



# Hydraulic Code Rule Changes

Proposed Title 220-660

Washington Administrative Code

## FINAL Programmatic Environmental Impact Statement



Habitat Improvement



Buoys



Flood Control Devices



Bank Protection



Boat & Equipment Access



Overwater Structures



Aquatic Plant Control



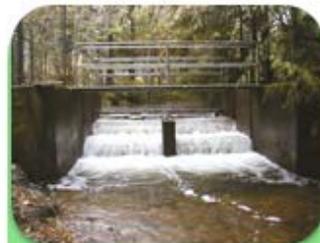
Marinas



Dredging



Culverts



Fish Passage Correction



Fish Screens

***Mission***  
of the  
Washington Department of Fish and Wildlife

*To preserve, protect and perpetuate fish, wildlife, and ecosystems  
while providing sustainable fish and wildlife  
recreational and commercial opportunities.*



State of Washington  
**Department of Fish and Wildlife**

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October 27, 2014

Dear Interested Parties:

The Washington Department of Fish and Wildlife (WDFW) has prepared this Final Programmatic Environmental Impact Statement (Final PEIS) on proposed changes to the Hydraulic Code Rules in chapter 220-110 Washington Administrative Code (WAC). The Final PEIS meets the requirements of the State Environmental Policy Act (SEPA) in chapter 43.21C RCW, SEPA rules in chapter 197-11 WAC, and other relevant state laws and regulations.

WDFW protects fish life by using its authority to provide approvals for construction projects in or near waters of the state. WDFW issues Hydraulic Project Approvals (HPAs) for projects that use, divert, obstruct, or change the natural flow or bed of any of the salt or fresh waters of the state. HPAs are issued based on the Hydraulic Code Rules. WDFW is revising the Hydraulic Code Rules to improve protections for fish and streamline the permit approval process.

The Hydraulic Code Rules, except those for mineral prospecting, were last updated in 1994 before Washington fish species were listed under the Endangered Species Act. There have also been changes to the hydraulic code statute (chapter 77.55 RCW), to other regulations, and to fish science and design technology during that time. The current Hydraulic Code Rules in chapter 220-110 WAC do not reflect those changes. WDFW is rewriting and replacing the entire chapter so that the content is easier for the applicant to understand, to reflect statutory changes in procedure, and to update rules based on contemporary science and design technology. The proposed new rule chapter is 220-660 WAC.

### **MAJOR CONCLUSIONS**

This is a non-project review proposal. The purposes of the proposed rule changes are to update the rules to better align with statutory changes, meet current fish science and design technology, and improve procedural and administrative requirements. Specifically the rule changes will:

- Incorporate up-to-date fish science and technology;
- Simplify the permitting of certain types of projects;
- Improve procedural and administrative requirements to better align with statutory changes made since the rules were last revised; and
- Establish a structure for adaptive management that responds to changing science and technology and/or the results of effectiveness monitoring.

These actions will deliver cost and time savings for some applicants, improve the overall effectiveness of the program, eliminate inconsistencies between the statute and the rules, and enhance a transparent decision making process with our stakeholders.

## **AREAS OF CONTROVERSY**

Areas of controversy include water crossing structures, timing windows, and changes that are necessary to implement legislation, including rules for single family bulkheads, tidegates and flood gates. Many people are concerned about the cumulative effects of HPAs issued by the agency. While the hydraulic code prevents considering issues beyond the proposed project, we can't deny that there are cumulative effects to the environment from hydraulic projects and development. WDFW's goal is to help applicants develop a project that best meets their needs while providing protection to fish life.

### **See Fact Sheet for details on document availability.**

WDFW believes this Final PEIS will assist decision makers to identify the key environmental issues and options associated with this action. Many changes have been made to the proposed rules and EIS based on comments received from agencies and interested parties during public review of the draft documents, which occurred from July 16 through September 15, 2014. Comments received and agency responses can be found in Appendix A to the Final PEIS.

Sincerely,

A handwritten signature in cursive script that reads "Lisa Wood". The signature is written in black ink and is contained within a thin black rectangular border.

Lisa Wood  
SEPA/NEPA Coordinator  
Agency Responsible Official  
Protection Division  
Habitat Program

## SEPA Fact Sheet – Final PEIS 14-049

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**Title:** Hydraulics Code Rule Changes – Final Programmatic Environmental Impact Statement

**Description:** The Washington State Department of Fish and Wildlife (WDFW) has prepared this Final Programmatic Environmental Impact Statement (Final PEIS) on the Hydraulic Code Rule changes. This document was prepared in compliance with the Washington State Environmental Policy Act (SEPA).

The Hydraulic Code Rules, except those for mineral prospecting, were last updated in 1994 before Washington fish species were listed under the Endangered Species Act. The purposes of the proposed rule changes are to update the rules to better align with statutory changes, meet current fish science and design technology, and improve procedural and administrative requirements. Specifically the rule changes will:

- Incorporate up-to-date fish science and technology;
- Simplify the permitting of certain types of projects;
- Improve procedural and administrative requirements to better align with statutory changes made since the rules were last revised; and
- Establish a structure for adaptive management that responds to changing science and technology and/or the results of effectiveness monitoring.

**Location:** Statewide

**Proposed Date of Implementation:** November 7-8, 2014

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Habitat Program, Protection Division

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**Permits and Licenses Required:** No permits, licenses, or approvals are required for the proposed Hydraulic Code Rule changes. Adoption of the rule changes is in compliance with chapter 34.05 RCW (Administrative Procedure Act) Part III Rule-Making Procedures.

**Authors and Principle Contributors:**

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**Consultants:** ESA Environmental Consultants and Cardno ENTRIX

**Date of Issue:** October 27, 2014

**Date of Next Action and Date Final Action is Planned:** Final action by the Fish and Wildlife Commission to adopt the rule changes will occur on or after November 7, 2014.

**Document Availability:** The Final PEIS, Hydraulic Code Rule Change Proposals, Cost-Benefit Analysis and Small Business Economic Impact Statement, HPA Aquatic Habitat Guidelines and “White Papers”, List of Science References, and other materials referenced in the Final PEIS are available at no charge at: <http://wdfw.wa.gov/licensing/hpa/rulemaking/> or at:

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Natural Resources Building, 5th Floor  
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These documents may be obtained in hard copy or CD by written request to the SEPA Responsible Official listed above, or by calling (360) 902-2260. Supplies are limited. To ask about the availability of these documents in a format for the visually impaired, call WDFW at 360-902-2534. Persons with hearing loss can call 711 or 1-800-833-6388 for Washington Relay Service, including TTY service. Persons with a speech disability can call 1-877-833-6341 to access a Communications Assistant with Washington’s Speech-to-Speech service.

**Distribution List:** Notice of the availability of this Final PEIS is posted on the WDFW SEPA website: [http://wdfw.wa.gov/licensing/sepa/sepa\\_final\\_docs\\_2014.html](http://wdfw.wa.gov/licensing/sepa/sepa_final_docs_2014.html), sent to local planning departments (city and county), affected Tribes, all state and federal agencies with jurisdiction, selected environmental organizations, individuals who have already commented on draft rules or EIS scoping, and interested parties.

## Acronyms and Abbreviations

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BMP	best management practice
cfs	cubic feet per second
Corps	U.S. Army Corps of Engineers
CWA	Clean Water Act
DAHP	Department of Archaeology and Historic Preservation
DNR	Washington State Department of Natural Resources
DPS	Distinct Population Segment
Ecology	Washington Department of Ecology
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
ESA	Endangered Species Act
ESSB	Engrossed Substitute Senate Bill
ESU	Evolutionarily Significant Unit
F	Fahrenheit
FPA	Forest Practices Act
GMA	Growth Management Act
GOIA	Governor's Office of Indian Affairs
HCP	Habitat Conservation Plan
HPA	Hydraulic Project Approval
JARPA	Joint Aquatic Resources Permit Application
LWD	large woody debris
LWM	large woody material
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NRCS	National Resource Conservation Service

OHWL	ordinary high water level
OHWM	ordinary high water mark
ORIA	[Washington governor's] Office of Regulatory Innovation and Assistance
PATON	Private Aids to Navigation
PCBs	polychlorinated biphenyls
PEIS	Programmatic Environmental Impact Statement
RCW	Revised Code of Washington
SBEIS	Small Business Economic Impact Statement
SEPA	State Environmental Policy Act
SMA	Shoreline Management Act
SHB	Substitute House Bill
TMDL	Total Maximum Daily Load
USFWS	U.S. Fish and Wildlife Service
WAC	Washington Administrative Code
WDFW	Washington Department of Fish and Wildlife

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## **Chapter 1 Introduction and Background**

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The Washington Department of Fish and Wildlife (WDFW) issued a Draft Programmatic Environmental Impact Statement (Draft PEIS) on proposed changes to the Hydraulic Code Rule (chapter 220-110) Washington Administrative Code (WAC) in October 2013. WDFW received numerous public comments on the Draft PEIS during the public comment period that ended December 13, 2013. In addition, the 2014 Washington State Legislature passed amendments (SHB 2261) to Revised Code of Washington (RCW) 34.05.271 that clarify how WDFW is required to identify sources of information reviewed and relied upon in preparing to take a significant agency action, including changes to agency rules. In response to the public comments and to respond to amendments to RCW 34.05.271, WDFW prepared a Supplemental Draft Programmatic Environmental Impact Statement (PEIS) on the proposed Hydraulic Code Rule changes. Public comment on the Supplemental Draft PEIS began July 16, 2014, and ended September 15, 2014 after a 30-day extension was granted.

WDFW has responded to comments on the Supplemental Draft PEIS, and submits this Final PEIS incorporating those responses. Comments and responses on the Draft and Supplemental Draft PEIS documents can be found in Appendix A. Action on the proposed rule change will occur no sooner than seven days after this Final PEIS is released in October 2014.

WDFW protects fish life by using its authority to provide approvals for construction or work that might affect the flow or bed of waters of the state. Specifically, WDFW issues Hydraulic Project Approvals (HPAs) for construction or performance of work that will use, divert, obstruct, or change the natural flow or bed of any of the salt or fresh waters of the state. HPAs are issued and provisioned based on the Hydraulic Code Rules, which implement chapter 77.55 RCW (Construction Projects in State Waters). WDFW is proposing revisions to the Hydraulic Code Rules primarily to improve protections for fish life. The Hydraulic Code Rules, except those for mineral prospecting, were last updated in 1994 before Washington fish species were listed as threatened or endangered under the federal Endangered Species Act (ESA). There have also been many changes to the statute, fish science, and design technology in that time. Updates to the Hydraulic Code Rules are needed to improve the consistency of the rules with statutory changes that have occurred since the last update, and to incorporate more current fish science and design technology.

WDFW initially undertook revision of the Hydraulic Code Rules in 2006 as part of the process of preparing a Habitat Conservation Plan (HCP) pursuant to the ESA for the HPA Program. An HCP is a management strategy under ESA that can provide long-term certainty of ESA compliance (refer to Section 1.5). It can be used for a particular set of activities, such as administrative rules, while providing conservation of ESA-listed species. WDFW was developing an HCP to assure that agency permitting actions contributed to conservation and recovery of listed species and to provide federal assurances to HPA permit holders for activities under an HPA. Updating the Hydraulic Code Rules was a centerpiece of developing the HCP. WDFW discontinued work on the HCP in 2012 when stakeholder and tribal support waned. However, WDFW has continued to work on revisions to the Hydraulic Code Rules.

A stakeholder working group was convened in 2011 to discuss modifications to the Hydraulic Code Rules. Stakeholder groups who were represented in 2011 meetings are listed in Appendix C. WDFW maintained discussions with individual stakeholder organizations and groups of organizations as we continued to develop proposed Hydraulic Code Rules. The final staff-recommended proposed Hydraulic Code Rules are products of intensive discussions with stakeholders in 2011 and since.

WDFW intends to complete adoption of the rules in November 2014. This Final PEIS is being prepared as part of the rule making process. Update of the Hydraulic Code Rules includes a major re-organization and simplification of the rule language as well as changes to some HPA provisions. Because of this, the updated rules appear under a new rule section: chapter 220-660 WAC. If changes to Hydraulic Code Rules are adopted, the current rules in chapter 220-110 WAC will be superseded by the new rules in chapter 220-660 WAC. If no changes are adopted, chapter 220-110 as it exists today will remain in effect.

Comments on the Supplemental Draft PEIS and proposed rules were taken separately but concurrently. Those comments and WDFW responses are detailed in Appendix A.

The sections in this chapter include descriptions of:

- The purpose and need for the proposed action;
- Summary of comments on the Draft PEIS and Supplemental Draft PEIS;
- Statutory authority for the proposed action;
- The State Environmental Policy Act (SEPA) review process;
- Related regulations and policies;
- Public involvement; and
- A guide to reading this document.

A note about terms and definitions: Terms used in the Hydraulic Code Rules are defined in that rule (Section 220-660-030 WAC). Terms not specifically defined in WAC are used in their common usage (as defined in any common dictionary). For the this EIS, the term “statute” means laws created by the legislature and codified in the “Revised Code of Washington” or RCW. The term “rule” refers to implementing regulations created by agencies and codified in Washington Administrative Code or WAC. Use of the term “code” refers to the “Hydraulic Code” in chapter 77.55 RCW unless an alternative context is clear.

Rules are the tools used by state government to implement the laws codified in RCW. Creating new rules, or revising old ones, must be done using steps and considerations set forth in the Administrative Procedures Act (chapter 34.05 RCW). For WDFW, adopting Hydraulic Code Rules or rule revisions is considered to be an action subject to State Environmental Policy Act (SEPA) statutes (chapter 43.21C RCW) and rules (chapter 179-11 WAC), hence this EIS. For more information on laws and rules, refer to the Legislature’s web page at: <http://www.leg.wa.gov/LawsAndAgencyRules/Pages/default.aspx> For more information on SEPA, refer to Department of Ecology’s web page at: <http://www.ecy.wa.gov/programs/sea/sepa/e-review.html>

## **1.1 Project Purpose and Need**

Several changes to hydraulic code statutes have occurred since the last comprehensive Hydraulic Code Rule update in 1994; those changes are detailed on Table 2-1. In some cases, current rules are incomplete with respect to current statute. Updating the rules to better align with current statute is one important purpose for the Hydraulic Code Rules update.

In addition, understanding of the impacts of hydraulic projects on fish life and habitat has advanced since the last rule update; however, no modifications to rule provisions have been implemented to take advantage of those advances. The current rules also do not reflect technological advancements for constructing many hydraulic projects and the rules are inconsistent with best practices, resulting in overly restrictive provisions in some cases and overly permissive provisions in other cases. In addition, certain administrative aspects of submitting and processing applications need to be updated to provide more consistency of format and content, and for the process of filing and processing applications.

New rules will result in clear application and permit-processing procedures for applicants and WDFW, bring rules into alignment with current statute, and will enable WDFW to apply available science and technology to prevent or mitigate the impacts to fish life and habitat caused by hydraulic projects.

The purposes of the proposed rule changes are to update the Hydraulic Code Rule provisions to respond to statutory changes, integrate current fish science and design technology, and improve procedural and administrative requirements. Specifically the rule changes will:

- Incorporate more recent fish science and technology;
- Simplify the permitting of certain types of projects;
- Improve procedural and administrative requirements to better align with statutory changes made since the rules were last revised; and
- Establish a baseline for adaptive management in response to changing science and technology and/or the results of effectiveness monitoring.

These actions will save time and costs for some applicants, improve the overall effectiveness of the program, better align the rules and statute, and enhance a transparent decision-making process with Tribes and stakeholders.

## **1.2 Environmental Policy Act Review Process**

Because the Hydraulic Code Rule changes address a program instead of a specific project, this document is prepared at a programmatic level in accordance with the State of Washington SEPA Rules (chapter 197-11 WAC). Alternatives and the potential negative or beneficial impacts of adopting the updated rules are evaluated in the Final PEIS. The Final PEIS does not evaluate the site-specific impacts of activities requiring an HPA. Generally, projects that require an HPA undergo site-specific SEPA review by the lead agency before WDFW issues an HPA.

The Fish and Wildlife Commission (FWC) will use information from this Final PEIS to evaluate proposed alternatives. Any alternatives adopted by the FWC must comply with state law and be within the Commission's authority to control.

Details about the stakeholder and public involvement process can be found in Final PEIS section 1.6. Final PEIS section 1.3 summarizes the comments received on the Draft and Supplemental Draft EIS documents (Final PEIS section 1.3.1) and proposed rules changes (Final PEIS section 1.3.2).

### **1.3 Summaries of Comments**

WDFW issued a Draft Programmatic Environmental Impact Statement (Draft PEIS) on the Hydraulic Code Rule Changes in October 2013. WDFW received numerous public comments on the Draft PEIS during the comment period, which ended December 13, 2013. Also, during the 2014 Washington State Legislature, lawmakers passed amendments (SHB 2261) to RCW 34.05.271, which clarify how WDFW must identify sources of information reviewed and relied upon in preparing to take a significant agency action including changes to agency rules. In response to the public comments on the draft PEIS and amendments to RCW 34.05.271, WDFW decided to prepare a supplemental draft PEIS on the proposed rule changes. The comment period on the Supplemental Draft PEIS extended from July 15 through September 15, 2014, and 197 comments were received during that period. Following is a summary of the comments on the Draft PEIS (Section 1.2.1) that led to the Supplemental Draft PEIS, and comments on the Supplemental Draft PEIS (Section 1.2.2) that led to this Final PEIS.

#### **1.3.1 Comments on the Draft PEIS**

Comments on the 2013 Draft PEIS included those related to the SEPA process, the evaluation of economic impacts, and the lack of detail in some sections and in some impacts analysis. Many of the comments expressed concern with how WDFW had incorporated science into the rule-making process. Many also commented on the limited array of alternatives analyzed in the document (only the preferred alternative and a no-action alternative were presented in the draft PEIS).

There were also several comments specific to the proposed rules. Those comments did not relate to the adequacy of the SEPA analysis, but focused on aspects of the rules that the commenters wanted WDFW to change. Upon careful consideration of the comments received, WDFW made changes to the proposed rules, and added two alternatives to the SEPA analysis.

Four main categories of comment are addressed in the Supplemental Draft PEIS: Incorporation of available science, evaluating additional alternatives, process and timing of the Draft PEIS (with respect to the rulemaking process under the Administrative Procedures Act), and discussion of economic impacts and the timing of the Small Business Economic Impact Statement. These topics were addressed as follows.

##### ***1.3.1.1 Incorporation of Available Science***

Comments related to incorporating available science stated that WDFW was not in compliance with RCW 34.05.271. This statute includes specific requirements for how WDFW should identify and make available the sources of information used in taking a significant agency action. The comments also stated that some of the white papers cited by WDFW in the Draft PEIS were not up to date and were not cited properly.

The Draft PEIS included information on the science reviewed, but it was not presented so that readers could clearly see how the science was used in developing the alternatives, assessing the impacts, and

the proposed rule changes. WDFW moved the *Science Supporting the Proposed Alternative* section of the Draft PEIS (Section 2.4.4 in the Draft PEIS) up to the *Formulation of Alternatives* section in Chapter 2 of the Supplemental Draft PEIS. This change highlights the science that was used in formulating the alternatives and also introduces the science before the new rules are described in more detail.

### **1.3.1.2 Incorporation of Additional Alternatives**

SEPA (WAC 197-11-440(5)(a)) requires that an Environmental Impact Statement (EIS) evaluate alternative courses of action to the proposal. The alternatives must be reasonable actions that could feasibly attain or approximate a proposal's objectives, but at a lower environmental cost or decreased level of environmental degradation (WAC 197-11-440(5)(b)). SEPA also includes requirements for evaluating alternatives for a non-project or programmatic proposal such as adopting new rules (WAC 197-11-442).

The requirements are intended to give the lead agency more flexibility in preparing an EIS for a programmatic proposal because less detail is available than for a project-specific proposal. The SEPA rules recommend that a programmatic EIS emphasize the evaluation of alternatives and that the alternatives, including the proposed action, be analyzed at a roughly comparable level. For a programmatic analysis, lead agencies are not required to examine all conceivable policies, but may limit the EIS to a discussion of alternatives which have been formally proposed or are reasonably related to the proposed action (WAC 197-11-442(4)). According to SEPA, the discussion of alternatives must be limited to a general discussion of the impacts of alternative proposals.

In the Draft PEIS, WDFW evaluated two alternatives—the Preferred Alternative (the proposed rule changes) and the No Action Alternative. Section 2.5 of the Draft PEIS also included a discussion of alternatives and proposed rule changes that had been presented to the public as part of scoping, but had been eliminated from further detailed study. Several comments stated that WDFW should have evaluated additional alternatives including those that were presented in scoping for the Draft PEIS.

WDFW considered three approaches the department could take to evaluate additional alternatives in the Supplemental Draft PEIS. The first approach was to provide additional analysis and explanation in Chapter 2 about why the alternatives were eliminated from consideration. The second approach was to further evaluate the alternatives presented to the public during the scoping. The third approach was to evaluate the alternatives received during the public comment period that were not included in the Preferred Alternative. WDFW chose to do two out of the three: WDFW expanded the explanations of eliminated alternatives so that the public can better understand the reasons the alternatives were not incorporated into the rule making process. WDFW also evaluated alternatives compiled from comments received during the Draft PEIS public comment period and included discussion of those additional alternatives in the document. Because changes recommended in the comments were not presented in rule-change form, the discussion of the additional alternatives in Chapter 2 of this document is limited to a listing of the suggested provisions and general discussions of the differences in impacts between the suggestions and the no-action alternative.

### ***1.3.1.3 Process and Timing of the Draft PEIS***

Some comments expressed concerns about the public input process and that the Draft PEIS was issued before WDFW had finalized the proposed rule changes. Comments about public input included statements that the stakeholder group WDFW established to provide advice on the proposed rule changes did not have broad enough representation.

To address these comments, WDFW combined the comment period on the final proposed rule changes with the comment period for the Supplemental Draft PEIS. WDFW has provided responses to comments on the proposed rule changes in Final PEIS Appendix A.

### ***1.3.1.4 Economic Analysis and Timing of the Small Business Economic Impact Statement***

A few comments stated that the Draft PEIS did not include a cost-benefit analysis and others stated that the Draft PEIS had been released before the Small Business Economic Impact Statement (SBEIS) had been prepared. SEPA does not require a cost-benefit analysis (WAC 197-11-450). To comply with SEPA, an environmental analysis focuses on impacts to the environment; SEPA rules state that the comparison of alternatives should not be displayed as a monetary cost-benefit analysis when there are important qualitative considerations.

When an agency adopts a rule change, an economic analysis is required if the rule is expected to impose more than minor costs on businesses in an industry (RCW 19.85.030). This analysis is conducted through a SBEIS and a cost/benefit analysis that the agency files with the code reviser along with the notice required before a rule-making hearing (RCW 34.05.320). If the SBEIS determines a rule change will cause a disproportionate impact on small businesses, the agency shall, where legal and feasible in meeting the stated objectives of the rule, reduce the costs imposed on small businesses.

WDFW prepared an SBEIS economic analysis for the proposed changes to the Hydraulic Code Rules. WDFW provided the SBEIS and cost/benefit analysis when the final draft proposed rules (CR102) were filed with the Washington State code reviser in July 2014.

## **1.3.2 Comments on the Supplemental Draft PEIS**

A Supplemental Draft PEIS was released on July 16, 2014, with comments due on August 15, 2014. An extension in the comment period was granted through September 15, 2014. Most of the comments received during the comment period focused on the proposed rules. Comments on the Supplemental Draft PEIS itself were helpful in highlighting where clarifications could be made, and where language used did not accurately convey the information presented. Changes have been incorporated into this Final PEIS in the Chapter 1 Introduction; in Section 1.2 SEPA process; in Section 1.5 regarding concurrent jurisdictions and authorities; in Chapter 2 descriptions of the alternatives and descriptions of the use of science; and in the Chapter 4 Impacts analysis. Minor non-substantive corrections were made (i.e. correcting typographic errors) throughout the document.

### ***1.3.2.1 Jurisdictions and Authorities***

Many commenters conveyed concern that new rule provisions, or inclusion of science guidance, extend WDFW's authority beyond the authority granted in chapter 77.55 RCW. A few commenters expressed

believes that the existence of these other laws preempts the need for the Hydraulic Code and rules. Responses to comments are found in Appendix A, and changes are incorporated below.

### **1.3.2.2 Alternatives**

Changes have been made to clarify that Alternative 1 represents the No-Action alternative called for in the SEPA rules. We have further clarified the niche our science “white papers” hold within the spectrum of science available to support the HPA program.

### **1.3.2.3 Mitigation**

Confusion about when mitigation will and will not be required is addressed in both the rules and Final PEIS. We have also clarified that the Hydraulic Code does not give WDFW the authority to require mitigation that restores habitat function beyond the effect of the individual project, or in other words, to incorporate the level of restored function needed for salmon recovery.

### **1.3.2.4 Impacts**

We have scoured Chapter 4 to address specific deficiencies highlighted in the comments.

### **1.3.2.5 Economic Analyses**

Many comments were received criticizing the economics analyses provided pursuant to WDFW’s rulemaking process, which we incorporate into the EIS by reference. Other commenters believe that the proposed rule changes impose requirements that significantly increase the cost of projects. Those comments resulted in changes in EIS descriptions of the impacts of the rule changes to more accurately convey how WDFW interprets the intent. All of the comments directed to the economic analysis are provided in Appendix A.

## **1.4 Statutory Authority**

WDFW has sole authority to implement the Hydraulic Code Rules (chapter 220-110 WAC) under chapter 77.55 RCW (Construction Projects in State Waters). RCW 77.55.021 (1) states

*“...In the event that any person or government agency desires to undertake a hydraulic project, the person or government agency shall, before commencing work thereon, secure the approval from the department in the form of a permit as to the adequacy of the means proposed for the protection of fish life.”*

RCW 77.55.011(11) defines a “hydraulic project” as

*“the construction or performance of work that will use, divert, obstruct, or change the natural flow or bed of any of the salt or freshwater of the state.”*

Although both “bed” (RCW 77.55.011(1)) and “waters of the state” (RCW 77.55.011(25)) are defined as land or waters waterward of the “ordinary high water line” (RCW 77.55.011(16)), the definition of a hydraulic project includes construction or performance of work landward of the ordinary high water line **if it will use, divert, obstruct, or change the natural flow or bed** waterward of the ordinary high water line.

The construction permit issued by the department is called a Hydraulic Project Approval (HPA). The sole purpose of HPA is to protect fish life from construction and other work in or near the water. Hydraulic projects require provisions that are beyond the authorities of other permitting agencies, and are more detailed in scope and site-specificity than general land and shoreline use regulations or federal permits. The HPA has conditions a permittee must follow that mitigate impacts to fish life caused by the project. The department cannot unreasonably withhold or unreasonably condition the HPA (RCW 77.55.021(7)(a)).

Chapter 77.55.231 paragraph 1 clarifies HPA authority with respect to conditioning a permit as follows:

*“Conditions imposed upon a permit must be reasonably related to the project. The permit conditions must ensure that the project provides proper protection for fish life, but the department may not impose conditions that attempt to optimize conditions for fish life that are out of proportion to the impact of the proposed project.”*

This section means that WDFW can't require a project to mitigate for all cumulative effects up to and including effects of the specific project at hand. The HPA program is limited to mitigating the effects of the specific project application. This statutory provision is especially important in understanding the HPA program's inability to require project mitigation to meet ESA salmon recovery standards or to otherwise address the cumulative negative effects to the environment from land development and use.

The role of the HPA in context with other local, state, and federal permits and authorities is explored further in section 1.5.

## **1.5 Related Regulations and Policies**

This section describes the major regulations and policies that relate to hydraulic projects. These regulations and policies are implemented by a variety of entities and agencies including the Environmental Protection Agency (EPA), U.S. Army Corps of Engineers (Corps), Washington Department of Ecology (Ecology), Washington Department of Natural Resources (WDNR), Native American Tribes of the Pacific Northwest, and local governments.

### **1.5.1 Treaty Indian Tribes and Government-to-Government Relationships**

The unique legal status of tribes and presence of tribally reserved rights and cultural interests throughout the state creates a special relationship between tribes and the state agencies responsible for managing and protecting the natural resources of the state. Tribes and tribal members possess property and self-government rights that predate the formation of the United States and the creation of the State of Washington and are guaranteed under treaties and federal law. At the same time, tribal members are citizens of the United States and the State of Washington. Due to federal laws and inherent tribal sovereignty, each reservation in the state constitutes a bordering jurisdiction for environmental purposes (Gov. Off. Indian Affairs, 2014). Tribal reserved rights to fish can be impacted by projects that change the productivity of fish or fish habitat.

In the centennial year of 1989, the Northwest Indian Tribes and the State of Washington signed the Centennial Accord, calling for tribes and agencies to work together, government-to-government, for the benefit of both tribal and non-tribal people:

*This Accord dated August 4, 1989, is executed between the federally recognized Indian tribes of Washington signatory to this Accord and the State of Washington, through its governor, in order to better achieve mutual goals through an improved relationship between their sovereign governments. This Accord provides a framework for that government-to-government relationship and implementation procedures to assure execution of that relationship.*

*Each Party to this Accord respects the sovereignty of the other. The respective sovereignty of the state and each federally recognized tribe provide paramount authority for that party to exist and to govern. The parties share in their relationship particular respect for the values and culture represented by tribal governments. Further, the parties share a desire for a complete Accord between the State of Washington and the federally recognized tribes in Washington reflecting a full government-to-government relationship and will work with all elements of state and tribal governments to achieve such an accord.*

The Centennial Accord was affirmed, and a compact to implement the terms of the Accord was agreed-to, on November 4, 1999. In this new Millennium Agreement, state and tribal officials framed the terms and principles of the state/tribal relationship needed to cement their government-to-government relationship. Among these principles are partnership and collaboration related to economic, social/cultural issues, and natural resources, as well as improved communication, cooperative education, and the development of a consensus-based, lasting and respectful relationship. (Gov. Off. Indian Affairs, 2014).

Procedures for implementing government-to-government policy between WDFW and the Northwest region Indian tribes related to the management of fisheries and hunting activities had been well-established prior to the Centennial Accord. Those relationships were defined through decisions of the federal court, specific state-tribal understandings, agreements, and management plans. Notable examples of federal case law that provide the legal foundation for the cooperative management relationship between WDFW and the treaty Indian tribes include U.S. v. Washington, U.S. v. Oregon, and Hoh v. Baldrige. Planning documents to implement the Centennial Accord were developed to highlight existing mechanisms for effective implementation of government-to-government policy, to present the status of current policy issues, and to aid resolution of disputes that may arise between WDFW and the Northwest Indian tribes. (WDFW, 2012).

An example of WDFW-tribal co-management is the setting of fishing seasons for salmon and steelhead. Tribes and WDFW cooperatively develop fish population estimates and estimates of fisheries impacts, and jointly consider the expected impacts of future fishing plans during the annual Pacific Fisheries Management Council North of Cape Falcon public planning process. Linkage with the PFMC process also provides a federal nexus for ESA compliance.

WDFW-tribal consultations and review of HPA applications had been a laborious and largely unsatisfactory process until the recent release of the Hydraulic Project Management System (HPMS) viewer and subsequently APPS online HPA application system. While some difficulties with the system are still being addressed, overall APPS provides good access and a means for documentation of communications between WDFW and tribal biologists regarding individual HPA applications.

Conflicting authorities and interests sometimes make it difficult for tribal and WDFW staff to agree about the approval and provisions of HPAs. The primary conflict centers around the overall goal of tribes and the State of Washington to recover salmon and steelhead populations and achieve de-listing under the federal ESA. The Hydraulic Code (chapter 77.55 RCW) clearly prohibits WDFW from imposing conditions upon an HPA that “*attempt to optimize conditions for fish life that are out of proportion to the impact of the proposed project*” from RCW 77.55.231(1).

The tension around these differing objectives has contributed to an overall improvement in communication and coordination among WDFW and tribal biologists and decisionmakers, and rigorous fish conservation consistent with HPA authority.

### **1.5.2 Permits and Authorizations Associated with Aquatic Resources Protection**

The Washington Governor’s Office of Regulatory Innovation and Assistance (ORIA) describes aquatic resources as including both the physical elements of the aquatic environment, such as bedlands, tidelands, and shorelands; as well as life forms such as aquatic plants, fish, and shellfish that live within the aquatic environment. Project proponents considering work in, over, under, or near water should view ORIA’s Aquatic Permits Sheet, which includes a table of commonly required permits, permit purpose, trigger activity, other required permits, timelines, agency contacts, and links to online resources.

The primary responsibility for managing the state’s fish and shellfish resources lies with the WDFW, which manages all fish and shellfish resources of the state. In cooperation with WDFW, the state’s Indian tribes also manage aquatic resources, responsibility for which was retained by tribes in a series of treaties. ORIA characterizes the HPA as work that uses, diverts, obstructs, or changes the natural flow or bed of any of the salt or fresh waters of state. Includes bed reconfiguration, all construction or other work waterward, under and over the ordinary high water line, including dry channels, and may include projects landward of the ordinary high water line (e.g., activities outside the ordinary high water line that will directly impact fish life and habitat, falling trees into streams or lakes, bridge maintenance, dike construction, etc.)

Following are descriptions of some permits or authorizations that ORIA lists<sup>1</sup> as being most likely to be needed concurrent with an HPA

#### ***1.5.2.1 Local Government land use and shoreline use permits***

Land use planning and management in Washington is regulated through local planning and zoning regulations. The 1990 state Growth Management Act (GMA) (chapter 36.70A RCW) establishes goals for land use planning and a number of mandatory planning requirements that express the state’s interest in local land use planning decisions. The state’s fastest growing counties, as well as cities within those counties, are required to prepare comprehensive plans consistent with the goals and mandatory requirements of the act. The provision of the GMA that most relates to hydraulic projects is the requirement that all counties and cities in the state must designate natural resource lands and critical areas within their jurisdiction. Natural resource lands include:

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<sup>1</sup> [Aquatic Permits Sheet](http://www.oria.wa.gov) accessible at <http://www.oria.wa.gov>

- Agricultural lands that are not already characterized by urban growth and that have long-term significance for the commercial production of food or other agricultural products;
- Forest lands that are not already characterized by urban growth and that have long-term significance for the commercial production of timber; and
- Mineral lands that are not already characterized by urban growth and that have long-term significance for the extraction of minerals.

Critical Areas Ordinances (CAO) protect locally designated critical areas such as wetlands, fish and wildlife habitat conservation areas, and frequently flooded areas. These ordinances manifest in local zoning and building permit restrictions. Critical areas as defined under GMA include:

- Wetlands,
- Areas with critical recharging effect on aquifers used for potable water,
- Fish and wildlife habitat conservation areas,
- Frequently flooded areas, and
- Geologically hazardous areas.

Counties and cities must give special consideration to conservation or protection measures needed to preserve or enhance anadromous fisheries. Typical protection measures include restricting types of development in critical areas and provisions for wetland and stream buffers to protect riparian areas.

Shorelines of the state are protected by the Shoreline Management Act (SMA) (chapter 90.58 RCW). The SMA applies to the following classes of waters of the state:

- All marine waters of the state,
- Streams and rivers with a mean annual flow of 20 cubic feet per second (cfs) or more,
- Lakes and reservoirs larger than 20 acres in area, and
- Wetlands and floodplains associated with the above.

The SMA also applies to upland areas extending landward for 200 feet of the ordinary high water mark (OHWM). The SMA requires cities and counties to adopt Shoreline Master Programs (SMPs) that meet the requirements of its administrative rules, which were last updated in 2003 (chapter 173-26 WAC). SMPs encourage water-dependent uses, protect shoreline natural resources, and promotes public access. The new administrative rules include requirements for such hydraulic projects as shoreline bank protection; piers and docks, fill, breakwaters, jetties, groins, and weirs; dredging and dredge material disposal; and shoreline habitat and natural systems enhancement projects. While SMA-related requirements are helpful to aquatic life, these requirements relate more to the physical locations and attributes of these projects, and not to protection of fish life. In this way, local government permit requirements pursuant to SMA intersect with, but are not redundant with HPA provisions.

The SMA exempts public and private projects that are designed to improve fish and wildlife habitat or fish passage from the requirement to obtain a shoreline substantial development permit, if all of the following conditions are met:

- The project has been approved by WDFW;
- The project has received an HPA from WDFW; and

- The local government has determined that the project is substantially consistent with the local shoreline master program (RCW 90.58.147).

Some fish and wildlife habitat improvement projects qualify for an expedited HPA.

### **1.5.2.2 Federal permits and authorizations**

#### **1.5.2.2.1 Discharge of Dredge or Fill Material Into Water: Section 404 Permit (Regional, Nationwide, or Individual)**

U.S. Department of the Army Corps of Engineers (Corps) has authority under Section 404 of the Clean Water Act to regulate ground-disturbing activities in waters of the United States, including wetlands. A variety of activities typically require Corps authorization, including placement of fill material, grading, mechanized land clearing, and redeposit of excavated/dredged material. The Corps authorizes activities by issuing individual and general permits. Under Section 404, individual permits include Standard Individual Permits, and general permits include Nationwide Permits and Regional General Permits. The Corps determines which type of permit is needed.

#### **1.5.2.2.2 Work or Structures in Navigable Waters, Corps Section 10 permit**

The Corps is authorized under Section 10 of the Rivers and Harbors Act to regulate work in, over, or under navigable waters of the United States. The Corps authorizes activities by issuing individual and general permits. Individual permits include Standard Individual Permits and Letters of Permission, and general permits include Nationwide Permits and Regional General Permits. The Corps determines which type of permit is needed. Corps permit can include authorization under RHA Section 10 and/or CWA Section 404.

#### **1.5.2.2.3 Bridge Permit**

The General Bridge Act of 1946 gives the U.S. Coast Guard permitting authority over construction or modification of bridges over certain navigable waters. The objective is to protection navigation, and authorize the structure's location and clearances.

#### **1.5.2.2.4 Private Aids to Navigation (PATON)**

Installation of a fixed structure or floating object within the waters of the United States requires a PATON permit from the Coast Guard.

#### **1.5.2.2.5 Relationship of federal permits to the HPA Program**

Federal permits regulate ground disturbance, discharge into navigable waters, and disruption to navigation. None of these provides the requirements necessary to protect fish life.

### **1.5.2.3 State Permits and Authorizations**

#### **1.5.2.3.1 Water Quality Certification Under Section 401 of the Clean Water Act (CWA)**

In addition to the Corps Section 404 authority mentioned above, the U.S. Environmental Protection Agency (EPA) delegates authority to states (and specific tribes) to regulate projects with respect to certain aspects of water quality under the Clean Water Act (CWA). As authorized under Section 401 of

the CWA, Washington State Department of Ecology (Ecology) issues permits relating to pollutant discharge – more on this in FPEIS section 1.5.4.

The Corps, Ecology, or authorized tribes verify that submitted projects will comply with state water quality standards and other aquatic resource protection, and review both project construction and operation activities.

Applying for a federal permit or license to conduct any activity that might result in a discharge of dredge or fill material into water or non-isolated wetlands or excavation in water or non-isolated wetlands requires this certification. Projects that continue to generate stormwater runoff or other discharge are also regulated by Ecology or tribe through authority delegated by the U.S. Environmental Protection Agency. Read more in FPEIS Section 1.5.4.

#### 1.5.2.3.2 NPDES Construction Stormwater General Permit

Ecology and authorized tribes have authority to issue NPDES permits to protect and maintain water quality and prevent or minimize sediment, chemicals, and other pollutants from entering surface water and groundwater. Read more in FPEIS Section 1.5.4.

#### 1.5.2.3.3 Coastal Zone Management (CZM) Federal Consistency

If the project is a federal activity, requires a federal license or permit, or is funded through federal Assistance Programs, and is proposed within any of Washington's fifteen coastal counties, Ecology reviews the project for consistency with state and federal CZM provisions. CZM provisions relate to land use and do not substitute for the HPA construction permit.

#### 1.5.2.3.4 Washington DNR Aquatic Use Authorizations (Aquatics Lands leases)

State-owned aquatic lands include approximately 1,300 miles of tidelands, 6,700 acres of constitutionally established harbor areas and all of the submerged land below extreme low tide, which amounts to some 2,000 square miles of marine beds of navigable waters and an undetermined amount of fresh water shoreland and bed. These lands represent a public trust and are managed to provide a balance of public benefits for all citizens of the state (WAC 232.20.100).

Pursuant to WAC 232.30.122, certain projects taking place on or over state-owned aquatic lands require an authorization from DNR. A person can obtain a DNR use authorization through the Joint Aquatic Resources Permit Application (JARPA) permit application process and JARPA Attachment E. A DNR authorization is a legal contract, not a regulatory permit like those obtained from other agencies. DNR contracts outline the terms and conditions of the use and convey certain property rights to the user in exchange for rent. DNR may also suggest options to avoid or minimize environmental harm.

DNR aquatics land program planning relies on shoreline master program planning as the preferred means for identifying and mitigating adverse impacts on resources and uses of statewide value (WAC 332-30-107 (6)).

#### ***Relationship to the HPA Program***

While it is likely that projects requiring DNR aquatic land use authorizations will also require HPAs, not every hydraulic project is subject to DNR authorization. Mitigation requirements under the DNR statute

relate to land use whereas the HPA is a construction permit with provisions that are specific to the protection of fish life. Mitigation and other provisions of an aquatic land authorization are not specific to the protection of fish life and do not substitute for the provisions of an HPA.

#### 1.5.2.3.5 Forest Practices Water Type Modification:

Washington Department of Natural Resources (DNR) reviews and grants a Water Type Modification, which is not a permit. Applications for Water Type Modification are sometimes submitted in conjunction with other aquatic project applications when the project also requires a Forest Practices permit or is associated with placement or replacement of a stream crossing structure. It is a tool that can be used to make water type changes based on field verification. Prior to submittal of a forest practices application/notification, forest landowners are required to determine, in the field, the type of any regulated waters as identified in the forest practices rules (Title 222 WAC) within proposed harvest boundaries, including the area within 200 feet of the proposal. In addition, field verified stream typing is required prior to placement or replacement of stream crossing structures for road construction or road maintenance. Read more on Forest Practices in FPEIS Section 1.5.5

#### 1.5.2.3.6 Aquatic Lands Right of Entry License:

Activities that the DNR commonly authorizes under this license are for recreational, scientific, or environmental purposes. The activity cannot interfere with the use and enjoyment of the state-owned aquatic lands by others. Requirements of these licenses are not sufficient to protect fish life.

### **1.5.2.4 *Other permits***

#### 1.5.2.4.1 Cultural Resources

The Washington State Department of Archaeology and Historic Preservation (DAHP) works with project proponents to ensure compliance with various cultural resource regulations, including Section 106 of the National Historic Preservation Act (NHPA) and the Governor's Executive Order 05-05. For more about Cultural Resources, see FPEIS Section 1.5.6.

#### 1.5.2.4.2 Scientific Collection Permit (SCPs)

WDFW, NOAA, U.S. Fish and Wildlife Service, and other agencies issue SCPs for species or locations under each agency's management. Federal Services might have jurisdiction under federal ESA, Marine Mammal Protection Act, Migratory Bird Treaty Act or other federal authority. State scientific collection permits are issued by WDFW to scientists/researchers, educators/educational institutions, and museums, aquariums/zoos for research or display purposes.

### **1.5.2.5 *State Environmental Policy Act (SEPA) and/or National Environmental Policy Act (NEPA)***

SEPA requires that state and local agencies review proposals to identify environmental impacts. Agency permits and approvals can be conditioned or denied to mitigate or avoid the impacts identified in SEPA documents.

Any proposal that requires a public agency action (decision) to license, fund, or undertake a project, or the proposed adoption of a policy, plan, or program can trigger environmental review under SEPA or NEPA. The state lead agency determines if a state SEPA exemption applies.

NEPA applies to all major federal actions: federal projects or any project requiring a federal permit, receiving federal funding, or located on federal land. The list of NEPA categorical exclusions is determined in rules specific to each federal agency.

#### **1.5.2.6 Joint Aquatic Resources Permit Application (JARPA)**

The JARPA form consolidates several federal, state, and local aquatic permit applications into one form. JARPA is used by multiple regulatory agencies in Washington State to allow project proponents to use a single form to apply for multiple aquatic resources protection permits. Although WDFW has an independent online permit processing tool (“APPS”), the JARPA form can still be used to apply for an HPA as well as the following approvals:

- Aquatic Use Authorization (DNR); and
- Local Shoreline Substantial Development Permits, Shoreline Conditional Use Permits, Shoreline Variances, and Shoreline Substantial Development Exemptions, unless local governments have their own permit applications.

#### **1.5.3 Endangered Species Act**

Enacted by Congress in 1973, the purpose of the ESA is to protect and recover imperiled species and the ecosystems upon which they depend. It is administered by the Interior Department’s U.S. Fish and Wildlife Service (FWS) and the Commerce Department’s National Marine Fisheries Service (NMFS) (collectively The Services). The FWS has primary responsibility for terrestrial and freshwater animals and plants, while the responsibilities of NMFS are mainly marine wildlife such as whales and anadromous fish such as salmon.

Under the ESA, species may be listed as either endangered or threatened. “Endangered” means a species is in danger of extinction throughout all or a significant portion of its range. “Threatened” means a species is likely to become endangered within the foreseeable future. For the purposes of the ESA, Congress defined species to include subspecies, varieties, and, for vertebrates, distinct population segments (DPSs) (or evolutionarily significant units – ESUs). A list of species listed under the federal ESA is provided in Appendix B of this Final PEIS.

The ESA protects endangered and threatened species and their habitats by prohibiting the “take” of listed animals except under Federal permit. Such permits generally are available for conservation and scientific purposes.

##### ***What is “Take”?***

The ESA makes it unlawful for a person to take a listed animal without a permit. Take is defined as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct.” Through regulations, the term “harm” is defined as “an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or

injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering.”

### ***ESA “Coverage”***

Federal agencies undertaking programs or planning projects that might “take” a listed species are required to consult with FWS or NMFS about whether that take will jeopardize the continued existence of the species.

If a state, local, or private project is federally-funded (or funded through pass-through grants using federal funds such as the Pacific Coast Salmon Fund), located on federal land, or requires a federal permit, license, or other authorization, there is a federal “nexus” or connection that prescribes one consultation pathway (called a Section 7 consultation). Privately-funded projects on private land use a different consultation pathway (called Section 10).

### ***Section 7 Consultation – Federal Cooperation***

Section 7 of the ESA requires Federal agencies to use their legal authorities to promote the conservation purposes of the ESA and to consult with the FWS and NMFS, as appropriate, to ensure that effects of actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of listed species. The questions to be answered in these consultations are whether the species will be harmed, whether the habitat will be harmed, and if the action will aid or hinder the recovery of the listed species. If harm is likely to occur, the consultation between federal agencies evaluates whether “reasonable and prudent alternatives” exist to minimize harm. During consultation the “action” agency (the federal agency conducting or funding the project) writes a “biological assessment” of the potential for harm from the proposed action. The federal Service then provides to the action agency a “biological opinion” or concurrence letter addressing the proposed action. In the relatively few cases in which the FWS or NMFS makes a jeopardy determination, the agency offers “reasonable and prudent alternatives” about how the proposed action could be modified to avoid jeopardy. It is extremely rare that a project ends up being withdrawn or terminated because of jeopardy to a listed species.

### ***Section 10 Consultation - HCPs***

Individuals planning to conduct any activity resulting in the “take” of an endangered or threatened species or adverse alteration of critical habitat, whether or not deliberate, must consult with the Services and obtain a permit to perform that activity. There are two types of permits issued for take under the Endangered Species Act (ESA):

1. Permits for scientific research or to enhance the propagation and survival of the species (ESA Section 10(a)(1)(A)), and
2. Permits for taking species incidental to (not the purpose of) an otherwise lawful activity (ESA Section 10(a)(1)(B)). The latter must be accompanied by a Conservation Plan, often referred to as a Habitat Conservation Plan (HCP).

Most individual projects fit under item 2, above, when a permit is necessary.

Section 10 of the ESA is used by landowners including private citizens, corporations, Tribes, States, and counties who want to develop property inhabited by listed species. Landowners may receive a permit to

take such species incidental to otherwise legal activities, provided they have developed an approved habitat conservation plan (HCP). HCPs include an assessment of the likely impacts on the species from the proposed action, the steps that the permit holder will take to avoid, minimize, and mitigate the impacts, and the funding available to carry out the steps. HCPs benefit not only landowners but also species by securing and managing important habitat and by addressing economic development with a focus on species conservation.

Again, individual project proponents should consult with the appropriate federal service to determine whether a permit is needed. Before applying for an individual permit, a person should determine if the proposed project is part of another authorized activity through local, state, or other federal agency actions. For example, projects funded through federal programs might already have ESA coverage by the funding agency as part of a larger program. (NMFS 2014; USFWS 2014)

### ***Relationship to the HPA Program***

WDFW originally began revising the Hydraulic Code Rules as part of developing an HCP. From about 2006 through 2011, WDFW, with assistance from stakeholders, had been pursuing an HCP relating to the HPA permit program. WDFW was developing the HCP to assure that agency permitting actions contributed to conservation and recovery of listed species and to provide federal assurances to HPA permit holders for activities under an HPA. At that time, the agency and stakeholders believed the benefits of the federal ESA coverage from the HCP outweighed the disadvantages of more prescriptive Hydraulic Code Rules.

In 2011, it became apparent to the department it would take several more years to complete the HCP process that began in 2006. The grant funding received to develop the HCP was insufficient to complete the process. If the department continued the HCP development, it would have been necessary to reallocate of scarce field staff resources to complete the process. Also, in early 2012, NMFS and FWS indicated that several types of hydraulic projects could not be covered under the HCP because some statutes in chapter 77.55 RCW prevented the department from meeting the Services' standards for an HCP. This led to the loss of support for HCP development and curtailment of the project.

Several fish and aquatic species in Washington are listed under the ESA and have designated critical habitat. Sections 3.2, 3.6, and 3.7 of this Final PEIS list those species. Because of the number of listed species and because hydraulic projects often include a federal nexus (e.g., have federal funding or a federal permit), many hydraulic projects require ESA consultation.

### **1.5.4 Clean Water Act**

The federal Clean Water Act (CWA) is the principal federal law addressing surface water quality. The CWA uses a variety of regulatory and non-regulatory tools to limit direct discharge of pollutants into waterways; finance municipal wastewater treatment facilities; and manage stormwater runoff from streets, construction sites, forests, and farms. These tools are implemented to achieve the overall goal of the act, which is to restore and maintain the chemical, physical, and biological integrity of the navigable waters of the United States so they can support the protection and propagation of shellfish, fish, and wildlife.

Many provisions of the CWA are regulated by the EPA. In some cases EPA has delegated its authority to state agencies or tribes: in Washington the authority is delegated to Ecology and seven Tribes. The Corps also implements sections of the CWA. Although WDFW regulates hydraulic projects, it has no authority to administer provisions of the CWA.

The EPA's authority includes discharge of pollutants from a point source into navigable waters regulated through a National Pollutant Discharge Elimination System (NPDES) Permit in accordance with Section 402 of the CWA. NPDES permits also apply to municipal stormwater systems. EPA is also responsible for implementing Section 303 of the CWA, which includes federal water quality standards and provisions for establishing Total Maximum Daily Loads (TMDLs). Section 401 of the CWA requires issuing a Section 401 Water Quality Certification for activities that involve depositing fill or excavating in navigable waters or associated wetlands. The certification states that the project is consistent with federal discharge requirements and the aquatic protection requirement of state law. In Washington State, EPA has delegated its CWA authority to the Department of Ecology, including issuing NPDES permits and Section 401 Water Quality Certification and establishing TMDLs.

Section 404 of the CWA regulates the discharge of dredged or fill material into waters of the U.S., which include wetlands as well as navigable waterways. The Corps implements Section 404 of the CWA.

#### ***Relationship to the HPA Program***

As stated earlier, the objective of the CWA is to restore and maintain the chemical, physical, and biological integrity of the navigable waters of the United States. Provisions of the CWA are protective of fish life, but CWA does not regulate all aspects of a hydraulic project that would affect fish life. In this way, the CWA intersects with the HPA, but the HPA is not redundant with the CWA. HPAs regulate aspects of hydraulic projects affecting fish life that are not regulated through the CWA.

#### **1.5.5 Forest Practices Act**

The Forest Practices Act (FPA) provides for managing public and private commercial forest lands in Washington to balance maintenance of a viable forest products industry with the need to protect natural resource attributes. These attributes include forest soils, fisheries, wildlife, water quantity and quality, air quality, recreation, and scenic beauty (RCW 76.09.010). Forest practices include all practices related to growing, harvesting, and processing timber, including such activities as road construction and maintenance, thinning, salvage, harvesting, reforestation, brush control, and application of fertilizers and pesticides. The FPA is administered by DNR through the forest practice rules (Title 222 WAC).

The FPA was amended in 1999 to incorporate the Forests and Fish Law. The Forests and Fish law was developed in response to federal ESA listing of salmon and steelhead and is considered an integral part of the state's salmon recovery strategy. The Forests and Fish Law contains requirements for state lands and private forestland owners to maintain or improve salmon habitat and water quality. Among the provisions of the law are requirements for improved road culverts to facilitate fish passage, enhanced road construction practices to reduce erosion and sedimentation, and enlarged stream buffers to provide better shading. The Forests and Fish Law was also negotiated to assure compliance under the CWA, particularly in light of the many impaired listings (303(d)) on forest lands.

### ***Relationship to the HPA Program***

During the 2012 legislative session, 2ESSB 6406 amended the FPA and the Hydraulic Code Rules to integrate fish protection standards contained within the current Hydraulic Code Rules into forest practices rules. All forest practices hydraulic projects (FPHPs) are now regulated under forest practices rules.

The amended statutes also require WDFW to establish procedures for the concurrence review process. Within this process, WDFW habitat biologists review and provide concurrence or non-concurrence on whether FPHPs meet specific criteria defined in 2ESSB 6406.

2ESSB 6406 states that when WDFW proposes changes to the Hydraulic Code Rules *“that would affect state or private forest landowners and impose restrictions or burdens on forest practices beyond those contemplated in the FFR...”*, WDFW must invoke the adaptive management process as outlined in Appendix M of the Forest and Fish Report. This provides the Forest Practices Policy Committee an opportunity to a review and comment on the proposed new Hydraulic Code Rule as part of the normal rule-making process. Once the Hydraulic Code Rules are adopted by the Fish and Wildlife Commission, the Forest Practices Board must incorporate changes to the FPHP fish protection standards into the Forest Practices rules.

### **1.5.6 Cultural Resources**

Several federal and state laws protect archaeological sites from disturbance by construction activities. These laws include the federal Archaeological Resource Protection Act of 1979 and Archaeological and Historic Preservation Act of 1974; Washington State Executive Order 05-05, chapter 27.44 RCW (Archaeological Sites and Resources), chapter 25-48 WAC (Archaeological Excavation and Removal Permit), and chapter 25-46 WAC (Registration of Historic Archaeological Resources on State-Owned Aquatic Lands).

Hydraulic projects often include excavation and other ground-disturbing activities in riparian and marine areas, which have a higher likelihood of presence of historic and cultural resources. Thus, it is important that proponents of hydraulic projects comply with regulations that protect cultural resources.

The Washington State Department of Archaeology and Historic Preservation (DAHP) works with project proponents to ensure compliance with various cultural resource regulations. (DAHP 2014)

#### ***Archaeological Site Alteration and Excavation Permit (Ch. 25-48 WAC):***

A permit issued by the DAHP must be obtained prior to any excavation or other actions that will alter, dig into, deface, or remove archaeological resources, skeletal remains, non-Indian or Native Indian graves, cairns, or glyptic records. DAHP should be contacted before beginning a project. The agency can help determine if historic or archaeological sites or graves would be affected. A historic/archaeological excavation assessment may be required. In addition, the status of any sites or structures listed in or eligible for listing in the State or National Register of Historic Places or Local Landmark designation may need to be determined. Plans for protection or mitigation measures may be a condition of any permit issued. More information can be found at <http://www.dahp.wa.gov/archaeological-permitting>.

### ***National Historic Preservation Act Section 106***

The DAHP and affected tribes must be consulted when projects are subject to review under Section 106 of the National Historic Preservation Act of 1966 (NHPA). Projects associated with federal undertakings must comply with the act. This includes projects using federal funding, including funding passed through a state or local agency; projects requiring license for the use of federal lands; or projects requiring permits issued by a federal agency. The NHPA requires all applicable projects identify cultural resources and obtain an opinion from DAHP on the site's significance and the impact of the project on the site. DAHP and affected tribes are consulted to help determine if the site has been surveyed, if there are identified historical resources on-site, and if the property is listed or eligible for listing on the National Register of Historic Places.

If projects will adversely affect property that meets National Register criteria, DAHP will participate in finding acceptable ways to avoid or mitigate that adverse effect. The federal agency involved is responsible for initiating and completing Section 106 review.

### ***Relationship to the HPA Program***

As mentioned above, projects requiring HPAs are more likely than non-HPA projects to be located where ground disturbance can reveal artifacts from Washington's rich Native American cultures. Project proponents are responsible to work with DAHP to identify and protect cultural resources.

### **1.5.7 Role of the Hydraulic Code Authority**

Local, state, and federal agencies may have jurisdiction over the same project. At each jurisdictional level, priorities and legal mandates determine the resources protected and the extent of the protection that is applied. Mitigation requirements also vary according to the agencies' protection priorities and legal mandates. As a result, regulatory efforts may share intentions or have entirely different habitat protection objectives.

The HPA fills a unique niche because it is the only permit issued solely to protect fish life. In many cases, the HPA is the only permit required for hydraulic projects in streams too small to be considered a shoreline of the state or navigable waters. These projects do not undergo a Critical Area Ordinance review because a shoreline or other land use application is not required by the local government. For hydraulic projects that receive a Shoreline Substantial Development Permit Exemption (SSDE) often the only permitting requirement is to obtain an HPA and perhaps a Corps Permit.

Ranching, farming, and silviculture activities are exempt from a Corps Section 404 permit. If the hydraulic project requires a Corps permit (Section 404 or Section 10) often the Corps will not make a final permit decision until local or state permits, including the HPA, are issued. If the hydraulic project requires a Corps permit, a Section 401 water quality certification is also required. In many cases, an HPA must be obtained before an Ecology Section 401 certification is issued. However, this is not the case for many of the Nationwide Permits that have a pre-approved Section 401 Water Quality Certification. The Corps issues nationwide permits for fifty types of projects that are similar in nature and have minimal individual or cumulative impacts. To receive a nationwide permit, hydraulic projects must comply with

the General Conditions listed in the document.<sup>2</sup> Usually the provisions in an HPA are more specific to the construction of a hydraulic project than the general conditions in a nationwide permit. As a result, the HPA provides added fish protection especially for non-ESA-listed state priority fish and shellfish species.

In accordance with Section 7 of the ESA, the Corps must consult with the Services on any work proposed in an application, including nationwide permits that may affect an ESA-listed species or its designated critical habitat. The Services provide the Corps with conservation measures to protect federally listed fish species. However, the Services do not recommend conservation measures to the Corps to protect other Washington state priority fish and shellfish species and their habitats. This is the unique purpose of the HPA.

## **1.6 Stakeholder and Public Involvement**

WDFW has involved the public and stakeholders in developing the updated Hydraulic Code Rules. WDFW formed a Stakeholder Advisory Group to provide comments on an initial draft of the Hydraulic Code Rules. This group included eighteen representatives from the construction industry, non-governmental organizations, state and federal agencies, and tribes<sup>3</sup>. This group met eight times between October 31 and the end of December, 2011, receiving presentations on and discussing issues relating to one or two specific aspects of the Hydraulic Code Rules at each meeting. The group engaged in policy discussions about the proposed changes and the impacts to their interests, and commented on revised rule proposals prepared by WDFW. Those rule documents were also posted on the WDFW web site for comment by any reader.

During this pre-rulemaking period, three separate drafts (versions) of the proposed rule changes were posted on the WDFW website along with forms to comment on the drafts. The fourth draft accompanied the September 2013 Draft PEIS. Version 6 of the rules accompanied the 2014 Supplemental Draft PEIS. A final version of the proposed rule changes is based on comments received through September 15, 2014 on Version 6 of the rules and the Supplemental Draft PEIS. This final PEIS has been issued in the last week of October 2014. The Fish and Wildlife Commission will consider adopting the final draft rules in November 2014.

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<sup>2</sup> User's Guide for Nationwide Permit in Washington State is available at <http://www.nws.usace.army.mil/Portals/27/docs/regulatory/NWPs/2012%20NWP%20Users%20Guide.pdf>

<sup>3</sup> Participants in this stakeholder process are identified in Appendix C.

Following is a timeline for events in the sequence of compliance with the Administrative Procedures Act (APA), and State Environmental Policy Act (SEPA).

- July 28, 2011 A Pre-proposal Statement of Inquiry (CR-101) was filed by WDFW as WSR 11-16-050, announcing WDFW’s intent to seek changes in the Hydraulic Code rule. This was the first step in the rulemaking process under the Administrative Procedure Act.
  
- June 22, 2012 WDFW issued a joint Declaration of Significance for the HPA rulemaking action and a SEPA scoping notice. Comments on the scoping notice were taken through July 16, 2012.  
  
WDFW received thirty-one comment documents. Generally, comments provided detailed suggestions for how rule changes should address specific problems or situations, or ways the proposals should not be changed from existing rules. Few commenters stated a preference among the alternatives presented, although a leaning towards the preferred alternative was deduced from the overall tone of the comments provided.
  
- October 2013 WDFW released, on October 1, a Draft Programmatic Environmental Impact Statement (Draft PEIS) outlining potential impacts of the proposed rule changes. Version 4 of the proposed rule changes was also made available in October 2013. Public comment was taken on both the Draft PEIS and proposed rule changes from October 1 through November 15, then extended through December 13, 2013. The following public meetings were also held:

DATE	TIME	LOCATION
10/17/2013	6:00 PM – 8:00 PM	WDFW Mill Creek Regional Office 16018 Mill Creek Blvd Mill Creek, WA 98012
10/23/2013	6:00 PM – 8:00 PM Mineral Prospecting Focus	Natural Resources Building Capitol Campus 1111 Washington Street SE Olympia, WA 98501 Natural Resource Building Room 172
10/24/2013	6:00 PM – 8:00 PM	Natural Resources Building Capitol Campus 1111 Washington Street SE Olympia, WA 98501 Natural Resource Building Room 172
10/28/2013	6:00 PM – 8:00 PM	Center Place 2426 N Discovery Place Spokane Valley, WA 99216

10/29/2013	6:00 PM – 8:00 PM	Grant County Public Works 124 Enterprise St SE Ephrata, WA 98823
10/30/2013	6:00 PM – 8:00 PM	Moxee City Hall 255 W Seattle Ave Moxee, WA 98936
11/4/2013	6:00 PM – 8:00 PM	Water Resources Center 4600 S.E. Columbia Way Vancouver, WA 98661

December 2013 - June 2014 WDFW reviewed public comments on both the proposed rule changes and on the EIS. More stakeholder discussions resulted in moving the rules from Version 4 through Version 5 to Version 6 during this time. In response to comments, WDFW was also preparing a Supplemental Draft PEIS during this time.

July 2, 2014 WDFW filed a Notice of Proposed Rulemaking (CR-102) providing public notice of the proposed rule changes (Version 5) and the opportunity to comment on those changes.

July 16, 2014 The Washington State Register (WSR 14-14-133) published the proposed rules changes, staff-recommended additional rule refinements, the CR-102, and an APA-required Small Business Economic Impact Statement. The Supplemental Draft PEIS was also released on this date.

Version 6 of the rules included rule changes processed through Version 5 (“OTS-6463.1”) plus last-minute changes recommended by staff pursuant to ongoing stakeholder discussions (“WDFW staff Recommended Amendments to OTS-6463.1”). Both these rule documents were published in WSR 14-14-133. WDFW staff continued to meet with stakeholders and tribes through the summer to clarify and revise the proposed rules as necessary.

A comment deadline of August 15 was set, and the public was notified that comments received by August 1 would be provided to the Fish and Wildlife Commission at the August 8 meeting.

August 2014 The Washington Fish and Wildlife Commission, a nine-member citizen panel that sets WDFW policy, held a public hearing on the proposed rule changes on August 8. Written comments received during the early part of the comment period were summarized for the commission. The commission did not take action to adopt the proposed rules changes at the August 8 meeting.

WDFW extended the rule and EIS comment deadline through September 15, 2014.

September-October 2014 WDFW reviewed and developed responses to comments and revised the EIS to its Final version. Comments on Version 6 of the rules were compiled into a staff-recommended set of changes for the FWC to consider in November.

November 7-8, 2014      The Washington Fish and Wildlife Commission is expected to consider adoption of the proposed changes to the state's Hydraulic Code rules at their November 7-8 scheduled meeting.

Refer to the FWC web site for more information about this meeting:

WDFW has met one-on-one with Tribes and interested stakeholders to discuss the rule update on an ad-hoc basis since the first CR-101 was filed in 2011. Stakeholders requesting to meet with WDFW included Washington Association of Counties, Association of Washington Cities, Association of Washington Business, Washington Forest Protection Association, Ports Association, Washington Department of Transportation, Ecology, and DNR, and members of the environmental community. WDFW Has welcomed input on the proposed rule changes, accepting input on suggested changes continuously since 2011.

## **1.7 How to Read this Document**

This EIS is organized into five chapters, with three appendices

**Chapter 1** provides background information on the Hydraulic Code Rules update process; the purpose and need for the action; summary of comments on the Supplemental Draft PEIS, statutory authority, related permits, actions, and laws; and a description of public involvement.

**Chapter 2** presents a description of the No Action Alternative (existing rule), Proposed Rule Changes Alternative, Alternative 3 (Additional Protection for the Natural Environment”), and Alternative 4 (“Additional Protection for the Built Environment”). The chapter also summarizes how the alternatives were developed and describes alternatives eliminated from detailed evaluation.

**Chapter 3** describes the affected environment and existing conditions.

**Chapter 4** describes the potential impacts and benefits of the four alternatives.

**Chapter 5** lists the references used in compiling this EIS.

**Appendix A** provides comments and responses for the Draft PEIS, Supplemental Draft PEIS, and Version Four and Six of the proposed rules.

**Appendix B** provides species listed under state or federal Endangered Species Act.

**Appendix C** provides the names of participants in the Fall 2011 stakeholder work group.

## Chapter 2 Alternatives

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The purpose of the action is to update the Hydraulic Code Rules for consistency with changes to the statute, to adequately reflect evolving fish science, and to incorporate improved project design and construction technology. The diversity of tribal, stakeholder, and public concerns and interests makes it challenging to develop comprehensive rule changes that meet the purpose and need of this project. The Final PEIS evaluates four alternatives for changes to the Hydraulic Code Rules: Alternative 1 - No Action, consisting of the Current Rules found in chapter 220-110 WAC; Alternative 2 – WDFW-proposed rule changes (preferred alternative); Alternative 3 - Increased Protection of Fish Life, which includes more restrictions to protect fish life; and Alternative 4 - Increased Protection for the Built Environment, which reduces restrictions in order to reduce project costs.

Alternative 2 (WDFW-proposed rule changes) is preferred for many reasons. This alternative represents over six years of work by WDFW and tribal/stakeholder representatives, including one-on-one and group discussions, and six rounds of draft rule review. Alternative 2 tries to balance all those competing needs and also improves alignment with the current statute. Alternatives 3 and 4 are included for Fish and Wildlife Commission consideration because they reflect the diverse array of public comments about the appropriate level of fish protection/restrictions the rules should impose on hydraulic projects.

This chapter describes the four alternatives and the process used to formulate the alternatives and includes tables that compare the alternatives. This chapter also discusses alternatives that were considered but eliminated from further study.

### 2.1 Formulation of Alternatives

As described in Chapter 1, WDFW began to revise the Hydraulic Code Rules in 2006 as part of developing a Habitat Conservation Plan (HCP) to provide long-term certainty of ESA compliance related to agency permitting action. Although work on the HCP ended in 2012, WDFW has remained committed to moving forward to improve Hydraulic Code Rules to incorporate more current scientific and technical knowledge to better protect fish life, to increase certainty for applicants, and to streamline the HPA approval process.

The Stakeholder Advisory Group assembled by WDFW provided input on how to balance protection of fish with economic impacts. The group reviewed a first draft of the revised rules in late 2011. The rule revisions evaluated in this Supplemental Draft PEIS incorporate comments from the advisory group and other public, tribal, and stakeholders on the subsequent second, third, and fourth drafts.

WDFW's participation in the *Lean Process* led to procedural improvements to HPA application processing and efficiency of implementing the Hydraulic Code Rules. The *Lean Process* is an internal review process used throughout state government to deliver essential services with innovation, efficiency, and integrity. The *Lean Process* uses a standard set of principles, methods, and tools to identify efficiencies. HPA system upgrades and efficiencies will allow WDFW staff to provide applicants with up-front and on-the-ground assistance before and during project development.

### **2.1.1 Bringing Hydraulic Code Rules Up To Date**

Several changes to hydraulic code statutes have occurred since the last comprehensive Hydraulic Code Rule update in 1994 (Table 2-1). In some cases, current rules are incomplete with respect to current statute. As stated in Chapter 1, updating the rules to better align with current statute is one important purpose for the Hydraulic Code Rules update.

In addition, new information about the impacts of hydraulic projects on fish life and habitat has become available since the last rule update, and technology to address those impacts has advanced significantly. The proposed action to update the Hydraulic Code Rules is intended to take advantage of that information and those advances.

Finally, the organization of the existing rules is not user friendly because procedural information and information relevant to a particular project type appears in several different sections. The proposed revision reorganizes the rules to follow a logical progression and to consolidate rules for each project type.

#### **2.1.1.1 Statute and Rules**

The state Legislature gave the department the responsibility to preserve, protect, and perpetuate all fish and shellfish resources of the state. To help achieve that goal, the Legislature passed a state law in 1943 called *Protection of Fish Life*. The law (now recorded in state statute, the *Revised Code of Washington*, as chapter 77.55 RCW) has been amended since it was originally enacted; however, the basic authority has been retained. Now titled *Construction projects in state waters*, the law can be accessed at: [apps.leg.wa.gov/RCW/default.aspx?cite=77.55](https://apps.leg.wa.gov/RCW/default.aspx?cite=77.55)).

The RCW also gives state agencies the authority to issue regulations to administer state laws. These regulations (the Washington Administrative Code, or WAC) represent the most fundamental level of legal requirement in Washington State. The WAC codifies these regulations and arranges them by subject and agency. chapter 220-110 WAC *Hydraulic code rules* establishes regulations for administration of the permit program involving construction of hydraulic projects or performance of other work that will use, divert, obstruct, or change the natural flow or bed of any of the salt or fresh waters of the state. The Hydraulic Code Rules also sets forth procedures for obtaining an HPA. This WAC chapter incorporates criteria generally used by WDFW to review and condition hydraulic projects so they are protective of fish life.

Table 2-1 details the changes to chapter 77.55 RCW since the last Hydraulic Code Rule update in 1994. Table 2-7 details recommended rule changes received from commenters that can't be implemented by the Fish and Wildlife Commission because they are inconsistent with current statute.

**Table 2-1 Changes to Hydraulic Code Statutes since 1994**

YEAR	BILL NO.	CURRENT RCW	TOPIC	Changes
1995	SB 5633	77.55.081	Aquatic Plant control	The Hydraulic Code (then RCW 75.20) was amended to exempt activities conducted solely for the removal or control of spartina and the removal or control of purple loosestrife by handheld tools or equipment from the need of an HPA. The bill further instructs the department to develop a pamphlet describing means of removing or controlling aquatic noxious weeds that fall under the authority of the Hydraulic Code for which no formal HPA is required – the pamphlet serving as the department’s permit.
1995	ESSB 5616	77.55.171	Watershed restoration projects — Permit processing	A new section was added to the Hydraulic Code (currently RCW 77.55.171) specifically directing the department to process applications for qualified restoration projects in compliance with the act, codified as RCW 89.08.450 through 89.08.510.
1995	ESHB 2793	77.55.191	Columbia R. anadromous fish sanctuary	This statute implements Referendum 45 by shifting the responsibility of the director relative to the Columbia River anadromous fish sanctuary to duties of the Fish and Wildlife Commission.
1996	SHB 2167	77.55.151	Permit issued to a marina or marine terminal for regular maintenance activities	SHB 2167 (1996) and ESHB 2866 (2002), taken together, affirm that regular maintenance activities for marinas and marine terminals should be covered by a renewable five-year HPA. SHB 2167 initially provided for the above for marinas; ESHB 2866 added marine terminals. “Marina” and “marine terminal” are defined.
1996	SB 6305	77.55.241,301	Off-site mitigation	This statute acknowledges that hydraulic projects might require mitigation and that such mitigation might be most beneficial if applied in locations away from the project site. The statute also provides that if an applicant proposes off-site mitigation, and the department either does not approve it or conditions it such that it is impractical, the applicant may submit the permit application to the Hydraulic Appeals Board for approval.
1997	SSB 5442	77.55.021(8),(10)	Expediting repairs during flooding emergency	This statute provides that the county legislative authority as well as the department may declare an emergency or imminent danger.

YEAR	BILL NO.	CURRENT RCW	TOPIC	Changes
1997	SHB 1565	77.55.091	Small scale prospecting and mining	This statute directs the department to, by June 30, 1997, and in cooperation with recreational miners and other interested parties, develop rules for small scale prospecting and mining and incorporate them into an updated Gold and Fish pamphlet. The pamphlet update was completed, and then revised in 2009.
1997	E2SHB 1866	77.55.101	Environmental excellence program	This statute directs agencies to “solicit and support” development of environmental excellence program agreements that use innovative environmental measures or strategies to achieve environmental results more effectively or efficiently than traditional methods. Such agreements would then not be subject to the environmental standards and other features of the environmental regulations that otherwise would be applied by the agreeing agency(ies). Details of such agreements are specified. It also provides that the terms and provisions of an environmental excellence program agreement under chapter RCW 43.21K supersede any standard, limitation, rule, or order of the Hydraulic Code.
1997	SSB 5327	77.55.111,121	Habitat incentives program	That portion of the act currently codified as RCW 77.55.111 provides that when evaluating an application for an HPA from an applicant who has entered into a habitat incentives agreement, the department must comply with the terms of that agreement. That portion codified as RCW 75.55.121 provides that the department and DNR shall implement a habitat incentives program to allow private landowners to enhance fish or wildlife habitat on their property and receive state regulatory certainty that future decisions relative to HPA applications will be based on the conditions present on the landowner’s property at the time of the agreement.
1997	ESSB 5273	77.55.251	Mitigation plan review; Compensatory mitigation for aquatic resources	This act finds that the state lacks a clear policy for mitigation of wetlands and aquatic habitat for infrastructure projects (e.g., highways, rail lines, utility corridors, and hydroelectric facilities). It requires state regulatory agencies to consider alternative mitigation proposals for infrastructure projects that are timed, designed, and located in a manner so as to provide equal or better biological functions and values as compared to traditional on-site, in-kind mitigation. The Act further provides procedures for project proponents to propose

YEAR	BILL NO.	CURRENT RCW	TOPIC	Changes
				<p>mitigation plans for compensatory mitigation within a watershed that guarantee long-term viability of biological functions and values, provide for long-term monitoring, and are consistent with an approved planning process. The Act provides that the department and Ecology may not require mitigation be on or near the project site if the proposed plan provides equal or better biological functions and values within the watershed or bay as compared to existing conditions for the target resources or species identified in the mitigation plan; it also lists the factors upon which this review is to be based. The plan is to be approved through Memoranda of Agreement with either the WDFW or Ecology.</p> <p>The Act further provides that, upon request, the department and Ecology must follow the guidance provided in this act for review of mitigation proposals. It also provides that if there are multiple requests for such mitigation proposal review, the departments may each schedule review to conform to available budgets.</p> <p>The Act is codified as Sections 90.74.005 through 90.74.030 and 75.55.251 RCW.</p>
1997	ESSB 5273	77.55.271	Sediment capping and dredging and navigation and maintenance dredging	<p>Section 5 of this act provides that the department may not require mitigation for sediment dredging or capping actions that result in a cleaner aquatic environment and equal or better habitat functions and values if the actions are taken under a state or federal cleanup action. It also provides that the act is not to be construed to require habitat mitigation for navigation and maintenance dredging of existing channels and berthing areas. This section is codified as RCW 77.55.271.</p>
1998	ESSB 6328	77.15.300,310,320	Fish and wildlife enforcement code	<p>This statute eliminates from what is now codified as RCW 77.57.010 (requiring that water diversions be screened) the provision that “it is unlawful to fail to comply with the section”. Similarly, it eliminates from what is now RCW 77.57.030 (requiring that a dam or other stream obstruction be equipped with a fishway) a similar provision. It also eliminates from what is now RCW 77.55.021 provisions that working without an HPA or failure to follow permit conditions is a gross misdemeanor and subject to abatement.</p>

YEAR	BILL NO.	CURRENT RCW	TOPIC	Changes
				It further amends the Columbia River anadromous fish sanctuary section (now RCW 77.55.191): (1) previously it was stated that it is unlawful to construct a dam greater than twenty-five feet high within the sanctuary. As amended, the department shall not issue an HPA to construct a dam greater than twenty-five feet high. (2) Previously, except by order of the Commission, a person was precluded from diverting water from the rivers and streams in quantities to reduce the flow below the annual average low flow. As amended, a person shall not do so (but the order is not required).
1998	SSHB 2879	77.55.181	Fish habitat enhancement project — Permit review and approval process	This statute provides a streamlined process for reviewing fish habitat enhancement projects submitted on a JARPA form that meets certain described conditions, including size or threshold tests. Within 45 days, the department must issue an HPA either with or without conditions, deny approval, or make a determination that the project does not meet all the conditions for streamlined review. Local governments are notified of the project, have 15 days to comment, and are precluded from requiring permits or charging fees. Any person aggrieved by a permit decision may appeal to the Hydraulic Appeals Board. The statute identifies eligibility requirements. The department is directed to develop size or scale threshold tests to evaluate if the scale of the project raises concerns regarding public health and safety. Further, the department is directed to continue to improve the permitting review and approval process.
2000	ESHB 2078	77.55	Fish and Wildlife	Combined HPA statutes for Departments of Wildlife and Fisheries from Title 75 to Title 77 RCW into one code; No substantive changes
2001	SSB 5961	77.55.181	Fish habitat enhancement project — Permit review and approval process	Technical corrections only, to reflect the change from Title 75 to Title 77 RCW.
2002	ESHB 2866	77.55.021 & .231	Minor modifications to plans/work timing	ESHB 2866 further provides that an HPA must contain provisions allowing for minor modification to plans and specifications without requiring reissuance of the HPA (or an additional fee).
2002	ESHB 2866	77.55.231	HPAs must be reasonably conditioned	Ch. 77.55 RCW had an existing provision that approvals shall not be unreasonably withheld. With ESHB 2866, the legislature finds that hydraulic

YEAR	BILL NO.	CURRENT RCW	TOPIC	Changes
				<p>project approvals should ensure that fish life is properly protected, but conditions attached to the approval of these permits must reasonably relate to the potential harm that the projects may produce.</p> <p>This part of ESHB 2866, now codified as RCW 77.55.231, provides that conditions must be “reasonably related to the project” and that “the department may not impose conditions that attempt to optimize conditions for fish life that are out of proportion to the impact of the proposed project.”</p>
2002	ESHB 2866	77.55.151	Permit issued to a marina or marine terminal for regular maintenance activities	ESHB 2866 added marine terminals to provisions earlier adopted for marina maintenance (1996 SHB2167).
2002	ESHB 2866	77.55.161	Storm water discharges	<p>ESHB 2866 also restricts department authority with respect to issuing HPAs for storm water projects. If the project is in an area covered by a National Pollution Discharge Elimination System (NPDES) municipal general permit, an HPA is required only for the actual construction of the outfall and any associated structures. Secondary impacts from the discharge may not be addressed in HPA permitting.</p> <p>In areas not covered by a NPDES municipal general permit, the department may additionally condition HPAs with respect to discharge rates to protect fish life from the direct hydraulic impacts of the discharge under certain conditions.</p> <p>The department may not require changes to the project design above the ordinary high water line. The department may recommend but not specify the measures required to meet prescribed discharge rates.</p>
2002	SSB 6513	77.55.041	Derelict fishing, crab, and other shellfish gear — Removal	This law exempts from provisions of the Hydraulic Code the removal of derelict fishing gear if removed according to guidelines that the department is directed to develop in conjunction with the DNR and the Northwest Straits Commission. These guidelines have been developed.
2002	ESSB 6594	77.55.071	Siting secure transition facilities	Expired 6/30/2009
2003	E2SHB 1418	77.55.281	Fishways on certain agricultural drainage facilities	RCW 77.57.030 requires that dams or other obstructions across or in a stream be provided with a fishway. Section 1 of E2SHB 1418 defines “other

YEAR	BILL NO.	CURRENT RCW	TOPIC	Changes
				<p>obstructions” to exclude “tide gates, flood gates, and associated man-made agricultural drainage facilities that were originally installed as part of an agricultural drainage system on or before May 20, 2003, or the repair, replacement, or improvement of such tide gates or flood gates.”</p> <p>Section 2 of the Act precludes the department from requiring, as a condition of an HPA, a fishway on a tide gate, flood gate, or other associated man-made agricultural drainage facility if such fishway was not originally installed as part of an agricultural drainage system existing on or before the effective date of the section.</p> <p>Section 2 further provides that “any condition requiring a self-regulating tide gate to achieve fish passage in an existing hydraulic project approval under this section may not be enforced.”</p> <p>The law also directs the Fish and Wildlife Commission and county legislative authorities to form a task force to develop a plan that addresses intertidal habitat goals contained in a limiting factors analysis for specific geographic areas. The process is underway in Skagit County.</p>
2003	ESSB 5776	77.55.301	Hydraulic Appeals Board	<p>This law reforms the process of appeal and review of final permit decisions made by state agencies and local governments for qualifying economic development projects. What is now RCW 77.55.301(6) was amended such that any person aggrieved by a permit decision under RCW 77.55.021 may appeal to the Office of Administrative Hearings or Hydraulic Appeals Board (HAB). However, the newly formed Environmental and Land Use Hearings Board hears qualifying economic development projects, in accordance with RCW 43.21L.</p>
2005	2SHB 1346	77.55 & 77.57	RCW 77.55 reorganized and recodified	<p>This act reorganizes and re-codifies the Hydraulic Code (chapter 77.55 RCW) and moves the statutes regarding fishways and stream obstructions to a separate chapter (chapter 77.57 RCW)</p>
2005	2SHB 1346	77.55.201	Landscape management plan	<p>2SHB 1346 provides that a landscape management plan approved by WDFW and DNR under RCW 76.09.350(2) shall serve as a permit for the life of the plan if fish are selected as one of the public resources for coverage under such a plan.</p>

YEAR	BILL NO.	CURRENT RCW	TOPIC	Changes
2005	2SHB 1346	77.55.211	Informational brochure	WDFW, Ecology, and DNR were directed by 2SHB 1346 to jointly develop an informational brochure that describes when permits and any other authorizations are required for flood damage prevention and reduction projects, and recommends ways to best proceed through the various regulatory permitting processes.
2005	2SHB 1346	77.55.221	Flood damage repair and reduction activities — Five-year maintenance permit agreements	2SHB 1346 further directs WDFW to, at the request of a county, develop five-year maintenance permit agreements (“General permits”), consistent with comprehensive flood control management plans adopted under the authority of RCW 86.12.200, or other watershed plan approved by a county legislative authority, to allow for work on public and private property for bank stabilization, bridge repair, removal of sandbars and debris, channel maintenance, and other flood damage repair and reduction activity under agreed-upon conditions and times without obtaining permits for specific projects.
2008	SHB 2525	77.55.021	Chronic Danger HPA	Established a Chronic Danger HPA and directs WDFW to review using the Habitat Restoration Project criteria. County declares “Chronic Danger” if flooding has impacted property, structures, water supply system, septic system, or access to roads due to flooding for two consecutive years. Property located on a marine shoreline is not included under this provision. In cases of chronic danger, WDFW is directed to issue a permit, upon request, for work necessary to abate the chronic danger by removing any obstructions, repairing existing structures, restoring banks, restoring road or highway access, protecting fish resources, or protecting property. Permit requests are subject to the review process established in RCW 77.55.181(3) as if it were a fish habitat improvement project.
2012	2SHB 1346	77.55.151	Defines regular maintenance activities	2SHB 1346 made changes to several programs that provide for the protection of the state's natural resources. Relative to the Hydraulic code, definitions for Emergency, Expedited, Multiple site, Forest Practices, and Pamphlet HPAs were added, along with the provisions to implement them.  The Act also defines regular maintenance activities for marinas or marine

YEAR	BILL NO.	CURRENT RCW	TOPIC	Changes
				terminals.
2012	E2SSB 6406	77.55.231	Application fee for a hydraulic project permit or permit modification — Projects exempt from fees — Disposition of fees. (Conditions reasonably related was in 2002, see SSB 6513)	E2SSB 6406 adds an HPA application fee and the mechanisms necessary to implement the fee.
2012	E2SSB 6406	77.55.331	Hydraulic project approval account	This is an element necessary to implement the HPA application fee.
2012	E2SSB 6406	77.55.341	Department to prepare and distribute information to the public	E2SSB 6406 directed WDFW to prepare and distribute technical and educational information to the general public to assist the public in complying with the requirements of this chapter.
2012	E2SSB 6406	77.55.351	Department to develop system to provide access to hydraulic project approval applications	E2SSB 6406 directed WDFW to develop a system to provide local governments, affected tribes, and other interested parties with access to hydraulic project approval applications. Led to development of the new online application and review system "APPS"
2012	E2SSB 6406	77.55.361	Limitations of chapter to a forest practices hydraulic project — Adoption of rules for concurrent review process — Department's duties regarding chapter 76.09 RCW	E2SSB 6406 directed WDFW and DNR to integrate the current HPA requirements for Forest Practices HPAs with the Forest Practices Rules administered by the DNR Forest Practices Board. Once integration has occurred, WDFW is permitted (“may”) review and provide comments on any forest practices application (“concurrence review”). Special timelines are applied to DNR’s approval (or disapproval) of a forest practices application that is subject to WDFW concurrence review.
2012	E2SSB 6406	77.55.371	Memorandum of agreement to implement integration of hydraulic project approvals into forest practices applications — Interagency contract	E2SSB 6406 also directed WDFW and DNR to enter into and maintain a memorandum of agreement between the two agencies that describes how to implement integration of hydraulic project approvals into forest practices applications per HPA/FPA integration.

### ***2.1.1.2 Science Supporting the Proposed Alternative***

In 1999, the Governor's Salmon Recovery Office commissioned the Aquatic Habitat Guidelines workgroup, led by WDFW, to develop design criteria for hydraulic projects to benefit salmon recovery. Beginning in 1999, WDFW has reviewed over 1,900 peer-reviewed journal articles, books, symposia literature, theses/dissertations, and technical reports for information applicable to hydraulic projects. Most of the literature has been synthesized into White Papers associated with AHG and HCP development and incorporated into the Aquatic Habitat Guidelines (AHG) Program documents.. Because the most recent compilation of information was completed in 2008, WDFW conducted additional review of literature available after 2008 and incorporated the relevant information into the proposed rule changes. The *Science References for HPA Rulemaking* includes citations for both the original compilation work as well as incorporation of some of the literature made available between 2008 and development of the proposed rules. While science and technological advances have certainly been made since 2008 (with many new papers becoming available in the past year alone), the individual white papers and the Compiled White Papers document remain the best information available to us for topics relevant to HPA rulemaking.

Interpreting the results of scientific studies for practical application requires a series of steps of compilation and distillation. Key information from the science references was consolidated into AHG "White Papers" for each major topic or project type. The White Papers were intended for agency use in developing the commissioned Aquatic Habitat Guidelines. "Guidelines" technical assistance manuals were created for certain project types by integrating the information represented in the white papers with information gained from practical experience with new technological methods to protect fish life. Implementation of projects that incorporate material from the guidelines technical manuals has further helped HPA Program biologists improve provisions related to specific project types, and some of those updated provisions are being recommended for adoption into the Hydraulic Code Rules.

Many of the science references reviewed for the AHG work provided information useful in revising the Hydraulic Code Rules. We also found many scientific studies to support provisions that extend beyond WDFW's authority, and those are not reflected in the proposed rules. The Aquatic Habitat Guidelines incorporate a broad range of science so that the project proponent can voluntarily choose designs that work best for fish and the specific project objectives and conditions. The rules provide a foundation from which to build a permitted project; the guidelines show proponents how they can optimize projects for fish recovery if that is their objective.

Section 34.05.271 RCW (also known as Substitute House Bill 2261 that passed the Washington Legislature in 2014) includes specific requirements for how WDFW should identify and make available the sources of information used in taking a significant agency action like HPA rulemaking. Citations for each reference reviewed by the AHG workgroup, and by HPA staff for rulemaking, are available in a document entitled "Science References for HPA Rulemaking," which is available on the WDFW HPA web site. Each reference is categorized for its level of peer review pursuant to subsection (1)(c) of that statute.

The following subsections describe the white papers and guidelines documents so readers can understand more about the kind of work that has gone into the guidelines documents and science behind rule proposals.

### ***2.1.1.3 Aquatic Habitat Guidelines (AHG) Program Documents***

In 1999, WDFW, Ecology, and Washington State Department of Transportation (WSDOT) were asked to develop guidelines using an integrated approach to marine, freshwater, and riparian habitat protection and restoration. In 2001, the United States Army Corps of Engineers (Corps) and the United States Fish and Wildlife Service (FWS) became participating agencies in the program. The AHG steering committee includes technical and science experts from each of these agencies, as well as representatives from Washington Department of Natural Resources (DNR) and the Recreation and Conservation Office (RCO).

The overarching goal of the AHG program is to develop technical assistance for proper management of activities affecting Washington's marine, freshwater, and riparian ecosystems so that fully functioning aquatic and riparian habitat can be protected and restored. The AHG Program provides technical assistance that shows people how to apply the best science and technology to design and construct several types of hydraulic projects. AHGs do not replace existing regulatory requirements; they are intended to provide technical guidance supporting regulatory consistency.

The guidelines documents produced by the AHG program are issued in a series of manuals. The manuals were written by a team that includes professionals from private industry, WDFW, Ecology, WSDOT, Corps, FWS, DNR, RCO, and technical consultants, and address many aspects of aquatic and riparian habitat protection and restoration. The guidelines documents not only help WDFW biologists provide technical assistance to HPA project developers and applicants, but also target audiences like local, state, and federal agencies; elected officials; engineering consultants and designers; volunteer restoration groups; and landowners. The Guidelines facilitate the consistent application of best science and good practices for project designs, construction, and operations affecting aquatic systems. Because of this approach, Washington State is a leader in bringing fish-protective project design information to a broad list of customers.

The Guidelines include surveys of background science and literature; summary of policy and regulatory issues; site and vicinity environmental assessment procedures; project design processes, standards, and details; and case studies that highlight site-specific issues. As such, the Guidelines address ecosystem-based strategies for aquatic and riparian habitat restoration and protection. The Guidelines are intended to support salmon and other aquatic habitat restoration projects, facilitate consistency in permitting of habitat restoration projects and other in-stream projects across the state, and provide a scientific basis for any future changes to current policies or regulations governing aquatic resource and habitat management in the state. AHG guidelines completed since 1999 are listed in Table 2-2. A few of the guidelines documents remain in draft form, pending additional work. Even guidelines that are considered "draft" provide useful information for project developers, so WDFW provides these drafts to the public on the WDFW web site.

#### **2.1.1.4 “White Papers”**

“White Papers” are the surveys of current best science and technical practices supporting the AHG guidelines documents. White papers are documents intended for use by agency staff. The White Papers compile technology and scientific information gleaned from a thorough review of literature about impacts to fish life from common hydraulic project types and ways to prevent or mitigate those impacts.

The white papers were written by recognized experts (listed above) and built on a set of guiding principles developed by professional resource managers, engineers, and other practitioners (Nelson and Bates 2000). White papers were initially prepared to support development of the AHG, and were adapted to support development of an HCP for the HPA program. Although the papers focused on impacts to ESA-listed fish life, the white papers provide a solid scientific foundation upon which to improve the rules for protecting fish life in general. The objectives of the HCP white papers were to:

- Compile the best available scientific information related to potential impacts on fish, their habitats, and associated ecological processes resulting from constructing, operating, and maintaining fish passage structures.
- Use this scientific information to estimate the circumstances, mechanisms, and risks of harm potentially or likely to result from constructing hydraulic projects.
- Identify appropriate and practicable measures, including policy directives, conservation measures, and best management practices (BMPs), to avoid and/or minimize the risk of harm to fish life.

Five principal tasks were performed in preparing the white papers:

1. Existing WDFW rules and guidance were reviewed to identify current knowledge and practices relating to analyzing the impacts to fish life associated with HPA-permitted activities.
2. A literature review was conducted to compile information reflecting the current state of knowledge of potential impacts to fish life associated with HPA-permitted activities.
3. The compiled documents were reviewed to determine which potential pathways of impact were addressed in each document. Most of the collected documents considered impacts to salmonids or to physical habitat features, although some documents identified impacts to other fish life and their habitats.
4. Impact mechanism analyses were prepared for each of the principal impact pathways and for each principal type of HPA-permitted activity.
5. A draft version of the white paper was prepared and reviewed by technical specialists on the consultant team, then submitted to WDFW for comments. The white paper was amended based on the comments and the white paper was finalized.

In some cases, white papers were not finalized because agency work leading to finalization was re-directed to other priorities. Information provided in the white papers was used to develop AHG guidelines and recommendations regardless of the “draft” or “final” status of the white paper. Likewise, both draft and final guidelines documents provide valuable assistance to project developers. White papers compiled in support of the AHG are listed in Table 2-3.

In 2006 and 2007, WDFW contracted with Anchor Environmental, Herrera Environmental Consultants, Jones & Stokes Associates, and R2 Resource Consultants to further develop eleven “white papers” documenting the state of the science on a range of topics related to HPAs. Each of the white papers was prepared as a stand-alone document. Therefore, many of the white papers contained information specific to a particular activity as well as more general information pertinent to more than one kind of HPA-permitted activity. In 2008, WDFW staff organized, condensed, and edited the information from ten of the eleven white papers, along with comments received during peer reviews, into the *Compiled White Paper for Hydraulic Project Approval Habitat Conservation Plan* (HCP) located on the WDFW website at [wdfw.wa.gov/publications/00803/](http://wdfw.wa.gov/publications/00803/). The eleventh white paper, *Small-scale mineral prospecting* (available at [wdfw.wa.gov/publications/00293/](http://wdfw.wa.gov/publications/00293/)), was not included in this consolidation because the Washington Administrative Code (WAC) sections covering mineral prospecting were updated independently and adopted by the Washington Fish and Wildlife Commission in 2008.

A list of White Papers and peer-review comments that were consolidated into the *Compiled White Paper for Hydraulic Project Approval Habitat Conservation Plan* are in Table 2-4. WDFW used the scientific and design information in the white papers and information from a review of applicable science published since 2008 to help develop the specific standards for hydraulic projects in the proposed Hydraulic Code Rules represented in Alternative 2.

Tables 2-2, 2-3, and 2-4 provide lists of the guideline and white paper documents completed since 1999. Pursuant to RCW 34.05.271, which includes specific requirements for how WDFW should identify and make available the sources of information used in taking a significant agency action, the category of level of review for each reference is identified.

**Table 2-2 Aquatic Habitat Guidelines Documents**

Note: Tables 2-2, 2-3, and 2-4 each include a column showing the RCW 34.05.271 category indicating the level of peer review for each document. Refer to Table 5-1 for key to categories.

DOCUMENT CITATION	SUMMARY	RELATED HPA ACTIVITIES	34.05.271 RCW CATEGORY
<b>Marine Shoreline Design Guidelines</b> , 2014, by Johannessen, J., A. MacLennan, A. Blue, J. Waggoner, S. Williams, W. Gerstel, R. Barnard, R. Carman, and H. Shipman (WDFW) (available at <a href="http://wdfw.wa.gov/publications/01583/">wdfw.wa.gov/publications/01583/</a> )	These guidelines are specific to shore armor – the construction of bulkheads and seawalls in Puget Sound. Created to inform responsible management of Puget Sound shores for the benefit of landowners and shared natural resources. Provides a comprehensive framework for site assessment and alternatives analysis to determine the need for shore protection and identify the technique that best suits the conditions at a given site. For use by project designers, planners, contractors, and landowners.	<ul style="list-style-type: none"> <li>• Common saltwater construction provisions</li> <li>• Bank protection in saltwater areas</li> </ul>	iii (External peer review)
<b>Water Crossing Design Guidelines</b> (formerly Design of road culverts for fish passage), 2013, prepared by Bob Barnard, Ken Bates, Bruce Heiner, Pat Klavas, Don Ponder, Pad Smith and Pat Powers (WDFW) (available at <a href="http://wdfw.wa.gov/publications/01501/">wdfw.wa.gov/publications/01501/</a> )	This document promotes water crossing selection and design process intended to have the least effect on the natural processes that create and support the stream structure in which fish live and migrate. The geomorphic approach to design is generally based on readily-measured characteristics of the natural channel in the adjacent reaches. Five different water crossing design methods are covered including no-slope culverts, stream simulation culverts, bridges, temporary culverts, and hydraulic design fishways.	<ul style="list-style-type: none"> <li>• Common freshwater construction requirements</li> <li>• Water crossing structures</li> <li>• Fish passage improvement structures</li> </ul>	iii
<b>Stream Habitat Restoration Guidelines</b> , 2012, by Michelle Cramer (WDFW) (available at <a href="http://wdfw.wa.gov/publications/01374/">wdfw.wa.gov/publications/01374/</a> )	This document includes design criteria and practical considerations for the design of stream restoration projects including site, reach, and watershed assessment, problem identification, general approaches to restoring stream and riparian habitat, factors to consider in identifying and selecting an approach, approaches to solving common restoration objectives, and stream and riparian habitat restoration techniques. Watershed processes and conditions that shape stream channels, stream ecology, geomorphology, hydrology, hydraulics, planting considerations and erosion control, and construction considerations are also presented in the main text and appendices.	<ul style="list-style-type: none"> <li>• Channel relocation and realignment</li> <li>• Large woody material placement, repositioning, and removal in freshwater areas</li> </ul>	iii
<b>Integrated Streambank Protection Guidelines (ISPG)</b> , 2003, prepared by Michelle Cramer, P.E., and Ken Bates, P.E (WDFW) and Dale Miller; Karin Boyd; Lisa Fotherby, Ph.D., P.E.; Peter Skidmore and Todd Hoitsma, (Inter-Fluve, Inc.) (available at <a href="http://wdfw.wa.gov/publications/00046/">wdfw.wa.gov/publications/00046/</a> )	This document includes design considerations for integrated stream bank protection: mechanisms and causes of failure (general bank erosion, scour, avulsion, mass failure, subsurface entrainment), shear, vertical distribution of shear, habitat, risk, site- and reach-based assessment, channel form, channel process (equilibrium and disequilibrium). Mitigation considerations: duration and extent of impacts (construction, lost habitat, etc.), lost opportunity, emergency bank protection. Project design includes decision-making matrices for selecting appropriate solutions.	<ul style="list-style-type: none"> <li>• Common freshwater construction requirements</li> <li>• Streambank protection and lake shoreline stabilization</li> </ul>	iii
<b>Protecting Nearshore Habitat and Functions in Puget Sound</b> , June 2010 Revised Edition, by EnviroVision, Herrera Environmental, and Aquatic Habitat Guidelines Working Group (available at <a href="http://wdfw.wa.gov/publications/00047/">wdfw.wa.gov/publications/00047/</a> )	This document is specific to shoreline modifications - a variety of structures and activities intended to adapt the shoreline environment for human use. Summarizes current science on important nearshore habitats and processes, data and recommendations to support avoidance and minimization of impacts and mitigating cumulative impacts.	<ul style="list-style-type: none"> <li>• Common saltwater construction provisions</li> <li>• Bank protection in saltwater areas</li> <li>• Residential and public recreational docks, piers, ramps, floats, watercraft lifts and buoys in saltwater areas</li> </ul>	iii

DOCUMENT CITATION	SUMMARY	RELATED HPA ACTIVITIES	34.05.271 RCW CATEGORY
<p><b><i>Land Use Planning for Salmon, Steelhead and Trout: A land use planner's guide to salmonid habitat protection and recovery</i></b>, October 2009, by Katie Knight (available at <a href="http://wdfw.wa.gov/publications/00033/">wdfw.wa.gov/publications/00033/</a>)</p>	<p>This document provides guidance for protecting salmon habitat through GMA and SMA plans and regulations. Document translates current best available science into planning tools, including model policies and regulations to protect salmonids and prevent further degradation or loss of habitat. For use by land use planners of local jurisdictions.</p>	<ul style="list-style-type: none"> <li>• Freshwater habitats of special concern</li> <li>• Common freshwater construction provisions</li> <li>• Large woody material placement, repositioning, and removal in freshwater areas</li> <li>• Channel relocation and realignment</li> <li>• Water crossings</li> <li>• Saltwater habitats of special concern</li> <li>• Common saltwater construction provisions</li> <li>• Streambank protection and lake shoreline stabilization</li> <li>• Bank protection in saltwater areas</li> <li>• Residential and public recreational docks, piers, ramps, floats, watercraft lifts and buoys in saltwater areas</li> </ul>	<p>iii</p>
<p><b><i>Fishway Guidelines for Washington State</i></b> (draft), 2000, prepared by Ken Bates (WDFW) (available at <a href="http://wdfw.wa.gov/publications/00048/">wdfw.wa.gov/publications/00048/</a>)</p>	<p>This document includes pre-design data requirements and considerations, design considerations for fishway entrances (entrance pool and transportation channel design), auxiliary water systems (diffuser and water supply source), fish ladders (pool and weir fishways, vertical slot fishways, roughened channels, hybrid fishways), fishway exit, tributary fish passage, upstream juvenile fish passage, flap gates, fishway flow control. Design considerations: types and applications of screen styles (drums, fixed plate, traveling, pump screens, infiltration galleries), screen design criteria, hydraulic design, fish bypass systems, debris management.</p>	<ul style="list-style-type: none"> <li>• Fish passage improvement structures</li> </ul>	<p>iii</p>
<p><b><i>Fish Protection Screen Guidelines for Washington State</i></b> (draft), 2000, by Ken Bates (WDFW) and Bryan Nordlund (NMFS) (available at <a href="http://wdfw.wa.gov/publications/00050/wdfw00050.pdf">wdfw.wa.gov/publications/00050/wdfw00050.pdf</a>)</p>	<p>This document provides design criteria and practical considerations for the design of fish protection screens including applications for hydroelectric facilities, irrigation, municipal, and industrial water withdrawal projects. The major objective of the fish screen guidelines is to highlight important design elements that should be considered in the design of fish screens at water diversion projects to provide the safe downstream passage of migrating juvenile salmonids.</p>	<ul style="list-style-type: none"> <li>• Common freshwater construction provisions</li> <li>• Water diversions and intakes</li> </ul>	<p>iii</p>

Table 2-3 White Papers Developed in Support of Aquatic Habitat Guidelines

DOCUMENT CITATION	SUMMARY	RELATED HPA ACTIVITIES	34.05.271 RCW CATEGORY
White Paper - <i>Protection of Marine Riparian Functions in Puget Sound</i> , Washington, 2009, prepared by Washington Sea Grant (available at <a href="http://wdfw.wa.gov/publications/00693/">wdfw.wa.gov/publications/00693/</a> )	This document summarizes the literature review and scientific and technical information on riparian areas and makes recommendations to help protect marine riparian functions from common human activities.	<ul style="list-style-type: none"> <li>• Saltwater habitats of special concern</li> <li>• Common saltwater construction provisions</li> </ul>	iii
White Paper - <i>Marine and Estuarine Shoreline Modification Issues</i> , 2001, prepared by Gregory Williams and Ronald Thom, Battelle Marine Sciences Laboratory (available at <a href="http://wdfw.wa.gov/publications/00054/">wdfw.wa.gov/publications/00054/</a> )	This white paper provides an assessment of the literature associated with design and ecological considerations associated for hard and soft structural shoreline stabilization (bulkheads, rock revetments, groins, jetties, beach nourishment, biotechnology), non-structural stabilization (setbacks, vegetation management, and ground/surface water management), estuary and shoreline restoration, tidegates, outfalls, and artificial reefs.	<ul style="list-style-type: none"> <li>• Saltwater habitats of special concern</li> <li>• Common saltwater construction provisions</li> <li>• Bank protection in saltwater areas</li> <li>• Artificial aquatic habitat structures</li> <li>• Outfall and tide and flood gate structures in saltwater areas</li> </ul>	iii
White Paper - <i>Over-water Structures: Marine Issues</i> , 2001, prepared by Barbara Nightingale and Charles Simenstad, University of Washington, School of Aquatic and Fishery Sciences, Seattle, Washington (available at <a href="http://wdfw.wa.gov/publications/00051/">wdfw.wa.gov/publications/00051/</a> )	This white paper examines and summarizes the literature associated with the following structures: docks, piers, floats, rafts, log rafts, boat ramps, hoists, launches, boat houses, houseboats and associated moorings, marinas, driving and removing pilings, trash booms and trash racks, work barges, and dolphins.	<ul style="list-style-type: none"> <li>• Common saltwater construction provisions</li> <li>• Residential and public recreational docks, piers, ramps, floats, watercraft lifts and buoys in saltwater areas</li> <li>• Marinas and terminals in saltwater areas</li> </ul>	iii
White Paper - <i>Over-water Structures: Freshwater Issues</i> , 2001, prepared by José Carrasquero (Herrera Environmental Consultants) (available at <a href="http://wdfw.wa.gov/publications/00052/">wdfw.wa.gov/publications/00052/</a> )	This white paper examines and summarizes the literature associated with the following structures: docks, piers, floats, rafts, log rafts, boat ramps, hoists, launches, boat houses, houseboats and associated moorings, marinas, driving and removing pilings, trash booms and trash racks, work barges, and dolphins.	<ul style="list-style-type: none"> <li>• Common freshwater construction provisions</li> <li>• Residential and public recreational docks, piers, ramps, floats, watercraft lifts and buoys in freshwater areas</li> <li>• Marinas and terminals in freshwater areas</li> </ul>	iii
White Paper - <i>Treated Wood Issues in Marine and Freshwater Environments</i> , 2001, prepared by Ted Posten, Battelle Marine Sciences Laboratory (available at <a href="http://wdfw.wa.gov/publications/00053/">wdfw.wa.gov/publications/00053/</a> )	This white paper examines and summarizes research on chemical contaminants in treated wood and the potential for adverse impact to fish life. The assessment focused on field-oriented studies that evaluate the spatial and temporal distribution of toxic constituents used in treated wood.	<ul style="list-style-type: none"> <li>• Common freshwater construction provisions</li> <li>• Streambank protection and lake shoreline stabilization</li> <li>• Residential and public recreational docks, piers, ramps, floats, watercraft lifts and buoys in freshwater areas</li> <li>• Marinas and terminals in freshwater areas</li> <li>• Common saltwater construction provisions</li> <li>• Bank protection in saltwater areas</li> <li>• Residential and public recreational docks, piers, ramps, floats, watercraft lifts and buoys in saltwater areas</li> <li>• Marinas and terminals in saltwater areas</li> </ul>	iii
White Paper - <i>Channel Design</i> , 2001, prepared by Dale Miller (Inter-Fluve, Inc.) (Available at <a href="http://wdfw.wa.gov/publications/00057/">wdfw.wa.gov/publications/00057/</a> )	This white paper examines and summarizes the state of current knowledge and technology pertaining to channel design methods and practices including design and ecological considerations for new channels, habitat restoration and mitigation, channel relocation and realignment, channel modification for habitat and stability, placement of large woody debris (including removal and relocation), placement of boulders (including smaller rocks and substrate), off-channel ponds (rearing and other), off-channel channels (new floodplains, high-flow bypass), gradient control structures, habitat enhancement activities and structures.	<ul style="list-style-type: none"> <li>• Common construction provisions in freshwater areas</li> <li>• Channel relocation and realignment</li> <li>• Large woody material placement, repositioning, and removal in freshwater areas</li> </ul>	iii

DOCUMENT CITATION	SUMMARY	RELATED HPA ACTIVITIES	34.05.271 RCW CATEGORY
White Paper - <i>Ecological Issues in Floodplain and Riparian Corridors</i> . 2001 prepared by Susan Bolton and Jeff Shellberg, University of Washington (available at <a href="http://wdfw.wa.gov/publications/00058/">wdfw.wa.gov/publications/00058/</a> )	This white paper examines and summarizes the literature pertaining to the current state of knowledge on the physical and biological effects of alluvial river channelization, channel confinement, and various channel and floodplain modifications.	<ul style="list-style-type: none"> <li>• Streambank protection and lake shoreline stabilization</li> <li>• Channel relocation and realignment</li> <li>• Large woody material placement, repositioning, and removal in freshwater areas</li> </ul>	iii
White Paper - <i>Dredging Activities: Marine Issues</i> . 2001 prepared by Barbara Nightingale and Charles Simenstad, University of Washington (available at <a href="http://wdfw.wa.gov/publications/00055/">wdfw.wa.gov/publications/00055/</a> )	This white paper examines and summarizes the literature pertaining to the current state of knowledge on the hydrologic, ecological, and biological effects (physical and chemical) of construction and maintenance dredging in saltwater areas associated with navigation channels, marinas, sediment clean-up, as well as other commercial developments.	<ul style="list-style-type: none"> <li>• Dredging in saltwater areas</li> </ul>	iii
White Paper - <i>Dredging and Gravel Removal in Marine and Freshwater Environments</i> , 2002 prepared by G. Mathias Kondolf, Matt Smeltzer, and Lisa Kimball (Center for Environmental Design Research)(available at <a href="http://wdfw.wa.gov/publications/00056/">wdfw.wa.gov/publications/00056/</a> )	This white paper examines and summarizes the literature pertaining to the current state of knowledge on the hydrologic and ecological effects of in-channel bar scalping, risks and avulsions associated with floodplain pits, freshwater dredging, instream sediment sumps and gravel pits, gravel removal.	<ul style="list-style-type: none"> <li>• Dredging in freshwater areas</li> <li>• Sand and gravel removal</li> </ul>	iii

Table 2-4 White papers and two peer review documents consolidated into the Compiled White Paper for Hydraulic Project Approval Habitat Conservation Plan

DOCUMENT CITATION	SUMMARY	RELATED HPA ACTIVITIES	34.05.271 RCW CATEGORY
<b>Bank Protection and Stabilization White Paper (draft)</b> , 2006, by Jones & Stokes Associates, Anchor Environmental, L.L.C., and R2 Resource Consultants (available at <a href="http://wdfw.wa.gov/publications/00996/">wdfw.wa.gov/publications/00996/</a> )	Compiles and summarizes existing scientific information on bank protection and stabilization projects including hard approaches, soft approaches and integrated approaches.	<ul style="list-style-type: none"> <li>• Common freshwater construction provisions</li> <li>• Streambank protection and lake shoreline stabilization</li> <li>• Common saltwater construction provisions</li> <li>• Bank protection in saltwater areas</li> </ul>	iii
<b>Overwater Structures and Non-Structural Piling White Paper</b> , 2006, prepared by Jones & Stokes Associates, Anchor Environmental, L.L.C., and R2 Resource Consultants (available at <a href="http://wdfw.wa.gov/publications/00995/">wdfw.wa.gov/publications/00995/</a> )	Compiles and summarizes existing scientific information on docks, piers, floats, ramps, wharfs, ferry terminals and other structures that are supported above or float on the water. This includes all structural or supporting pilings. Non-structural pilings are individual, non-structural pilings, power poles, transmission lines, conduits, etc. Pilings are driven into the stream, lake, and ocean bed.	<ul style="list-style-type: none"> <li>• Common freshwater construction provisions</li> <li>• Residential and public recreational docks, piers, ramps, floats, watercraft lifts and buoys in freshwater areas</li> <li>• Common saltwater construction provisions</li> <li>• Residential and public recreational docks, piers, ramps, floats, watercraft lifts and buoys in saltwater areas.</li> </ul>	iii
<b>Water Crossings White Paper</b> , prepared for Washington Department of Fish and Wildlife by Jones & Stokes Associates, in association with Anchor Environmental, L.L.C. and R2 Resource Consultants (2006) (available at <a href="http://wdfw.wa.gov/publications/00994/">wdfw.wa.gov/publications/00994/</a> )	Compiles and summarizes existing scientific information on water crossings and utility lines.	<ul style="list-style-type: none"> <li>• Common freshwater construction provisions</li> <li>• Water crossings</li> <li>• Utility crossings in freshwater areas</li> </ul>	iii
<b>Shoreline Modifications White Paper (draft)</b> , 2007, by Herrera Environmental Consultants, Inc. (available at <a href="http://wdfw.wa.gov/publications/01003/">wdfw.wa.gov/publications/01003/</a> )	Compiles and summarizes existing scientific information on jetties, breakwaters, groins, and bank barbs.	<ul style="list-style-type: none"> <li>• Common saltwater construction provisions</li> <li>• Marinas and terminals in saltwater areas.</li> </ul>	iii
<b>Marinas and Shipping/Ferry Terminals White Paper (draft)</b> , 2007, by Herrera Environmental Consultants, Inc. (available at <a href="http://wdfw.wa.gov/publications/00997/">wdfw.wa.gov/publications/00997/</a> )	Compiles and summarizes existing scientific information on marina and terminal structures and the area of alteration.	<ul style="list-style-type: none"> <li>• Common freshwater construction provisions</li> <li>• Marinas and terminals in freshwater areas</li> <li>• Common saltwater construction provisions</li> <li>• Marinas and terminals in saltwater areas</li> </ul>	iii
<b>Fish Passage White Paper (draft)</b> , prepared for Washington Department of Fish and Wildlife by Herrera Environmental Consultants, Inc. in consultation with K. Bates (Working draft 2008, not to be cited)	Compiles and summarizes existing scientific information on construction, maintenance, and operation of fish passage structures.	<ul style="list-style-type: none"> <li>• Common freshwater construction provisions</li> <li>• Fish passage improvement structures</li> </ul>	iii
<b>Fish Screens White Paper (draft)</b> , prepared for Washington Department of Fish and Wildlife by Herrera Environmental Consultants, Inc. (Working draft March 2008, not to be cited)	Compiles and summarizes existing scientific information on construction and maintenance of fish screens.	<ul style="list-style-type: none"> <li>• Common freshwater construction provisions</li> <li>• Water diversions and intakes</li> </ul>	iii
<b>Channel modifications (draft)</b> , 2007, prepared by Herrera Environmental Consultants, Inc. (available at <a href="http://wdfw.wa.gov/publications/01002/">wdfw.wa.gov/publications/01002/</a> )	Compiles and summarizes existing scientific information on channel modification projects including dredging, gravel mining and scalping, sediment capping and channel creation and alignment.	<ul style="list-style-type: none"> <li>• Common freshwater construction provisions</li> <li>• Dredging in freshwater areas</li> <li>• Sand and gravel removal</li> <li>• Channel relocation and realignment</li> <li>• Common saltwater construction provisions</li> <li>• Dredging in saltwater areas</li> </ul>	iii

DOCUMENT CITATION	SUMMARY	RELATED HPA ACTIVITIES	34.05.271 RCW CATEGORY
<b>Flow Control Structures White paper</b> (draft), prepared for Washington Department of Fish and Wildlife by Herrera Environmental Consultants, Inc. (Working draft December 2007, not to be cited)	Compiles and summarizes existing scientific information on flow control structures.	<ul style="list-style-type: none"> <li>• Common freshwater construction provisions</li> <li>• Outfalls in freshwater areas</li> <li>• Water diversions and intakes</li> <li>• Common saltwater construction provisions</li> <li>• Outfalls and tide and flood gate structures in saltwater areas</li> </ul>	iii
<b>Habitat Modifications</b> (draft), 2007, by Herrera Environmental Consultants, Inc. (available at <a href="http://wdfw.wa.gov/publications/00998/">wdfw.wa.gov/publications/00998/</a> )	Compiles and summarizes existing scientific information on beaver dam removal and modification, large woody debris placement, movement and removal, spawning substrate augmentation, in-channel and off-channel habitat creation and modification, riparian planting, restoration and enhancement, wetland creation, restoration and enhancement, beach nourishment, reef creation, restoration and enhancement, and eelgrass and other aquatic vegetation creation, restoration and enhancement.	<ul style="list-style-type: none"> <li>• Common freshwater construction provisions</li> <li>• Beaver dam management</li> <li>• Saltwater habitats of special concern</li> <li>• Common saltwater construction provisions</li> <li>• Artificial aquatic habitat structures</li> </ul>	iii
<b>Peer Review of White Papers Prepared in 2006 for the Hydraulic Project Approval Habitat Conservation Plan: Small-Scale Mineral Prospecting, Overwater Structures and Non-Structural Pilings, Bank Protection and Stabilization, and Water Crossings</b> , 2007, prepared by Duane Phinney, PH2 Consulting Services LLC (available at <a href="http://wdfw.wa.gov/publications/01005/">wdfw.wa.gov/publications/01005/</a> )	Five to seven experts in each topic were selected to conduct the review. Those comments for each white paper were combined and provided to each reviewer of that white paper. A meeting was convened for each white paper after reviewers had time to review the comments of other reviewers. Discussion of important topics for each white paper at these post-review meetings elicited additional comments.	<ul style="list-style-type: none"> <li>• Common freshwater construction provisions</li> <li>• Streambank protection and lake shoreline stabilization</li> <li>• Residential and public recreational docks, piers, ramps, floats, watercraft lifts and buoys in freshwater areas</li> <li>• Mineral prospecting</li> <li>• Common saltwater construction provisions</li> <li>• Residential and public recreational docks, piers, ramps, floats, watercraft lifts and buoys in saltwater areas</li> <li>• Bank protection in saltwater areas</li> </ul>	Not applicable – this is a document in which peer-review comments are provided, and not a science reference itself
<b>Peer Review of White Papers Prepared in 2007 for the Hydraulic Project Approval Habitat Conservation Plan: Channel Modifications, Fish Passage, Flow Control Structures, Habitat Modifications, Fish Screens, Marinas And Shipping/Ferry Terminals, and Shoreline Modifications</b> , 2007, prepared by Duane Phinney, PH2 Consulting Services LLC (available at <a href="http://wdfw.wa.gov/publications/01004/">wdfw.wa.gov/publications/01004/</a> )	Three to five experts reviewed individual white papers. (Two to four Washington Department of Transportation experts reviewed five of the white papers. This is considered as one review.) Those comments for each white paper were combined by white paper section and provided to each reviewer of that white paper. The Peer Review Coordinator subsequently convened a post-review meeting for each white paper.	<ul style="list-style-type: none"> <li>• Common freshwater construction provisions</li> <li>• Marinas and terminals in freshwater areas</li> <li>• Fish passage improvement structures</li> <li>• Water diversions and intakes</li> <li>• Dredging in freshwater areas</li> <li>• Sand and gravel removal</li> <li>• Channel relocation and realignment</li> <li>• Beaver dam management</li> <li>• Outfalls in freshwater areas</li> <li>• Common saltwater construction provisions</li> <li>• Saltwater habitats of special concern</li> <li>• Marinas and terminals in saltwater areas</li> <li>• Dredging in saltwater areas</li> <li>• Artificial aquatic habitat structures</li> <li>• Outfalls and tide and flood gate structures in saltwater areas</li> </ul>	Not applicable, see above

**2.1.1.5 Rule Section Reorganization**

The proposed rule changes represent not only changes in substance of the provisions, but also represent a reorganization of the material to help readers better find the information they need. Rules are reorganized by topic and project type. Table 2-5 shows how the material is laid out, provides a cross-reference between the old and new (proposed) WAC sections, and describes the content of each (proposed) section.

**Table 2-5 Rule Section Reorganization**

NEW WAC SECTION NAME	NEW WAC SECTION NUMBER	EXISTING WAC NUMBER
<p><b>Purpose</b></p> <p>Purpose statement gives an overview of the intent of the rules.</p>	220-660-010	220-110-010
<p><b>Instructions for using chapter</b></p> <p>Describes how an applicant would follow the common technical provisions for hydraulic projects and how the department uses the provisions to condition HPAs and also refers applicants to WDFW guidance documents for help.</p>	220-660-020	New section
<p><b>Definitions</b></p> <p>Defines the terms used in the chapter.</p>	220-660-030	220-110-020
<p>Applicability of hydraulic project approval authority</p> <p>Describes when an HPA is required and the activities that do not require a person to get an HPA.</p>	220-660-040	220-110-035
<p><b>Procedures</b></p> <p>Describes the procedures applicants follow to apply for an HPA. It also describes the procedures the department follows to review applications and make permit decisions. Guidance for applying for an HPA is provided on the department’s website (wdfw.wa.gov).</p>	220-660-050	220-110-030,031
<p><b>Integration of hydraulic projects approvals and forest practices applications</b></p> <p>Describes the Integration of hydraulic project approvals and forest practices applications</p>	220-660-060	220-110-085
<p><b>Changes to hydraulic project approval technical provisions</b></p> <p>Describes the established conditions that allow the department to add, modify, or delete technical provisions in these proposed rules.</p>	220-660-070	220-110-032
<p><b>Mitigation requirements for hydraulic projects</b></p> <p>Defines how the department will apply mitigation sequencing to protect fish life.</p>	220-660-080	New Section
<p><b>Technical provisions</b></p> <p>Combines the introductions to the freshwater and saltwater technical provision sections into a single</p>	220-660-090	220-110-040,230

NEW WAC SECTION NAME	NEW WAC SECTION NUMBER	EXISTING WAC NUMBER
introduction section; no substantive changes to the existing language.		
<p><b>Freshwater habitats of special concern</b></p> <p>Freshwater habitats of special concern provide essential functions to the developmental life histories of twenty-two priority fish species. Priority fish species include species that are listed under state and federal endangered species laws, and species of recreational, commercial, or tribal importance.</p>	220-660-100	New section
<p><b>Authorized work times in freshwater areas</b></p> <p>The department authorizes work during less critical times of the year to reduce the risk of impacts to fish life at certain life stages. In-water work is not allowed during critical periods of the year unless a person can implement mitigation measures to eliminate risk to fish life.</p>	220-660-110	New section
<p><b>Common freshwater construction provisions</b></p> <p>Common freshwater construction provisions can apply to many hydraulic projects. However, only applicable common construction provisions will be applied to a specific hydraulic project. Common construction provisions include job site access, equipment use, construction materials, sediment and erosion control containment, in-water work area isolation, fish removal, job site repair, and revegetation.</p>	220-660-120	New section
<p><b>Streambank protection and lake shoreline stabilization</b></p> <p>Streambank protection and lake shoreline stabilization structures are permanent or temporary structures constructed to reduce or prevent streambank and shoreline erosion. Structural techniques armor the bank with material such as riprap, concrete, or timber. Biotechnical techniques attempt to mimic natural processes by using live plantings, rootwads, and large woody material (LWM). Biotechnical techniques usually impact fish life less than structural techniques. Some projects integrate both structural and biotechnical techniques.</p>	220-660-130	220-110-050,223
<p><b>Residential and public recreational docks, piers, ramps, floats watercraft lifts, and buoys in freshwater areas</b></p> <p>Docks are structures that are fixed to the shoreline but floating upon the water. Piers are fixed, pile-supported structures. Floats (rafts) are floating structures that are moored, anchored, or otherwise secured in the water that are not directly connected to the shoreline. A ramp is a gangway that connects a pier or shoreline to a float and provides access between the two. Pilings usually associated with these structures are timber, steel, reinforced concrete, or composite posts that are driven, jacked, or cast vertically into the bed. A watercraft lift is a structure that lifts boats and personal watercraft out of the water. A mooring buoy is a structure floating on the surface of the water that is used for private and commercial vessel moorage.</p>	220-660-140	220-110-060
<p><b>Boat ramps and launches in freshwater areas</b></p> <p>A boat ramp or launch is a sloping, stabilized roadway or entry point constructed on the shoreline for launching boats from vehicular trailers or by hand for primitive boat launch designs. Ramps and launches extend into the water at a slope of typically twelve to fifteen percent and are typically oriented perpendicular to the shoreline. Ramp and launch widths vary with intended use, whereas the length often depends on the</p>	220-660-150	220-110-224

NEW WAC SECTION NAME	NEW WAC SECTION NUMBER	EXISTING WAC NUMBER
slope of the shoreline and seasonal water levels. Ramps and launches are usually constructed in areas protected from wind and waves with access to deep water close to shore. Construction materials commonly consist of gravel, concrete, or asphalt; they are often associated with marinas and parking lots.		
<b>Marinas and terminals in freshwater areas</b>	220-660-160	New section
A marina is a public or private facility providing vessel moorage space, fuel, or commercial services. Commercial services include overnight or live-aboard vessel accommodations (RCW 77.55.011(13)). A terminal is a public or private commercial wharf located in the navigable waters of the state and used, or intended to be used, as a port or facility for the storing, handling, transferring, or transporting of goods, or transporting passengers and vehicles, to and from vessels (RCW 77.55.011(14)).		
<b>Dredging in freshwater areas</b>	220-660-170	220-110-130
Dredging includes removing substrate or sediment from rivers and lakes to improve vessel navigation and to maintain navigational channels and sediment traps for flow conveyance. River dredging is also used for flood abatement and to clean up contaminated sediments.		
<b>Sand and gravel removal</b>	220-660-180	220-110-140
Sand and gravel deposited by river processes is used as construction aggregate for roads and highways (base material and asphalt), pipelines (bedding), septic systems (drain rock in leach fields), and concrete (aggregate mix) for highways and buildings. In some areas, people remove aggregate mainly from river deposits, either from pits in river floodplains and terraces, or by removing gravel directly from riverbeds with heavy equipment.		
<b>Water crossing structures</b>	220-660-190	220-110-070
Water crossings are structures constructed to facilitate the movement of people, animals, or materials across or over rivers and other bodies of water. These structures include bridges, culverts, fords, and conduits; this chapter covers bridges, culverts, and fords and WAC 220-660-270 covers conduits. Generally, people use bridges to cross over larger streams and rivers, or over unstable channels; they use culverts to cross over smaller streams and they use fords when other stream crossing options would result in a greater impact to fish and their habitats.		
<b>Fish passage improvement structures</b>	220-660-200	New section
Fish passage improvement structures facilitate the passage of fish through or around a barrier. They restore upstream and downstream fish access to habitats that have become isolated by human activities such as placing culverts, dams, and other artificial obstructions.		
<b>Channel change and realignment</b>	220-660-210	220-110-080
Channel relocation may solve problems of channel encroachment and/or confinement, and foster the development of a new channel with appropriate channel morphology and healthy riparian zones. Channel relocation permanently changes the location of the channel. The new channel should be designed with bioengineered stability, rather than structural stability, so that the profile, pattern, cross-section, and bed elevation can be expected to achieve long-term natural functioning.		

NEW WAC SECTION NAME	NEW WAC SECTION NUMBER	EXISTING WAC NUMBER
<p><b>Large woody material placement, repositioning &amp; removal in freshwater areas</b></p> <p>Large woody material is trees and tree parts that enter stream channels mainly from streambank under cutting, wind throw, and slope failures. Public agencies sometimes reposition or remove large woody material to address a threat to life, the public, or property. Large woody material is also placed in streams to restore or create fish habitat.</p>	220-660-220	220-110-150
<p><b>Beaver dam management</b></p> <p>A person may need to remove, breach, or modify a beaver dam to prevent flood damage to private and public land or infrastructure. Beaver dams are normally removed using hand tools or equipment such as backhoes. An alternative to frequent dam removal is installing a beaver exclusion device. These devices prevent beavers from building a dam at the mouth or inside of culverts that blocks water flow. Installing a water level (flow) control device may be a preferred alternative to removing an established dam that has created or maintains a wetland. A person can install a water level control device to maintain a desirable beaver wetland. These devices are installed at the intended depth, extending upstream and downstream of the dam. This preserves the pond’s habitat benefits.</p>	220-660-230	New section
<p><b>Pond construction</b></p> <p>Out-of-channel ponds may be constructed for livestock watering, irrigation, fire protection, or another purpose.</p>	220-660-240	220-110-180
<p><b>Water diversions and intakes</b></p> <p>Surface water diversions are common instream features in agricultural areas where the water is used for irrigation. Throughout the state, people also divert water for other agricultural, hydropower, industrial, recreational, residential, municipal, and hatchery uses.</p>	220-660-250	220-110-190
<p><b>Outfall structures in freshwaters areas</b></p> <p>Outfalls move water from one place to another, typically to a body of water. Outfalls may convey irrigation water, stormwater, or other waste materials.</p>	220-660-260	220-110-170
<p><b>Utility crossings in freshwater areas</b></p> <p>Utility lines are cables and pipelines that transport gas, telecommunications, fiber optics, power, sewer, oil, and water lines from one side of a watercourse to the other.</p>	220-660-270	220-110-100
<p><b>Felling and yarding of timber</b></p> <p>Timber felling includes “bucking” or cutting the felled tree into short lengths and limbing the felled tree. Yarding is the process of hauling logs from the cutting area to the landing and includes skidding (dragging the logs across the ground). There are three main kinds of yarding systems: ground based, cable, and aerial logging.</p>	220-660-280	220-110-160

NEW WAC SECTION NAME	NEW WAC SECTION NUMBER	EXISTING WAC NUMBER
<p><b>Aquatic plant removal and control</b></p> <p>Aquatic plant removal and control means the physical and mechanical methods to remove or control aquatic plants. It does not address aquatic plant control using grass carp, herbicides, or water column dye.</p>	220-660-290	220-110-331 through 338
<p><b>Mineral prospecting</b></p> <p>Mineral prospecting projects excavate, process, or classify aggregate using hand-held mineral prospecting tools and mineral prospecting equipment. When prospectors locate valuable minerals through prospecting, they may attempt to recover larger quantities of the minerals using a variety of machines, including suction dredges, high bankers, and heavy equipment. The rules in this section apply to the use of hand-held mineral prospecting tools and small motorized equipment.</p>	220-660-300	220-110-200 through 206
<p><b>Tidal reference areas</b></p> <p>The department uses the following tidal reference areas to delineate segments of the state's marine shorelines. The authorized work times in saltwater areas vary by tidal reference area.</p>	220-660-310	220-110-240
<p><b>Saltwater habitats of special concern</b></p> <p>Saltwater habitats of special concern provide essential functions in the developmental life history of fish life.</p>	220-660-320	220-110-250
<p><b>Authorized work times in saltwater areas</b></p> <p>The department applies timing windows to reduce the risk of impacts to fish life at critical life stages. In-water work is not allowed during critical periods of the year unless a person can take mitigation measures to eliminate risk during critical periods.</p>	220-660-330	220-110-271
<p><b>Intertidal forage fish spawning bed surveys</b></p> <p>The department uses intertidal forage fish spawning habitat surveys to determine presence, absence, quantity, and timing of surf smelt (<i>Hypomesus pretiosus</i>) and Pacific sand lance (<i>Ammodytes hexapterus</i>) spawning. The presence of spawning may restrict project type, design, location, and timing.</p>	220-660-340	New section
<p><b>Seagrass and macroalgae habitat surveys</b></p> <p>The department has developed survey guidelines for seagrass and macroalgae habitat to improve protection of these important habitats in Puget Sound and coastal waters. The guidelines contain protocols for both preliminary and advanced surveys to help evaluate potential impacts to these habitats at project sites with various conditions.</p>	220-660-350	New section
<p><b>Common construction provisions for saltwater areas</b></p> <p>Common saltwater construction provisions can apply to many hydraulic projects. However, only applicable common construction provisions will be applied to a specific hydraulic project. Common construction provisions include job site access, equipment use, construction materials, sediment and erosion control containment, and job site repair and revegetation</p>	220-110-360	220-660-270

NEW WAC SECTION NAME	NEW WAC SECTION NUMBER	EXISTING WAC NUMBER
<p><b>Bank protection in saltwater areas</b></p> <p>A bank protection structure is a permanent or temporary structure constructed to protect or stabilize the bank. Bank protection methods are either hard or soft techniques. Soft approaches attempt to mimic natural processes by using biotechnical methods such as live plantings, rootwads and large woody material, and beach nourishment. Hard approaches armor the bank with material such as rock, concrete, or wood intended to prevent erosion of the bank. Some projects use both hard and soft approaches, but to be considered soft, the total area of the project must consist of at least 85% in aerial extent naturally-occurring materials used in ways that are consistent with the shore processes taking place in the vicinity of the project. The remaining 15% of the total project area must not interrupt sediment delivery to the beach (e.g., must not bulkhead a feeder bluff) and still be called soft. The total area extends cross-shore from MLLW to OHWL, and long-shore from a line perpendicular to the shoreline at the beginning of one end of construction to the other end.</p>	220-660-370	220-110-280
<p><b>Residential and public recreational docks, piers, ramps, floats watercraft lifts, and buoys in saltwater areas</b></p> <p>Docks are structures that are fixed to the shoreline but floating upon the water. Piers are fixed, pile-supported structures. Floats (rafts) are floating structures that are moored, anchored, or otherwise secured in the water that are not directly connected to the shoreline. A ramp is a gangway that connects a pier or shoreline to a float and provides access between the two. Pilings usually associated with these structures are timber, steel, reinforced concrete, or composite posts that are driven or jacked into the bed. A watercraft lift is a structure that lifts boats and personal watercraft out of the water. A mooring buoy is a structure floating on the surface of the water that is used for private and commercial vessel moorage.</p>	220-660-380	220-110-300
<p><b>Boat ramps and launches in saltwater areas</b></p> <p>A boat ramp or launch is a sloping stabilized roadway or entry point constructed on the shoreline for launching boats from vehicular trailers or by hand for primitive boat launch designs. Ramps and launches extend into the water at a slope of typically twelve to fifteen percent and are typically oriented perpendicular to the shoreline. Ramp and launch widths vary with intended use, and the length often depends on the slope of the shoreline and tidal amplitudes. Ramps and launches are usually constructed in protected areas with access to deep water close to shore. Construction materials commonly consist of gravel, concrete, or asphalt; they are often associated with marinas and parking lots. A railway-type boat launch consists of a pair of railroad tracks supported by pilings, and extends from the upland down to the beach.</p>	220-660-390	New section
<p><b>Marinas and terminals in saltwater areas</b></p> <p>A marina is a public or private facility providing vessel moorage space, fuel, or commercial services. Commercial services include overnight or live-aboard vessel accommodations (RCW 77.55.011(13)). A marine terminal is a public or private commercial wharf located in the navigable waters of the state and used, or intended to be used, as a port or facility for the storing, handling, transferring, or transporting of goods, passengers, and vehicles to and from vessels (RCW 77.55.011(14)).</p>	220-660-400	220-110-330

NEW WAC SECTION NAME	NEW WAC SECTION NUMBER	EXISTING WAC NUMBER
<p><b>Dredging in saltwater areas</b></p> <p>Dredging includes removing substrate to improve vessel navigation and to maintain channels. Dredging is also used to clean up contaminated sediments.</p>	220-660-410	220-110-320
<p><b>Artificial aquatic habitat structures in saltwater areas</b></p> <p>An artificial aquatic habitat structure is a structure that humans design and place to provide long-term alterations to saltwater bottom habitat. The structure is designed and located to contribute to fish and shellfish management. One example is an artificial reef.</p>	220-660-420	New section
<p><b>Outfalls and tide and flood gates in saltwater areas</b></p> <p>Outfalls move water from one place to another, typically to a body of water. Outfalls may convey stormwater, or other waste materials. Tide and flood gates are adjustable gates used to control water flow in estuary, river, stream, or levee systems.</p>	220-660-430	New section
<p><b>Utility crossing in saltwater areas</b></p> <p>Utility crossings are cables and pipelines that transport gas, telecommunications, fiber optics, power, sewer, oil, or water underneath waterbodies.</p>	220-660-440	220-110-310
<p><b>Test boring in saltwater areas</b></p> <p>Boring is used to obtain information about the physical properties of the bed. This information is often needed to design foundations for proposed structures and to repair existing structures. Test boring is also commonly used to gather information about the contamination levels of sediment proposed for dredging.</p>	220-660-450	New section
<p><b>Informal appeal of adverse administrative actions</b></p> <p>Describes the processes to informally appeal an HPA permit decision to the department's HPA Appeals Coordinator.</p>	220-660-460	220-110-340
<p><b>Formal appeal of administrative actions</b></p> <p>Describes the process to formally appeal an HPA permit decision to the Pollution Control Hearings Board.</p>	220-660-470	220-110-350
<p><b>Compliance</b></p> <p>Describes the civil compliance and criminal penalty processes.</p>	220-110-480	220-110-360

## **2.2 Alternatives**

Table 2-6 summarizes provisions for the hydraulic project rule change alternatives: Final PEIS Alternatives 2, 3, and 4. The table indicates the WAC title and section of the proposed rule, the WAC section of the existing rule, and a summary of provisions for each of the alternatives. Provisions for the rule change alternatives are described in relation to the no-action alternative (Final PEIS Alternative 1). Alternative 1 (No-Action Alternative) is not represented on these tables because no changes are proposed. In this way, Alternative 1 represents the baseline from which change is measured.

### **2.2.1 No Action Alternative 1 – Current Rule**

Under the No Action Alternative, WDFW would not update the Hydraulic Code Rules and would continue to implement the existing rules (chapter 220-110 WAC). The current rules can be accessed at: [apps.leg.wa.gov/wac/default.aspx?cite=220-110](http://apps.leg.wa.gov/wac/default.aspx?cite=220-110) . Under Alternative 1, the current rules would not be updated to better align with statutes or incorporate available fish science and technology, and the procedural and administrative requirements would not be improved.

### **2.2.2 Alternative 2 – WDFW-Proposed Rule Changes (Preferred Alternative)**

The Preferred Alternative includes changes to existing sections of the Hydraulic Code Rules, and provides new sections, new definitions, and new procedures for implementation. The updated rules are easier to read because they are organized by project type or topic. The updated rules also include explanations for the provisions for hydraulic projects by describing the fish life concerns for each type of project.

The provisions included in Alternative 2 represent the culmination of work to align with statutory changes, integrate current fish science and design technology, and improve procedural and administrative requirements. As described in Final PEIS section 1.6, changes have been made to the proposed rule changes (Preferred Alternative) based on comments received during the last review round.

Actual proposed rule change language for the Preferred Alternative is presented independently from this document in a form that complies with the APA. The rules are provided as replacement WAC sections (chapter 220-660 WAC) and, if adopted, the existing rule (chapter 220-110 WAC) will be rescinded.

### **2.2.3 Alternative 3 – Increased Protection for Fish Life**

A number of commenters on the September 2013 Draft PEIS recommended that WDFW consider alternatives that are more restrictive than the WDFW-proposed rule changes. Some commenters recommended eliminating streamlined HPA permitting processes. Others recommended the rules require compensatory mitigation for cumulative impacts or to maintain structures that do not meet current standards because the maintenance work perpetuates impacts into the future. The overall approach is more precautionary and prescriptive than the approach proposed in Alternative 2.

This alternative responds to comments to provide higher levels of protection/restriction to protect fish life. Specific aspects of this alternative are based on Tribal and environmental stakeholder input and other stakeholder and public comments.

A few of the Alternative 3 proposals are not able to be implemented by the Fish and Wildlife Commission because the topic is regulated by statute (legislated law) not rule; these are identified as such in Table 2-6.

#### **2.2.4 Alternative 4 – Increased Protection for the Built Environment**

A number of commenters on the September 2013 Draft PEIS recommended that WDFW consider alternatives that are less restrictive than the proposed rule changes. Some commenters recommended the Commissioners limit the authority that allows WDFW to issue HPAs for hydraulic projects to only those projects waterward of the ordinary high water line. Others recommended the rules provide protection only for fish and shellfish present at the work site but not their habitat. Other recommendations were made for less restrictive alternatives.

This alternative responds to comments to provide less protection/restrictions to reduce project costs. Specific recommendations in this alternative are based on comments from Federal Highway Administration, Washington State Department of Transportation, a coalition of regional road maintenance professionals, city and county public works agencies, and other stakeholders.

A few of the Alternative 4 proposals are not able to be implemented by the Fish and Wildlife Commission because the topic is regulated by statute (legislated law) not rule; these are identified as such in Table 2-6.

Again, Table 2-6 details provisions of the rule-change alternatives that differ from the existing rule (which is the no-action alternative represented by Alternative 1).

### **2.3 Proposed Rule Changes Eliminated from Detailed Study**

As described above, development of the revised Hydraulic Code Rules has included several iterations and WDFW has evaluated several different approaches to the rule revisions. The major options considered but not carried forward are described in the following sections along with the reasons for eliminating the alternatives. Generally, alternatives were eliminated because they did not meet the purpose and need for the action; that is, the alternatives below either do not update the rules to reflect evolving fish science and design technology, or do not contribute to better alignment with GMA/SMA provisions or Hydraulic Code statutes. Several of the approaches were rejected because they did not simplify the application process or increase certainty for applicants.

#### **2.3.1 Curtailment of work to develop a Habitat Conservation Plan**

As described in Chapter 1, WDFW originally began revising the Hydraulic Code Rules as part of developing an HCP. In 2011, it became apparent to the department it would take several more years to complete the HCP process that began in 2006. The grant funding received to develop the HCP was insufficient to complete the process, and re-direction of state resources from customer assistance to this activity would have been required. Re-directing those scarce field staff resources in 2013-2014 was

not feasible to WDFW. Also, in early 2012, the federal Services indicated that several types of hydraulic projects could not be covered under the HCP because some statutes in chapter 77.55 RCW prevented the department from meeting the Services' standards for an HCP. This led to the loss of support for HCP development and these combined factors led to curtailment of the project.

### **2.3.2 "Prescriptions Only" Approach**

Early in the process, WDFW considered a prescription-only alternative, which would contain only rules, as directed by RCW 77.55.081 and RCW 77.55.091 for removal or control of noxious weeds and for small scale mining and prospecting. With those two exceptions, the Hydraulic Code Rules would not include technical provisions applicable to construction activities. Instead, each proposed hydraulic project would be evaluated on a site-by-site basis. All requirements for each project, (no matter how common or routine that type of project is), would be established through an analysis of the unique conditions present at that specific site. This alternative was contained in the SEPA Scoping Notice issued in June 2012. WDFW eliminated this alternative from further consideration because the complexity and inconsistency that would result from implementing such an approach made the alternative infeasible. In addition, the approach would not provide transparency or regulatory predictability for applicants.

### **2.3.3 Procedural Alternative**

The procedural alternative would have made changes to only the Hydraulic Code Rules that were necessary because of changes to the enabling laws, including recodifications. This approach would have ensured that the rules met statutory requirements; however, it would not incorporate available science or technology, nor would it improve protection of fish life. In addition, it would eliminate the efficiencies gained through general and model HPA permitting processes.

### **2.3.4 One-Activity-at-a-Time Alternative**

This alternative proposed an approach similar to that used by WDFW to update the rules for mineral prospecting. The rules for only one activity at a time would be updated. While this approach could meet the project purpose for the selected activity, it would not improve the application process, would not improve readability of the Hydraulic Code Rules, and would not ensure that the permit program as a whole meets the regulatory standard of protecting fish life. Because of the scope of the purpose and need, this alternative was judged infeasible for this rulemaking process. It might be advantageous to employ this approach for future HPA rulemaking.

### **2.3.5 Most-Commonly-Permitted Activity**

This alternative would have changed only the sections of the Hydraulic Code Rules that cover the most-frequently permitted types of construction projects: water crossings, bank protection, and overwater structures. While this approach could have met the purpose and need for the selected activities, it would not improve the application processing or readability, nor ensure that the rules as a whole met the regulatory standard of protecting fish life.

**Table 2-6 Summary of Alternatives to Hydraulic Project Regulations (chapter 220-660 WAC)**

Note: Provisions of the Rule change alternatives (Alts. 2, 3, and 4) are detailed relative to the no-action alternative (Alternative 1) as represented in the current Hydraulic Code Rules (chapter 220-110 WAC). Provisions of existing rule are not provided on this table. Provisions denoted with \* are provisions that are inconsistent with current statute, and would require legislation.

WAC TITLE (E) EXISTING (P) PROPOSED	ALTERNATIVE 2 WDFW PROPOSED RULE CHANGES	ALTERNATIVE 3 INCREASED PROTECTION FOR THE NATURAL ENVIRONMENT	ALTERNATIVE 4 INCREASED PROTECTION FOR THE BUILT ENVIRONMENT
Technical provisions E 220-110-040 E 220-110-230 P 220-660-090	Combines the introductions to the freshwater and saltwater technical provision sections into a single introduction section; no substantive changes to the existing language.	Same as Alt. 2 (Minor or no comments)	Same as Alt. 2 (Minor or no comments)
Purpose E 220-110-010 P 220-660-010	Purpose statement intent remains the same, but narrative is restated in a more concise manner.	Same as Alt. 2 (Minor or no comments)	Amends the language to limit HPA authority to projects waterward of the ordinary high water line.
Instructions for using chapter E New section P 220-660-020	Describes how an applicant would follow the common technical provisions for hydraulic projects and how the department uses the provisions to condition HPAs; also refers applicants to WDFW guidance documents for help.	Same as Alt. 2 (Minor or no comments)	Same as Alt. 2 (Minor or no comments)
Definitions E 220-110-020 P 220-660-030	<p>Forty-six new definitions are added including the following:</p> <ul style="list-style-type: none"> <li>• The proposed definition of “Fish habitat” means habitat that is used by fish life at any life stage at any time of the year, including potential habitat that is likely to be used by fish life and that could reasonably be recovered by restoration or management, including off-channel habitat.</li> <li>• The definitions of freshwater area, saltwater area, and watercourse are amended to include surface water connected wetlands that provide or maintain fish habitat.</li> <li>• Definitions for maintenance, repair, rehabilitation and replacement are added. These terms are used in the mitigation section to clarify when compensatory mitigation is required or when work must comply with current standards.</li> <li>• Unimpeded fish passage is defined. “Unimpeded fish passage” means the free movement of all fish species at any mobile life stage around or through a human-made or natural structure.</li> </ul>	Same as Alt. 2 (Minor or no comments)	<p>Retains the Alternative 2 definitions except for the following changes:</p> <ul style="list-style-type: none"> <li>• Amend the definition of fish habitat to the following: “Fish habitat” means habitat, which is used by fish life at any life stage at any time of the year.</li> <li>• Remove “wetlands” from the definitions of “freshwater area”, “saltwater area” and “watercourse”.</li> <li>• Delete the definitions of maintenance, repair, rehabilitation and replacement and proposes all these activities should be considered maintenance.</li> <li>• Delete unimpeded from the “unimpeded fish passage”.</li> </ul>
Applicability of hydraulic project approval authority E 220-110-035 P 220-660-040	Outdated language transferring hydraulic code authority to DNR for forest practices hydraulic projects in non-fish waters is removed because of the integration of all hydraulic code authority in DNR forest practices. Portable boat hoists and scientific instruments are added to the list of exempt project types.	Same as Alt. 2 (Minor or no comments)	Same as Alt. 2 (Minor or no comments)

\* Requires Statutory change

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<p>Procedures E 220-110-030 E 220-110-031 P 220-660-050</p>	<p>Modifies current rules to reflect statutory and policy changes including:</p> <ul style="list-style-type: none"> <li>• Maintains ability to issue “general” or “simplified” HPAs for repair and maintenance projects because these are typically routine in nature and can be pre-conditioned, reserving limited resources for projects that pose higher risk to fish life.</li> <li>• Establishes procedures for applying for two new HPA types established by statute: fish habitat enhancement project (FHEP) and chronic danger HPAs.</li> <li>• Clarifies the procedures for applying for existing HPA types including standard, emergency, imminent danger, expedited, and pamphlet HPAs. Two new standard HPA types, “general HPAs” and “model HPAs” are proposed to streamline the permitting process for low risk hydraulic projects.</li> <li>• Limits multi-site HPAs to five sites, unless the department makes an exception, to ensure site visits can be conducted with the 45-day review period.</li> <li>• Delays issuing HPAs for a minimum of 7 days to allow the Tribes and other entities an opportunity to comment on complete HPA applications.</li> <li>• Allows subsequent minor modifications to an existing HPA permit provided the modifications do not adversely affect fish life. Clarifies how the department processes HPA applications.</li> </ul>	<p>Retains the Alternative 2 language except for the following changes:</p> <ul style="list-style-type: none"> <li>• Remove the ability to issue “general” or “model” HPAs due to concerns that the opportunity for a meaningful and useful individual project review is removed to achieve streamlining.</li> <li>• Delay issuing HPAs for a minimum of 20 days to allow the Tribes and other entities an opportunity to comment on the complete HPA application.</li> <li>• Provide Tribes an opportunity to comment on emergency, imminent danger, expedited, and HPAs with minor modifications before they are issued. *</li> <li>• Allow one minor modification to an existing HPA permit, provided modifications do not adversely affect fish life.</li> <li>• Create a pamphlet for the removal of impacted fine grained sediments and sand from spawning gravel stream beds deposited there as a result of surface water runoff discharge into streams. *</li> <li>• Eliminate the \$150 application fee for restoration projects. *</li> <li>• Authorize additional types of fish habitat enhancement projects. *</li> </ul>	<p>Retains the Alternative 2 language except for the following changes:</p> <ul style="list-style-type: none"> <li>• Remove the limit on the number of sites covered in a multi-site HPA.</li> <li>• Add more flexibility on how an emergency, imminent danger or chronic danger is declared, and additional positions authorized to make these declarations to improve the efficiency and ease for government agencies to receive HPAs. *</li> </ul>
<p>Integration of hydraulic projects approvals and forest practices applications E 220-110-085 P 220-660-060</p>	<p>Retains the existing section that was added in 2013 to implement SB 6406. The amendment required the integration of Hydraulic Code Rule fish protection standards (Title 220 WAC) into the forest practices rules for hydraulic projects in fish-bearing waters on forest land. The rules stipulate how the department will work with DNR and the applicant.</p>	<p>Same as Alt. 2 (Minor or no comments)</p>	<p>The Alternative 2 language would be replaced by a new section that repeats the all of the rules applicable to forest practices.</p>
<p>Changes to hydraulic project approval technical provisions E 220-110-032 P 220-660-070</p>	<p>Retains the 1994 rule language that allows the department to add, modify and delete technical provisions when certain criteria are demonstrated. Language is also added to allow the department to modify and delete technical provision that are not possible to comply with due to geological, engineering or environmental constraints or safety concerns;</p>	<p>Same as Alt. 2 (Minor or no comments)</p>	<p>Retains the Alternative 2 language except for the following change:</p> <ul style="list-style-type: none"> <li>• Remove this clause "loss of or injury to fish or shellfish, or the loss or permanent degradation of the habitat that supports the fish and shellfish populations" and replace it with "will be protective of fish life."</li> </ul>

\* Requires Statutory change

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Mitigation requirements for hydraulic projects E New Section P 220-660-080	Incorporates statutes and policies adopted since 1994 and includes the following: <ul style="list-style-type: none"> <li>Establishes the baseline for measuring impacts as the existing habitat condition.</li> <li>Does not require compensatory mitigation for maintenance projects (routine, repair, rehabilitation, and replacement) unless the maintenance work caused a new impact not associated with the original work.</li> <li>Requires design and construction of rehabilitation and replacement projects to comply with the proposed rules.</li> </ul>	Retains the Alternative 2 language except for the following changes: <ul style="list-style-type: none"> <li>Require compensatory mitigation for cumulative impacts.*</li> <li>Require compensatory mitigation for maintaining or repairing a structure that currently diminishes habitat and/or perpetuates impacts into the future.</li> <li>Require the same mitigation for rehabilitation or replacement of structurally deficient or functionally obsolete structures that is required for new structures (including mitigation).</li> </ul>	Retains Alternative 2 language except for the following changes: <ul style="list-style-type: none"> <li>Do not require compensatory mitigation for routine maintenance, repair, rehabilitation, or replacement of the structure even if new impacts to fish life occurred as a result of the work.</li> <li>Delete the provision "mitigation must compensate for temporal loss, uncertainty of performance, and differences in habitat functions, type, and value" because these values are difficult to quantify.</li> </ul>
Freshwater habitats of special concern E New section P 220-660-100	Identifies freshwater habitats of special concern for priority fish species. This habitat requires protective measures for priority fish species due to their population status or sensitivity to habitat alteration.	Same as Alt. 2 (Minor or no comments)	Same as Alt. 2 (Minor or no comments)
Authorized work times in freshwater areas E New section P 220-660-110	Specifies the criteria the department will follow to determine when work should occur. The criteria include life history stages of fish life present, the expected impact of the work, BMPs proposed by the project proponent, weather, and other conditions. Requires the department to publish the times when spawning salmonids and their eggs and fry are least likely to be in freshwaters of Washington.	Retains Alternative 2 provisions except the following: <ul style="list-style-type: none"> <li>All in-water work would be prohibited during times of the year when spawning salmonids and their incubating eggs are likely to be present regardless of the expected impact from the work, best management practices, weather, and other conditions.</li> </ul>	Same as Alt. 2 (Minor or no comments)
Common freshwater construction provisions E New section P 220-660-120	Combines the common construction provisions that apply to many freshwater projects into a single section. New provisions are added for staging areas, job site access, equipment use, materials, water quality protection, aquatic work area isolation, diversion pumps, fish removal and demobilization, and cleanup.	Retains Alternative 2 provisions except for the following change: <ul style="list-style-type: none"> <li>The use of all treated wood and tires would be prohibited.</li> </ul>	Retains Alternative 2 provisions except for the following provisions would be removed: <ul style="list-style-type: none"> <li>Remove sections eight through twelve.</li> <li>(8) In-water work area isolation using block nets</li> <li>(9) In-water work area isolation using a temporary bypass</li> <li>(10) In-water work area isolation using a cofferdam structure</li> <li>(11) In-water work without a bypass or cofferdam</li> <li>(12) Fish removal</li> </ul>

\* Requires Statutory change

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Streambank protection and lake shoreline stabilization E 220-110-050 E 220-110-223 P 220-660-130	New restrictions are added to the existing rules including the following: <ul style="list-style-type: none"> <li>Separate provisions for design and construction to clarify when standards apply.</li> <li>Allows the department to require an applicant to submit a qualified professional's rationale with the HPA application for a new or replacement structure extending waterward of the existing structure or bankline. Requires the permittee to avoid or minimize adverse impacts to fish life by using the least impacting technically feasible alternative. Benchmarks must be established so the department can verify compliance with the approved plans.</li> <li>In cases where the bankline of a river or stream has changed as a result of meander migration or lateral erosion and a new ordinary high water line has formed landward of an existing lake bulkhead, the rule requires the current location of the new bank be maintained with some exceptions.</li> </ul>	Retains Alternative 2 provisions except for the following changes: <ul style="list-style-type: none"> <li>The department would always require an engineer's report that unequivocally determines bank protection or shoreline stabilization is needed to protect infrastructure before allowing any form of bulkhead or armoring work. If protection is warranted, the department would firmly require a biotechnical solution unless an engineer clearly finds that a hard bulkhead is the only option.</li> <li>The placement of new and replacement structures would have to consider climate change.</li> </ul>	Same as Alt. 2 (Minor or no comments)
Residential and public recreational docks, piers, ramps, floats watercraft lifts, and buoys in freshwater areas E 220-110-060 P 220-660-140	Adds new provisions for overwater structures in waterbodies where impacts to fish spawning areas and to juvenile salmonid migration corridors and feeding and rearing areas are a concern. Provisions are also added to the existing rules for the following: <ul style="list-style-type: none"> <li>Pile design</li> <li>Steel impact driving sound attenuation</li> <li>Watercraft lift design</li> <li>Mooring buoy design</li> <li>Residential and public recreational dock, pier, ramp, float, watercraft lift, and buoy construction.</li> </ul>	Retains Alternative 2 provisions except for the following change: <ul style="list-style-type: none"> <li>All docks, piers, ramps and floats would have 100% of the deck covered in grating.</li> </ul>	Retains Alternative 2 except for the following changes: <ul style="list-style-type: none"> <li>Remove all grating requirements because some research shows the sunlight penetrated through the grating on average about 10% more than traditional planked decking.</li> <li>Do not specify pier height or width requirements for waterbodies where impacts to juvenile salmonid migration corridors and feeding and rearing areas are a concern.</li> </ul>
Boat ramps and launches in freshwater areas E 220-110-224 P 220-660-150	New provisions are added to the existing rules for boat ramp and launch design and construction to minimize impacts to the bed including fish spawning areas, the movement of wood and sediment, and juvenile fish migration, feeding, and rearing areas.	Same as Alt. 2 (Minor or no comments)	Same as Alt. 2 (Minor or no comments)
Marinas and terminals in freshwater areas E New section P 220-660-160	A new section is added for marina and terminal design, construction, and maintenance. The maintenance provisions align with a change to the statute.	Same as Alt. 2 (Minor or no comments)	Retains Alternative 2 except for the following change: <ul style="list-style-type: none"> <li>Acknowledge the different purposes, requirements, and constraints of bulkheads and other bank stabilization in the marina/marine terminal environment.</li> </ul>

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<p>Dredging in freshwater areas E 220-110-130 P 220-660-170</p>	<p>New provisions are added to the existing rules to allow the department to assess impacts more accurately and includes the following provisions:</p> <ul style="list-style-type: none"> <li>The department may require quantitative analysis of the extraction rate to determine impacts to sediment transport and delivery.</li> <li>The department may require multi-season pre- and post-dredge project bathymetric or biological surveys.</li> <li>The department will evaluate the potential impacts of dredging and the disposal of dredged materials in eulachon spawning areas.</li> </ul>	<p>Retain Alternative 2 provisions except for the following changes:</p> <ul style="list-style-type: none"> <li>Include rules for removing gravel and debris from small streams in the proposed rule changes.</li> <li>Require scientific justification to prove that dredging will resolve flooding problems before any HPAs for dredging are issued.</li> </ul>	<p>Retain Alternative 2 provisions except for the following changes:</p> <ul style="list-style-type: none"> <li>Include rules for removing gravel and debris from small streams in the proposed rule changes.</li> <li>Authorize dredging in fish spawning areas.</li> </ul>
<p>Sand and gravel removal E 220-110-140 P 220-660-180</p>	<p>A new provision is added to the existing rules to clarify that the department may require quantitative analysis of the extraction rate to determine impacts to sediment transport and delivery. This new provision would allow the department to assess impacts more accurately.</p>	<p>Same as Alt. 2 (Minor or no comments)</p>	<p>Same as Alt. 2 (Minor or no comments)</p>
<p>Water crossing structures E 220-110-070 P 220-660-190.</p>	<p>Retains current rule language for no-slope culvert design. Hydraulic culvert design provisions are moved to the fish passage improvement structure section. New provisions are added for design of the stream-simulation and an alternative culvert design methods. Some of the current language for bridges is retained but new provisions are added for design and construction. New provisions are added for design and construction of temporary fords.</p>	<p>Retains Alternative 2 provisions except for the following changes:</p> <ul style="list-style-type: none"> <li>Include language that requires permittees to install stream simulation culverts unless the permittee can show that stream simulation is not feasible, or that another design will provide equal or better protection of fish life.</li> <li>Remove the no-slope design alternative because it is inconsistent with the recent federal court order regarding state culverts because no-slope designed culverts are often found to impede fish passage.</li> <li>Move this design approach to the fish passage improvement section.</li> </ul>	<p>Retains Alternative 2 provisions except for the following changes:</p> <ul style="list-style-type: none"> <li>The culvert design standards would be removed. The designs proposed are not based on technically sound engineering practices and are not justified by significant research.</li> <li>The bridge design standards would be amended because they may require the preparation of multiple designs so that the cost differential can be quantified, thus increasing the time and costs associated with all bridge projects.</li> <li>Amend the rules to allow American Association of State Highway and Transportation Officials and Federal Highway Administration standards (by name) because they have been well vetted by the engineering community.</li> <li>Amend the rules to use a channel forming flow, such as the 2-year flood, instead of a rare flood like the 100-year to evaluate how changes in flow velocity will affect fish life. WDFW's focus should be on fish life and the channel below the OHWL. Over the course of a bridge's lifespan, the flow velocity during the 100-year flood will have less influence on the channel form than the 2-year flood.</li> <li>Remove the three-feet of clearance for bridges.</li> </ul>

\* Requires Statutory change

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Fish passage improvement structures E New section P 220-660-200	A new section is added for design, construction, and maintenance of fish ladders, weirs constructed for fish passage, roughened channels, trap and haul operations, and hydraulic design culvert retrofits. Designs must have an engineer’s approval and meet specific criteria. The structures must be inspected and maintained.	Retains Alternative 2 provisions except for the following changes: <ul style="list-style-type: none"> <li>• All structures would be temporary and a timeframe would be established in rule for a permanent solution to be implemented.</li> <li>• Roughened channel would be a temporary solution used only in extreme circumstances with a valid reason why a more reliable fish passage method (e.g. stream simulation or bridge) cannot be used.</li> <li>• Hydraulic design option culverts would have limited application in exceptional circumstances where constraints prevent the use of bridges, no-slope and stream simulation culverts.</li> </ul>	Retains Alternative 2 provisions except for the following change: <ul style="list-style-type: none"> <li>• The department would not require compensatory mitigation if a fish passage structure cannot pass all fish species present at all mobile life stages.</li> </ul>
Channel change and realignment E 220-110-080 P 220-660-210	The following new provision is added to the existing rules for channel change and realignment design: <ul style="list-style-type: none"> <li>• A channel change may be approved if:</li> <li>• Permanent new channels are similar to the old channel in length, width, depth, flood plain configuration, and gradient, and</li> <li>• The new channel incorporates fish habitat components, bed materials, meander configuration, and native or other approved vegetation that provides better protection for fish life than that which previously existed in the old channel.</li> </ul>	Same as Alt. 2 (Minor or no comments)	Same as Alt. 2 (Minor or no comments)
Large woody material placement, repositioning and removal in freshwater areas E 220-110-150 P 220-660-220	The following new provisions are added to the existing rules for placement of large woody material: <ul style="list-style-type: none"> <li>• The department will approve the repositioning or removal of large woody material within the watercourse when needed to protect life, the public, property, or when needed to construct or mitigate for a hydraulic project. The department will require a person to place the repositioned or removed wood directly back in the channel unless there are engineering, legal, safety, or environmental constraints. When these constraints are present, the department may approve the placement of repositioned or removed wood in the floodplain, side channels, along banks, or in the marine nearshore. If wood must be removed from the waterbody because of legal or safety constraints, the department will require compensatory mitigation if the removal of the wood diminishes fish habitat function or value.</li> <li>• The department will approve placing large wood back in the channel to improve fish habitat. This may include placing channel-spanning logs, creating log jams, or introducing a single large log or rootwads to the channel. Large woody material may be stabilized against buoyant forces and hydraulic drag forces that may mobilize wood during flood flows by pinning, anchoring, or burying woody material in the floodplain.</li> </ul>	Same as Alt. 2 (Minor or no comments)	Same as Alt. 2 (Minor or no comments)

\* Requires Statutory change

<b>WAC TITLE (E) EXISTING (P) PROPOSED</b>	<b>ALTERNATIVE 2 WDFW PROPOSED RULE CHANGES</b>	<b>ALTERNATIVE 3 INCREASED PROTECTION FOR THE NATURAL ENVIRONMENT</b>	<b>ALTERNATIVE 4 INCREASED PROTECTION FOR THE BUILT ENVIRONMENT</b>
Beaver dam management E New section P 220-660-230	A new section is added for beaver dam removal, breaching, or modification and the design and construction of beaver deceivers and pond water level control devices.	Retains Alternative 2 provisions except for the following change: • The department would require a professional determination that there is an imminent threat to property or the environment before issuing an HPA for removal of a beaver dam.	Same as Alt. 2 (Minor or no comments)
Pond construction E 220-110-180 P 220-660-240	Retains current rules except the following provision is removed because the department cannot enforce the provision: • Pond construction activities involving a diversion of state waters shall be dependent upon first obtaining a water right.	Retains Alternative 2 provisions except for the following change: • Applicants would be required to demonstrate they have a valid water right to apply for HPA for water diversions.	Same as Alt. 2 (Minor or no comments)
Water diversions and intakes E 220-110-190 P 220-660-250	Retains current rules except the following provision is removed because the department cannot enforce the provision: • The exercise of project activity associated with the diversion of state waters shall be dependent upon first obtaining a water right.	Retains Alternative 2 provisions except for the following change: • Applicants would be required to demonstrate they have a valid water right to apply for HPA for water diversions.	Same as Alt. 2 (Minor or no comments)
Outfall structures in freshwaters areas E 220-110-170 P 220-660-260	Retains current rules except language is added to reflect statutory changes to the department's authority to regulate stormwater including the following: • The department may not provision HPAs for storm water discharges in locations covered by a national pollution discharge elimination system municipal storm water general permit for water quality or quantity impacts. The HPA is required only for the actual construction of any storm water outfall or associated structures. • In locations not covered by a national pollution discharge elimination system municipal storm water general permit, the department may provision HPAs to protect fish life from adverse effects, such as scouring or erosion of the bed of the water body, resulting from the direct hydraulic impacts of the discharge.	Same as Alt. 2 (Minor or no comments)	Same as Alt. 2 (Minor or no comments)
Utility crossings in freshwater areas E 220-110-100 P 220-660-270	Retains current rules except language is added for utility line design and directional drilling.	Retains Alternative 2 provisions except for the following change: • The department would require that conduit lines in watercourses would not constrict the channel or preclude future opportunities for bridges or other less-impacting approaches to water crossings.	Same as Alt. 2 (Minor or no comments)
Felling and yarding of timber E 220-110-160 P 220-660-280	Retains current rule provisions.	Same as Alt. 2 (Minor or no comments)	Same as Alt. 2 (Minor or no comments)

\* Requires Statutory change

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Aquatic plant removal and control E 220-110-331 E220-110-332 E 220-110-333 E 220-110-334 E 220-110-335 E 220-110-336 E 220-110-337 E 220-110-338 P 220-660-290	Consolidates eight sections into one section, and retains current rule provisions. The only substantial change is the addition of a new section that explains the statutory limits of our authority.	Same as Alt. 2 (Minor or no comments)	Same as Alt. 2 (Minor or no comments)
Mineral prospecting E 220-110-200 E 220-110-201 E 220-110-202 E 220-110-206 P 220-660-300	Consolidates four sections into one section and retains the current rule provisions. An additional sub-section is added to allow mineral prospecting on ocean beaches to occur under the Gold and Fish pamphlet.	Retains Alternative 2 provisions except additional timing restrictions would be added.	Retains Alternative 2 provisions except for the timing windows would be changed the 1994 timing windows.
Tidal reference areas E 220-110-240 P 220-660-310	No change from current rules.	Same as Alt. 2 (Minor or no comments)	Same as Alt. 2 (Minor or no comments)
Saltwater habitats of special concern E 220-110-250 P 220-660-320	Retains the current rule provisions for saltwater habitats of special concern except rock sole spawning beds that are removed because rock sole are not obligate beach spawning fish. Olympia oyster settlement areas are added. Nearshore zone geomorphic processes that form and maintain habitat are also added. These include sediment supply and transport; beach erosion and sediment accretion; distributary channel migration; and tidal channel formation and maintenance.	Retain Alternative 2 provisions except for the following change: <ul style="list-style-type: none"> <li>• Rock sole spawning beds would be retained as a saltwater habitat of special concern.</li> </ul>	Alternative 2 provisions except the following language would be changed to read: “The presence of saltwater habitats of special concern may restrict project type, design, location, and timing.” Remove the phrase “adjacent areas”.
Authorized work times in saltwater areas E 220-110-271 P 220-660-330	Retains current rule work times in Pacific sand lance spawning beds and lingcod settlement and nursery areas. Reduces work times in juvenile salmonid migration corridors and feeding and rearing areas by two months. Retains work times in herring spawning beds except work times are added for two additional tidal reference areas that did not have restrictions. The work time in or adjacent to rock sole spawning beds is removed because rock sole are not obligate beach spawning fish. <ul style="list-style-type: none"> <li>• Where the smelt spawning season is six months or longer, adds a new requirement that work must be started within seventy-two hours of a survey.</li> </ul>	Retain Alternative 2 provisions except for the following changes: <ul style="list-style-type: none"> <li>• Work times would apply to potential (suspected) as well as documented spawning areas.</li> <li>• Apply work times regardless of the expected impact from the work.</li> <li>• Add work times for rock sole spawning beds.</li> </ul>	<ul style="list-style-type: none"> <li>• Alternative 4 would retain the Alternative 1 authorized work times.</li> <li>• Additional monitoring would be required for projects. This will allow work to continue as previous but will monitor where/when aquatic life is entering the project area.</li> </ul>

\* Requires Statutory change

WAC TITLE (E) EXISTING (P) PROPOSED	ALTERNATIVE 2 WDFW PROPOSED RULE CHANGES	ALTERNATIVE 3 INCREASED PROTECTION FOR THE NATURAL ENVIRONMENT	ALTERNATIVE 4 INCREASED PROTECTION FOR THE BUILT ENVIRONMENT
Intertidal forage fish spawning bed surveys E New section P 220-660-340	This new section requires a biologist who conducts forage fish spawning surveys to complete the department's forage fish spawning beach survey training. A biologist must follow the department-approved intertidal forage fish spawning protocol and use the standard department data sheets when conducting forage fish spawning beach surveys. New WAC section	Same as Alt. 2 (Minor or no comments)	Same as Alt. 2 (Minor or no comments)
Seagrass and macroalgae habitat surveys E New section P 220-660-350	This new section clarifies when seagrass and macroalgae habitat surveys are required, diver qualifications, and the survey protocol.	Same as Alt. 2 (Minor or no comments)	Same as Alt. 2 (Minor or no comments)
Common construction provisions for saltwater areas E 220-660-270 P 220-110-360	Retains current rule language and adds new provisions for staging areas, job site access, equipment use, vessel operation, materials, and demobilization and cleanup.	Retain Alternative 2 provisions except for the following changes: <ul style="list-style-type: none"> <li>• The use of treated wood and tires would be prohibited.</li> </ul>	Same as Alt. 2 (Minor or no comments)
Bank protection in saltwater areas E 220-110-280 P 220-660-370	The non-single family and single-family residence bank protection provisions are combined into one section. The current rules are retained except for the following changes: <ul style="list-style-type: none"> <li>• If a new OHWL re-establishes landward of a bulkhead protection structure because of a breach, the department will consider this re-established OHWL to be the existing OHWL if the structure isn't repaired within three years.</li> <li>• Design alternatives are listed from the most preferred to the least.</li> <li>• An HPA application for new, replacement, or rehabilitated bulkhead or other bank protection work must include a site assessment, alternatives analysis, and design rationale by a qualified professional. This only applies to non-single family bank protection structures.</li> </ul>	Retain alternative 2 except for the following changes for single-family residence bulkheads processed under RCW 77.55.141: <ul style="list-style-type: none"> <li>• All bank protection, even single-family residences, must use the least impacting feasible bank protection design. *</li> <li>• All HPA applications for new, replacement, or rehabilitated bulkhead or other bank protection work must include a site assessment, alternatives analysis, and design rationale by a qualified professional. *</li> </ul>	Same as Alt. 2 (Minor or no comments)

\* Requires Statutory change

<b>WAC TITLE (E) EXISTING (P) PROPOSED</b>	<b>ALTERNATIVE 2 WDFW PROPOSED RULE CHANGES</b>	<b>ALTERNATIVE 3 INCREASED PROTECTION FOR THE NATURAL ENVIRONMENT</b>	<b>ALTERNATIVE 4 INCREASED PROTECTION FOR THE BUILT ENVIRONMENT</b>
Residential and public recreational docks, piers, ramps, floats watercraft lifts, and buoys in saltwater areas E 220-110-300 P 220-660-380	The current rules are retained for overwater structures except for the following changes: <ul style="list-style-type: none"> <li>• The department will require that new structures are designed with a pier and ramp to span the intertidal beach, if possible.</li> <li>• Structures must be located at least twenty-five feet (measured horizontally from the nearest edge of the structure) and four vertical feet away from seagrass and kelp at extreme low water.</li> <li>• A structure must have been usable at the site within the past twelve months of the time of application submittal to be considered a replacement structure.</li> <li>• The replacement of more than thirty-three percent or two hundred and fifty square feet of decking or replacement of decking substructure requires installation of functional grating.</li> <li>• Design requirements are added to reduce impacts from shading and grounding.</li> <li>• Provisions are added for the design and construction of mooring buoys and watercraft lifts.</li> <li>• Provisions are added for removing creosote piling.</li> <li>• A provision is added to require sound attenuation when installing steel piling with an impact pile driver.</li> </ul>	Retain Alternative 2 provisions except for the following changes: <ul style="list-style-type: none"> <li>• Prohibit the construction of new docks in documented herring spawning areas.</li> <li>• Require 100% grating of docks and floats.</li> <li>• Require mooring buoys to be a certain distance from seagrass and macroalgae.</li> </ul>	Same as Alt. 2 (Minor or no comments)
Boat ramps and launches in saltwater areas E New section P 220-660-390	This new section lists design alternatives from the most preferred to the least. <ul style="list-style-type: none"> <li>• New design requirement to avoid and minimize impacts to bed, littoral drift cells, and saltwater habitats of special concern.</li> </ul>	Same as Alt. 2 (Minor or no comments)	Retain the language in Alternative 2 but delete the following provisions: <ul style="list-style-type: none"> <li>• Design and locate the boat ramp or launch to avoid adverse impacts to saltwater habitats of special concern.</li> <li>• The department may require an eelgrass/macroalgae habitat survey for all new ramp or launch construction. A survey is not required to replace an existing structure within its original footprint.</li> <li>• Design and locate boat ramps and launches to avoid and minimize excavation below the OHWL.</li> </ul>

\* Requires Statutory change

WAC TITLE (E) EXISTING (P) PROPOSED	ALTERNATIVE 2 WDFW PROPOSED RULE CHANGES	ALTERNATIVE 3 INCREASED PROTECTION FOR THE NATURAL ENVIRONMENT	ALTERNATIVE 4 INCREASED PROTECTION FOR THE BUILT ENVIRONMENT
<p>Marinas and terminals in saltwater areas E 220-110-330 P 220-660-400</p>	<p>The current rules are retained for marinas and rules for marine terminals are added.</p> <ul style="list-style-type: none"> <li>• When possible, locate new marinas and terminals in areas that will minimize impacts to fish life.</li> <li>• Locate new marinas and terminals to avoid and minimize impacts to seagrass and kelp.</li> <li>• Locate new marinas and terminals in naturally deep areas to avoid or minimize dredging.</li> <li>• Locate new marinas and terminals in areas deep enough to avoid or minimize propeller wash impacts to the bed.</li> <li>• Locate new marinas and terminals in areas with existing low or impaired biological value.</li> <li>• Design and construct marinas and terminals so that most overwater coverage is in the deepest water possible; this is necessary to allow light penetration to the intertidal and shallow subtidal areas.</li> <li>• Provisions are added for removing creosote piling.</li> <li>• A provision is added to require sound attenuation when installing steel piling with an impact pile driver.</li> <li>• Provisions are added for marina and marine terminal maintenance to incorporate a statutory change.</li> </ul>	<p>Retain the language in Alternative 2 but add the following provision:</p> <ul style="list-style-type: none"> <li>• New and expanded docks, wharves, piers, marinas, rafts, shipyards and terminals must be at least a specified buffer distance from existing native aquatic vegetation attached to or rooted in substrate.</li> </ul>	<p>Retains Alternative 2 except for the following change:</p> <ul style="list-style-type: none"> <li>• Acknowledge the different purposes, requirements, and constraints of bulkheads and other bank stabilization in the marina/marine terminal environment.</li> </ul>
<p>Dredging in saltwater areas E 220-110-320 P 220-660-410</p>	<p>Retains the current rule provisions for dredging in saltwater areas except the following new provisions are added:</p> <ul style="list-style-type: none"> <li>• The department may require hydrodynamic modeling for new dredging projects and expansions.</li> <li>• Design project to avoid dredging and expansions that convert intertidal to subtidal habitat.</li> </ul>	<p>Same as Alt. 2 (Minor or no comments)</p>	<p>Same as Alt. 2 (Minor or no comments)</p>
<p>Artificial aquatic habitat structures in saltwater areas E New section P 220-660-420</p>	<p>This new section includes provisions for designing and constructing artificial aquatic habitat structures that must meet one or more of the following needs:</p> <ul style="list-style-type: none"> <li>• Enhance fish viewing opportunity at a specific location;</li> <li>• Enhance or conserve aquatic resources; or</li> <li>• Mitigate for impacted fish habitat.</li> </ul>	<p>Same as Alt. 2 (Minor or no comments)</p>	<p>Same as Alt. 2 (Minor or no comments)</p>

\* Requires Statutory change

WAC TITLE (E) EXISTING (P) PROPOSED	ALTERNATIVE 2 WDFW PROPOSED RULE CHANGES	ALTERNATIVE 3 INCREASED PROTECTION FOR THE NATURAL ENVIRONMENT	ALTERNATIVE 4 INCREASED PROTECTION FOR THE BUILT ENVIRONMENT
Outfalls and tide and flood gates in saltwater areas E New section P 220-660-430	This new section includes the statutory limits of our authority, and provisions for the design and construction of stormwater outfall and tide and floodgate projects including the following: <ul style="list-style-type: none"> <li>• The department may not provision HPAs for storm water discharges in locations covered by a national pollution discharge elimination system municipal storm water general permit for water quality or quantity impacts. An HPA is required only for the actual construction of any stormwater outfall or associated structures.</li> <li>• In locations not covered by a national pollution discharge elimination system municipal storm water general permit, the department may issue HPAs that contain provisions to protect fish life from the direct hydraulic impacts of the discharge, such as scouring or erosion of the waterbody bed.</li> <li>• The department may not require a fishway on a tide gate, flood gate, or other associated human-made agricultural drainage facilities as a provision of a permit if such a fishway was not originally installed as part of an agricultural drainage system existing on or before May 20, 2003.</li> </ul>	Same as Alt. 2 (Minor or no comments)	Same as Alt. 2 (Minor or no comments)
Utility crossing in saltwater areas E 220-110-310 P 220-660-440	Retains the current rule provisions for utility lines except for the following change: <ul style="list-style-type: none"> <li>• The department may require an eelgrass/macroalgae habitat survey for new construction.</li> </ul>	Same as Alt. 2 (Minor or no comments)	Same as Alt. 2 (Minor or no comments)
Test boring in saltwater areas E New section P 220-660-450	This new section includes provisions to protect water quality during boring projects.	Same as Alt. 2 (Minor or no comments)	Same as Alt. 2 (Minor or no comments)
Informal appeal of adverse administrative actions E 220-110-340 P 220-660-460	Retains the current rule provisions.	Same as Alt. 2 (Minor or no comments)	Same as Alt. 2 (Minor or no comments)
Formal appeal of administrative actions E 220-110-350 P 220-660-470	Retains the current rule provisions.	Same as Alt. 2 (Minor or no comments)	Same as Alt. 2 (Minor or no comments)

\* Requires Statutory change

WAC TITLE (E) EXISTING (P) PROPOSED	ALTERNATIVE 2 WDFW PROPOSED RULE CHANGES	ALTERNATIVE 3 INCREASED PROTECTION FOR THE NATURAL ENVIRONMENT	ALTERNATIVE 4 INCREASED PROTECTION FOR THE BUILT ENVIRONMENT
Compliance E 220-110-360 P 220-110-480	Retains the current rule provisions and adds the following language for civil enforcement: <ul style="list-style-type: none"> <li>• The department will develop programs to encourage voluntary compliance by providing technical assistance consistent with statutory requirements.</li> <li>• The department may issue a notice of correction.</li> <li>• The department may issue a civil penalty provided for by law without first issuing a notice of correction only under specific circumstances:</li> <li>• The person has previously been subject to an enforcement action for the same or similar type of violation; or</li> <li>• Compliance is not achieved by the date set by the department in a previously issued notice of correction; or</li> <li>• The violation has a probability of placing a person in danger of death or bodily harm, has a probability of causing more than minor environmental harm, or has a probability of causing physical damage to the property of another in an amount exceeding one thousand dollars; or</li> <li>• The violation was committed by a business that employed fifty or more employees on at least one day in each of the preceding twelve months.</li> </ul>	Same as Alt. 2 (Minor or no comments)	Same as Alt. 2 (Minor or no comments)

\* Requires Statutory change

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\* Requires Statutory change

### 2.3.6 Proposed Single-Rule Changes

In addition to alternatives that were proposed but not carried forward, WDFW received numerous suggestions for individual rule changes that were not incorporated into the proposed rules. Many of those comments were received during the comment period for the Draft PEIS dated September 2013. The comments and agency responses are summarized in Appendix A of the final PEIS.

WDFW received several suggestions for rule changes that would require a change in the statute prior to implementation in rule. Suggestions expressed by multiple stakeholders that were not included in the proposed rules changes (Alternative 2) are included in one of the added alternatives: Increased Protection of Fish Life – Alternative 3, and Increased Protection for the Built Environment – Alternative 4. As noted previously, a few of the Alternative 3 and 4 proposals are presently not able to be implemented by the Fish and Wildlife Commission because the topic is regulated by statute (legislated law) not rule. Rules adopted by the Fish and Wildlife Commission must be consistent with current statute.

Table 2-7 summarizes the suggested rule changes that would require legislated changes to Hydraulic Code statutes before being implemented by the Fish and Wildlife Commission in rule.

**Table 2-7 Suggested Rule Changes that are Inconsistent with Current Statute**

WAC SECTION OF PROPOSED CHANGE	REQUESTED CHANGE	STATUTORY REFERENCE
General	Hydraulic code rules should also protect marine mammals, birds, or amphibians.	RCW 77.55.021(1)
WAC 220-660-030(20)	Change the definition of “Chronic danger”.	RCW 77.55.221
WAC 220-660-030(26)	Change the definition of “County legislative authority”.	RCW 77.55.021(12)(a)
WAC 220-660-030(34)	Change how an emergency is declared and who can declare an emergency.	RCW 77.55.021(12)(a) – (d)
WAC 220-660-030(75)	Change the definition of Hydraulic Project. This is very broad and we have concerns that, with the varied interpretations of different biologists, this could reach far outside of reasonable impacts that affect fish life.	RCW 77.55.011(11)
WAC 220-660-030(78)	Change how an imminent danger is declared and who can declare an emergency.	RCW 77.55.011(12)
WAC 220-660-030(157)	If the agricultural drainage facility is in a natural watercourse that has been used as an agricultural drainage facility since before the modern HPA rules, WDFW should consider the effects of excluding from the definition of hydraulic projects maintenance of “man-made agricultural drainage facilities,” whether those are in the waters of the state or not.	RCW 77.55.011(11) RCW 77.55.021(12)(c)

WAC SECTION OF PROPOSED CHANGE	REQUESTED CHANGE	STATUTORY REFERENCE
WAC 220-660-040(1)(b)	All hydraulic projects must comply with the applicable requirements listed in chapter 220-660 WAC. After 'all hydraulic projects' add "within waters of the state."	RCW 77.55.011(11)
WAC 220-660-040(2)	Add an (2)(l) subsection to include SEPA exemptions. RCW 119.11 is a state law for SEPA, but WDFW adopted WAC 220-100 that requires all of WAC 220 to be incorporated into all WDFW rule making.	RCW 77.55.011(11) RCW 77.55.021(1) RCW 77.55.021(2)
WAC 220-660-040(2)	Add an exemption for routine maintenance such as mowing, vegetation removal, and removal of debris relating to the levee structure and within the rights of way of any Diking District, and that is governed by regulations, ETLs, Vegetation Management Regulations and variances, under regulations and jurisdiction of the U.S. Army Corps of Engineers.	RCW 77.55.021(1) RCW 77.55.131
WAC 220-660-050	Add a pamphlet for the removal of impacted fine grained sediments and sand from spawning gravel stream beds deposited there as a result of surface water runoff discharge into streams.	RCW 77.55.011(17)
WAC 220-660-050	Restoration projects should not have to pay the \$150 application fee.	RCW 77.55.321
WAC 220-660-050(3) – (8)	Permit categories could be reduced to three: Standard, Expedited (incorporating common elements of emergency, imminent danger, and chronic danger), and Pamphlet.	RCW 77.55.021(12)(a)-(d) RCW 77.55.021(14) RCW 77.55.021(15)(a)-(b)
WAC 220-660-050(3)-(8)	Rules for standard, emergency, imminent danger, chronic danger, expedited HPAs are too restrictive. In addition, USACE officials are generally always on site at times of flooding, in particular in Skagit County, and are ready to take immediate action. Under these revisions, where there must be notification to the Department in writing of a Declaration of Emergency and a requirement to wait for HPA approval or even a verbal approval before work is authorized, would be in the real world, completely impractical and unworkable. In fact this would be an impediment to effective flood control and protection of life and property...	RCW 77.55.021(12)(a)-(d) RCW 77.55.021(14) RCW 77.55.021(15)(a)-(b) RCW 77.55.021(16)
WAC 220-660-050(3)(b)(i)	Seattle City Light (SCL) developed a Fish and Aquatics Management Plan in support of the	RCW 77.55.181

WAC SECTION OF PROPOSED CHANGE	REQUESTED CHANGE	STATUTORY REFERENCE
	<p>relicensing of the Boundary Dam. The Plan was endorsed by settling parties, including WDFW, and describes the comprehensive protection, mitigation, and enhancement program that SCL is implementing under a new license issued by the Federal Energy Regulatory Commission (FERC) in 2013. SCL also operates three other hydroelectric facilities on the west slope of the Cascade Mountains-the Skagit River, Newhalem Creek, and South Fork Tolt River hydroelectric projects. The FERC licenses for these projects include requirements to improve fish habitat within their respective Project boundaries and watersheds for conservation purposes. Because the non-operational mainstem and tributary measures are designed to benefit native salmonid populations and their habitats, SCL requests that fish enhancement projects undertaken to meet FERC license requirements be considered eligible for a FHEP HPA.</p>	
WAC 220-660-050(3)(b)(i)C	<p>This requirement could preclude many if not all restoration projects if anyone comments in regards to public safety concerns. At what point do we sacrifice salmon for the lowest-skill level of river recreational users?</p>	RCW 77.55.181
WAC 220-660-050(4)	<p>Change how an emergency is declared and who can declare an emergency.</p>	RCW 77.55.021(12)(a)-(d)
WAC 220-660-050(4)(a)(i)	<p>Add "natural" and "built" before environmental at the end of the 1st sentence and throughout document. WDFW adopted WAC 220-100 that's required to be incorporated into all actions, by all WDFW rule making, by WAC 197-11-704. This definition cannot be modified.</p>	RCW 77.55.021(12)(a)
WAC 220-660-050(5)	<p>Change how an imminent danger is declared and who can declare an imminent danger.</p>	RCW 77.55.021(14)
WAC 220-660-050(6)	<p>Imminent dangers are covered under emergency permits, chronic danger permits are mere loopholes provided for chronic problems that are often a result of either poor management, lack of proper planning or inadequate infrastructure. If there is truly imminent risk the project can be addressed under an emergency permit. We request that chronic danger permits be removed/deleted</p>	RCW 77.55.021(15)(a)-(b) RCW 77.55.221

WAC SECTION OF PROPOSED CHANGE	REQUESTED CHANGE	STATUTORY REFERENCE
WAC 220-660-050(6)	Change how a chronic danger is declared and who can declare a chronic danger	RCW 77.55.021(15)(a)-(b) RCW 77.55.221
WAC 220-660-050(12)(b)	By law, WDFW has 45 days from the date a complete application package is received to issue or reject an HPA. The law should be updated to assume project authorization if WDFW exceeds the 45 day time period. That would be consistent with Water Quality Certifications and Coastal Zone Management Certifications issued by the Department of Ecology	RCW 77.55.021(7)(b)
WAC 220-660-050(13)(b)(iv)	At the end of the sentence, after "section" add "in non-NPDES discharges."	RCW 77.55.021(7)(b)(iv)
WAC 220-660-050(14)(a)	The imposed limitation on permit conditions that are "out of proportion to the impacts of the proposed project" itself inappropriately ignores cumulative impacts at the project site, and thereby codifies any existing habitat degradation that may be present. This codification is in itself a perpetuation of degradation, and therefore is, in fact, an impact of the project itself, which must be addressed. The language must therefore be stricken.	RCW 77.55.021(7)(a) RCW 77.55.231
WAC 220-660-050(15)(a)	Delete "may" and add "shall".	RCW 77.55.021(9)(b)
WAC 220-660-050(15)(d)(ii)	Delete "periodic floodwaters alone do not constitute a problem that requires an HPA."	RCW 77.55.021(9)(c)
WAC 220-660-080	The rules should require compensatory mitigation for cumulative impacts to fish life.	RCW 77.55.231
WAC 220-660-080(4)(h)	Do not use existing conditions as the baseline for assessing impacts to fish life from a project.	RCW 77.55.231
WAC 220-660-090	All HPAs should contain the provision that structures must be removed at the end of their useful life.	RCW 77.55.021(9)(b)
WAC 220-660-180	The entire sand and gravel extraction section from rivers for purposes of collecting construction aggregate should be stricken.	RCW 77.55. This is a lawful type of hydraulic project.
WAC 220-660-380	Boat ramps replace habitat. Consider assessing cumulative impacts of more new structures as part of the decision-making process.	RCW 77.55.231
WAC 220-660-370 WAC 220-660-390	In addition to shielding artificial lights from shining on the water (220-660-140(3) and elsewhere), lights should also be shielded from shining into the sky in order to minimize adverse	RCW 77.55.021(7)(a)

WAC SECTION OF PROPOSED CHANGE	REQUESTED CHANGE	STATUTORY REFERENCE
	impacts to birds.	
WAC 220-660-420	Agricultural drainage facilities are exempt but stormwater and industrial features are not. The language should be updated to include all manmade drainage facilities that are wholly created for the purpose of managing surface water.	RCW 77.55.281
WAC 420-660-420	"The department may not require changes to the project design above the mean higher high water mark of marine waters, or the ordinary high water mark of freshwaters of the state." Strike the reference to freshwaters of the state, since this section is about marine waters. More substantively, Ecology is concerned that OHWM, which establishes the landward limit of state waters, is typically 1.5 feet above MHHW (at least in the central and northern Salish Sea). Please explain the basis, rationale, statutory mandate, etc. for the proposed language outlining that WDFW cannot require design changes to outfall structures above MHHW. We think there is a real risk that aquatic resources and functions will not be adequately protected by this provision.	RCW 77.55.161
WAC 220-660-470	The department should establish a stop-work provision in the enforcement and compliance section.	RCW 77.55.291
WAC 220-660-470	Limit compliance actions to current projects with an HPA.	RCW 77.55.291 RCW 77.15.300
WAC 220-660-470	The department should have higher penalties for non-compliance.	RCW 77.55.291

## 2.5 Adaptive Management

Adaptive management of natural resources is a process that makes possible

*“the acquisition of additional knowledge and the utilization of that information in modifying programs and practices so as to better achieve management goals.”<sup>4</sup>*

The adaptive management process uses monitoring to inform decision-makers and reduce uncertainty.

The Alternative 2 WDFW-proposed rule changes represent the culmination of almost a decade’s work to modernize the Hydraulic Code Rules’ science/technology foundation. As such, adoption of Alternative 2 would establish a baseline from which changing science and technology and/or the results of effectiveness monitoring can be compared.

Development of an updated adaptive management plan for the HPA program will commence once a decision is finalized in fall 2014. WDFW Habitat Program scientists have already begun monitoring success of certain hydraulic project types, and we hope those efforts can be expanded in the months and years ahead as we implement the updated plan.

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<sup>4</sup> (Lindenmayer and Franklin 2002:260).

## **Chapter 3 Affected Environment**

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This chapter describes environmental resources potentially affected by adoption of the revised Hydraulic Code Rules. Because the rules will be implemented statewide and the environmental landscape of Washington State varies widely from region to region, a general description of the resource categories is provided. The discussion focuses on the portions of the existing natural and built environments that will be most affected by implementing the revised Hydraulic Code Rules. Because water resources and fish will be most affected, more detail is provided on those topics. This EIS does not include descriptions of the affected environment or impacts to resources unlikely to be affected by the revised Hydraulic Code Rules.

Resources included in this Supplemental Draft PEIS are:

- Fish
- Water Resources
- Earth
- Climate
- Wildlife
- Vegetation
- Land and Shoreline Use
- Recreation
- Cultural Resources
- Social and Economic Issues

### **3.1 Fish**

The freshwater rivers and lakes of Washington State provide habitat for a variety of fish species. The connection of these waters to Puget Sound and the Pacific Ocean provides habitat for a large number of salmon species (“salmonids”). Salmonid populations in general have experienced declines across the state, and several species are listed as threatened or endangered under the ESA or have special status listings in Washington State (See Section 3.1.5). The following sections describe fish and invertebrates found in Washington’s waterbodies. A list of all federally and state listed fish and invertebrates in Washington and their status is provided in Appendix B.

#### **3.1.1 Freshwater Resident Salmonids**

Resident salmonids remain in freshwater habitat for their entire life cycle. All resident salmonids require clean, cool water to thrive. Some populations of resident salmonids in Washington State are declining. A number of factors have been attributed to the declines including the loss of suitable rearing habitat, water quality degradation, and loss of clean spawning gravels.

Resident salmonids typically feed on plankton, insects, other invertebrates, and smaller fish. Some of the most important and widespread native species of resident salmonids are rainbow trout, cutthroat trout, bull trout, and Dolly Varden. These species are discussed in more detail below. In addition, there

are a number of introduced (nonnative) resident salmonid species in Washington's lakes and streams including brown trout, golden trout, Lahontan cutthroat trout, lake trout, eastern brook trout, and tiger trout (hybrid between a brook trout and brown trout).

**Rainbow Trout** – Rainbow trout are widely distributed in Washington's lakes and streams and are the state's most popular game fish. Because of their popularity, natural populations are supplemented by WDFW stocking programs that add over 17 million rainbow trout each year to the state's lakes and streams. Resident rainbow trout generally grow to a length of 18-24 inches. Rainbow trout include the sub-species of concern known as the red-band trout that is native to Washington State and other parts of the Columbia River basin.

**Cutthroat Trout** – Resident coastal cutthroat trout are found in streams and ponds throughout much of western Washington. Although they may grow to a length of about 18 inches, in smaller bodies of water they may grow to no larger than eight or nine inches long. One group, or what is referred to as a Distinct Population Segment (DPS), of coastal cutthroat trout, the Southwestern Washington DPS, was proposed for listing as a threatened species under the ESA in 1999; however, this DPS is currently identified only as a federal species of concern. Westslope cutthroat trout, another subspecies of cutthroat trout, are more common in eastern Washington lakes and streams and WDFW stocks them in a number of high-country lakes.

**Bull Trout** – Although commonly considered trout, bull trout are actually members of the char subgroup of the salmon family. Scientists distinguish char from other salmonids by the absence of teeth in the roof of the mouth and the presence of light colored spots on a dark background on the body (trout and salmon have dark spots on a lighter background). Bull trout living in streams may grow to about four pounds in weight, while those living in lakes can weigh 20 pounds. Some bull trout live out their lives in areas near where they were hatched (resident); others migrate from streams to lakes and reservoirs (adfluvial), from small streams to larger river systems (fluvial), or to and from salt water bodies (amphidromous) a few weeks after emerging from the gravel. While bull trout are known to live as long as 12 years, they reach sexual maturity between four and eight years of age. They spawn in gentle stream reaches with cold, unpolluted water and gravel and cobble substrate. Spawning occurs in the fall after stream temperatures drop. Bull trout were listed as threatened by the USFWS in 2001; critical habitat was most recently identified in 2012.

**Dolly Varden** – As with bull trout, Dolly Varden are members of the char subgroup of the salmon family. Dolly Varden are found in many rivers and some lakes in coastal areas of Washington. The Dolly Varden is similar in appearance to bull trout, but is generally smaller. Dolly Varden populations have generally been declining, and WDFW has restricted fishing for Dolly Varden in a number of areas. In 2001, the USFWS proposed Dolly Varden for listing as endangered due to similarity of appearance with bull trout and because they occur together only within the area occupied by the Coastal-Puget Sound bull trout DPS (66 Federal Register 1628). A designation of threatened or endangered under the similarity of appearance provisions of the ESA extends the take prohibitions of Section 9 to cover the species. However, under section 4(e) of the ESA, a designation of threatened or endangered due to similarity of appearance, does not extend other protections of the ESA, such as the consultation requirements for federal agencies under section 7 of the ESA.

### 3.1.2 Anadromous Salmonids

Fish that hatch and rear in freshwater, spend a portion of their life in salt water, and then return to freshwater to spawn are referred to as anadromous. In Washington, the five Pacific salmon species including Chinook, coho, chum, sockeye, and pink salmon as well as steelhead exhibit this migratory life history form. Two other species native to Washington waters, coastal cutthroat trout (also called sea run cutthroat) and bull trout, exhibit a similar migratory life history form, which is termed amphidromous. Unlike strictly anadromous species such as Pacific salmon, amphidromous species often return seasonally to fresh water as subadults sometimes for several years before returning to spawn.

Salmon habitat extends from the smallest inland streams to the Pacific Ocean and is comprised of a vast network of freshwater, estuarine, and ocean habitats. Salmon use freshwater habitats for spawning, incubation, and juvenile rearing. In estuarine habitats, juvenile salmon experience rapid growth and make critical adjustments in the chemical balance of their body fluid as they transition between fresh and salt water. Salmon gain most of their adult body mass in ocean habitats before returning to rivers to spawn.

Throughout their lives, salmon feed on freshwater and marine invertebrate organisms and fishes, while being consumed in turn by a variety of parasites, predators, and scavengers. Juvenile salmon feed on salmon carcasses, eggs, and invertebrates, including invertebrates that may have previously fed on salmon carcasses such as caddis flies, stoneflies, and midges. Thus, returning salmon provide a flow of nutrients into freshwater habitats and play a critical role in the ability of watersheds to retain overall productivity of salmon runs.

Salmon populations have declined significantly over the past several decades such that many salmon stocks in Washington State are now listed by the National Marine Fisheries Service (NMFS) as either threatened or endangered under the federal ESA.

**Chinook Salmon** – Chinook salmon are the largest of all salmon. There are different seasonal “runs” or modes in the migration of Chinook salmon from the ocean to freshwater. These runs are usually identified as spring, summer, fall, or winter based on when the adult salmon enter freshwater to begin their spawning migration. Freshwater entry and spawning are believed to be related to local water temperature and water flow regimes. An adult female Chinook will prepare a spawning bed, called a redd, in a stream area with suitable gravel composition, water depth, and velocity. An adult female may deposit four to five “nesting pockets” within a single redd. Chinook salmon eggs will hatch 90 to 150 days after deposition and fertilization by males. Juvenile Chinook may spend from three months to two years in freshwater before migrating to estuarine waters as smolts. After a period of rapid growth, the smolts migrate to the ocean to feed and mature. Juvenile Chinook that spend a shorter amount of time in freshwater (weeks to several months) before migrating to the ocean are often referred to as “ocean maturing” as opposed to those that spend an extended amount of time in freshwater before migrating to the ocean, which are referred to as “freshwater maturing”. Chinook remain in the ocean for one to six years, most commonly two to four. Chinook salmon can grow to about 40 pounds in weight; although those with long ocean residence time can sometimes weigh over 100 pounds.

More information about chinook salmon in Washington can be found in ESA recovery plans for Puget Sound, Snake River, and Interior Columbia River, available from NMFS. WDFW and Puget Sound tribes have also developed a Puget Sound Harvest Management Plan under ESA (available at WDFW's web page on science publications supporting policymaking). These documents provide detailed information about evolutionarily significant units and hatchery production effects.

**Coho Salmon** – Coho salmon spend approximately half of their life cycle rearing in streams and tributaries. The long freshwater rearing period makes coho salmon more dependent on flow and freshwater habitat than salmonids with shorter freshwater rearing times. The remainder of their life cycle up to the point of returning to their stream of origin to spawn and die is spent foraging in estuarine and marine waters of the Pacific Ocean. Most adult coho return as three-year-olds; however, a small number return as two-year-olds. A mature coho is usually about 2 feet in length and weighs an average of about 8 pounds.

**Chum Salmon** – Chum salmon are large salmon, second only to Chinook salmon in size. They spawn in the lower reaches of rivers and creeks, typically within 60 miles of the Pacific Ocean. Almost immediately after hatching, chum migrate to estuarine and ocean habitats. Thus, survival and growth of juvenile chum depends less on freshwater habitat conditions than on estuarine and marine habitat conditions. They usually arrive at their stream of origin from November to the end of December. Most chum salmon mature in three to five years. A mature chum salmon weighs between 18 to 22 pounds.

Puget Sound summer chum salmon are ESA-listed in Puget Sound, as are fall chum salmon in the Lower Columbia River area. More information can be found in ESA recovery plans, status reviews, and listing documents for Puget Sound summer chum and lower Columbia River chum, available from NMFS. ESA documents provide detailed information about evolutionarily significant units, recovery strategies, and hatchery production effects.

**Sockeye Salmon** – Sockeye salmon exhibit a variety of life history patterns that reflect varying dependency on freshwater environments. Most sockeye spawn in or near lakes where juveniles rear for one to three years before migrating to the ocean. For this reason, the major distribution and abundance of sockeye is closely related to the location of rivers that have accessible lakes in their watersheds, such as the Wenatchee River (Lake Wenatchee), Cedar River (Lake Washington), Quinault River (Lake Quinault), Sol Duc River (Lake Pleasant), Okanogan River (Lake Osoyoos) and Baker River (Baker Lake). Two units of sockeye in Washington are ESA listed: Lake Ozette sockeye and Redfish Lake (Snake River) sockeye are listed under federal ESA. More information can be found in ESA recovery plans and status review documents for these fish, available from NMFS.

There are also non-anadromous forms of sockeye salmon that spend their entire life in fresh water. Occasionally, some of the juveniles in an anadromous population will remain in their rearing lake environment throughout their lives and will eventually spawn together with their anadromous siblings. In Washington State, non-anadromous sockeye are referred to as kokanee.

**Pink Salmon** – Pink salmon are the most abundant northwest salmon. They spawn in odd numbered years a short distance up coastal rivers. With only a two-year life cycle, they tend to be small relative to other salmon, averaging three to four pounds and seldom reaching 10 pounds (WDFW 2001).

**Steelhead** – Steelhead are sea-going rainbow trout. They begin their lives in freshwater rivers and creeks where they rear for two years before migrating to marine waters. Consequently, they are very dependent on flows and freshwater habitat. They reside in marine waters for one to six years (typically two to three years), then return to their home streams to spawn. Unlike salmon that die after they spawn, adult steelhead can return to the sea and repeat the cycle. Adult steelhead typically weigh from 5 to 14 pounds, although those with long ocean residence time may reach about 30 pounds.

Most steelhead spawn from mid-winter to late-spring, however two distinct “runs” of steelhead return to freshwater at different times, a winter run and a summer run. Winter-run steelhead return to Washington streams from November to the end of April. Summer-run steelhead return to freshwater from April to the end of September in about 36 Washington rivers and creeks (WDFW 2001). In general, summer-run steelhead migrate longer distances to reach their spawning grounds and thus enter freshwater in an immature reproductive state. Winter steelhead, on the other hand, tend to enter streams at an advanced stage of sexual maturity (gonads fully developed) and therefore do not have to travel as far before spawning. For example, steelhead that migrate into the upper Columbia and Snake River drainage are summer-run steelhead, while most, but not all, runs in Puget Sound drainages are winter-run steelhead.

More information about steelhead in Washington can be found in ESA status reviews and listing documents for Puget Sound, Snake River, and the Columbia River, available from NMFS. ESA documents provide detailed information about evolutionarily significant units and hatchery production effects.

### **3.1.3 Other Fish**

This discussion of “other fish” is comprised of two subsections: freshwater fish and salt water fish. Some of the fish described below live at least part of their lives in estuaries or portions of rivers affected by tides that are transitional areas between freshwater and marine waters. In addition, native and non-native species, such as white sturgeon, eulachon, longfin smelt, Pacific lamprey, and American shad, are anadromous.

#### ***Freshwater Species***

Approximately 70 non-salmonid fish species can be found in freshwater bodies of Washington State at some point in their life cycles. Of this number, over 30 species are introduced, including some of the more popular sport fish such as largemouth bass, smallmouth bass, walleye, crappie, yellow perch, channel catfish, tiger muskellunge, and bluegill. Native freshwater species include sturgeon, the largest freshwater fish species; a variety of minnows such as northern pikeminnow, redbreast shiner, leopard dace, and speckled dace; burbot (a member of the cod family); largescale sucker; Columbia River smelt (eulachon); and several sculpin species (WDFW 2001).

#### ***Saltwater Species***

A large number of fish species are present in the marine waters of Washington State. Puget Sound alone, excluding the outer Washington Coast, is represented by 71 families of marine fish. A complete list of the marine fishes of Puget Sound can be found at: <http://www.burkemuseum.org/static/FishKey/>. Species of interest, primarily because of importance to recreational and commercial fisheries, include

Pacific herring, Pacific cod, walleye pollock, numerous rockfish species, ling cod, and Pacific halibut. Other representative families include sharks, rays, sculpin, sablefish, and gunnels. Marine forage fish including sand lance and surf smelt utilize the intertidal areas of beaches for reproduction and are thus at an increased risk of exposure to development activities along the marine nearshore area. Protection of these and other forage fish species including Pacific herring are important because forage fish provide a source of food for many fish and wildlife species including salmon.

### **3.1.4 Other Aquatic Organisms**

Saltwater habitats associated with Washington's marine waters support many types of invertebrates, including several recreational and commercial shellfish species. The marine waters of Puget Sound and the Washington Coast contain native and non-native organisms. The following sections briefly describe those species relevant to the Hydraulic Code Rules.

#### ***Native Aquatic Organisms***

In addition to fish, Washington State is also home to crustaceans (crabs, shrimp, and crayfish), mollusks (snails, clams, and oysters), echinoderms (starfish, sea urchins, and sea cucumbers).

The Dungeness crab, red rock crab, and several species of clams and oysters are also recreationally and/or commercially harvested in Washington. The Pacific oyster, which is the largest component of the commercially harvested oysters in Washington State was introduced from Japan in the early 1900s. The Olympia oyster is native to Washington State and is also a relevant commercial species. Clams include geoducks, razor clams, native and Manila (non-native) littleneck clams, cockles, horse clams, eastern soft-shell clams, macoma clams, and blue mussels. Other invertebrates include shrimp, abalone, nudibranchs, sea stars, sea cucumbers, scallops, snails, Pacific giant octopus, squid, sea urchins, anemone, sand dollars, and polychaete worms.

Freshwater invertebrates are also present in Washington State and include freshwater mussels and snails, aquatic insects, and one native species of crayfish, the signal crayfish. Several non-native and invasive crayfish have also been documented in Washington waters. Aquatic invertebrates are an important food source for fish as well as other aquatic and terrestrial organisms. Aquatic invertebrates include the larval stage of terrestrial insects such as mayflies, stoneflies, caddis flies, dragonflies and damselflies, and mosquitoes. These organisms play a critical role in the food-web of the freshwater aquatic environment because most resident and juvenile salmonids depend on them as a food source.

Many of the native aquatic species also have special status listings either at the Washington State level or under the ESA. A list of these species is included in Appendix B.

#### ***Aquatic Invasive Organisms***

"Aquatic invasive species" means nonnative species classified by the state fish and wildlife commission under RCW 77.12.020 as prohibited aquatic animal species or regulated aquatic animal species; or by the state noxious weed control board under RCW 17.10.070 as aquatic noxious weeds. Once nonnative species become established in a new environment where natural enemies, pests, or disease that kept them in check in their native environment are missing, they may spread rapidly and cause unanticipated negative biological and economic impacts. Aquatic invasive species in freshwater environments in

Washington State include the New Zealand mudsnail (*Potamopyrgus antipodarum*), the Asian clam (*Corbicula fluminea*), and Eurasian water milfoil (*Myriophyllum spicatum*). Invasive species in the marine environment of Washington include the European green crab (*Carcinus maenus*), the oyster drill (*Ceratostoma inornatum*), Cordgrass (*Spartina spp.*), Japanese eelgrass (*Zostera japonica*) and several non-native tunicates including the club tunicate (*Styela clava*), transparent tunicate (*Ciona savignyi*), and colonial tunicate (*Didemnum vexillum*). More information on aquatic invasive species in Washington State can be found at: [wdfw.wa.gov/ais/](http://wdfw.wa.gov/ais/).

### **3.1.5 Species and Habitats with Special Status**

Appendix B lists the fish species and habitats with special status designations under the federal ESA and those with special status in Washington State. Those with special status designations under the ESA include species listed as endangered, threatened, candidate species, species proposed for listing as threatened or endangered, species of concern, and those areas designated or proposed as critical habitat. Critical habitats are those areas that are essential to the conservation of the species. Those with special state status designations are those considered “species of concern” by WDFW, which includes those species listed as State Endangered, State Threatened, State Candidate, State Sensitive, or State Monitor.

## **3.2 Water Resources**

With approximately 50,000 miles of rivers and streams, 7,800 lakes, and 3,200 miles of coastline, water is an essential resource for the economic, social, and cultural well-being of the state of Washington. These waters provide the necessary physical, chemical, and biological elements to support the numerous fish and wildlife species that inhabit these aquatic habitats. The Washington State Hydraulic Code is intended to protect these resources specifically for the fish that depend on these systems.

### **3.2.1 Surface Water**

The construction of hydraulic projects or any work that will use, divert, obstruct, or change the flow or bed of a watercourse is regulated under the Hydraulic Code Rules. RCW 77.55.011(11) defines “Hydraulic Project” as “*the construction or performance of work that will use, divert, obstruct, or change the natural flow or bed of any of the salt or freshwaters of the state.*” RCW 77.08.10 (62) defines “Waters of the state” and “state waters” as meaning “*all salt and freshwaters waterward of the ordinary high water line and within the territorial boundary of the state.*” This includes freshwater rivers and streams, lakes, and marine waters and shorelines as described in the following sections.

WAC 220-660-030(152) defines “Watercourse,” “river,” or “stream” as “*any portion of a stream or river channel, bed, bank, or bottom waterward of the ordinary high water line of waters of the state. Watercourse also means areas in which fish may spawn, reside, or pass, and tributary waters with defined bed or banks that influence the quality of habitat downstream. Watercourse also means waters that flow intermittently or that fluctuate in level during the year, and the term applies to the entire bed of such waters whether or not the water is at peak level. A watercourse includes all surface-water-connected wetlands that provide or maintain habitat that supports fish life. This definition does not include irrigation ditches, canals, storm water treatment and conveyance systems, or other entirely*

*artificial watercourses, except where they exist in a natural watercourse that has been altered by humans.”*

### **3.2.1.1 Freshwater - Rivers and Streams**

The Columbia River, the largest river in the western United States, drains the eastern and southwestern portions of Washington. Because of the large volume of water conveyed by the Columbia River and the substantial change in elevation along its course, a number of hydroelectric dams have been constructed on the river, including 11 in Washington State. As such, many reaches of the Columbia are controlled pools or artificial lakes behind dams, such as Franklin D. Roosevelt Lake behind Grand Coulee Dam. The largest tributary of the Columbia, the Snake River, is also highly developed for hydroelectric power generation with four dams operating in Washington. Other major tributaries of the Columbia River in eastern Washington, listed from upstream to downstream, include the Pend Oreille, Kettle, Colville, Spokane, Sanpoil, Okanogan, Methow, Chelan, Entiat, Wenatchee, Yakima, Walla Walla, Klickitat, and White Salmon river systems. Washington tributaries of the Columbia River in the reach flowing from the Cascade Mountain Range Divide to the Pacific Ocean include the Wind, Washougal, Lewis, Kalama, Coweeman, Cowlitz, Elochoman, and Grays river systems. A number of large western Washington river systems discharge to Puget Sound, including, from north to south, the Nooksack, Skagit, Stillaguamish, Snohomish, Cedar, Duwamish-Green, Puyallup, Nisqually, and Deschutes. Hood Canal, the western arm of Puget Sound, receives several moderate to large river systems including the Quilcene, Dosewallips, Duckabush, Hamma Hamma, and Skokomish.

Rivers on the north end of the Coast (Olympic Mountain) Range flow into the Strait of Juan de Fuca, that connects Puget Sound with the Pacific Ocean. These rivers include the Dungeness, Elwha, Lyre, and Hoko rivers systems. Rivers on the west side of the Coast Range flow directly into the Pacific Ocean or embayments of the ocean such as Grays Harbor and Willapa Bay. These include the Sol Duc, Hoh, Queets, Quinault, Humptulips, Chehalis, and Willapa river systems.

Streamflow in the state’s rivers is primarily determined by the amount and type of precipitation that falls during winter months. Precipitation that falls during the rest of the year is typically returned to the atmosphere through evaporation and transpiration by plants. Stream flows in rivers whose headwaters are at relatively low elevations and that are located in areas where winter temperatures are above freezing for most of the winter respond quickly and directly to rainfall events and generally have a strong winter peak in their annual flow pattern (hydrograph). The Chehalis River is an example of a river exhibiting this type of flow pattern.

Snow is the main form of precipitation feeding rivers whose headwaters are at relatively high elevations and/or are located in areas where temperatures are below freezing for most of the winter . Generally, flows in such rivers are low during the winter, but peak strongly in spring and early summer when snow melts. Most eastern Washington rivers, including the east-slope Cascade rivers, exhibit this flow pattern.

Rivers originating from the higher portions of the Olympic Mountains and the upper west-slopes of the Cascade Mountains have headwaters in areas where snowfall is the predominant form of winter precipitation, but temperatures are above freezing for most of the winter in the reaches below the

headwaters. Flow patterns in such rivers typically show a winter peak associated with seasonal rainfall in the mid- and lower reaches as well as a spring or early summer peak associated with snowmelt in the upper reaches (Hamlet et al. 2001). However, rivers that are fed by glacial melt water, in addition to snow pack, will exhibit a different flow pattern. Glaciers can contribute a considerable amount of flow to rivers during late summer and early fall after the snow pack has melted and when precipitation is normally low.

An increase in human development has affected ecological processes in many freshwater bodies within Washington. Development has affected changes in hydrologic, hydraulic, sediment, and temperature regulation/water quality functions.

#### 3.2.1.1.1 Hydrologic Stressors

Hydrologic alteration has occurred in many rivers and streams within Washington. Hydrologic alteration can be defined as any human-caused disruption in any of the five important characteristics of a flow regime: magnitude, frequency, duration, timing (or predictability), and the rate of change (or flashiness) (Poff et al. 1997). Hydrologic alterations resulting from dam construction and other human activities have negatively impacted the biodiversity and ecological integrity of rivers worldwide (Dudgeon 2000; Pringle et al. 2000).

These consequences of hydrologic alteration have included habitat fragmentation, conversion of lotic (moving-water) habitat to lentic (still-water) habitat, variable flow and thermal regimes, degraded water quality, altered sediment transport processes, and changes in timing and duration of floodplain inundation (Cushman 1985; Pringle 2001). These alterations can result in adverse impacts on crucial life stages of aquatic organisms, such as reproduction, recruitment or migration, and a reduction in riparian and wetland functions. These alterations have occurred through three major pathways including: 1) modifications of the landscape, or watershed, through land-use activities, 2) surface water diversion, and 3) construction of impoundments.

Modifications to the landscape through human-caused land-use activities, including development, forestry, and farming has resulted in negative effects to all the characteristics of a flow regime. A decrease in areas with native soils and vegetation and corresponding increases in impervious surfaces reduces the infiltration, interception, and evapotranspiration of precipitation and can reduce groundwater recharge and increase surface water runoff. This in turn can result in more frequent and abnormally intense peak stream flows, reduced base flows, and other hydrologic effects.

There are currently 1,141 dams in the State of Washington, including 106 dams that are greater than 50 feet in height (Ecology 2013). Many of these dams are located on large river systems, including the Columbia River, and impound substantial quantities of water, which is used for power generation, industry, drinking water, and irrigation. Water releases from these structures often do not coincide with the natural hydrologic regime, resulting in substantial hydrologic alterations.

Similar hydrologic alterations can occur due to stream or lake diversions of water for human uses. These withdrawals alter the hydrologic regime, and can result in extremely low streamflow in the summer months. Groundwater withdrawals can also have similar effects, reducing groundwater recharge capability of streams. Lastly, land-use activities also can alter natural drainage and flood pathways,

result in a loss of open channel area, and decrease surface water storage areas through loss of wetlands and floodplains.

Flood risk is a major concern for projects in proximity to the waters of Washington State. Flooding of rivers, streams, and other shorelines is a natural process that is affected by various factors and land uses occurring throughout the watershed. Past land use processes have disrupted hydrological processes and increased the rate and volume of runoff, thereby exacerbating flood hazards and reducing ecological functions.

Flood risk is regulated by local flood-damage-prevention ordinances adopted in compliance with the National Flood Insurance Program. Streambank stabilization measures, shore armoring, and flood risk reduction are regulated by the Shoreline Management Act and the Critical Areas regulations of GMA. Flood hazard reduction measures often consist of structural measures that are regulated by the Hydraulic Code Rules, including dikes, levees, revetments, floodwalls, shore armoring, and channel realignment. Nonstructural flood hazard reduction measures can also include hydraulic projects such as dike removal and wetland restoration.

#### 3.2.1.1.2 Hydraulic and Sediment Stressors

Human development has also resulted in changes to natural hydraulic and sediment functions and processes. Two of the physical functions affected are slope/bank stability and sediment transport. Development has often resulted in simplified and straightened stream channels confined within levees or dikes, with hardened/armored banks, limited floodplain area or channel migration zone (CMZ), lack of bankside riparian vegetation, and limited or no channel complexity and structure. These simplified channels, which are also usually affected by changes in the hydrologic effects discussed above, can result in dramatic changes in sediment transport processes by altering natural erosion (scour) and depositional patterns and increasing stream velocities. Bank erosion can result, leading to a surplus of fine sediments that can be transported downstream and deposited. Also, altered hydrologic and hydraulic processes, coupled with alteration of riparian areas, can simplify instream structure, including channel form, stream and floodplain roughness, and debris presence and recruitment.

#### 3.2.1.1.3 Stream Temperature and Water Quality

Changes to stream temperature and water quality can also result from human disturbance and development. Cleared riparian zones increase the amount of solar radiation reaching a waterbody, which can result in substantial increases in stream temperature in small and medium-sized waterbodies. Furthermore, when these riparian areas are developed and lack vegetation, the ability of the landscape to infiltrate and intercept chemicals in stormwater runoff is decreased, resulting in greater increases in pollutant loading.

#### **3.2.1.2 *Freshwater - Lakes***

The state has numerous fresh water lakes, the largest of which is Lake Chelan, an approximately 55-mile long glacial lake in north central Washington. The state's lakes include naturally formed lakes, constructed reservoirs on rivers and streams, and natural lakes that are artificially raised and/or

controlled through constructed impoundments. Lakes are typically fed by water from inflowing rivers or creeks, but may also be fed by groundwater and direct precipitation.

Increased human development around lake edges has resulted in stressors within lacustrine (lake) systems in Washington.. In addition, many lakes are dammed or the outlet otherwise restricted, affecting hydrology and water quality in some lakes.

### **3.2.1.3 Marine Waters and Shorelines**

The major marine water features of Washington State are the Pacific Ocean, the Strait of Juan de Fuca, and Puget Sound, including Hood Canal, collectively called the Salish Sea. Additional marine water features are large coastal estuaries including Grays Harbor at the mouth of the Chehalis River, Willapa Bay at the mouth of the Willapa River, and the Columbia River estuary at the mouth of the Columbia River, as well as the straits and bays of the San Juan Archipelago. Fifteen counties have marine shorelines--Clallam, Grays Harbor, Island, Jefferson, King, Kitsap, Mason, Pacific, Pierce, San Juan, Skagit, Snohomish, Thurston, Wahkiakum, and Whatcom counties. Collectively, these counties share 2,337 miles of marine shoreline comprised of 157 miles of Pacific coastline, 144 miles of coast along the Strait of Juan de Fuca, 89 miles in Grays Harbor, 129 miles in Willapa Bay, 34 miles in the Columbia River Estuary, and 1,784 miles bordering Puget Sound and the Strait of Georgia. Approximately 73 percent of these shorelines consist of sand or pebble beaches, while 27 percent consist of rocky headlands, marshes, or other shoreline types (Ecology and NOAA 2001).

Increased human development along marine shorelines and increased use of marine waters for transportation has resulted in shoreline armoring and overwater structures (e.g., docks, bulkheads, piers), alteration of drift cell and sediment dynamics (from piers, jetties, breakwaters, and marinas), degraded water quality from stormwater runoff, and degraded nearshore conditions from loss or alteration of estuarine, wetland, and riparian habitats. The loss of estuary habitat due to placing fill and disconnecting floodplain and tidal wetlands in the estuary is also a factor limiting salmon productivity.

## **3.2.2 Water Quality**

Ecology's most recent federal Clean Water Act section 303(d) list was approved by the U.S. Environmental Protection Agency (EPA) in December 2012. The list is part of Ecology's Water Quality Assessment, which groups waters in Washington State into five categories. Category 5 constitutes the 303(d) list, the list of impaired water bodies that generally require a total maximum daily load (TMDL) plan. The list assesses water bodies for over 100 parameters, including temperature, fecal coliform, dissolved oxygen, instream flow, bacteria, and turbidity. Ecology's 303(d) list can be accessed at: [http://www.ecy.wa.gov/programs/wq/links/wq\\_assessments.html](http://www.ecy.wa.gov/programs/wq/links/wq_assessments.html).

An EPA report based on 2008 monitoring lists the most prevalent causes of impairment to rivers and streams to be, in order of impact: increased water temperature, high levels of fecal coliform bacteria, low dissolved oxygen, high pH, low instream flow, and high levels of polychlorinated biphenyls (PCBs). For lakes, the most prevalent causes of impairment were high levels of PCBs, presence of invasive exotic species, increased water temperature, low dissolved oxygen, high levels of dioxin, and high levels of fecal coliform bacteria. For marine waters, the most prevalent causes of impairment were high levels of

fecal coliform bacteria, low dissolved oxygen, presence of invasive exotic species, high levels of PCBs, and high levels of metals (EPA 2013).

### 3.2.3 Wetlands

The U.S. Army Corps of Engineers evaluates applications for permits for proposed activities in "Waters of the United States" (including wetlands) throughout the State of Washington under the authority of Section 404 of the Clean Water Act. Two state laws, the state Water Pollution Control Act and the Shoreline Management Act, give Washington Department of Ecology the authority to regulate wetlands.

Under RCW 90.58.030 (Shoreline Management Act of 1971), wetlands are defined as:

*"Those areas inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas."*

Washington State's wetlands include the estuarine salt marshes of Puget Sound and the Pacific Coast, riparian wetlands adjacent to rivers and streams as an integral part of riparian habitat, potholes and vernal pools of eastern Washington, and high elevation meadows and fens. Many of the freshwater wetlands of western Washington are associated with ponds, lakes, rivers, and shorelines; however, a significant number of wetlands are "isolated" and not directly connected to other surface water bodies. Such wetlands depend on groundwater discharge and precipitation for their water source. The climate of eastern Washington creates permanent and intermittent wetlands that are typically very different from western Washington wetlands in their origin, seasonality, chemistry, and plant species distribution.

Wetlands in the state are critical to maintaining regional biodiversity. Although wetlands represent only 2.1 percent of the area of the state (Dahl 1990), over two-thirds of all terrestrial vertebrate species in Washington can be considered "wetland users" (Knutson and Naef 1997; Kaufmann et al. 2001).

Wetlands also provide important habitat structure for anadromous and resident fish (Sheldon et al. 2005). Anadromous and resident fish benefit from:

- Ponded or impounded surface waters that are either seasonal or permanent and connected to streams;
- Interspersed land and water or shorelines that provide protection from wind, waves, and predators, and natural territorial boundaries;
- Varying depths of water, such as deep and shallow pools (e.g., shallow waters provide refuge for some young freshwater fish, while the deeper waters provide refuge for the larger adults);
- Overhanging vegetation that regulates water temperature;
- Vegetation cover that provides protection from predation (e.g., overhanging or submerged vegetation, submerged logs and rocks, floating debris); and
- Large woody debris that provides cover and habitat for macroinvertebrates.

Many of Washington's wetlands have been lost since the early 1900s due to development activities such as urban development, utility infrastructure construction, logging, and agriculture. Many of the remaining wetlands in the state have been degraded through alteration of hydrology, sedimentation, and removal of vegetation.

### 3.3 Earth

The geology of Washington State is very complex and has been shaped by a variety of geologic processes including subduction of the Pacific plate, dormant and active volcanism, and repeated glaciation. These processes have created a complex patchwork of geologic regions that are illustrated on Figure 3-1 and described below.

The far western portion of Washington State is part of the Coast Range region. The Coast Range consists of the Willapa Hills of southwest Washington and the Olympic Mountains, which extend north from the Chehalis River valley and form the Olympic Peninsula. The Puget Trough, a structural depression that extends the length of the state, lies to the east of the Coast Range. The Puget Trough is generally flat, but in places is characterized by hummocky glacial deposits. A substantial portion of the northern half of the trough is occupied by Puget Sound, a marine estuary of the Pacific Ocean.

East of the trough is the geologically complex Cascade Range. This range, which extends the entire length of the state, separates western Washington from eastern Washington. The most prominent geographic feature in the southeast portion of the state is the Columbia Plateau. The plateau is an extensive basin formed by numerous basalt flows. The Columbia and Snake Rivers flow through deeply incised trenches cut into the plateau largely as a result of the Missoula Floods that occurred during the last ice age (approximately 15,000 years ago).

The northeast portion of the state is occupied by several mountainous areas including the Okanogan Highlands, the Kettle River Range, and the Selkirk Mountains, a portion of the Rocky Mountain Range.

According to the Natural Resource Conservation Service's (NRCS) *Washington Soil Atlas*, broad variation in topography, climate, and geologic formations within the state has produced thousands of recognized soil types in the state (Hipple 2013). Common parent materials for soil in Washington include volcanic ash, glacial till, granite, schist, limestone, basalt, and tuff. Portions of southeast Washington are occupied by fertile, windblown dust called loess.

### 3.4 Climate

Washington's climate varies dramatically from west to east with the western part of the state having a mild, humid climate and the eastern part a more extreme and dry climate. Western Washington has frequent cloud cover and considerable fog and rain. Portions of western Washington on the west side of the Olympic Mountains receive as much as 160 inches per year of precipitation, making that area the wettest in the 48 conterminous states. Precipitation in the Puget trough is much less, typically in the range of 40 to 50 inches per year with approximately 60 to 80 percent of that total falling in the six-month period between October and March. Some areas of western Washington experience the rain shadow effect of the Olympic Mountains and receive significantly less rainfall. For example, average annual precipitation for the City of Sequim is only 16 inches.

Precipitation increases dramatically near the Cascade Mountains. Palmer, a site approximately 20 miles west of the Cascade crest, receives an annual average of 90 inches of precipitation. In an average year, Snoqualmie Pass, located at the Cascade crest, receives 104 inches of precipitation, although much of that precipitation falls in the form of snow.

Temperatures in western Washington are moderate. Typical average maximum temperatures in July are about 70°F in coastal areas, and 5 to 10 degrees warmer inland. Average minimum temperatures in July are generally in the low to mid-50s (F). Average maximum temperatures in January are in the mid-40s (F) with average minimum temperatures in the low 30s (F).

Many parts of eastern Washington receive less than 10 inches of total annual precipitation, and much of that precipitation falls in the form of snow. Total precipitation approaches 20 inches per year in areas closest to the Cascade Range and the Selkirk Mountains.

Temperature ranges in eastern Washington are more extreme than those of western Washington. Average maximum temperatures in July are in the mid-80s (F) to near 90°F. Average minimum temperatures in July are generally in the mid- to upper 50s (F). Average maximum temperatures in January are in the low to mid-30s (F), except in southeast Washington where the average maximum temperatures are closer to 40°F. Average minimum temperatures in January are typically in the teens to mid-20s (F).

### **3.4.1 Climate Change**

According to the *Washington Climate Change Impacts Assessment*, average annual temperatures in the Pacific Northwest are anticipated to increase by 2.0° F by the 2020s, 3.2°F by the 2040s, and 5.3°F by the 2080s. Increases in temperature are projected to reduce snowfall, resulting in decreasing snowpack in Washington by 28 percent by the 2020s, 40 percent by the 2040s, and 59 percent by the 2080s. Changes in the magnitude of snowpack and timing of snowmelt will shift stream flow timing. Stream temperatures would rise, impacting quality and extent of fish habitat. By the 2080s, periods of thermal stress for salmon would double or possibly quadruple in duration. Increases in thermal stress are projected to be greatest in the Interior Columbia River Basin and the Lake Washington Ship Canal (Climate Impacts Group 2009).

Sea level rise associated with climate change is expected to increase bluff erosion and shift coastal beaches inland. Major ports will likely be able to accommodate rising sea level at their facilities but adapting low-lying coastal transportation networks that serve port facilities (e.g., trains, highways) will be a significant challenge. Shellfish production in the state may be negatively impacted by increasing ocean temperatures and acidity, shifts in disease and growth patterns, and more frequent harmful algal blooms. (Climate Impacts Group 2009).

## **3.5 Wildlife**

Washington's diverse wildlife species inhabit an equally diverse variety of habitats ranging from desert to rainforest in the terrestrial environment, and mountain spring to ocean in the aquatic environment. Wildlife most pertinent to the Hydraulic Code Rules includes species that use freshwater and saltwater bodies and their riparian or shoreline vegetation for nesting, breeding, foraging, and refuge. The following sections describe groups of species and particular wildlife that rely on Washington's aquatic habitats. A list of all federally and state listed wildlife in Washington and their status is provided in Appendix B.

### **3.5.1 Marine mammals**

Three kinds of marine mammals—cetaceans (whales, dolphins, and porpoises), pinnipeds (seals and sea lions), and mustelids (sea otters)—occur within the project vicinity. All marine mammals are federally protected under the Marine Mammal Protection Act, regardless of their listing status under ESA.

Over 20 species of cetaceans are present in the marine waters of Washington State. Six of these species are federally listed under the ESA, including killer whale (orcas), gray whale, humpback whale, blue whale, sperm whale, sei whale, and Northern Pacific right whale. Many of these species such as blue whale and sei whale are relatively rare visitors to the Salish Sea and generally inhabit areas of the continental shelf where they migrate along the Pacific coast between their breeding grounds and feeding grounds. Other species such as orcas spend considerable portions of the year within the Salish Sea and inner coastal waters.

Cetaceans are either filter feeders that use their baleen to strain plankton and other tiny organisms from the water, or toothed whales that feed primarily on fish, squid, and crustaceans. Larger toothed whales also eat aquatic birds and mammals, including other cetaceans (Nowak 1999; Reeves et al. 2002). Pinnipeds found in Washington State include Northern fur, Northern elephant, and harbor seals; and California and Steller sea lions. Seals and sea lions generally feed on fish, squid, octopus, and shellfish, and crustaceans. Harbor seals are considered a non-migratory species, breeding and feeding in the same area throughout the year while other pinnipeds are migratory, moving hundreds or thousands of miles from their breeding grounds in Mexico, Canada, Oregon, and Washington. Although California and Steller sea lions do not breed in Washington waters they utilize portions of Puget Sound and the lower Columbia River, where they feed on salmon. Pinnipeds temporarily leave the water between periods of foraging along shorelines, and often congregate on haulouts such as beaches, logbooms, docks, and floats.

Sea otter, a mustelid, is also found in Washington. Previously widely distributed within the state, they now almost exclusively occupy rocky habitat along the Olympic Peninsula coast and western Strait of Juan de Fuca (Lance et al. 2004). Sea otters feed primarily on shellfish such as sea urchins, clams, crabs, and mussels.

### **3.5.2 Amphibians**

Amphibians include frogs, toads, newts, and salamanders that inhabit a wide variety of habitats, with most species living in terrestrial or freshwater aquatic ecosystems. In Washington, most amphibian larva live in water. The young generally undergo metamorphosis from larva with gills to an adult air-breathing form with lungs. Amphibians use their skin as a secondary respiratory surface but some small terrestrial salamanders and frogs lack lungs and rely entirely upon skin. Tadpoles and aquatic amphibians utilize gills for respiration. Some amphibian species are fully aquatic throughout life, some take to the water intermittently, and some are entirely terrestrial as adults.

In Washington, several species of frogs and toads are closely associated with open water areas such as streams, lakes, and wetlands, and riparian areas (Johnson and O'Neil 2001). These include bull frog, Cascades frog, northern red-legged frog, Pacific chorus frog, Western toad and Oregon-spotted frog. Oregon spotted frog is listed as a candidate species under the ESA.

Although salamanders reproduce in Washington's freshwater streams and ponds, the adults of most salamander species are also closely associated with open water areas such as streams, lakes, wetlands, and riparian areas (Johnson and O'Neil 2001). Salamander species present within Washington include Long-toed salamander, Northwestern salamander, Pacific giant salamander, Dunn's Salamander, Van Dyke Salamander, Western Red-backed salamander, Cascade torrent salamander, and Olympic Torrent Salamander (Jones et al. 2006). The rough-skinned newt is also found in Washington. None of these species is listed under ESA, although some species of salamander are federal species of concern and/or state candidate species.

### **3.5.3 Reptiles**

Reptiles are a class of cold-blooded egg-laying vertebrate animals with scales or scutes (bony plates). They include lizards, snakes, and turtles. Of these species, turtles are most associated with marine and freshwater habitats. Several species of turtles inhabit aquatic and terrestrial habitats within Washington.

Sea turtles include the leatherback sea turtle, loggerhead turtle, green turtle, and Olive Ridley sea turtle. Although all of these species are known to inhabit offshore areas of the Columbia River mouth and Puget Sound, they are rare within Washington waters with no known significant nesting (breeding) locations. Only the leatherback sea turtle has been sighted in Puget Sound (Strait of Juan de Fuca). All four of these species are listed as threatened or endangered under the ESA.

Washington has only two native land-based turtles, the painted turtle and the Western pond turtle, both of which live exclusively in freshwater ponds and streams. Western pond turtle is classified as a state endangered species.

### **3.5.4 Birds**

Hundreds of bird species are documented as spending at least a portion of their lives in Washington. The following discussion focuses on those groups of birds most closely associated with freshwater and marine aquatic habitat.

Waterfowl include swans, geese, and ducks, that are mid-sized to large birds most commonly found on or near water. Most waterfowl feed while on the water, diving or submerging their bodies to search for fish, plants, and invertebrates. Approximately 50 species of waterfowl are found in Washington State.

Loons are large, fish-eating birds with spear-shaped bills and long, thickset necks. They are expert divers, able to dive to depths of approximately 250 feet and remain underwater for long periods. All loon species nest on fresh water shores, but in winter are found most commonly on saltwater. There are only five species of loons worldwide, and all five have been seen in Washington (Seattle Audubon Society 2013).

Six species of grebes are found in Washington. Grebes are water-dwelling diving birds with thick, waterproof plumage and that consume fish, aquatic insects, and other small water creatures. During the breeding season they can be found on marshy ponds, where they build floating nests and in the winter, grebes live on open water.

Albatrosses and petrels, also known as tube-nosed seabirds, spend much of their life on the open ocean foraging from the water's surface. For most species, the nesting season is the only time of the year that they touch land. Four species of albatross, 12 species of shearwaters and petrels, and four species of storm-petrels utilize nearshore and offshore areas in Washington.

Pelicans and cormorants are aquatic, medium-sized to large birds that feed on small fish and other aquatic animals and that mostly nest in colonies. Representatives of five of the order's six families have been found in Washington, including one species of tropicbirds, two species of boobies, two species of pelican, and one species of frigate bird.

Hérons and ibises are large birds with long legs and necks. Many live on or near water where they wade in search of prey and many breed in colonies. Herons and egrets are generally wading birds that generally inhabit wetlands and slow-moving waters. Nine different species of herons have been observed in Washington, as have three species of ibis, tactile feeders that generally inhabit wetlands and use their long, often curved bills to probe in shallow water or mud for invertebrates or small vertebrates.

Rails, coots, and cranes are members of a diverse group of mostly aquatic or marsh-dwelling birds. Despite their wet habitat, members of this order do not have webbed feet, although in some groups their strong toes are slightly webbed or lobed. Coots and rails are generally omnivorous wetland dwellers that use a variety of foraging techniques. Four species of coots and rails are found in Washington on both sides of the Cascade Mountains (Seattle Audubon Society 2013). A single species of crane, the sandhill crane, is found in Washington. These cranes nest in wetlands that are surrounded by lodgepole pine, ponderosa pine, grand fir, or Douglas fir forests.

The order Charadriiformes is well represented in Washington, and includes shorebirds, gulls, and auks. Most of this group consists of water birds that feed on invertebrates or small aquatic creatures. This group include plovers (nine species in Washington State), oystercatchers (one species), stilts and avocets (two species), sandpipers and phalaropes (approximately 40 species), gulls and turns (approximately 30 species), skuas and jaegers (four species), and auks, murre, and puffins (14 species) (Seattle Audubon Society 2013).

### **3.5.5 Beavers**

Beavers are widely distributed across Washington State along rivers, small streams, lakes, and wetlands where there is deep, calm water or adequate year-round flow. Beavers build dams across streams and other watercourses to impound water and create deep-water protection from predators, access to food supplies, and underwater entrances to dens. Beavers can have substantial effects on streams and riparian habitat. Through dam building and feeding, beavers alter hydrology, channel geomorphology, biogeochemical pathways, and community productivity (Naiman et al. 1986).

Beaver ponds and associated wetlands provide fish rearing habitat and habitat for birds and mammals (Bisson et al. 1987; Brown et al. 1996; McCall et al. 1996). Ponds also provide surface water and bank storage that can improve summer instream flow and benefit fish. Multiple studies have noted the interaction that used to exist between beavers and riparian areas and streams prior to the elimination of beaver in many locations (Naiman et al. 1986; Gurnell 1998). Changes in hydrologic regime can also

affect beaver populations. For example, streams with higher and more frequent peak flows affect dam building and stability. Persistent breaching or removal of a beaver dam can increase the risk of negative impacts to fish habitat.

### **3.5.6 Other Species that Utilize Riparian Habitats**

Throughout the state, riparian habitat occurs in areas adjacent to rivers, streams, seeps, and springs. Riparian areas provide diverse and productive habitat for wildlife because of the availability of water, moist rich soils, and a variety of plants. In addition to being essential for healthy fish populations, approximately 85 percent of the state's terrestrial (land) animals use riparian habitat for essential life activities (WDFW 1998).

Riparian habitats provide large mammals (e.g., opossum, beaver, fox, mink, otter, elk, and deer) with prey and carrion, a productive and varied plant community, reduced winter snow accumulation, vegetation in early spring, aquatic habitat, and transportation corridors (Raedeke et al. 1988). Forested riparian habitat offers snags that provide shelter for cavity-nesting birds and mammals (e.g., woodpecker, chickadee, wren) and a food source for tree-clinging, insect eating birds (e.g., nuthatches). Amphibians, reptiles, and small mammals find shelter in or under downed trees and under dense vegetation. Large animals such as deer, elk, and moose can seek refuge from intense summer heat in relatively cool riparian zones (WDFW 1998).

The size of the riparian area and the extent of interaction between the land and the water vary with the size of the stream (Bilby 1988). Riparian habitat along smaller headwater streams is usually insufficient to support large mammals. Lowland riparian areas along large rivers once provided productive wildlife habitat, but has been highly modified by humans. Aquatic species such as otter, beaver, muskrat and mink are most affected by changes in size and composition of riparian areas (Raedeke 1988).

## **3.6 Vegetation**

The flora associated with watercourses in Washington differs between the east and west side of the Cascade Mountain range and between fresh and salt waters. As distance from the watercourse and elevation increase, changes in soil, moisture, temperature, precipitation, and other factors combine to create conditions that are suitable for different plants.

### **3.6.1 Riparian Species – Native and Invasive**

Riparian areas on the west side of the state are extensions of a temperate rain forest and support species such as black cottonwood, red alder, and western red cedar. A dense shrub layer is typically present (e.g., Indian plum, oceanspray, salal) and the floor of the forest has a dense coverage of ferns and mosses. East of the Cascades riparian areas are dominated by willow species, black cottonwood, and other deciduous shrubs and are adjacent to ponderosa pine forests, shrub-steppe or grassland environments. Many watercourses east of the Cascades are void of riparian vegetation due to previous land activities and development.

Riparian vegetation communities present along the shores of Puget Sound are very diverse. Some of the more common trees and shrubs are the same as those found in freshwater riparian areas such as

Douglas fir, Pacific madrone, vine maple, oceanspray, and salmonberry. Alder and vine and big-leaf maple forest communities commonly occur along the shores of Puget Sound. Salt-tolerant vegetation found in the backshore of beaches or in mudflats includes saltgrass and saltweed, pickleweed, seaside arrowgrass, and dune wildrye. Marine riparian vegetation communities are particularly important because they exhibit greater biodiversity than inland vegetation communities and influence the health and integrity of marine habitats and species (Brennan 2007). Riparian areas maintain local biodiversity, and their ecological functions provide the basis for many valued fisheries, in addition to bird and other wildlife habitat (National Research Council 2002).

### **3.6.2 Aquatic Species – Native and Invasive**

Freshwater aquatic environments support native and invasive vegetation including algae. Floating plants can have leaves on the surface and be rooted to substrates (e.g., water lilies, pondweeds); tangled mats of stems, leaves, and flowers also rooted to substrates (e.g., water primrose or purslane, water pennywort); or entirely free floating (e.g., duckweed). Other species of pondweed, waterweed, startwort or bladderwort can grow entirely underwater at shallow depths. Several species of freshwater aquatic plants are considered invasive as they overrun habitats and crowd out native species, such as Eurasian watermilfoil.

Saltwater environments contain seagrasses, kelp, sea lettuce, and other macroalgae species. Eelgrass is rooted seagrass that spreads horizontally at shallow water depths throughout intertidal and subtidal zones. Beds of *Zostera marina* and *Z. japonica* (an invasive species) are found throughout much of the Puget Sound shoreline growing in muddy and sandy substrates (Mumford 2007). Kelp is a large seaweed present in intertidal and subtidal zones. Twenty-three species of kelp are found in Puget Sound, making it one of the most diverse kelp floras in the world (Druehl 1969). Sea lettuce (several species of the genus *Ulva*) grows in shallow bays and inlets and can grow, break off, and accumulate rapidly in thick piles driven by winds and currents during summer months. All types of seaweeds are essential components of the Puget Sound ecosystem. They provide food for several species of sea birds, fish, and other marine animals, as well as shelter for fish.

## **3.7 Land and Shoreline Use**

Land use in Washington State is highly diverse. Portions of the Cascade Range and the Olympic Mountains are dedicated to federally owned wilderness areas, national parks, national recreation areas, and national forests. Approximately 30 percent of land in the state is federally owned. The national forests are managed for multiple uses including commercial timber production and recreation. Private forest lands are common in mountainous areas such as the coast range, Cascades, and northeast Washington. Land privately managed for timber production (e.g., Weyerhaeuser, Georgia Pacific, and Plum Creek) also accounts for 9.4 million acres (43 percent) of Washington's forest lands (Erickson and Rinehart 2005).

The lowlands of Puget Sound are heavily urbanized and include some of the state's largest cities such as Seattle, Tacoma, Everett, Bellingham, Bremerton, and Olympia. Areas around Spokane, Richland, Kennewick, Pasco, Yakima, and Wenatchee in eastern Washington are also characterized by urban-level

development. These urbanized areas are home to much of the state's population, as well as its manufacturing, commercial, and service industry base.

The state is also the site of extensive agricultural development. In western Washington, agricultural development is concentrated in the major river valleys, particularly those in the Puget Sound region. Major portions of eastern Washington have been developed for agricultural production. The Yakima, Wenatchee, and Okanogan River Valleys and the Columbia Basin in the central part of eastern Washington contain large scale irrigated agriculture. Southeast Washington is extensively developed for dry- land farming of primarily wheat.

Land use in riparian areas is managed by local zoning and critical areas ordinances, the Growth Management Act (chapter 36.70A RCW) and the Shoreline Management Act (chapter 90.58 RCW). The Growth Management Act requires affected cities and counties to designate their rural areas and urban growth areas and to conduct capital facilities planning to ensure that adequate public facilities are provided concurrent with future growth within designated urban growth areas. The Growth Management Act also requires all counties and cities to develop and adopt land development regulations to protect critical areas such as wetlands, fish and wildlife habitat, floodplains, and aquifer recharge areas. The Shoreline Management Act requires cities and counties to adopt local master programs, which must be approved by Ecology. Shoreline Master Programs are intended to protect shorelines from development and to require mitigation of impacts where appropriate. Local Shoreline Master Programs are required to include regulations for shoreline stabilization measures and in-water work. More information on land use regulations is included in Section 1.5 of this Final PEIS document.

### **3.8 Recreation**

Waters of the State of Washington are used extensively for recreation. People enjoy sightseeing, waterfowl watching, hunting, fishing, and other water oriented activities. Water activities include swimming or wading, motor boating, water skiing, personal water craft use (e.g., jet skis), sailboating, non-motorized boating (kayaking, canoeing, or rowing), white water rafting, inner tubing, wind surfing, surfboarding, scuba diving, and beachcombing.

Water-oriented recreation in Washington often revolves around docks, piers, and marinas. Both publicly-owned and privately-owned marinas are common in Washington State. New docks are regulated by the Shoreline Management Act, which includes a policy preference for joint-use docks. However, privately-owned docks associated with single-family residential uses remain more common in the state.

Water recreation in and around smaller streams can include the construction of "play" structures along the shoreline. Some "water play" involves impounding streams (construction of "recreational dams") to enhance the depth of a swimming hole. These recreational structures can impede fish migration within the creek as flows decline into the fall months. In some cases, spawning migrations are impacted, reducing fish productivity.

Recreation that depends on healthy fish life is of major economic value in Washington, particularly in more rural areas. USFWS estimates in its 2011 report<sup>5</sup> that expenditures for recreational fishing in Washington top \$974,615,000. It is critical to Washington's economy that we continue to provide access for recreationists that support fish and wildlife conservation in Washington. It is also important while implementing recreational access projects to maintain protection for the fish that are the object of much of that recreation. Protecting fish resources is vital to the ecological health and community sustainability of Washington.

### **3.9 Cultural Resources**

Cultural resources consist of archeological, historic, and traditional cultural places including buildings, structures, sites, districts, objects, and landscapes. The State Department of Archeology and Historic Preservation (DAHP) has recorded over 20,000 archeological and traditional cultural places and over 100,000 historic properties within the state. This information is maintained in the Washington State Inventory of Cultural Resources.

Under the State Environmental Policy Act, potential significant adverse impacts to historic, archeological, and traditional cultural places associated with project actions must be identified and evaluated. The DAHP is responsible for providing formal opinions to local governments and other state agencies on a site or property's significance and the potential impact of a proposed project action upon such sites or properties. Similarly, the National Historic Preservation Act requires that all federal agencies consider cultural resources as part of all licensing, permitting, and funding decisions. More about regulation of cultural resources impacts can be found in Final PEIS section 1.5.

Many of the state's rivers and other surface water bodies have cultural significance to some population groups, including Native American tribes. Rivers and their tributaries can be viewed as being analogous to the bloodstream of a watershed and have great importance on both a practical and spiritual level. For this reason, riparian and marine areas often have a higher likelihood of presence of historic and cultural resources.

### **3.10 Social and Economic Issues**

In addition to forestry and agriculture (as discussed in Final PEIS Section 3.7), major industries in Washington State include computer software, aircraft, electronics, aluminum production, real estate, and retail sales. Other major industries in the state that rely on access to water include hydroelectric power generation, tourism, recreation, and importing and exporting.

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<sup>5</sup> 2011 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation U.S. Fish and Wildlife Service publication FHW/11-WA, Issued June 2013

The rivers, lakes, and marine waters of Washington State are central to many social and economic drivers in addition to the many businesses that depend on access or proximity to water. Single-family residences and undeveloped residential plots are often located near water. The economy of Washington also depends on its transportation infrastructure, much of which (including state and federal roads, bridges, railways, and the Washington State Ferry system) is located in or near waters regulated by the Hydraulic Code Rules.

The companion document "*Detailed Small Business Economic Impact Statement and Cost Benefit Analysis*" (Revised July 30, 2014) contains information about the average annual number of HPAs by applicant group and types of project. This document can be found on the WDFW Hydraulic Code Rules web site.

## **Chapter 4 Regulated Activities and Effect on the Environment**

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This chapter describes the probable significant adverse environmental impacts<sup>6</sup> that may result from adopting the revised Hydraulic Code Rules. Because this is a programmatic EIS that is evaluating the general impacts of implementing the proposed rule changes, potential impacts are discussed generally. Specific hydraulic projects that require an HPA would be evaluated under the new Hydraulic Code Rules if the changes are adopted. This chapter compares the impacts of implementing hydraulic projects under Alternative 2 – WDFW-Proposed Rule Changes (Preferred Alternative), Alternative 3 - Increased Protection for the Natural Environment, and Alternative 4 - Increased Protection for the Built Environment to the environmental baseline represented by Alternative 1 - the No Action Alternative (existing rules).

Because the Hydraulic Code Rules apply only to projects that affect the natural flow or bed of state waters, the elements of the natural environment<sup>7</sup> that would be most affected are fish, earth, and water resources. Most-impacted elements of the built environment include transportation, agriculture, cultural resources, and recreation. Potential impacts to those resources are discussed in more detail below, with most of the foundation provided under the Fish section. Other resources that would be less affected or only indirectly affected by the proposed rule changes are discussed in less detail.

Impacts of Alternative 2, Alternative 3, and Alternative 4 are evaluated through a comparison with Alternative 1, No-Action. A detailed comparison of probable significant adverse environmental impacts between the four alternatives is provided in Table 4-2. In addition, tables are provided for each element that summarizes the level of risk of additional impacts for each of the proposed alternatives. Unless otherwise stated, we assume for these evaluations that the total number of individual HPA projects per year would not vary significantly among the options. Note that provisions of Alternatives 3 and 4 that are identified in Table 2-6 as requiring statutory change are not evaluated in this section.

The Hydraulic Code (chapter 77.55 RCW) sets boundaries on the scope of Hydraulic Project Approvals (permits). Permits may not be unreasonably withheld or unreasonably conditioned (RCW 77.55.021(7)(a)). Also, permit conditions must be reasonably related to the project, and not an attempt to optimize conditions for fish that are out of proportion to the impact of the proposed project (RCW 77.55.231). The following are some further examples of the statutory limitations on HPA authority:

- Marine bulkheads are a significant cause of cumulative impacts in Puget Sound. However, 77.55.141 RCW directs that WDFW shall issue HPAs, with or without restrictions, for single-family marine bulkheads that meet specified criteria. Impacts to the environment from marine bulkheads for single-family residences will continue for alternatives 1 through 4.
- Permits issued in locations covered by a national pollution discharge elimination system municipal storm water general permit may not be conditioned or denied for water quality or

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<sup>6</sup> RCW 43.21C.031(2)

<sup>7</sup> WAC 197-11-444 provides lists of elements of the natural and built environments

quantity impacts arising from storm water discharges. A permit is required only for the actual construction of any storm water outfall or associated structures pursuant to this chapter (RCW 77.55.161(2)).

- Fish passage may not be required for existing tide gates, flood gates, or other associated man-made agricultural drainage facilities (RCW 77.55.281).
- The department is required to immediately approve certain activities when a state of emergency has been declared (RCW 77.55.021(12)).
- The department is required to approve applications for specified activities when appropriate authorities have determined that an imminent danger or chronic danger exists (RCW 77.55.021(14) and (15)).

These limitations render an individual permit unsuitable for addressing broad scale cumulative impacts. They also demonstrate a legislative intent for HPAs to authorize work without requiring prevention of cumulative impacts. None of the alternatives reduces the risk of impacts in situations such as the above.

## **4.1 Fish**

There have been significant gains in knowledge over the last decade with respect to how activities within our waterways affect fish life. Since the last revisions were made to the Hydraulic Code Rules, gains have been achieved in minimizing these effects by implementing specific design criteria, using avoidance measures where appropriate, implementing construction related Best Management Practices (BMP), and adhering to allowable work windows aimed at protecting all life stages of fish, primarily salmonids. The following text outlines potential impacts to fish resulting from activities regulated under the proposed changes to the Hydraulic Code Rules. The impacts discussion is based primarily on the Fish Life Concerns included for each activity in the proposed Hydraulic Code Rules, supplemented with additional information where necessary.

### **4.1.1 Freshwater Impacts of Hydraulic Projects on Fish**

Constructing or performing work activities in or near watercourses can alter the habitat that fish and shellfish depend on. Direct damage or loss of habitat causes a direct loss of fish and shellfish production. Damaged habitat can continue to cause lost production of fish and shellfish for as long as the habitat remains altered. Work activities can also alter the physical processes that form and maintain fish habitat such as hydrologic patterns and sediment movement. Impacts associated with hydraulic projects include:

- Alteration of light regime
- Aquatic vegetation modifications
- Alteration of fish migration patterns
- Disturbance of streambank or lake shoreline
- Direct loss of fish habitat
- Riparian vegetation modifications
- Disturbance of substrate
- Alteration of stream morphology
- Alteration of sediment delivery and movement

- Alteration of hydrologic patterns
- Alteration of beaver dams
- Impacts to freshwater fish habitat

**Alteration of light regime** – Structures such as piers, floats, ramps, or marinas and terminals over freshwater shoreline habitats result in reduced light or shading of fish habitat, which reduces the survival of aquatic plants. Aquatic plants provide food, breeding areas, and protective nurseries for fish. Marinas and terminals have a larger impact area than residential docks and they are usually associated with heavy boat traffic and human use.

The shading and light reduction created by overwater structures may alter predator/prey relationships. Overwater structures may contribute to attracting and congregating juvenile salmon, for example, and may also provide ambush habitat for their predators, such as smallmouth and largemouth bass. Overwater structures, especially if coverage is dense along the shoreline, may reduce phytoplankton primary productivity and therefore negatively affect food-web interactions and productivity higher in the food chain.

**Aquatic vegetation modifications** – New structures and associated vessel activity can disturb or directly remove aquatic vegetation, which can affect fish life. Marinas and terminals have a larger impact area than residential docks and they are usually associated with heavy boat traffic and human use, which can cause fish to avoid the area.

**Alteration of fish migration patterns** – In-water structures can alter the movement of juvenile salmon, steelhead, and other fish species. The structure itself can physically block migration or force fish into deeper water, and changes in areas of light and dark can affect migration and increase risk of predation. Boat ramps and launches placed above bed grade can block sediment and wood movement, and alter nearshore migration of juvenile fish. Piers may increase the exposure of juvenile salmon, steelhead, and other small fish to potential predators by providing predator habitat and by changing migration patterns from shallow to deeper water. This can alter the natural predator/prey relationship.

Fishways such as ladders or weirs can impact the migration of some fish. Fish passage structures that target one species or group of species may unintentionally limit the passage of other important species. Species selection can alter species composition and community relationships upstream of the passage barrier, with important implications for conservation of individual species and biodiversity.

Off-channel ponds created for livestock watering, irrigation, fire protection, or another purpose can provide beneficial habitat or can have detrimental effects on fish. Ponds can disrupt fish movement and also support elevated temperatures that are harmful to fish life. However, these areas can provide important refugia from high flow events and important rearing habitat in cases where off-channel habitat (areas of low energy) is limiting.

Certain activities may create physiological barriers to fish migration. For example, construction activities that create large amounts of turbidity may delay migration.

**Disturbance of streambank or lake shoreline** - Activities that install permanent or temporary structures for the purpose of protecting or stabilizing a streambank or lake shoreline can result in loss of habitat or alter the bed or beach and the physical processes that form and maintain fish habitat. Direct loss of

habitat may include loss of cover, spawning beds, large woody material, riparian function, floodplain connectivity, and alteration to the channel/beach, any of which decreases the complexity and diversity of fish habitats.

**Direct loss of fish habitat** - Structures that displace river or lakebed habitat used by fish and shellfish include boat ramps or launches, marinas and terminals, water diversions and intakes, and outfall structures. Bridges and piers can also cause the loss of river or lakebed habitat. The larger the number of these structures in a given area, the greater the loss and fragmentation of habitat.

**Riparian vegetation modifications** - Construction along streambanks or shorelines can disturb or remove riparian habitat. For example, streambank and shoreline stabilization projects may disturb the riparian zone during construction. The installation of outfalls can cause a direct loss of bank side riparian habitat to accommodate the structure or during construction. Removing sand and gravel from the streambed may also involve extensive clearing of vegetation. These activities decrease loading of large woody material in the channel, which is important as cover for fish, and short term loss of macroinvertebrates that are food for fish. Road widening and new roads; power line corridors; residential, commercial, and industrial development; trails; utility infrastructure; agriculture; and other activities have the potential to disturb and degrade riparian conditions.

**Disturbance of substrate** – Activities that disturb freshwater or nearshore substrates include installing piles for piers, boat ramps, or boat launches; dredging to improve vessel navigation or moorage; sediment traps for flow conveyance and flood abatement; and dredging to clean up contaminated sediments. Dredging in lakes converts shallow-water habitats into deeper-water habitats and may create a steeper bottom transition. This may change the size and species distribution of fish in the localized environment, altering predator/prey dynamics. The effect of dredging on rivers is more complex because localized alteration of channels can lead to dynamic shifts in channel form as the system adjusts to the changed conditions. Dredging may result in a loss of spawning gravel. These effects can extend a considerable distance beyond the bounds of the original dredging project.

**Alteration of stream morphology** – Activities that remove sand and gravel from streambeds can change the channel shape and bed elevation and may cause flow diversion, sediment stockpiling, and excavation of deep pits. Removing sand and gravel can also produce a local sediment shortage that can reduce spawning potential and success in gravel-starved stream reaches. Loss of gravel bar head control can create significant channel head cutting upstream of the project.

Bank protection can prevent the stream channel from naturally migrating across the floodplain. This can eliminate sources of woody material, sediment, and side channels. Natural channels evolve over time and migrate across their floodplains. When a channel naturally moves to a new alignment, it leaves behind vital habitat, such as floodplain sloughs and side channels. If the natural fluvial processes of a stream are restricted or interrupted, these side-channel habitats will diminish in productivity and be permanently lost. These habitats cannot be mitigated by the design of a project. They are lost when a channel is fixed in a specific location, regardless of the bank-protection technique.

Activities that involve changing or relocating a stream channel to restore habitat lost because of human-caused changes can result in short term impacts. Channel realignment and bank re-grading typically

destroy bank and bed habitat in the active channel and will temporarily lead to elevated suspended sediment concentrations. This may result in the downstream burial of invertebrates, elevated suspended solids, and habitat destruction. In-channel work has a much greater impact on the bank and channel when compared with off-channel work.

Activities that remove, place, and relocate large woody materials in stream channels are conducted where it is necessary to address a threat to life or public or private property, or an immediate threat of serious environmental degradation, caused by streambank erosion or flooding. During construction, these activities can result in short term impacts similar to those described for channel relocation. In general, the disturbed woody material must be replaced in a location within the stream where it could not result in damage, but would continue to help create complex habitats.

***Alteration of sediment delivery and movement patterns*** – Removing sand and gravel from an active channel bed may affect sediment movement if it disrupts the sediment balance in the river. This disruption may cause channel adjustments that extend considerable distances from the excavation site. Outfalls can increase erosion and lead to increased sediment supply to downstream reaches of rivers and streams and trap (accumulate) sediment. Overwater structures also act as groins, which affect longitudinal connectivity and sediment flow. In general, any activity that alters the channel profile by altering the slope or channel width can potentially have an adverse impact on sediment delivery.

Mineral prospecting and mining activities can alter streambed morphology and sediment movement patterns because a variety of machines, including suction dredges, high bankers, and other heavy equipment, are used to remove or sort large quantities of aggregate to separate out valuable minerals. These alterations affect the physical processes that form and maintain fish habitat.

***Alteration of hydrologic patterns*** – Water crossing structures such as bridges or culverts can restrict the flow of streams and rivers and/or affect the movement and distribution of wood and sediment. Activities that involve surface trenching through streambanks and channels for the purpose of installing utility lines may also cause surface and subsurface flows to shift, altering stream hydrology.

Artificial lighting along docks, piers, and marinas may also result in altered predator-prey relationships by concentrating prey species and providing increased opportunities for predators. Artificial lighting may also result in behavioral effects by interrupting normal light/darkness patterns. For example, nocturnal predators may show avoidance patterns and have reduced foraging success if prey is attracted to the light and the predator is repelled by the light.

***Alteration of beaver dams*** – Beaver dams can be removed, breached, or modified when needed to address a threat to public or private land or infrastructure caused by flooding. Such activities are conducted when the use of water level (flow) control or beaver exclusion devices is not feasible or has not successfully controlled the threat. Breaching, notching, or removing a dam can negatively affect fish, shellfish, and their habitat by de-watering the upstream pond, stranding fish, and releasing sediment and large volumes of water (that can be devoid of oxygen) downstream. Releasing sediment can affect downstream spawning areas. Breaching or removing a beaver dam may not prevent future beaver activity in the area, and persistent breaching or removal can increase the risk of negative impacts to fish habitat.

#### 4.1.2 Freshwater impacts that directly harm fish

Constructing or performing work activities in or near watercourses can kill or injure fish or shellfish directly. Impacts associated with hydraulic projects include:

- Direct injury to fish
- Entrainment and stranding
- Elevated underwater sound
- Impacts to water quality

**Direct injury to fish** - In addition to harming habitat, dredging within freshwater streams or lake shorelines may injure or kill fish and shellfish when dredging equipment traps fish during the uptake of sediments and water.

Mineral prospecting and mining activities can harm fish by physically disturbing eggs or fry incubating within the bed or cause mortality from passing vulnerable fish through mineral prospecting equipment.

Fish can also be harmed during fish salvage efforts (e.g., electrofishing, seining, dip netting) depending upon the method of fish removal and other environmental factors.

Sound waves generated by pile driving or blasting can injure or kill fish.

**Entrainment and stranding** - Removing sand and gravel from streambeds can create trenches or pits in the bed that can trap fish and lead to death. Surface water diversions are common instream features in agricultural areas where the water is used for irrigation. Throughout the state, people also divert water for other agricultural, hydropower, industrial, recreational, residential, municipal, and hatchery purposes. To protect fish, including salmon and steelhead, Washington State law (RCW 77.57.070 and RCW 77.57.010) requires that all surface water diversions be screened to prevent fish from being drawn into the diversions where they may be injured or killed.

For many projects, isolating in-water work areas within cofferdams or using other methods and then using pumps to remove the remaining water allows construction activities to occur “in the dry.” This technique is fairly common for projects such as bridge and culvert replacements. However, sometimes fish can be missed during salvage efforts and can be sucked into pump intakes or pumped to upland areas where they die.

**Elevated underwater sound** – Many hydraulic projects can create excessive underwater noise and vibration in and near the construction site. Highly intensive noise-generating construction activities such as impact pile driving or blasting can negatively affect fish by resulting in direct mortality (impact and vibratory pile driving/blasting), adverse behavioral effects (reduced feeding, impaired predator avoidance), delayed spawning, and delayed migration.

**Impacts to water quality** - Activities that disturb substrates release suspended sediments into the water column that can affect fish by interfering with breathing and feeding. Vessel activity associated with boat ramps and launches or marinas and terminals can also increase sedimentation and diminish water quality. Using heavy machinery above and below the OHWL of any water body increases the risk of fish exposure to construction-related contaminants such as fuels, oil, grease, or hydraulic fluids, which can be toxic to fish and other aquatic life.

#### **4.1.3 Saltwater Impacts of Hydraulic Projects on Fish**

Constructing or performing work activities in or near the saltwater can alter the habitat that fish and shellfish depend on. Direct damage or loss of habitat causes a direct loss of fish and shellfish production. Damaged habitat can continue to cause lost production of fish and shellfish for as long as the habitat remains altered. Work activities can also alter the physical processes that form and maintain fish habitat such as hydrologic patterns and sediment movement. The types of impacts associated with hydraulic projects include:

- Shoreline modification
- Disturbance of substrate
- Alteration of light regime
- Aquatic vegetation modifications
- Direct loss of fish habitat
- Impacts to saltwater fish habitat

***Shoreline modification*** – Constructing bulkheads, wharves, and piers can result in the removal of marine riparian vegetation, which supplies habitat and structure for the nearshore environment, a source of terrestrial food and nutrients. These structures can also alter sediment delivery to the nearshore, which supports spawning habitat for many species and contributes to the composition and density of aquatic vegetation. These structures can also alter the slope of the marine nearshore; thus altering predator/prey relationships, current patterns, and marine vegetation composition and distribution and ultimately the productivity and composition of fish and other aquatic species in the marine nearshore.

**Table 4-1 Common impacts from shoreline modification to beaches and bluffs<sup>8</sup>**

SHORELINE MODIFICATION	EFFECT
Alteration of erosion or wave energy and changes to supply or distribution of sediments along the shore can result in impacts such as:	Loss of backshore due to shoreline armoring Direct loss of beach through downcutting (often caused by shoreline armoring) Indirect loss of beach through armoring of updrift bluffs, the resultant loss of sediment supply followed by changes in beach substrate character and downcutting
Loss of nearshore vegetation:	Decreases in terrestrial food supply, shading, and protection from overhead predators due to clearing of marine riparian vegetation Simplification of habitat structure due to removal of large wood and overhanging branches Reduced bluff and beach stabilization, and increased erosion due to vegetation removal
Loss or change to beach substrate	Degrades conditions that support aquatic and riparian vegetation Loss of spawning habitat for forage fish

***Disturbance of substrate*** – Most structures constructed in the marine environment require footings or supports, such as steel pipe piles to support piers. Other structures such as boat ramps act as supports for vehicles loading and off-loading boats and other watercraft. These structures can result in disruption of foraging and migration and direct loss of forage fish spawning habitats. For example, a boat launch constructed in the nearshore could displace habitat used by sand lance and surf smelt for spawning resulting in reduced spawning success, lost productivity, and altered predator/prey relationships. Disturbance of substrates can also reduce habitat necessary to support marine vegetation such as eelgrass, which is vital to many marine species including juvenile salmonids and crustaceans. Prop wash from vessels and grounding of floats during low tide can also change substrate structure.

***Alteration of fish migration patterns*** -Juvenile salmon have been shown to avoid moving under an overwater structure if there is an abrupt transition from light to dark. Instead, they react by migrating into deeper water and around the offshore edge of the structure. This migration pathway is in a water depth zone where predators are more likely, travel distances are greater, and currents are stronger. Construction activities that create noise and turbidity can also temporarily disrupt nearshore migration and feeding (EnviroVision 2010).

***Alteration of light regime*** – Similar to the discussion under freshwater impacts, overwater structures such as piers and marinas can alter light transmission into the water and result in reduced growth of aquatic vegetation and destruction of existing aquatic vegetation. Loss of marine vegetation from shading impacts of boats and floats can reduce spawning, rearing, and refugia habitat available to forage

<sup>8</sup> EnviroVision et al. 2010

fish, and alter predator/prey relationships. In addition, shading from overwater structures alters migration patterns of juvenile salmon, leading them away from the intertidal zone and into deeper waters along the shoreline, elevating the risk of predation for many species.

**Aquatic vegetation modifications** – Human activities and shoreline modification can adversely affect seagrass and kelp and other aquatic vegetation through direct removal or degradation and indirectly through altering the environmental conditions that support them. Overwater structures, shoreline armoring, riparian vegetation alteration, boating, illegal harvesting, shellfish culturing, and water quality impairments all have the potential to affect the health of aquatic vegetation. These activities can alter light and nutrient levels, alter substrate composition, increase toxics and suspended sediments, or physically disturb aquatic vegetation (EnviroVision et al. 2010).

**Direct loss of fish habitat** – Structures that displace natural habitat with something that is man-made can be considered a direct loss of fish habitat. Similar to the discussion under freshwater, these structures include piers, floats, buoys, boat ramps. Many of these structures require installing piles or concrete forms that displace natural habitats. This can result in lost productivity at all levels of the food chain, altered predator/prey relationships, increased competition for resources, altered migration patterns, and altered physical processes.

Saltwater impacts that directly harm fish

Constructing or performing work activities in or near watercourses can kill or injure fish or shellfish directly. Impacts associated with hydraulic projects include:

- Entrainment
- Noise and vibration
- Water quality/sediment

**Entrainment** –In the marine environment, entrainment is most likely to occur during dredging activities. During dredging, fish, shellfish, and other aquatic invertebrates can be injured or killed if trapped within the dredging device.

**Noise and vibration** –Noise and vibration impacts to saltwater species would be the same as those described for freshwater species.

**Water quality/sediment** – Construction of facilities along or within the marine nearshore presents many challenges to fish and other aquatic organisms. Facilities such as marinas and terminals constructed along or within the marine nearshore have high levels of human traffic and a capacity to hold and store large numbers of watercraft. Potential harm or injury to fish is related to the accidental discharge of contaminants such as fuel, oil, and sewage. In industrial settings, piers, wharves and other facilities can support more high-intensity construction and related activities such as ship building and maintenance. These activities have even higher potential for introducing contaminants into the water.

#### **4.1.4 Impacts of Hydraulic Code Rules Alternatives on Fish**

Table 4-2 summarizes how proposed changes to the Hydraulic Code Rules affect fish, what impacts are caused by hydraulic projects, and compares how the proposed changes represented in the different alternatives affect impacts of the hydraulic projects. All impacts are measured relative to the no-action alternative (Alternative 1). Column 1 shows the hydraulic project type (or regulatory activity) and Column 2 lists the potential impacts of the hydraulic project that could affect fish based on the impacts described in this section. The third, fourth, and fifth columns list the provisions of Alternatives 2, 3, and 4, respectively, that bring about the potential impacts in the second column. The columns includes brief assessments of whether the proposed rule changes under each of the alternatives will reduce, maintain, or increase the risk of impacts compared to the no-action alternative (Alternative 1 - existing rules). It is important to note that provisions of Alternatives 3 and 4 that would require statutory change are not evaluated on this table. None of the Alternative 2 proposed rule changes are expected to degrade conditions for fish compared to the no-action alternative.

**Table 4-2 Regulated Project Activities, Risk of Probable Significant Adverse Environmental Impact, and Provisions of the Alternatives Affecting That Risk**

REGULATED HYDRAULIC PROJECTS ACTIVITY (WAC)	POTENTIAL IMPACTS TO FISH CAUSED BY HYDRAULIC PROJECTS	COMPARISON OF ALTERNATIVE 2 FISH IMPACTS TO ALTERNATIVE 1 – NO ACTION	COMPARISON OF ALTERNATIVE 3 FISH IMPACTS TO ALTERNATIVE 1 – NO ACTION	COMPARISON OF ALTERNATIVE 4 FISH IMPACTS TO ALTERNATIVE 1 – NO ACTION
Purpose E 220-110-010 P 220-660-010	Not Applicable	No change to risk of impacts	No alternative	Increases risk of impacts <ul style="list-style-type: none"> <li>The Commission would restrict how the department could use our authority to projects conducted waterward of OHWL. This would increase the risk to fish life from bank protection, bridge, levee and dike and other projects conducted landward of the OHWL.</li> </ul>
Instructions for using chapter E New section P 220-660-020	Not Applicable	No change to risk of impacts	No alternative	No alternative
Definitions E 220-110-020 P 220-660-030	Not Applicable	Reduces the risk of impacts <ul style="list-style-type: none"> <li>The new and amended definitions clarify the intent of the terms as they relate to the rules. Improved understanding of the terms may lead to improved compliance with the rules.</li> </ul>	No alternatives	No change to risk of impacts <ul style="list-style-type: none"> <li>Retaining the current definitions of “freshwater area”, “saltwater area” and “watercourse” and removing new definitions for “fish habitat” and “unimpeded fish passage” would not change the risk. It would just reduce clarity about how the rules are applied.</li> </ul>
Applicability of hydraulic project approval authority E 220-110-035 P 220-660-040	Not Applicable	No change to risk of impacts <ul style="list-style-type: none"> <li>Minimal changes are proposed to the existing rules.</li> </ul>	No alternative	<ul style="list-style-type: none"> <li>No alternative</li> </ul>
Procedures E 220-110-030 E 220-110-031 P 220-660-050	Not Applicable	No change to risk of impacts <ul style="list-style-type: none"> <li>The time saved on processing applications for the low-risk project types authorized in general HPAs and “model HPAs” is spent on higher risk projects. Other changes to the procedures implement changes to the statute.</li> </ul>	Reduced risk of impacts <ul style="list-style-type: none"> <li>WDFW would issue standard HPAs for the ~2000 projects authorized each year in general HPAs. The reduced risk assumes an increase in staffing to process the 2,000 additional applications.</li> <li>Increases risk of impacts</li> <li>If there is no increase in staffing, WDFW would have to use more staff resources to process low risk applications reducing the amount of time spent on medium and high risk projects.</li> </ul>	No change to risk of impacts <ul style="list-style-type: none"> <li>The limit on the number of sites that can be covered in a multi-site HPA would be removed. The number would be determined by each individual biologist based on work load.</li> </ul>

REGULATED HYDRAULIC PROJECTS ACTIVITY (WAC)	POTENTIAL IMPACTS TO FISH CAUSED BY HYDRAULIC PROJECTS	COMPARISON OF ALTERNATIVE 2 FISH IMPACTS TO ALTERNATIVE 1 – NO ACTION	COMPARISON OF ALTERNATIVE 3 FISH IMPACTS TO ALTERNATIVE 1 – NO ACTION	COMPARISON OF ALTERNATIVE 4 FISH IMPACTS TO ALTERNATIVE 1 – NO ACTION
Integration of hydraulic projects approvals and forest practices applications E 220-110-085 P 220-660-060	Not Applicable	No change to risk of impacts • No change is proposed to the existing rules.	No Alternative	No change to risk of impacts • Repeating the rules applicable to forest practices would not change the risk to fish life.
Changes to hydraulic project approval technical provisions E 220-110-032 P 220-660-070	Not Applicable	No change to risk of impacts • Minimal changes are proposed to the existing rules.	No alternative	Increases risk of impacts • This clause "loss of or injury to fish or shellfish, or the loss or permanent degradation of the habitat that supports the fish and shellfish populations" would be replaced by "will be protective of fish life." This change would be less protective than the existing language 220-110-032(4).
Mitigation requirements for hydraulic projects E New Section P 220-660-080	Not Applicable	No change to risk of impacts. • The new WAC section clarifies how the department determines mitigation requirements to protect fish life. "Protection of fish life" means avoiding and minimizing impacts to fish life and fish habitat through mitigation sequencing.	Reduces risk of impacts Requiring compensatory mitigation for the following would reduce the risk of impacts to habitat: • Maintaining or repairing a structure that currently diminishes habitat and/or perpetuates impacts into the future; and • Rehabilitation or replacement of structurally deficient or functionally obsolete structures that is required for new structures.	Increases risk of impacts • Not requiring "compensatory mitigation for all work that causes a new impact or compensation for temporal loss, uncertainty of performance, and differences in habitat functions, type, and value" will increase the risk of impacts. This doesn't conform with the mitigation policy dated 01/08/99.
Technical Provisions E 220-110-040 E 220-110-230 P 220-660-090	Not Applicable	No change to risk of impacts	No alternative	No alternative
Freshwater habitats of special concern E New section P 220-660-100	Not Applicable	Reduces risk of impacts • New WAC section identifies habitats that serve essential functions for twenty-two freshwater fish species. The presence of these habitats may restrict hydraulic project type, design, location, and timing.	No alternative	No alternative
Authorized work times in freshwater areas E New section P 220-660-110	Not Applicable	Reduces risk of impacts • New WAC section describes the criteria the department will to authorize work to protect fish life during critical life stages.	Reduces risk of impacts • The work times in the table "Times when spawning or incubating salmonids are least likely to be within Washington State freshwaters" would apply to all in-water projects regardless of the risk to fish life from the work.	No alternative

REGULATED HYDRAULIC PROJECTS ACTIVITY (WAC)	POTENTIAL IMPACTS TO FISH CAUSED BY HYDRAULIC PROJECTS	COMPARISON OF ALTERNATIVE 2 FISH IMPACTS TO ALTERNATIVE 1 – NO ACTION	COMPARISON OF ALTERNATIVE 3 FISH IMPACTS TO ALTERNATIVE 1 – NO ACTION	COMPARISON OF ALTERNATIVE 4 FISH IMPACTS TO ALTERNATIVE 1 – NO ACTION
<p>Common freshwater construction provisions E New section P 220-660-120</p>	<ul style="list-style-type: none"> <li>• Aquatic vegetation modifications</li> <li>• Disturbance of streambank or lake shoreline</li> <li>• Direct loss of habitat</li> <li>• Riparian vegetation modifications</li> <li>• Entrainment, stranding and handling impacts to fish</li> <li>• Water quality modifications</li> </ul>	<p>Reduces risk of impacts</p> <ul style="list-style-type: none"> <li>• New WAC section has additional construction provisions for job site access, equipment use, sediment and erosion control reduce impacts to sensitive areas and water quality. New provisions for construction materials and work area isolation reduce impacts to water quality. The new work area isolation and fish removal provisions also protect fish from entrainment, stranding and handling.</li> </ul>	<p>Reduces risk of impacts</p> <ul style="list-style-type: none"> <li>• The use of all treated wood and tires would be prohibited. This would reduce risk of water quality modifications.</li> </ul>	<p>No change to risk of impacts</p> <ul style="list-style-type: none"> <li>• The work area isolation and fish removal provisions would not be included into the new rules. The existing provisions in the current rules would be retained.</li> </ul>
<p>Streambank protection and lake shoreline stabilization E 220-110-050 E 220-110-223 P 220-660-130</p>	<ul style="list-style-type: none"> <li>• Aquatic vegetation modification</li> <li>• Alteration of fish migration patterns</li> <li>• Disturbance of streambank and lake shoreline</li> <li>• Direct loss of habitat</li> <li>• Disturbance of riparian vegetation</li> <li>• Disturbance of substrate</li> <li>• Alteration of stream morphology</li> <li>• Alteration of sediment delivery and movement patterns</li> <li>• Water quality modifications</li> </ul>	<p>Reduces risk of impacts</p> <ul style="list-style-type: none"> <li>• A new provision would require a professional’s rationale to ensure new bank protection is designed with a less impacting technically feasible alternative.</li> <li>• New provisions require designs to consider the ecological and geomorphological processes. This reduces alteration of the stream morphology, sediment delivery and movement and disturbance of the substrate.</li> <li>• New provisions restrict location of replacement structures once a new ordinary high water line has reestablished. This reduces alteration of the stream morphology.</li> </ul>	<p>Reduces the risk of impacts</p> <ul style="list-style-type: none"> <li>• A new provision would always require a professional’s rationale to ensure new bank protection is designed with a less impacting technically feasible alternative. This would provide a professional third party opinion to help the department determine if the least impacting option is being proposed by the applicant.</li> <li>• The design and location of new and replacement structures would have to consider climate change. This would reduce the risk of future alteration of the stream morphology, sediment delivery and movement and disturbance of the substrate.</li> </ul>	<p>No change to risk of impacts</p> <ul style="list-style-type: none"> <li>• A new provision to require a professional’s rationale would not be included in the new rules. This is not in the current rules. The existing rules rely on the judgment of the department.</li> </ul>
<p>Residential and public recreational docks, piers, ramps, floats, watercraft lifts, and buoys in freshwater areas E 220-110-060 P 220-660-140</p>	<ul style="list-style-type: none"> <li>• Alteration of light regime</li> <li>• Aquatic vegetation modifications</li> <li>• Alteration of fish migration patterns</li> <li>• Disturbance of streambank or lake shoreline</li> <li>• Direct loss of habitat</li> <li>• Riparian vegetation modifications</li> <li>• Disturbance of substrate</li> <li>• Elevated underwater sound impacts to fish</li> <li>• Water quality modifications</li> </ul>	<p>Reduces risk of impacts</p> <ul style="list-style-type: none"> <li>• New provisions require designs to avoid and minimize impacts to freshwater habitats of special concern. This reduces the risk of impacts from alteration of the light regime, aquatic vegetation modifications, alteration of migration patterns, and disturbance of substrate.</li> <li>• New pile driving provisions reduce the risk of impacts from elevated sound.</li> <li>• New provisions for the removal of treated wood piling reduce risk from water quality modification.</li> </ul>	<p>Reduces risk of impacts</p> <ul style="list-style-type: none"> <li>• New provisions for grating would be changed to require grating to cover 100% of the deck regardless of the orientation, width and height of the structure. This will reduce the risk of impacts from alteration of the light regime, aquatic vegetation modifications, and alteration of migration patterns.</li> </ul>	<p>No change to risk of impacts</p> <ul style="list-style-type: none"> <li>• The provisions for grating and those specifying pier height and width would be removed. These are not in the current rules.</li> </ul>

REGULATED HYDRAULIC PROJECTS ACTIVITY (WAC)	POTENTIAL IMPACTS TO FISH CAUSED BY HYDRAULIC PROJECTS	COMPARISON OF ALTERNATIVE 2 FISH IMPACTS TO ALTERNATIVE 1 – NO ACTION	COMPARISON OF ALTERNATIVE 3 FISH IMPACTS TO ALTERNATIVE 1 – NO ACTION	COMPARISON OF ALTERNATIVE 4 FISH IMPACTS TO ALTERNATIVE 1 – NO ACTION
Boat ramps and launches in freshwater areas E 220-110-224 P 220-660-150	<ul style="list-style-type: none"> <li>• Alteration of light regime</li> <li>• Aquatic vegetation modifications</li> <li>• Alteration of fish migration patterns</li> <li>• Disturbance of streambank or lake shoreline</li> <li>• Direct loss of habitat</li> <li>• Riparian vegetation modifications</li> <li>• Disturbance of substrate</li> <li>• Alteration to stream morphology</li> <li>• Alteration to sediment delivery and movement patterns</li> </ul>	Reduces risk of impacts <ul style="list-style-type: none"> <li>• New provision requires locating ramps and launches to avoid direct loss of spawning habitat.</li> <li>• New design provisions reduce the risk of alteration of light regime, migration patterns, stream morphology and sediment delivery and movement.</li> </ul>	No alternative	No alternative
Marinas and terminals in freshwater areas E New section P 220-660-160	<ul style="list-style-type: none"> <li>• Alteration of light regime</li> <li>• Aquatic vegetation modifications</li> <li>• Alteration of fish migration patterns</li> <li>• Disturbance of streambank or lake shoreline</li> <li>• Direct loss of habitat</li> <li>• Riparian vegetation modifications</li> <li>• Disturbance of substrate</li> <li>• Elevated underwater sound</li> <li>• Water quality modifications</li> </ul>	Reduces risk of impacts <ul style="list-style-type: none"> <li>• This new WAC section requires designs to avoid impacts to fish spawning areas and juvenile salmon migration corridors, rearing and feeding areas. This reduces risk of alteration of the light regime and migration patterns.</li> <li>• A provision requires new facilities to avoid and minimize impacts to aquatic vegetation.</li> <li>• Several provisions require the location of facilities in areas that will reduce impacts to fish life, where possible. This reduces the risk of impacts from aquatic vegetation modifications, alteration of migration patterns, disturbance of substrate, and alteration of stream morphology and sediment movement and delivery.</li> <li>• Pile driving provisions reduce the risk of impacts from elevated sound.</li> <li>• New provisions for the removal of treated wood piling reduce risk from water quality modification.</li> </ul>	No alternative	No increased risk of impacts <ul style="list-style-type: none"> <li>• Provisions would be added for bulkheads and other bank stabilization in the marina/marine terminal environment instead of referring applicants to proposed WAC section 220-660-130. This would result in duplicate language.</li> </ul>

REGULATED HYDRAULIC PROJECTS ACTIVITY (WAC)	POTENTIAL IMPACTS TO FISH CAUSED BY HYDRAULIC PROJECTS	COMPARISON OF ALTERNATIVE 2 FISH IMPACTS TO ALTERNATIVE 1 – NO ACTION	COMPARISON OF ALTERNATIVE 3 FISH IMPACTS TO ALTERNATIVE 1 – NO ACTION	COMPARISON OF ALTERNATIVE 4 FISH IMPACTS TO ALTERNATIVE 1 – NO ACTION
Dredging in freshwater areas E 220-110-130 P 220-660-170	<ul style="list-style-type: none"> <li>• Alteration of light regime</li> <li>• Aquatic vegetation modifications</li> <li>• Alteration of fish migration patterns</li> <li>• Direct loss of habitat</li> <li>• Disturbance of substrate</li> <li>• Alteration to stream morphology</li> <li>• Alteration to sediment delivery and movement patterns</li> <li>• Entrainment, stranding and handling impacts to fish</li> <li>• Water quality modifications</li> </ul>	Reduces risk of impacts <ul style="list-style-type: none"> <li>• A new provision requires a professional to conduct a pre-project channel survey to determine the potential channel changes from the project. This will reduce the risk of alteration to the stream morphology and sediment delivery and movement.</li> </ul>	Reduces risk of impacts <ul style="list-style-type: none"> <li>• The existing rules do not have a section for removing gravel and debris from small streams so including this section will result in reduced risk. Currently each biologist provisions HPAs for this work based on their professional judgment since there are no common provisions in rule.</li> <li>• Adding a provision to require scientific justification to prove that dredging will resolve flooding problems would provide a professional third party opinion to help the department determine if dredging is a proper solution given the impacts.</li> </ul>	No change to risk of impacts <ul style="list-style-type: none"> <li>• A new provision to require a survey would not be included in the new rules.</li> </ul>
Sand and gravel removal E 220-110-140 P 220-660-180	<ul style="list-style-type: none"> <li>• Alteration of light regime</li> <li>• Aquatic vegetation modifications</li> <li>• Alteration of fish migration patterns</li> <li>• Direct loss of habitat</li> <li>• Disturbance of substrate</li> <li>• Alteration to stream morphology</li> <li>• Alteration to sediment delivery and movement patterns</li> <li>• Entrainment, stranding and handling impacts to fish</li> <li>• Water quality modifications</li> </ul>	No change to risk of impacts	No alternative	No alternative

REGULATED HYDRAULIC PROJECTS ACTIVITY (WAC)	POTENTIAL IMPACTS TO FISH CAUSED BY HYDRAULIC PROJECTS	COMPARISON OF ALTERNATIVE 2 FISH IMPACTS TO ALTERNATIVE 1 – NO ACTION	COMPARISON OF ALTERNATIVE 3 FISH IMPACTS TO ALTERNATIVE 1 – NO ACTION	COMPARISON OF ALTERNATIVE 4 FISH IMPACTS TO ALTERNATIVE 1 – NO ACTION
Water crossing structures E 220-110-070 P 220-660-190	<ul style="list-style-type: none"> <li>• Alteration of fish migration patterns</li> <li>• Disturbance of streambank or lake shoreline</li> <li>• Direct loss of habitat</li> <li>• Riparian vegetation modifications</li> <li>• Disturbance of substrate</li> <li>• Alteration to stream morphology</li> <li>• Alteration to sediment delivery and movement</li> <li>• Alteration to hydrologic patterns</li> </ul>	Reduces risk of impacts <ul style="list-style-type: none"> <li>• The WAC section is amended. Currently, water crossing designs must provide fish passage. The amended language requires water crossing designs to also protect the stream morphology, sediment delivery and movement, movement of wood and hydrologic patterns and prevent substrate disturbance.</li> </ul>	Reduces risk of impacts <ul style="list-style-type: none"> <li>• Moving the no-slope culvert option to Section 200 and requiring only stream simulation culverts unless the permittee can show that stream simulation is not feasible, will reduce risk of impacts to fish habitat. The stream-simulation method is shown to protect the stream morphology, sediment delivery and movement, movement of wood and hydrologic patterns and prevent substrate disturbance.</li> </ul>	No change to risk of impacts <ul style="list-style-type: none"> <li>• Even if the culvert design standards are removed, the applicant would have to show the proposed design would meet fish protection standards. In the absence of rules this would be entirely up the judgment of biologist or WDFW engineer to determine.</li> <li>• Retaining the existing bridge provisions would not increase the risk of impacts.</li> <li>• Increases risk of impacts</li> <li>• Adding guidelines by name to the rules that are outside the control of the department would increase the risk of impacts if the guidelines changed and reduced fish protection.</li> <li>• Amending the rules to use a channel forming flow, such as the 2-year flood, will increase the risk of impacts. The existing rules state “The bridge shall be constructed, according to the approved design, to pass the 100-year peak flow with consideration of debris likely to be encountered...”</li> </ul>
Fish passage improvement structures E New section P 220-660-200	<ul style="list-style-type: none"> <li>• Alteration of light regime</li> <li>• Alteration of fish migration patterns</li> <li>• Disturbance of streambank or lake shoreline</li> <li>• Direct loss of habitat</li> <li>• Disturbance of substrate</li> <li>• Alteration to stream morphology</li> <li>• Alteration to sediment delivery and movement patterns</li> <li>• Alteration to hydrologic patterns</li> <li>• Entrainment, stranding and handling of fish</li> </ul>	Reduces impacts to fish life <ul style="list-style-type: none"> <li>• This new WAC section includes provisions to ensure fish passage improvement structures (fish ladders, fish passage weirs, roughened channels, trap and haul operations and hydraulic design culverts) provide fish passage. This would reduce the risk of impacts to fish migration patterns and from the entrainment, stranding and handling of fish.</li> </ul>	Reduces impacts to fish life <ul style="list-style-type: none"> <li>• The new WAC section would require all fish passage improvement structures be installed temporarily. The section would include timeframes for barrier correction. This would reduce the risk of impacts to fish migration patterns, alteration of stream morphology, sediment delivery and movement, and hydraulic patterns. This would also reduce the risk of impacts from entrainment, stranding and handling of fish.</li> </ul>	No change to risk of impacts <ul style="list-style-type: none"> <li>• The new WAC section would not require fish ladders to have enough water to pass fish safely if target fish species are present and actively migrating. Since this provision is not in the rules now, removing it would not change the risk of impacts. The bridge shall be constructed, according to the approved design, to pass the 100-year peak flow with consideration of debris likely to be encountered. Exception shall be granted if applicant provides hydrologic or other information that supports alternative design criteria.</li> </ul>

REGULATED HYDRAULIC PROJECTS ACTIVITY (WAC)	POTENTIAL IMPACTS TO FISH CAUSED BY HYDRAULIC PROJECTS	COMPARISON OF ALTERNATIVE 2 FISH IMPACTS TO ALTERNATIVE 1 – NO ACTION	COMPARISON OF ALTERNATIVE 3 FISH IMPACTS TO ALTERNATIVE 1 – NO ACTION	COMPARISON OF ALTERNATIVE 4 FISH IMPACTS TO ALTERNATIVE 1 – NO ACTION
Channel change/ realignment E 220-110-080 P 220-660-210	<ul style="list-style-type: none"> <li>• Aquatic vegetation modifications</li> <li>• Alteration of fish migration patterns</li> <li>• Disturbance of streambank or lake shoreline</li> <li>• Direct loss of habitat</li> <li>• Riparian vegetation modifications</li> <li>• Disturbance of substrate</li> <li>• Alteration to stream morphology</li> <li>• Alteration to sediment delivery and movement patterns</li> <li>• Alteration to hydrologic patterns</li> </ul>	Reduces risk of impacts <ul style="list-style-type: none"> <li>• A new provision clarifies a channel change must provide better protection of fish life than the old channel. This would reduce the risk of direct loss of habitat.</li> </ul>	No alternatives	No Alternatives
Large woody material placement, repositioning and removal in freshwater areas E 220-110-150 P 220-660-220	<ul style="list-style-type: none"> <li>• Alteration of fish migration patterns</li> <li>• Disturbance of streambank or lake shoreline</li> <li>• Direct loss of habitat</li> <li>• Disturbance of substrate</li> <li>• Alteration to stream morphology</li> <li>• Alteration to sediment delivery and movement patterns</li> <li>• Alteration to hydrologic patterns</li> </ul>	No change to risk of impacts <ul style="list-style-type: none"> <li>• The department will still approve the repositioning or removal of large woody material within the watercourse when needed to protect life, the public, property, or when needed to construct or mitigate for a hydraulic project. Compensatory mitigation will be required if the removal of wood from the channel diminishes fish habitat function or value.</li> </ul>	No alternative	No alternative
Beaver dam management E New section P 220-660-230	<ul style="list-style-type: none"> <li>• Aquatic vegetation modifications</li> <li>• Alteration of fish migration patterns</li> <li>• Disturbance of streambank or lake shoreline</li> <li>• Direct loss of habitat</li> <li>• Disturbance of substrate</li> <li>• Alteration to stream morphology</li> <li>• Alteration to sediment delivery and movement patterns</li> <li>• Alteration to hydrologic patterns</li> <li>• Alteration of beaver dams</li> <li>• Entrainment, stranding and handling of fish</li> <li>• Water quality modifications</li> </ul>	Reduces risk of impacts <ul style="list-style-type: none"> <li>• New WAC section allows the removal, breaching, or modification of dams and the design and construction of beaver deceivers and pond water level control devices only when it is needed to protect property and infrastructure. This reduces the risk from potential impacts.</li> </ul>	Reduces risk of impacts <ul style="list-style-type: none"> <li>• A new provision would be added that would require an applicant to obtain professional determination that shows there is an imminent threat to property or the environment.</li> </ul>	No alternative

REGULATED HYDRAULIC PROJECTS ACTIVITY (WAC)	POTENTIAL IMPACTS TO FISH CAUSED BY HYDRAULIC PROJECTS	COMPARISON OF ALTERNATIVE 2 FISH IMPACTS TO ALTERNATIVE 1 – NO ACTION	COMPARISON OF ALTERNATIVE 3 FISH IMPACTS TO ALTERNATIVE 1 – NO ACTION	COMPARISON OF ALTERNATIVE 4 FISH IMPACTS TO ALTERNATIVE 1 – NO ACTION
Pond construction E 220-110-180 P 220-660-240	<ul style="list-style-type: none"> <li>• Disturbance of streambank or lake shoreline</li> <li>• Direct loss of habitat</li> <li>• Disturbance of substrate</li> <li>• Alteration to stream morphology</li> <li>• Alteration to sediment delivery and movement patterns</li> <li>• Alteration to hydrologic patterns</li> <li>• Entrainment, stranding and handling of fish</li> <li>• Water quality modifications</li> </ul>	No change to risk of impacts <ul style="list-style-type: none"> <li>• The provision to require a water right is removed. This would not change the risk of impacts because it is the responsibility of Department of Ecology to enforce water rights.</li> </ul>	No change to risk of impacts <ul style="list-style-type: none"> <li>• The provision to require a water right is retained. This would not change the risk of impacts because it is the responsibility of Department of Ecology to enforce water rights.</li> </ul>	No alternative
Water diversions and intakes E 220-110-190 P 220-660-250	<ul style="list-style-type: none"> <li>• Disturbance of streambank or lake shoreline</li> <li>• Disturbance of substrate</li> <li>• Alteration to hydrologic patterns</li> <li>• Entrainment, stranding and handling of fish</li> </ul>	No change to risk of impacts <ul style="list-style-type: none"> <li>• The provision to require a water right is removed. This would not change the risk of impacts because it is the responsibility of Department of Ecology to enforce water rights.</li> </ul>	No change to risk of impacts <ul style="list-style-type: none"> <li>• The provision to require a water right is retained. This would not change the risk of impacts because it is the responsibility of Department of Ecology to enforce water rights.</li> </ul>	No alternative
Outfall structures in freshwater areas E 220-110-170 P 220-660-260	<ul style="list-style-type: none"> <li>• Aquatic vegetation modifications</li> <li>• Alteration of fish migration patterns</li> <li>• Disturbance of streambank or lake shoreline</li> <li>• Direct loss of habitat</li> <li>• Disturbance of substrate</li> <li>• Alteration to stream morphology</li> <li>• Alteration to sediment delivery and movement patterns</li> <li>• Alteration to hydrologic patterns</li> <li>• Entrainment, stranding and handling of fish</li> <li>• Water quality modifications</li> </ul>	No change to risk of impacts <ul style="list-style-type: none"> <li>• No provisions are added to reflect statutory changes to the department’s authority to regulate stormwater.</li> </ul>	No alternative	No alternative
Utility crossings in freshwater areas E 220-110-100 P 220-660-270	<ul style="list-style-type: none"> <li>• Aquatic vegetation modifications</li> <li>• Disturbance of streambank or lake shoreline</li> <li>• Disturbance of substrate</li> <li>• Alteration to sediment delivery and movement patterns</li> </ul>	Retains current rules except language is added for utility line design and directional drilling	Add provision <ul style="list-style-type: none"> <li>• The department would require that conduit lines in watercourses would not constrict the channel or preclude future opportunities for bridges or other less-impacting approaches to water crossings.</li> </ul>	No alternatives

REGULATED HYDRAULIC PROJECTS ACTIVITY (WAC)	POTENTIAL IMPACTS TO FISH CAUSED BY HYDRAULIC PROJECTS	COMPARISON OF ALTERNATIVE 2 FISH IMPACTS TO ALTERNATIVE 1 – NO ACTION	COMPARISON OF ALTERNATIVE 3 FISH IMPACTS TO ALTERNATIVE 1 – NO ACTION	COMPARISON OF ALTERNATIVE 4 FISH IMPACTS TO ALTERNATIVE 1 – NO ACTION
Felling and yarding of timber E 220-110-160 P 220-660-280	<ul style="list-style-type: none"> <li>• Aquatic vegetation modifications</li> <li>• Alteration of fish migration patterns</li> <li>• Disturbance of streambank or lake shoreline</li> <li>• Direct loss of habitat</li> <li>• Disturbance of substrate</li> <li>• Alteration to stream morphology</li> <li>• Alteration to sediment delivery and movement</li> <li>• Alteration to hydrologic patterns</li> <li>• Alteration of beaver dams</li> <li>• Entrainment, stranding and handling of fish</li> <li>• Water quality modifications</li> </ul>	No change to risk of impacts <ul style="list-style-type: none"> <li>• Retains the current rule provisions.</li> </ul>	No alternatives	No alternatives
Aquatic plant removal and control E 220-110-331 E 220-110-332 E 220-110-333 E 220-110-334 E 220-110-335 E 220-110-336 E 220-110-337 E 220-110-338 P 220-660-290	<ul style="list-style-type: none"> <li>• Aquatic vegetation modifications</li> <li>• Alteration of fish migration patterns</li> <li>• Disturbance of streambank or lake shoreline</li> <li>• Direct loss of habitat</li> <li>• Disturbance of substrate</li> <li>• Entrainment, stranding and handling of fish</li> <li>• Water quality modifications</li> </ul>	No change to risk of impacts <ul style="list-style-type: none"> <li>• Retains the current rule provisions.</li> </ul>	No alternatives	No alternatives
Mineral prospecting E 220-110-200 E 220-110-201 E 220-110-202 E 220-110-206 P 220-660-300	<ul style="list-style-type: none"> <li>• Aquatic vegetation modifications</li> <li>• Alteration of fish migration patterns</li> <li>• Disturbance of streambank or lake shoreline</li> <li>• Disturbance of substrate</li> <li>• Entrainment, stranding and handling of fish</li> <li>• Water quality modifications</li> </ul>	Reduces risk of impacts <ul style="list-style-type: none"> <li>• The changes to the work windows reduce the risk of impacts to spawning and incubating fish</li> </ul> No change to risk of impacts <ul style="list-style-type: none"> <li>• The additional rules for small-scale mineral prospecting on ocean beaches will not affect the risk of impacts because the rules reflect the HPA provisions the department currently uses.</li> </ul>	Reduces risk of impacts <ul style="list-style-type: none"> <li>• Additional timing restrictions supported by survey information or other science would reduce the risk of impacts.</li> </ul>	Increases risk of impacts <ul style="list-style-type: none"> <li>• The reversion of the work windows back to the 1994 windows would increase the risk to fish life.</li> </ul>
Tidal reference areas E 220-110-240 P 220-660-310	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>	No change to risk of impacts <ul style="list-style-type: none"> <li>• Retains the current rule provisions.</li> </ul>	No alternatives	<ul style="list-style-type: none"> <li>• No alternatives</li> </ul>

REGULATED HYDRAULIC PROJECTS ACTIVITY (WAC)	POTENTIAL IMPACTS TO FISH CAUSED BY HYDRAULIC PROJECTS	COMPARISON OF ALTERNATIVE 2 FISH IMPACTS TO ALTERNATIVE 1 – NO ACTION	COMPARISON OF ALTERNATIVE 3 FISH IMPACTS TO ALTERNATIVE 1 – NO ACTION	COMPARISON OF ALTERNATIVE 4 FISH IMPACTS TO ALTERNATIVE 1 – NO ACTION
Saltwater habitats of special concern E 220-110-250 P 220-660-320	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	Reduces risk of impacts <ul style="list-style-type: none"> <li>The addition of Olympia oyster and nearshore processes to the section will reduce risk of impacts from shoreline modifications.</li> </ul> No change to risk of impacts <ul style="list-style-type: none"> <li>Removing rock sole spawning beds will have no effect on risk because science gathered after 1994 show they are not obligate beach spawning fish.</li> </ul>	No change to risk of impacts <ul style="list-style-type: none"> <li>Retaining rock sole spawning beds will have no effect on risk because science gathered after 1994 show they are not obligate beach spawning fish.</li> </ul>	Increases risk of impacts <ul style="list-style-type: none"> <li>Removing the phase “adjacent areas” will increase the risk because this language is in the existing rules. WAC 220-110-250 states “In the following saltwater habitats of special concern, or areas in close proximity with similar bed materials, specific restrictions regarding project type, design, location, and timing may apply...”.</li> </ul>
Authorized work times in saltwater areas E 220-110-271 P 220-660-330	Not applicable	Reduces risk of impacts <ul style="list-style-type: none"> <li>Reducing the work times by two months will reduce risk to juvenile salmon. Adding work times to protect herring spawning beds in two new areas and adding work times to protect lingcod nursery and settlement areas will also reduce the risk of impacts from shoreline modifications.</li> </ul> No change to risk of impacts <ul style="list-style-type: none"> <li>Removing the work time to protect rock sole spawning beds will have no effect on risk because science gathered after 1994 show they are not obligate beach spawning fish.</li> </ul>	Reduces risk of impacts <ul style="list-style-type: none"> <li>Applying work times to suspected as well as known habitat will reduce the risk to saltwater habitats of special concern that have not been mapped by the department. Applying work times regardless of the risk to the saltwater habitats of special concern will reduce the risk from unknown or unforeseen impacts.</li> </ul> No change to risk of impacts <ul style="list-style-type: none"> <li>Retaining the work time to protect rock sole spawning beds will have no effect on risk because science gathered after 1994 show they are not obligate beach spawning fish.</li> </ul>	No change to risk of impacts <ul style="list-style-type: none"> <li>The existing work times would be retained.</li> </ul>
Intertidal forage fish spawning habitat surveys E New section P 220-660-340	Not applicable	No change to risk of impacts <ul style="list-style-type: none"> <li>The existing rules give permittees the option of doing surveys in project locations where spawning occurs for six months or longer. The new section just codifies the method.</li> </ul>	No alternative	No alternative
Seagrass and macroalgae habitat surveys E New section P 220-660-350	Not applicable	Reduces risk of impacts <ul style="list-style-type: none"> <li>New WAC section clarifies when an eelgrass/macroalgae habitat survey is required. This reduces the risk to aquatic vegetation.</li> </ul>	No alternative	No alternative

REGULATED HYDRAULIC PROJECTS ACTIVITY (WAC)	POTENTIAL IMPACTS TO FISH CAUSED BY HYDRAULIC PROJECTS	COMPARISON OF ALTERNATIVE 2 FISH IMPACTS TO ALTERNATIVE 1 – NO ACTION	COMPARISON OF ALTERNATIVE 3 FISH IMPACTS TO ALTERNATIVE 1 – NO ACTION	COMPARISON OF ALTERNATIVE 4 FISH IMPACTS TO ALTERNATIVE 1 – NO ACTION
Common construction provisions for saltwater areas E 220-110-270 P 220-660-360	<ul style="list-style-type: none"> <li>• Direct loss of habitat</li> <li>• Shoreline modification</li> <li>• Aquatic vegetation modifications</li> <li>• Disturbance of substrate</li> <li>• Water quality modifications</li> </ul>	Reduces risk of impacts <ul style="list-style-type: none"> <li>• New provisions added for equipment use, vessel operation, sediment and erosion control reduces impacts to sensitive areas and water quality. New provisions for construction materials reduce impacts to water quality.</li> </ul>	Reduces risk of impacts <ul style="list-style-type: none"> <li>• The use of all treated wood and tires would be prohibited. This would reduce risk of water quality modifications.</li> </ul>	No alternative
Bulkheads and other bank protection in saltwater areas E 220-110-280 P 220-660-370	<ul style="list-style-type: none"> <li>• Direct loss of habitat</li> <li>• Shoreline modification</li> <li>• Alteration of fish migration patterns</li> <li>• Aquatic vegetation modifications</li> <li>• Disturbance of substrate</li> </ul>	Reduces risk of impacts <ul style="list-style-type: none"> <li>• New provisions added for re-establishment landward of a breached bulkhead, a preference for the least impacting alternative, and a site assessment, alternatives analysis, and design rationale by a qualified professional reduce impacts from shoreline modifications.</li> </ul>	Impact not evaluated <ul style="list-style-type: none"> <li>• Requiring single-family residence bulkheads (RCW 77.55.141) to provide a site assessment, alternatives analysis, and design rationale by a qualified professional to show the least impacting feasible alternative bank protection method as proposed would reduce impacts from shoreline modifications. [would require statutory change]</li> </ul>	No alternatives
Residential and public recreational docks, piers, ramps, floats watercraft lifts, and buoys in saltwater areas E 220-110-300 P 220-660-380	<ul style="list-style-type: none"> <li>• Direct loss of habitat</li> <li>• Shoreline modification</li> <li>• Alteration of light regime</li> <li>• Alteration of fish migration patterns</li> <li>• Aquatic vegetation modifications</li> <li>• Disturbance of substrate</li> <li>• Elevated underwater sound</li> <li>• Water quality modifications</li> </ul>	Reduces the risk of impacts <ul style="list-style-type: none"> <li>• New provisions require designs to avoid and minimize impacts to saltwater habitats of special concern. This reduces the risk of impacts from alteration of the light regime, aquatic vegetation modifications, alteration of migration patterns, and disturbance of substrate.</li> <li>• New pile driving provisions reduce the risk of impacts from elevated sound.</li> <li>• New provisions for the removal of treated wood piling reduce risk from water quality modification.</li> </ul>	Reduces risk of impacts <ul style="list-style-type: none"> <li>• New provisions for grating would be changed to require grating to cover 100% of the deck regardless of the orientation, width and height of the structure. This will reduce the risk of impacts from alteration of the light regime, aquatic vegetation modifications, and alteration of migration patterns</li> </ul>	No alternatives
Boat ramps and launches in saltwater areas E New section P 220-660-390	<ul style="list-style-type: none"> <li>• Direct loss of habitat</li> <li>• Shoreline modification</li> <li>• Alteration of light regime</li> <li>• Alteration of fish migration patterns</li> <li>• Aquatic vegetation modifications</li> <li>• Disturbance of substrate</li> </ul>	Reduces the risk of impacts <ul style="list-style-type: none"> <li>• New WAC section lists design alternatives from the most preferred to the least. New section reduces direct loss of habitat, shoreline modification, aquatic vegetation modification and disturbance to substrate.</li> </ul>	No alternatives	No change to risk of impacts <ul style="list-style-type: none"> <li>• Deleting proposed provisions would not change the risk of impact since this is a new section.</li> </ul>

REGULATED HYDRAULIC PROJECTS ACTIVITY (WAC)	POTENTIAL IMPACTS TO FISH CAUSED BY HYDRAULIC PROJECTS	COMPARISON OF ALTERNATIVE 2 FISH IMPACTS TO ALTERNATIVE 1 – NO ACTION	COMPARISON OF ALTERNATIVE 3 FISH IMPACTS TO ALTERNATIVE 1 – NO ACTION	COMPARISON OF ALTERNATIVE 4 FISH IMPACTS TO ALTERNATIVE 1 – NO ACTION
Marinas and terminals in saltwater areas E 220-110-330 P 220-660-400	<ul style="list-style-type: none"> <li>• Direct loss of habitat</li> <li>• Shoreline modification</li> <li>• Alteration of light regime</li> <li>• Alteration of fish migration patterns</li> <li>• Aquatic vegetation modifications</li> <li>• Disturbance of substrate</li> <li>• Elevated underwater sound</li> <li>• Water quality modifications</li> </ul>	Reduces risk of impacts <ul style="list-style-type: none"> <li>• This section is amended to include terminals.</li> <li>• Several provisions require the location of facilities in areas that will reduce impacts to fish life, where possible. This reduces the risk of impacts from shoreline modification, alteration of light regimes, aquatic vegetation modifications, alteration of migration patterns, and disturbance of substrate.</li> <li>• Pile driving provisions reduce the risk of impacts from elevated sound.</li> <li>• New provisions for the removal of treated wood piling reduce risk from water quality modification.</li> </ul>	Reduces risk of impact <ul style="list-style-type: none"> <li>• Adding a provision that requires new and expanded docks, wharves, piers, marinas, rafts, shipyards and terminals to a specified buffer distance from existing native aquatic vegetation attached to or rooted in substrate would reduce risk from aquatic vegetation modifications.</li> </ul>	No increased risk of impacts <ul style="list-style-type: none"> <li>• Provisions would be added for bulkheads and other bank stabilization in the marina/marine terminal environment instead of referring applicants proposed WAC section 220-660-370. This would result in duplicate language.</li> </ul>
Dredging in saltwater areas E 220-110-320 P 220-660-410	<ul style="list-style-type: none"> <li>• Direct loss of habitat</li> <li>• Alteration of light regime</li> <li>• Alteration of fish migration patterns</li> <li>• Aquatic vegetation modifications</li> <li>• Disturbance of substrate</li> <li>• Entrainment, stranding and handling of fish</li> <li>• Water quality modifications</li> </ul>	Reduces risk of impacts <ul style="list-style-type: none"> <li>• New provision that requires hydrodynamic modeling will reduce risk from water quality modification.</li> <li>• New provisions that require dredging to avoid converting intertidal to subtidal habitat reduce risk from direct loss of habitat.</li> </ul>	No alternative	No alternative
Artificial aquatic habitat structures E New section P 220-660-420	<ul style="list-style-type: none"> <li>• Aquatic vegetation modifications</li> <li>• Disturbance of substrate</li> </ul>	Reduces risk of impacts <ul style="list-style-type: none"> <li>• New WAC section specifies structures must provide a net benefit to fish.</li> </ul>	No alternatives	No alternatives
Outfall, tide and flood gate structures in saltwater areas E New section P 220-660-430	<ul style="list-style-type: none"> <li>• Direct loss of habitat</li> <li>• Shoreline modification</li> <li>• Aquatic vegetation modifications</li> <li>• Disturbance of substrate</li> <li>• Entrainment, stranding and handling of fish</li> <li>• Water quality modifications</li> </ul>	No change to risk of impacts <ul style="list-style-type: none"> <li>• No provisions are added to reflect statutory changes to the department’s authority to regulate stormwater.</li> </ul>	No alternatives	No alternatives

REGULATED HYDRAULIC PROJECTS ACTIVITY (WAC)	POTENTIAL IMPACTS TO FISH CAUSED BY HYDRAULIC PROJECTS	COMPARISON OF ALTERNATIVE 2 FISH IMPACTS TO ALTERNATIVE 1 – NO ACTION	COMPARISON OF ALTERNATIVE 3 FISH IMPACTS TO ALTERNATIVE 1 – NO ACTION	COMPARISON OF ALTERNATIVE 4 FISH IMPACTS TO ALTERNATIVE 1 – NO ACTION
Utility lines in saltwater areas E 220-110-310 P 220-660-440	<ul style="list-style-type: none"> <li>• Direct loss of habitat</li> <li>• Shoreline modification</li> <li>• Aquatic vegetation modifications</li> <li>• Disturbance of substrate</li> <li>• Water quality modifications</li> </ul>	Reduces risk of impacts <ul style="list-style-type: none"> <li>• The new provision requiring a eelgrass/macroalgae survey, if warranted, will reduce the risk of impacts to aquatic vegetation</li> </ul>	No alternatives	No alternatives
Test boring in saltwater areas E New section P 220-660-450	<ul style="list-style-type: none"> <li>• Aquatic vegetation modifications</li> <li>• Disturbance of substrate</li> </ul>	Reduces risk of impacts <ul style="list-style-type: none"> <li>• New WAC section will reduce the risk of impacts to water quality.</li> </ul>	No alternative	No alternative
Informal appeal of adverse administrative actions E 220-110-340 P 220-660-460	Not applicable	No change to the risk of impacts Retain the existing language.	No alternative	No alternative
Formal appeal of administrative actions E 220-110-350 P 220-660-470	Not applicable	No change to the risk of impacts Retains the existing language.	No alternative	No alternative
Compliance E 220-110-360 P 220-110-480	Not applicable	No change to risk of impacts	No alternatives	No alternatives

[Intentionally Blank]

Table 4-3 compares the impacts of the alternatives on the Fish element by summarizing the level of risk of that alternative impacting the named element – in this case, risk of impacts to fish. Reduction or increase in risk is evaluated in the context with the no-action alternative (Alternative 1).

**Table 4-3 Comparison of Risk of Probable Significant Adverse Environmental Impacts of the Alternatives on Fish Relative to the No-Action Alternative**

ELEMENT IMPACTED	CHANGE IN RISK OF IMPACTS RELATIVE TO ALTERNATIVE 1		
	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4
Fish	Considerable reduction in risk	Further reduction in risk	Increased risk

Color Coding Key: bright green represents considerable reduction in risk of significant adverse impact, light green represents some reduction in risks, and pink represents increase in risk of adverse impact. All risks are measured relative to the no-action alternative.

Alternative 2 and 3 proposed rule revisions provide a higher level of protection for fish and other aquatic species and their habitats than the no-action alternative (existing rules). Provisions in both Alternatives 2 and 3 require no net loss, where authorized by the Hydraulic Code Statute 77.55 RCW. Individual hydraulic projects would likely require mitigation actions suited to the type and location of the project. Projects under alternatives 2 and 3 would require more mitigation than would projects under alternative 4, in which no-net-loss is not a requirement.

## 4.2 Earth

Impacts to earth from hydraulic projects are primarily limited to disturbance at or downstream from the immediate project location. As discussed in section 4.1, those impacts include increased potential for erosion, deposition, and sedimentation; disturbance to substrate and banks; and changes to contour/topography.

### 4.2.1 Impacts of Hydraulic Projects on Sedimentation, Erosion, and Topography

#### 4.2.1.1 Filling, grading, and freshwater channel modifications

Changes to channel geometry include channel straightening and shortening, channel narrowing, reduced habitat complexity, channel incision, channel braiding, decreased channel migration and side channel creation, and decreased floodplain connectivity.

Changes to substrate include increased scour, increased deposition, substrate coarsening, reduced large woody debris and organic material recruitment, and reduced gravel recruitment and transport.

Project types most likely to result in these impacts include water crossings (culverts, bridges), fish passage, flow control structures, bank protection, channel modifications, habitat modifications, shoreline modifications, overwater structures (docks, floats), and marinas and marine terminals. Vessel grounding, anchoring, and prop wash (related to project construction or operation of a boat launch for example) can also impact substrate composition and geometry. Any project involving grading or filling could cause these impacts.

**4.2.1.2 Saltwater modifications**

Changes to marine nearshore “earth” processes and geometry related to hydraulic projects include altered sediment supply, transport, littoral drift, and altered substrate composition. Hydraulic project types primarily responsible for these impacts include flow control structures, bank protection, shoreline modifications, channel modifications, habitat modifications, and overwater structures such as docks, floats, marinas, and marine terminals.

**4.2.1.3 Dredging**

Dredging changes bathymetry and substrate composition; alters water circulation and subsequent nutrient, prey, and habitat availability; and re-suspends contaminants. Dredging is often required for water crossings, fish passage structures, flow control structures, bank protection and shoreline modification projects, overwater structures, and for channel modification.

**4.2.1.4 Mineral prospecting**

None of the three alternatives propose substantive changes to mineral prospecting rules.

**4.2.1.5 Removing sediment in small streams**

WDFW received comments noting that the proposed rule changes relating to dredging do not help permitting of hydraulic projects designed to remove sediment and debris in small streams where that sediment has impacted fish habitat. WDFW will be working with stakeholders during the 2015-17 period to develop rules that improve permitting for this project type.

**Table 4-4 Comparison of Risk of Probable Significant Adverse Environmental Impacts of the Alternatives on the Earth Element Relative to the No-Action Alternative**

ELEMENT IMPACTED	CHANGE IN RISK OF IMPACTS RELATIVE TO ALTERNATIVE 1		
	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4
Substrate size	Reduction in risk	Further reduction in risk	Increased risk
Topography	Reduction in risk	Further reduction in risk	Increased risk

**4.2.2 Effects of the Alternatives to earth**

Many measures of the existing rules specifically protect the earth element. The general construction requirements for hydraulic projects include provisions to minimize disturbance from construction by minimizing the size of the construction area, installing erosion protection, protecting disturbed areas from further erosion, and replacing vegetation following construction. Design standards for hydraulic projects such as boat ramps and docks also minimize impacts on earth.

New science and technology offer us new ways to minimize or avoid project impacts, which decreases the need for mitigation. Because alternatives 2 and 3 incorporate additional provisions that avoid and/or minimize potential physical, chemical, and biological impacts from hydraulic project activities, mitigation requirements for projects under those alternatives would be less than under the no-action alternative. Alternative 4 does not incorporate all of the new provisions that are protective of earth elements, and the mitigation standard is not no-net-loss, so requirements for project-scale mitigation

under Alternative 4 will be less than the mitigation expected under the no-action alternative or under alternatives 2 or 3.

#### **4.2.2.1 *Alternative 2 Provisions Protecting Earth Resources***

Specific provisions in Alternative 2 that reduce impacts to littoral drift include:

- Design pile-supported structures with maximum open space between pilings to allow waves, currents, and sediment to pass beneath.
- Minimize certain impacts from floating structures placed perpendicular to shorelines, which dampen wave action and prohibit natural shoreline erosional processes, by minimizing the size of these structures.
- Use floating breakwaters or ramps instead of breakwater walls to reduce impacts to littoral drift.

Provisions relating to dredging projects include:

- Use multi-season pre- and post-dredge project biological surveys to more extensively assess impacts to animal communities.
- Require hopper dredges, scows, barges, and trucks or any other equipment used to transport dredged materials to disposal or transfer sites to completely contain the dredged material.
- Avoid projects and expansions that convert intertidal to subtidal habitat. If such conversion is unavoidable, conduct a comprehensive, large-scale risk assessment to identify the cumulative effects of site-specific changes to ecosystem dynamics.

#### **4.2.2.2 *Alternative 3 Provisions Protecting Earth Resources***

Provisions of Alternative 3 that could affect risk of impacts to earth resources include:

- Before allowing any form of bulkhead or armoring work in freshwater areas, require an engineer's report that unequivocally determines that bank protection or shoreline stabilization is needed to protect infrastructure.
- If protection is warranted in freshwater areas, require a biotechnical ("soft") solution unless an engineer clearly finds that a hard bulkhead is the only option.
- Add provisions requiring mitigation for removing gravel and debris from small streams.
- Require permittees to install stream simulation culverts unless the permittee can show that stream simulation is not feasible, or that another design will provide equal or better protection of fish life.
- Remove the no-slope culvert design alternative.
- Require that a shorter bridge design be based on engineering constraints and not constraints caused by existing infrastructure and levee setback opportunities.
- All fish passage improvement structures would be temporary and a timeframe would be established in rule for a permanent solution to be implemented.
- Hydraulic design option culverts would have limited application in exceptional circumstances where bridges or no-slope and stream simulation culverts cannot be used.
- Before issuing an HPA to remove a beaver dam, require a professional determination that there is an imminent threat to property or the environment

#### **4.2.2.3 Alternative 4 Provisions Affecting Earth Resources**

Provisions of Alternative 4 that could affect risk of impacts to earth resources include:

- Include rules for removing gravel and debris from small streams. (*see note*).
- Authorize dredging in fish spawning areas.
- Alternative 4 does not include the Alternatives 2 or 3 culvert design standards.
- Amend the bridge design standards.
- Amend the rules to use a channel forming flow, such as the 2-year flood, instead of a rare flood event like the 100-year to evaluate how changes in flow velocity will affect fish life.
- Alt. 4 does not include provisions to design and locate a boat ramp or launch to avoid adverse impacts to saltwater habitats of special concern.
- Alt. 4 does not include provisions to design and locate boat ramps and launches to avoid and minimize excavation below the OHWL.

Note: This provision causes an adverse impact absent detailed and specific rules for removing gravel and debris where it is adversely impacting fish habitat. WDFW will be working with stakeholders during the 2015-17 timeframe to develop a separate set of rules for sediment removal in small streams.

### **4.3 Climate**

When addressing the topic of climate, we considered not only the impacts of projects on climate and the rate of climate change, but also how climate changes will affect hydraulic projects and fish life.

#### **4.3.1 Impacts of Hydraulic Projects on Climate**

Adopting the proposed Hydraulic Code Rules would not directly affect climate change. Hydraulic project construction can contribute greenhouse gas emissions, but the level of emissions is not expected to differ among the various alternatives.

Under all alternatives, the need to respond to emergencies, imminent danger, and chronic danger (as defined in statute) will likely increase as the climate changes. Work done under such circumstances will continue to be directed first at human health and safety, as is currently the case. This increase in the need for emergency responses will occur uniformly under any of the alternatives, so there is no difference in risk among the alternatives.

#### **4.3.2 Impacts of Climate Change on Hydraulic Projects**

Known impacts of climate change on hydraulic projects include reduction in snowpack, sea level rise, and more frequent extreme weather events that can cause local flooding or slope failures.

Reduced snowpack affects stream flows in summer and fall; stream flows can be further impacted by hydraulic projects. These effects are discussed in the Water Resources section.

Sea level rise is a factor affecting (or that will affect) slope failures in marine areas. The need for upgraded or new hydraulic projects for slope protection will increase. Existing docks, terminals, boat ramps and other saltwater developments might need to be upgraded to accommodate or retreat from higher sea levels. The key to climate considerations is to ensure that future hydraulic projects take sea level elevation changes into account when designing new projects.

Both Alternatives 2 and 3 contain provisions that limit the placement of new bulkheads, except when those provisions are prohibited by statute. Because of the advancements in bulkhead design, and changing ideas about the extent to which natural erosion processes need to be controlled, new and replacement bulkheads under alternatives 2 and 3 will have fewer impacts than under the no-action alternative. New and replacement bulkheads under alternative 4 will potentially expose fish life to the same or higher risk of impacts than the same projects under the no-action alternative.

**4.3.3 Effects of the Alternatives on Climate Change Resilience**

Outcomes related to implementing the proposed rule changes would improve conditions for fish that would help them withstand the impacts of climate change. New provisions represented in Alternatives 2 and 3 will improve conditions for fish when compared to Alternative 1 outcomes, and healthier populations and habitats are more resilient to the effects of climate change. The no-action alternative and alternative 4 do not include these new provisions, do not improve conditions for fish, and therefore do not improve climate change resilience.

Alternative 3 offers provisions that can raise awareness about climate-friendly project design.

There are cases where current statute limits permit restrictions to projects, for example for residential bulkheads. In those cases, the absence of authority to limit project location or provisions would lead to decreased habitat and thus diminish fish resiliency for responding to climate change. There are no differences in this regard among the alternatives evaluated in this PEIS; no provisions requiring statutory changes were evaluated.

**Table 4-5 Comparison of Risk of Probable Significant Adverse Environmental Impacts of the Alternatives on or from the Climate Element Relative to the No-Action Alternative**

ELEMENT IMPACTED	CHANGE IN RISK OF IMPACTS RELATIVE TO ALTERNATIVE 1		
	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4
Impacts to Rate of Climate Change	No change in risk	No change in risk	No change in risk
Climate Change Resilience	Reduction in risk	Reduction in risk	Increased risk

**4.3.3.1 Alternative 3 Provisions Affecting Climate Change Resilience**

The following provisions might improve awareness and/or contribute to project designs that are more protective of fish life:

- Before allowing any form of bulkhead or armoring work in freshwater areas, require an engineer’s report that unequivocally determines that bank protection or shoreline stabilization is needed to protect infrastructure.
- If bank protection is warranted in freshwater areas, require a biotechnical (“soft”) solution unless an engineer clearly finds that a hard bulkhead is the only option.
- Require that placement of new and replacement structures consider climate change.
- Alternative 4 Provisions Affecting Climate Change Resilience

#### **4.3.3.2 Provisions of Alternative 4 that could reduce resilience to climate change include:**

- Alt. 4 does not include the provision "mitigation must compensate for temporal loss, uncertainty of performance, and differences in habitat functions, type, and value" because these values are difficult to quantify.
- Alt. 4 does not include the provision to design and locate boat ramps and launches to avoid adverse impacts to saltwater habitats of special concern.
- Alt. 4 does not include the provision to design and locate boat ramps and launches to avoid and minimize excavation below the OHWL.

## **4.4 Water Resources**

As discussed in Chapter 3, water resources within Washington include streams, rivers, lakes, wetlands, estuaries, and marine areas. Key functions of aquatic natural resources include properly functioning physical and chemical processes such as natural hydrology, adequate surface and groundwater hydraulics and sediment processes, and water of sufficient quality. The level of function of such processes, in turn, directly contributes to creating and maintaining habitat for fish and wildlife.

Residential, industrial, commercial, agricultural, and recreational development along water bodies can dramatically impact properly functioning conditions of those water bodies. To the extent that hydraulic projects facilitate that development, there is an indirect impact to water resources, most notably to surface water flow, groundwater, and water quality, from hydraulic projects.

This section describes potential impacts to water resources that could be caused by hydraulic projects. As described in Chapter 3, WDFW does not regulate water quality, but hydraulics projects can impact water quality in several ways.

### **4.4.1 Surface Water Flow**

This section analyses potential changes in timing and/or quantity of streamflows resulting from the four alternatives. Projects in or near water can affect the banks or bed of a channel by changing the channel itself, or through bank/bed excision or accretion during construction. Many types of hydraulic projects must divert flow away from the construction site during the construction period. All project permits contain provisions that minimize construction-related impacts, and require restoring the construction site to pre-construction conditions (or better). Post-construction monitoring is not always able to detect when site restoration (for example, replanted vegetation) has been successful.

Hydraulic project types affecting the natural flow or bed of state waters include water crossings, fish passage, flow control structures, bank protection, shoreline modifications, channel modifications, habitat modifications, water crossing structures like bridges and culverts, and overwater structures like docks, floats, and marinas.

Water crossings and culverts present their own set of challenges for applicants and regulators. In many Washington streams, hydrographs are lacking or incomplete, so the "100-year recurrence interval flood flow" cannot be determined. WDFW often recommends engineering consultations for projects that affect channel and bank protection in order to provide for the reasonable protection of fish life. Allowing sufficient room for proper floodplain function benefits not only fish (increased habitat diversity

and resilience) but also people (reduced out-of-channel flooding). Because greater caution/protection is often associated with higher costs, tradeoffs between design flows and cost must be balanced by regulators and the applicant.

As a result of this rigorous design consultation, most projects make the surrounding areas more resilient to high flow events than before construction of the hydraulic project. However, occasionally a project will fail to adequately protect channels and banks in high-flow events, resulting in channel degradation, bank erosion, and adjacent flooding. Extreme rain and storm events are occurring more frequently as the climate warms, so flooding might also become more frequent. Provisions in the proposed Hydraulic Code Rules will be current with the most recent science and technology; adaptive management of the program will ensure project design stays ahead of changing conditions.

Saltwater hydraulic projects can change marine nearshore processes and geometry by altering wave energy, redirecting current, changing local flow velocities, altering nearshore circulation, and changing groundwater/surface water interactions and hyporheic exchange. Saltwater hydraulic projects that can affect water resources include flow control structures, bank protection, shoreline modifications, channel modifications, habitat modifications, and overwater structures like bridges, docks, marinas, and marine terminals.

#### **4.4.2 Groundwater**

Recharge means refilling of groundwater aquifers, as water from the land surface percolates downward into geologic units. Discharge refers to water leaving the groundwater system to enter surface lakes, rivers, or wetlands. Impacts to groundwater could result from changes in recharge to groundwater aquifers relating to changes in stream flows. Impacts could be significant if surface-water hydrology of a stream reach is altered enough to change the quantity or timing of groundwater recharge and discharge. Changes could affect groundwater discharge to surface water flows both in timing and volume of flow.

Some hydraulic projects that provide better habitat for fish also provide benefits through groundwater recharge. For example, projects that slow the flow of water to provide channel complexity or allow sediments to settle out of the water column benefit groundwater because there is a higher rate of percolation into groundwater, which could later manifest as higher late-summer flow volumes. Benefits from slower flows must be balanced with detrimental effects; for example, slow moving water can have higher temperatures than faster flows. Also, removing beaver dams can speed flow and reduce percolation to groundwater aquifers.

Maintaining a strong adaptive management component to hydraulic project regulation can provide the flexibility for regulators and applicants to respond to new science about surface water/groundwater continuity and incorporate measures that avoid or mitigate for project impacts on groundwater function.

#### **4.4.3 Water Quality**

Projects affecting the flow or bed of waters of the state can affect water quality by releasing suspended solids and increased turbidity; by increasing temperatures; through effects to dissolved oxygen, pH, and salinity; by altering pollutant and nutrient loading; through accidental release of fuel, oil, or other

contaminants; and by introducing contaminants from treated wood. Water quality impacts are most often caused by hydraulic projects such as water crossings, fish passage, flow control structures, bank protection, shoreline modifications, channel modifications, habitat modifications, water crossing structures like bridges and culverts, and overwater structures like docks, floats, marinas and marine terminals. Rainfall runoff can cause disturbed sediment at construction sites to become suspended in the water column. Vessel activity associated with boat ramps and launches or marinas and marine terminals can increase suspended sediments. Reducing riparian vegetation can expose streams to more solar radiation, increasing water temperature.

Increased water temperature can change fish behavior or metabolism. The amount of oxygen available is reduced at higher water temperatures. Changing fish metabolism can make fish more prone to disease or directly cause death. Fish migration behavior and/or spawning success can be negatively impacted when passage corridors or spawning areas are unavailable to fish because the water is too warm.

Construction activities in and near water can increase risk of contaminants spreading to the aquatic environment, which can be toxic to fish and other wildlife. Preservatives used on submerged wood can be toxic, and WDFW regulates which preservatives are acceptable for hydraulic projects. Some elements in industrial discharge and stormwater are toxic to fish, which is why these activities and facilities are subject to regulation by the Clean Water Act (CWA). Some toxic chemicals can move up through the food chain, building up in the tissues of small organisms, which are eaten by fish, which in turn are eaten by larger fish, marine mammals, and humans – harming their health. The presence of toxic substances in Washington's seafood is an important consideration as Ecology implements the CWA.

While WDFW is clearly interested in improving water quality conditions as they relate to protecting fish life, a bill passed the Washington legislature in 2002 (Engrossed Substitute House Bill 2866) clarified WDFW's authority to condition HPAs for water quality protection. The bill distinguished WDFW's authority from the authorities of Department of Ecology or U.S. Army Corps of Engineers under CWA. Generally, HPAs address the actual construction of outfalls and any associated structures, but cannot require changes to project design above the ordinary high water line. HPAs may not address secondary impacts from the discharge (i.e. degradation to water quality) when a project is covered under a National Pollution Discharge Elimination System (NPDES) municipal general permit. In areas not covered by a NPDES municipal general permit, WDFW is allowed, under certain situations, to condition HPAs for specific discharge rates to protect fish life from the direct impacts of the discharge. WDFW may recommend, but not specify, the measures required to meet prescribed discharge rates.

#### **4.4.4 Effects of the Alternatives to Water Resources**

Several hydraulic project activities have the potential to directly affect water resources by impacting sediment processes, stream hydraulics, and water quality. The overall potential physical and chemical effects, and the resulting biological effects of the activities discussed below are presented in Table 4-2, which also documents how proposed rule changes under Alternative 2 affect the impacts of these activities.

Regulated activities likely to affect overall stream hydrology include streambank protection and lake shoreline stabilization (WAC 220-660-130), dredging in freshwater areas (WAC 220-660-170), and removing sand and gravel (WAC 220-660-180). These activities would alter the physical processes of streams and other waterbodies. Pond construction (WAC 220-660-240) could also alter the hydrologic regime.

Several freshwater project activities have the potential to affect local hydraulic functions of water resources. These are activities associated with modifying stream or river beds or banks, which may in turn affect the distribution and velocity of stream flows. In addition, any project activity that may alter hydraulics also can affect sediment dynamics, including local scour depositional patterns, which are closely related. The primary project activities that have the potential to directly affect stream hydraulics and sediment mobilization and transport are as follows:

- Residential docks, watercraft lifts, and buoys in freshwater areas (WAC 220-660-140)
- Boat ramps and launches in freshwater areas (WAC 220-660-150)
- Marinas and terminals in freshwater areas (WAC 220-660-160)
- Dredging in freshwater areas (WAC 220-660-170)
- Sand and gravel removal (WAC 220-660-180)
- Water crossing structures (WAC 220-660-190)
- Fish passage improvement structures (WAC 220-660-200)
- Channel change/ realignment (WAC 220-660-210)
- Mineral prospecting WAC (220-660-300)

The project activities listed above could also lead to potential impacts related to turbidity, which could be generated while constructing or operating all of these project types. In addition, project activities involving outfall structures in saltwater areas (WAC 220-660-430) and outfall structures in freshwater areas (WAC 220-660-260) could also increase turbidity.

Lastly, project activities that alter the marine shoreline or benthos can also result in direct changes to local drift cells and alter shoreline sediment transport dynamics. Direct effects on marine water resources could result from the following project activities (see Table 4-2 for more details):

- Bulkheads and other bank protection in saltwater areas (WAC 220-660-370)
- Residential docks (piers, ramps, and floats), buoys and other overwater structures in saltwater areas (WAC 220-660-380)
- Boat ramps and launches in saltwater areas (WAC 220-660-390)
- Marinas and terminals in saltwater areas (WAC 220-660-400)
- Dredging in saltwater areas (WAC 220-660-410)

Flooding can occur when culverts are undersized, when beavers build dams, and when large woody material is placed in streams to slow water velocities. Provisions of the Hydraulic Code Rules are intended to ensure that placement and sizing of culverts and large wood can withstand extreme conditions without failure under most foreseeable conditions. Beaver management decisions (such as a dam removal) are carefully considered so that impacts of the removal are minimized.

**Table 4-6 Comparison of Risk of Probable Significant Adverse Environmental Impacts of the Alternatives on Water Resources Relative to the No-Action Alternative**

ELEMENT IMPACTED	CHANGE IN RISK OF IMPACTS RELATIVE TO ALTERNATIVE 1		
	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4
Water Resource Hydrology	Reduction in risk	Same as Alternative 2	Increased risk
Groundwater	No change in risk	No change in risk	No change in risk
Water Quality	Reduction in risk	Further reduction in risk	Increased risk

The Hydraulic Code Rules are designed to allow construction projects while providing adequate protection for fish life. Many elements of the environment, taken together, define the habitat in which fish live, but none more so than water. The Hydraulic Code Rules include provisions that avoid or minimize impacts to the water resource element. Alternatives 2 and 3 include new provisions that reduce risk of adverse impacts to water resource hydrology and quality over the protections provided in the no-action alternative. Alternative 4 does not include those additional protections and removes other protections, so risk of adverse impact to water resources is increased over the no-action alternative.

#### **4.4.4.1 Alternative 2 Provisions Affecting Water Resources**

Alternative 2 includes new provisions that avoid and/or minimize potential physical, chemical, and biological impacts from hydraulic project activities, such as:

- Requires a professional assessment of risk and justification for project;
- More robust design requirements that will minimize impacts to habitat; and
- Construction methods (e.g., vibratory versus impact pile driving) and material (e.g., specifications for type, size, and composition) requirements will minimize impacts to fish and habitat.

Alternative 2 provisions that reduce risk of impacts from freshwater hydraulic projects include:

- Set staging areas in a location and manner that prevents contaminants from entering water.
- Protect areas exposed during construction.
- Route the construction water (wastewater) from the project to an upland area above the limits of anticipated floodwater.
- Locate the structure deep enough to avoid prop wash re-suspension of sediments and contaminants.
- Prevent transporting and introducing aquatic invasive species by thoroughly cleaning vessels, equipment, boots, waders, and other gear.
- Do not use wood treated with oil-type preservative. Wood treated with waterborne preservative chemicals may be used if the Western Wood Preservers Institute has approved its use in the aquatic environment.
- Completely contain treated wood sawdust, trimmings, and drill shavings.
- Structures built of treated wood should incorporate features to prevent or minimize the abrasion of treated wood by floats, ramps, or vessels.

Alternative 2 provisions that mitigate impacts to saltwater circulation include:

- Design pile-supported structures with maximum open space between pilings to allow waves, currents, and sediment to pass beneath.
- Minimize certain impacts from floating structures placed perpendicular to shorelines, which dampen wave action and inhibit natural shoreline erosional processes, by minimizing the size of these structures.
- Use floating breakwaters or ramps instead of breakwater walls to reduce impacts to littoral drift

#### ***4.4.4.2 Alternative 3 Provisions Affecting Water Resources***

Alternative 3 provisions of Alternative 3 that reduce risk to water flow and hydrology include:

- A tee diffuser outfall would be the only design method authorized in low flow situations.
- Require that conduit lines in watercourses would not constrict the channel or preclude future opportunities for bridges or other less-impacting approaches to water crossings.
- Before allowing any form of bulkhead or armoring work in freshwater areas, require an engineer's report that unequivocally determines that bank protection or shoreline stabilization is needed to protect infrastructure.
- If bank protection in freshwater areas is warranted, require a biotechnical ("soft") solution unless an engineer clearly finds that a hard bulkhead is the only option.

The following provision would reduce risk to water quality:

- The use of all treated wood and tires would be prohibited.

These Alternative 3 provisions might increase risk of flooding:

- Before issuing an HPA for removal of a beaver dam, require a professional determination that there is an imminent threat to property or the environment
- Require scientific justification to prove that dredging will resolve flooding problems before any HPAs for dredging are issued.

Rule changes proposed in Alternative 3 further reduce the likelihood of water quality degradation because this alternative prohibits the use of any wood preservative for submerged wood.

#### ***4.4.4.3 Alternative 4 Provisions Affecting Water Resources***

Alternative 4 proposals that affect risk for water resources include:

- Alt. 4 does not include the culvert design standards.
- Amend the rules to use a channel forming flow, such as the 2-year flood, instead of a rare flood like the 100-year to evaluate how changes in flow velocity will affect fish life.
- Alt. 4 does not include the provision to design and locate the boat ramp or launch to avoid adverse impacts to saltwater habitats of special concern.
- Alt. 4 does not include the provision to design and locate boat ramps and launches to avoid and minimize excavation below the OHWL.
- Alt. 4 removes all grating requirements.

## 4.5 Wildlife

As discussed in Chapter 3, mammals, birds, reptiles, and amphibians utilize the riverine, marine, and wetland habitats in Washington. Some of these species spend all of their lives in or near the wetted perimeter of rivers, streams, wetlands, and oceans while many others use such areas only for specific life history stages, such as breeding, feeding, and migration. Other wildlife species utilize upland habitats where hydraulic project activities could occur.

Most changes to the hydraulic project activities regulated by Alternative 2 would not result in direct impacts to most wildlife species. This is because:

- Most of the project activities with proposed rule changes would not affect individuals directly, because most wildlife species are mobile and able to walk, fly, or swim away from disturbances such as noise, light, human activity, or turbidity; and
- The vast majority of hydraulic project activities occur in areas that already have some level of development and human activity, areas that would generally be avoided by many of the wildlife species discussed in Chapter 3.

Wildlife that are at risk of direct effects from hydraulics project activities include the following:

Amphibians associated with the wetted perimeter of freshwater streams, rivers, lakes, and wetlands.

The habitat range and mobility of these species are somewhat limited and amphibians and reptiles are widely distributed throughout the landscape, including areas that have some level of existing development, indicating a susceptibility to direct effects from physical harm and/or stranding of larval forms.

Marine animals that are sensitive to in-water or in-air disturbances (particularly from noise and vibration) and that have at least moderate utilization of marine nearshore/shoreline areas. This would include pinnipeds, cetaceans, and diving birds.

Aquatic wildlife that uses marine or lacustrine benthic habitat or riverine bed habitat for feeding or migration. Such wildlife species (e.g., diving ducks) could be injured or killed by certain hydraulic project activities, such as dredging.

Wildlife that use streams, lakes, rivers, or the freshwater shoreline for nesting or denning. This includes beaver, muskrat, nutria, river otter, and similar wildlife species.

### 4.5.1 Impacts of Hydraulic Projects to Wildlife

Hydraulic project activities may directly affect some of the wildlife species in Washington. Project activities that could result in direct effects to wildlife are discussed below.

Several hydraulic project activities have potential to directly affect marine mammals and diving birds in marine habitat, due primarily to potential acoustic impacts and physical entrainment:

- Bulkheads and other bank protection in saltwater areas (WAC 220-660-370)
- Residential piers, ramps, floats, watercraft lifts, and buoys in saltwater areas (WAC 220-660-380)
- Boat ramps and launches in saltwater areas (WAC 220-660-390)

- Marinas and terminals in saltwater areas (WAC 220-660-400)
- Dredging in saltwater areas (WAC 220-660-410)
- Outfall and tide and flood gate structures in saltwater areas (WAC 220-660-430)

Likewise, some freshwater wildlife species may be exposed to direct impacts from hydraulic project activities. These impacts would result primarily from stranding and entrainment of amphibian species or effects from entrainment on benthic species. Such activities include:

- Residential docks, watercraft lifts, and buoys in freshwater areas (WAC 220-660-140)
- Boat ramps and launches in freshwater areas (WAC 220-660-150)
- Marinas and terminals in freshwater areas (WAC 220-660-160)
- Dredging in freshwater areas (WAC 220-660-170)
- Sand and gravel removal (WAC 220-660-180)
- Water crossing structures (WAC 220-660-190)
- Fish passage improvement structures (WAC 220-660-200)
- Channel change/ realignment (WAC 220-660-210)
- Mineral prospecting WAC (220-660-300)

Two hydraulic project activities could directly affect certain wildlife species or species groups. Streambank protection and lake shoreline stabilization activities (WAC 220-660-130) could result in death or injury from destruction of the primary habitats (e.g., active dens in disturbed shoreline habitats) of bank-dwelling mammals and birds and beaver dam management activities (WAC 220-660-230) could result in similar effects on beaver.

Most of the potential effects on wildlife would be indirect effects from habitat alteration, changes to physical or biological ecological functions (e.g., water quality), or alterations on a wildlife species predator or prey (e.g., fish).

Development in general can contribute to ecosystem fragmentation, for both aquatic and terrestrial animals. Specific effects include:

- Altered longitudinal (up and down stream) connectivity
- Altered lateral connections between rivers and floodplains
- Loss of access to floodplain habitats
- Altered habitat complexity
- Loss of riparian cover

Project types most often associated with ecosystem fragmentation impacts to wildlife include water crossings, fish passage, flow control structures, bank protection, shoreline modifications, channel modifications, habitat modifications, and overwater structures.

#### **4.5.2 Effects of the Alternatives on Wildlife**

The rules that are associated with reducing impacts of regulated hydraulic project activities on fish life are also likely to reduce effects on wildlife .

**Table 4-7 Comparison of Risk of Probable Significant Adverse Environmental Impacts of the Alternatives on Wildlife Relative to the No-Action Alternative**

ELEMENT IMPACTED	CHANGE IN RISK OF IMPACTS RELATIVE TO ALTERNATIVE 1		
	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4
Wildlife and Ecosystem Impacts	Reduction in risk	Further reduction in risk	Increased risk

In some cases, this isn't true; for example, removing beaver dams may directly injure or kill beavers because the primary aim of this activity is to destroy beaver habitat. The proposed rule prioritizes beaver dam removal methods that would have minimal effects on beaver and other wildlife, fish, and water resources. The proposed rule also specifies that removal of established beaver dams be conducted only when other measures for controlling beaver damage have not been effective.

Mitigation for impacts to wildlife is not required under the Hydraulic Code Statute 77.55 RCW. Other laws and rules might require that impacts to wildlife be mitigated. For example, acoustic impacts of a hydraulic project on marine mammals is not regulated by the Hydraulic Code Statute 77.55 RCW or by the Hydraulic Code Rules (beyond those provisions needed to protect fish life), but the project can be subject to regulation under SEPA, the federal Marine Mammal Protection Act, or Endangered Species Act.

**4.5.2.1 Alternative 2 Provisions Affecting Wildlife**

Alternative 2 includes new provisions that avoid and/or minimize potential physical, chemical, and biological impacts on wildlife resources. General examples of such measures include explicit requirements for the following:

- A professional assessment of risk and justification for project;
- More robust design requirements that will minimize impacts to habitat;
- New and expanded residential and recreational overwater structures must be at least a specified buffer distance from existing native aquatic vegetation attached to or rooted in substrate.
- Construction methods (e.g., vibratory versus impact pile driving) and material (e.g., specifications for type, size, and composition) requirements will minimize impacts to fish and habitat; and
- Work windows that will minimize overlap of authorized work with presence of relevant life history stages of fish.

**4.5.2.2 Alternative 3 Provisions Affecting Wildlife**

Provisions of Alternative 3 that could affect risk of impacts to wildlife include:

- Require mooring buoys to be a certain distance from seagrass and macroalgae.
- New and expanded marinas and marine terminals, wharves, piers, marinas, and terminals must be at least a specified buffer distance from existing native aquatic vegetation attached to or rooted in substrate.

#### **4.5.2.3 Alternative 4 Provisions Affecting Wildlife**

Provisions of Alternative 4 that could affect risk of impacts to wildlife include:

- Alt. 4 does not include the provision "mitigation must compensate for temporal loss, uncertainty of performance, and differences in habitat functions, type, and value".
- Alt. 4 does not contain pier height or width requirements for waterbodies where impacts to juvenile salmonid migration corridors and feeding and rearing areas are a concern.
- Alt. 4 does not contain the provision to design and locate the boat ramp or launch to avoid adverse impacts to saltwater habitats of special concern.
- Alt. 4 does not include the provision to design and locate boat ramps and launches to avoid and minimize excavation below the OHWL.

### **4.6 Vegetation**

As described in Chapter 3, the shorelines and shallow waters of the state's freshwater and marine watercourses support diverse vegetation. Many hydraulic project activities can result in direct or indirect impacts to vegetation. Vegetation that might be impacted includes:

- Riparian vegetation associated with freshwater river and stream corridors and lake shorelines. This is likely to include deciduous shrubs and/or trees and coniferous trees in some areas;
- Wetland vegetation associated with emergent, shrub, or forest wetland communities present adjacent to streams or lakes;
- Riparian vegetation associated with marine shorelines including deciduous and coniferous shrubs and trees;
- Salt-tolerant vegetation present in backshore beaches including grasses and herbaceous species;
- Submerged and floating aquatic vegetation associated with the shoreline of freshwater lakes; and
- Submerged and floating aquatic vegetation associated with shallow marine waters along shorelines and estuaries.

#### **4.6.1 Impacts of Hydraulic Projects to Vegetation**

Hydraulic project activities may directly impact some of the vegetation species associated with freshwater rivers, streams and lakes, and marine shorelines. Impacts to vegetation could occur while constructing and/or operating a project.

In terms of construction, the revised Hydraulic Code Rules contain numerous requirements and recommendations that would reduce impacts to riparian, wetland, and aquatic vegetation. Overall, the general construction requirements for all hydraulic projects include provisions to minimize disturbance from construction by avoiding to the maximum extent practicable and then minimizing disturbance to aquatic and wetland plants (except aquatic noxious weeds), riparian and wetland areas, replacing vegetation following construction, and monitoring the replaced vegetation.

Several hydraulic project activities could directly affect vegetation because they require in-water or on-land construction in areas where vegetation is typically present. Such activities include:

- Streambank protection and lake shoreline stabilization (WAC 220-660-130)
- Residential docks, watercraft lifts, and buoys in freshwater areas (WAC 220-660-140)
- Boat ramps and launches in freshwater areas (WAC 220-660-150)
- Marinas and terminals in freshwater areas (WAC 220-660-160)
- Water crossing structures (WAC 220-660-190)
- Channel change/ realignment (WAC 220-660-210)
- Outfall structures in freshwater areas (WAC 220-660-260)
- Bulkheads and other bank protection in saltwater areas (WAC 220-660-370)
- Residential piers, ramps, watercraft lifts, and buoys in saltwater areas (WAC 220-660-380)
- Boat ramps and launches in saltwater areas (WAC 220-660-390)
- Marinas and terminals in saltwater areas (WAC 220-660-400)
- Dredging in saltwater areas (WAC 220-660-410)
- Outfall and tide and flood gate structures in saltwater areas (WAC 220-660-430)

Alteration or loss of aquatic vegetation:

Impacts to aquatic vegetation ripple throughout aquatic ecosystems:

- Changes to water quality
- Loss of refugia and cover
- Altered flow pattern
- Altered nutrient cycling pattern
- Increased risk of predation
- Altered production of habitat-forming materials from off-site
- Altered habitat complexity
- Alteration or loss of riparian vegetation

Alteration or loss of riparian vegetation can result in:

- Reduced shading and altered temperature regime
- Reduced streambank or shoreline stability
- Altered inputs of habitat-forming materials from off-site (including large woody material)
- Altered groundwater, surface water and hyporheic exchange
- Altered habitat complexity

Beneficial project types:

Two hydraulic project types are intended to have beneficial effects on aquatic vegetation. Aquatic plant removal and control (WAC 220-660-290) covers the physical and mechanical methods for removing aquatic noxious weeds (e.g., *Spartina* sp. and purple loosestrife) that threaten native vegetation, and fish and shellfish and their habitat. Seagrass and macroalgae habitat surveys (WAC 320-660-350) include specific guidelines for surveying seagrass and macroalgae habitats to improve protection and preservation. The proposed rule changes contain protocols for both preliminary and advanced surveys to assist in evaluating the potential impacts associated with other regulated hydraulic project activities such as new or replacement docks, mooring buoys, or other overwater structures, and new or maintenance dredging, trenching, filling or grading.

#### 4.6.2 Effects of the Alternatives on Vegetation

The rules associated with regulated hydraulic project activities that minimize or avoid impacts to fish life also reduce risk of impacts to vegetation. Some provisions are intended specifically to avoid or minimize impacts to vegetation that comprises fish habitat.

**Table 4-8 Comparison of Risk of Probable Significant Adverse Environmental Impacts of the Alternatives on Vegetation Relative to the No-Action Alternative**

ELEMENT IMPACTED	CHANGE IN RISK OF IMPACTS RELATIVE TO ALTERNATIVE 1		
	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4
Aquatic and Riparian Vegetation	Reduction in risk	Further reduction in risk	Increased risk

One common mitigation requirement for impacts to vegetation is replanting with native vegetation. We received comments about the difficulty of establishing new plantings after a project is completed, and we agree that new plantings require constant care to ensure they perform the intended ecosystem functions. Each HPA permit biologist works individually with project proponents to tailor the specific revegetation requirements to the specific project location and extent of project impact. Hydraulic Project Approvals not only include specifically-tailored provisions for revegetation, but also include performance standards requiring that the revegetation effort be successful. WDFW provides continuing technical assistance to ensure those performance standards can be met.

##### 4.6.2.1 Alternative 2 Provisions Affecting Vegetation

Alternative 2 would reduce the risk of negative environmental impacts for vegetation, as compared to Alternative 1. This is because the Preferred Alternative includes provisions to avoid and minimize impacts to vegetation during construction, provides specific guidelines to avoid and minimize impacts to vegetation for many of the hydraulic activities, and two of the regulated activities are expected to have beneficial effects on vegetation. Changes in the type, magnitude, or distribution of effects on vegetation would be expected based on proposed provisions in Alternative 2. Future outcomes are expected to be better than those under the no-action alternative.

The proposed rule changes include provisions to minimize disturbance to vegetation and are expected to reduce direct impacts to vegetation associated with the activities listed above. We expect that regulated activities that occur between the banks or waterward of shorelines could generally avoid impacts to vegetation. These activities include:

- Dredging in freshwater areas (WAC 220-660-170),
- Sand and gravel removal (WAC 220-660-180),
- Fish passage improvement structures (WAC 220-660-200),
- Water diversions and intakes (WAC 220-660-250),
- Utility crossings in freshwater areas WAC (220-660-270) and saltwater areas (WAC 220-660-440),
- Mineral prospecting (WAC 220-660-300), and
- Boring in saltwater areas (WAC 220-660-450).

Alternative 2 provisions that reduce risk to aquatic vegetation:

- Locate structures in deeper water to minimize shading and physical impacts on aquatic vegetation.
- Minimize impacts from vessels.
- Do not allow floats to ground out on low tides.
- Any walkways should be 100 percent grated; floats and docks should be at least 60 percent grating.
- Orient grating to maximize transmission of light under the structure.
- New and expanded residential and recreational overwater structures must be at least a specified buffer distance from existing native aquatic vegetation attached to or rooted in substrate.
- Minimize the amount of pier area that directly contacts the shoreline, to allow light penetration to the nearshore intertidal and shallow subtidal areas.

Provisions that reduce risk to riparian vegetation:

- Use existing roadways or travel paths whenever possible
- Use hand equipment rather than heavy equipment
- If using heavy equipment, use wide-track or rubberized tires

**4.6.2.2 Alternative 3 Provisions Affecting Vegetation**

Provisions of Alternative 3 that could affect risk of impacts to vegetation include:

- Before allowing any form of bulkhead or armoring work in freshwater areas, require an engineer's report that unequivocally determines that bank protection or shoreline stabilization is needed to protect infrastructure.
- If protection in freshwater areas is warranted, require a biotechnical ("soft") solution unless an engineer clearly finds that a hard bulkhead is the only option.
- Require 100% of an overwater structure's deck to be covered in grating.
- Require mooring buoys to be a certain distance from seagrass and macroalgae.
- New and expanded marinas and marine terminals must be at least a specified buffer distance from existing native aquatic vegetation attached to or rooted in substrate.

**4.6.3 Alternative 4 Provisions Affecting Vegetation**

Provisions of Alternative 4 that could affect risk of impacts to vegetation include:

- Alt. 4 does not include the provision "mitigation must compensate for temporal loss, uncertainty of performance, and differences in habitat functions, type, and value" because these values are difficult to quantify.
- Remove all grating requirements
- No pier height or width requirements would be specified for waterbodies where impacts to juvenile salmonid migration corridors and feeding and rearing areas are a concern.
- Authorize dredging in fish spawning areas.
- Amend the rules to allow American Association of State Highway and Transportation Officials and Federal Highway Administration [bridge/culvert design] standards (by name)

- Alt. 4 does not include the culvert design standards.
- Amend the bridge design standards.
- Amend the rules to use a channel forming flow, such as the 2-year flood, instead of a rare flood like the 100-year to evaluate how changes in flow velocity will affect fish life.
- Alt. 4 does not include the provision to design and locate the boat ramp or launch to avoid adverse impacts to saltwater habitats of special concern.
- Alt. 4 does not include the provision for the department to require an eelgrass/macroalgae habitat survey for all new ramp or launch construction. A survey is not required to replace an existing structure within its original footprint.
- Alt. 4 does not include the provision to design and locate boat ramps and launches to avoid and minimize excavation below the OHWL.

## 4.7 Built Environment

The State Environmental Policy Act and implementing rules direct agencies to disclose the extent to which projects cause “*Significant impacts on both the natural environment and the built environment*”<sup>9</sup> ... “*This involves examining impacts to and the quality of the physical surroundings, whether they are in wild, rural, or urban areas. Discussion of significant impacts shall include the cost of and effects on public services, such as utilities, roads, fire, and police protection, that may result from a proposal. EISs shall also discuss significant environmental impacts upon land and shoreline use, which includes housing, physical blight, and significant impacts of projected [human] population on environmental resources...*”<sup>10</sup>,

In this section, WDFW provides an overview of programmatic impacts to Environmental Health and Safety; Land and shoreline use; Light, Glare, Noise, and Visual Aesthetics; Recreation; Historic and Cultural Resources; Agriculture; Transportation; and Public Services and Utilities.

The Hydraulic Code Rules provide provisions for most types of hydraulic projects constructed on private and public property and how those projects can be constructed. The provisions have broad environmental effects because fish habitat comprises a significant portion of freshwater and nearshore saltwater environments, which are also shared with human uses.

New design standards for some project types could increase costs of constructing such projects. Costs could also increase because the proposed new rules provide mitigation provisions that apply to most projects.

Probable significant adverse environmental impacts would be determined on a project-specific basis for hydraulic projects requiring additional environmental review. To help us think about the effects of proposed Hydraulic Code Rules on “the built environment,” this section is designed to put forward some types of impacts to the built environment that might occur for particular hydraulic project types.

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<sup>9</sup> WAC 197-11-444; SEPA Rules

<sup>10</sup> RCW 43.21C.110 (1)(d) and (f)

#### **4.7.1 Environmental Health and Safety**

Safety of people and property is a critical consideration when hydraulic projects are being evaluated for permitting, but these factors are not regulated by the Hydraulic Code Rules. Provisions in Hydraulic Code Statute 77.55 RCW allow immediate permitting under emergency situations declared by WDFW or a county government. Two other types of permits, imminent danger and chronic danger, are addressed in statute. The rule change proposals incorporate procedures to improve implementation of projects under these circumstances.

In some cases, there is debate regarding the designs that would be best for both fish and people. Some proposed rule changes provide provisions for professionally-engineered designs when project proponents and permit biologists do not agree on the project design in highly sensitive locations (marine bank protection, for example). WDFW works together with the proponent and his/her design engineer to ensure that the project is protective of both human and fish needs.

Concern about flooding is a frequent discussion topic. For example, beaver dams and placement of large wood pieces are both intended to slow the natural flow of a stream, but these structures sometimes cause blockages during high flow conditions. Design technology has evolved regarding selection and placement of human-placed habitat elements, and flooding at high flows is less of a problem for these types of projects now. We still can't always get beavers to cooperate with our human development plans, but provisions are proposed in the rule revisions that facilitate decisions on beaver management techniques.

Undersized culverts and road crossings can also cause local flooding during high-flow events. Existing and proposed new hydraulic project provisions help to ensure that new structures involving fish passage improvements will also provide benefits in terms of reduced risk of localized flood impacts. One of the interesting challenges of adapting to climate change is that flow patterns and volumes are changing from those we have experienced in the past. Human development has also changed hydrology in some streams. Locations that have not historically been susceptible to "flash floods" can now be affected. Rule changes represented by the proposed alternatives should reduce risk of flood impacts.

Discussions about fuel spills and toxic contaminants occur in Section 4.3 and are not repeated here.

In general, Alternatives 2 and 3 reduce risk of impacts to environmental health and safety over the no-action alternative. Alternative 4 is probably neutral with respect to environmental health and safety when compared with the no-action alternative.

##### ***4.7.1.1 Alternative 2 Provisions Affecting Environmental Health and Safety***

New construction provisions included in Alternative 2 that are intended to improve conditions for fish life probably also offer more conservative work methods and designs that improve public safety. Provisions of Alternative 2 relating to hydraulic project design potentially can decrease effects like flooding, which improves overall safety of these structures. New provisions for beaver management help people remove property impacts from beaver activity. Provisions for the type of wood preservative used for water-contact projects help improve overall environmental health. These are discussed in greater detail in the water quality section.

#### **4.7.1.2 *Alternative 3 Provisions Affecting Environmental Health and Safety.***

- Prohibit the use of all treated wood and tires.
- Before allowing any form of bulkhead or armoring work in freshwater areas, require an engineer's report that unequivocally determines that bank protection or shoreline stabilization is needed to protect infrastructure.
- If protection in freshwater areas is warranted, require a biotechnical ("soft") solution unless an engineer clearly finds that a hard bulkhead is the only option.
- Require scientific justification to prove that dredging will resolve flooding problems before any HPAs for dredging are issued.
- Before issuing an HPA to remove a beaver dam, require a professional determination that there is an imminent threat to property or the environment.

#### **4.7.1.3 *Alternative 4 Provisions Affecting Environmental Health and Safety***

- Alt. 4 removes all grating requirements.
- Amend the rules to use a channel forming flow, such as the 2-year flood, instead of a rare flood like the 100-year to evaluate how changes in flow velocity will affect fish life.

### **4.7.2 Land and Shoreline Use**

Hydraulic Code Rules do not directly affect land and shoreline use because local land/shoreline use regulations restrict the kinds of projects and activities that can occur in certain locations. The construction of hydraulic projects must first be consistent with existing land use regulations, including zoning code restrictions, critical areas regulations, and Shoreline Management Programs.

However, hydraulic projects by their nature profoundly affect land/shoreline use because hydraulic projects are primarily construction projects intended to convert land from one use to another or to improve an existing use.

For example, if a dock is not an allowed use in a certain location under the local SMP, the type and amount of grating proposed for the dock pursuant to HPA rules is moot. On the other hand, some jurisdictions might be more likely to allow a conditional shoreline use project if the project has received an HPA or provides additional benefits to the natural habitat function.

Current implementation of the existing rules places limits on project locations through project specific restrictions, but those limits are not specified in the existing rule language. This absence has created uncertainty for landowners/developers. The Alternative 2 proposed rule changes will improve certainty to landowners about location and design requirements, making it easier for project proponents to know what is required before applying for an HPA.

Overall, Alternatives 2 and 3 are more supportive of local land and shoreline use regulations compared with the no-action alternative. Alternative 4 presents some increased risk that HPA projects will adversely affect land/shoreline use over the no-action alternative.

#### **4.7.2.1 *Existing Conditions (Alternative 1) Affecting Land and Shoreline Use***

Under the no-action alternative (Alternative 1), hydraulic projects would continue to be regulated under the existing Hydraulic Code Rules, which are inconsistent with some aspects of the Shoreline

Management Act, some local critical areas ordinances, and other regulations. This inconsistency causes uncertainty among landowners about how projects should be constructed and can lengthen the time required to permit a hydraulic project.

#### ***4.7.2.2 Alternative 2 Provisions Affecting Land and Shoreline Use***

The proposed rule changes increase the restrictions on hydraulic project construction beyond the existing regulations. They also further limit what can be constructed and where. For example, ponds could no longer be constructed within a watercourse (WAC 220-660-240). In addition, the revised rule limits the location of marinas and terminals (WAC 220-660-160 and 400).

#### ***4.7.2.3 Alternative 3 Provisions Affecting Land and Shoreline Use***

Before allowing any form of bulkhead or armoring work, Alternative 3 requires an engineer's report that unequivocally determines that bank protection or shoreline stabilization is needed to protect infrastructure. As evaluated in this PEIS, the project would be limited by this provision, but not preempted.

#### ***4.7.2.4 Alternative 4 Provisions Affecting Land and Shoreline Use***

- Alt. 4 does not include HPA pier height or width requirements for waterbodies where impacts to juvenile salmonid migration corridors and feeding and rearing areas are a concern.
- Alt. 4 does not include the provision to design and locate the boat ramp or launch to avoid adverse impacts to saltwater habitats of special concern.
- Alt. 4 does not include provision to design and locate freshwater boat ramps and launches to avoid and minimize excavation below the OHWL.
- It should be noted that local ordinances might require these provisions completely independently from the state Hydraulic Code Statute 77.55 RCW or Hydraulic Code Rules.

### **4.7.3 Light, Glare, Noise, and Visual Aesthetics**

The extent to which hydraulic projects affect light, glare, noise, and visual aesthetics is very project-specific. Most construction projects affect these elements of the environment while under construction. The extent to which projects have permanent effects are tied to local regulations and people's social and natural resource values.

Projects that generate noise include water crossings, fish passage, flow control structures, bank protection, shoreline modifications, channel modifications, habitat modifications, and overwater structures.

Projects that can affect ambient light include overwater structures, fish passage, and channel modifications. The effects of light on natural resources are discussed in the sections covering Fish and Vegetation. Projects that include lighting must meet not only provisions of an HPA but also the more precise requirements of local ordinances.

Visual Aesthetics are affected by any construction project. Most projects are unattractive when under construction. Many hydraulic projects permanently alter a natural landscape to a built landscape, with the associated changes in aesthetics. However, project provisions that protect fish life also preserve or restore near-natural conditions, and so maintain or restore the natural aesthetic.

For example, bank protection structures can present unattractive built elements in the otherwise natural landscape. New provisions and considerations for bank protection projects that reduce/minimize impacts to fish life, such as use of soft-shore protection alternatives, can also produce more aesthetically pleasing designs, especially to the landowner wishing to restore the natural beach of their waterfront property.

The extent to which hydraulic projects are socially pleasing is often linked with the amount of economic activity generated by the project. Most hydraulic projects are intended to maintain or add social and/or economic value, and are therefore pleasing based on that measure.

In general, Alternatives 2 and 3 reduce the risk of adverse impacts due to light, glare, noise, and visual aesthetics when compared with the no-action alternative. Alternative 4 slightly increases the risk of impact to these elements compared with no-action.

#### ***4.7.3.1 Existing conditions Affecting Light, Glare, Noise, and Aesthetics***

There are currently no provisions for attenuating noise from pile driving. Current provisions for project activities within the beach area prohibit work when the project area, including the work corridor, is inundated by tidal waters unless the work is occurring from a vessel or barge. Provisions relating to light penetration on docks and floats exist, but they do not reflect current design and technology improvements.

#### ***4.7.3.2 Alternative 2 Provisions Affecting Light, Glare, Noise, and Aesthetics***

- Alternative 2 includes the following proposed provisions, which are intended to reduce impacts to fish life but also cause reductions in overall risks of impact from noise.
- Pile driving
- When installing steel piling, a vibratory hammer is preferred.
- If impact pile driving is needed, set the drop height to the minimum needed to drive the piling.
- Use appropriate sound attenuation to minimize harm to fish from impact steel pile-driving noise.
- Equipment use
- Avoid and minimize the use of equipment below the OHWL of rivers, streams, and lakes.
- Avoid and minimize use of equipment on the beach area and confine equipment to specific access and work corridors.
- Project activities within the beach area must not occur when the project area, including the work corridor, is inundated by tidal waters unless the work is occurring from a vessel or barge.
- Provisions relative to light penetration through decking are discussed in Section 4.1.

#### ***4.7.3.3 Alternative 3 Provisions Affecting Light, Glare, Noise, and Aesthetics***

Provisions for Alternative 3 are the same as for Alternative 2.

#### ***4.7.3.4 Alternative 4 Provisions Affecting Light, Glare, Noise, and Aesthetics***

Alternative 4 removes existing provisions relating to noise, light, and aesthetics, and deletes some provisions proposed in Alternative 2:

- Alt. 4 removes all grating requirements

- Alt. 4 contains no specified pier height or width requirements for waterbodies where impacts to juvenile salmonid migration corridors and feeding and rearing areas are a concern
- Alt. 4. Does not include the provision to design and locate boat ramps or launches to avoid adverse impacts to saltwater habitats of special concern

#### **4.7.4 Recreation**

Water-oriented recreational development and public access to water are among the prioritized uses under the Shoreline Management Act (SMA) and individual Shoreline Master Programs enacted by cities and counties in the state. The revisions to the Hydraulic Code Rules proposed in Alternative 2 bring the rules into consistency with the SMA.

Water-oriented recreation in Washington often revolves around docks, piers, boat launches and marinas. These structures are all regulated under the Hydraulic Code Rules, so in some sense, Hydraulic Code Rules facilitate enhanced recreational opportunities. The extent to which HPA rules restrict recreational development is tricky to evaluate. Ultimately, the HPA rules are intended to protect the resources that are the object of that recreation; in this sense, the HPA rules also facilitate enhanced recreational opportunities by protecting the objects of that recreation. On the other hand, applicants whose recreation-related projects are restricted by the HPA rules will view the HPA rules as (at the best) unsupportive of enhanced recreational opportunities or (at the worst) obstructive of those uses. The mandate of the Hydraulic Code Statute 77.55 RCW is to protect fish life, and the overall context for that mandate is WDFW's mission to protect and enhance fish and wildlife resources for recreational and commercial uses. This is another situation where the effects measured at the project scale might be negative, but the statewide scale overall is supportive of more and better fish-related recreation experiences.

One way that Alternative 2 supports project development is by specifying detailed regulations in the rules instead of relying on site-by-site provisions to protect fish. Having design provisions spelled out in rule helps reassure project proponents that certain recreational structures will be allowed, and provides transparency on the design criteria. This streamlines the permitting process by minimizing the need to revise designs during the permitting process. While new regulations for docks, launches, and marinas could increase design and construction time for these structures, procedural improvements for hydraulic permits offset some of this inconvenience.

Overall, Alternative 2 reduces impacts to recreation over the no-action alternative because design provisions are transparent. Alternative 3 adds to risk of impacts to recreation compared to the no-action alternative by imposing tighter restrictions. Alternative 4 increases risk of impacts to recreation projects by perpetuating uncertainty regarding project provisions.

##### ***4.7.4.1 Existing conditions (Alternative 1) that affect recreation***

The existing Hydraulic Code Rules include provisions for constructing freshwater docks, piers, and floats and driving or removing piling (existing WAC 200-110-060); freshwater boat hoists, ramps, and launches (existing WAC 220-110-224); saltwater boat ramps and launches (existing WAC 220-110-290); saltwater piers, pilings, docks, floats, rafts, ramps, boathouses, houseboats, and associated moorings (existing WAC 220-110-300); and marinas in saltwater areas (existing WAC 220-110-330). Recreation-related

hydraulic projects are regulated project-by-project and site-by-site as necessary to protect fish life. These provisions currently limit locations, construction methods, and dimensions of structures built for water-oriented recreation.

#### **4.7.4.2 *Alternative 2 Provisions Affecting recreation***

Hydraulic Code Rules for recreation-related structures have been significantly revised to match current fish science and design technology. Revised WACs 220-660-140 (Residential docks, watercraft lifts, and buoys in freshwater areas), 220-660-150 (Boat ramps and launches in freshwater areas), 220-660-160 (Marinas and terminals in freshwater areas), 220-660-380 (Residential piers, ramps, floats, watercraft lift and buoys in saltwater areas), 220-660-390 (Boat ramps and launches in saltwater areas) and 220-660-400 (Marinas and terminals in saltwater areas) all regulate recreation-related hydraulic projects. Changes to each section are summarized in Table 4-2.

In these sections, new regulations have been added covering projects that were not previously included in the Hydraulic Code Rules, including watercraft lifts, mooring buoys, piers, ramps, floats, grating and paint, treated wood, piling, noise and pile driving, and piling removal. Marinas and terminals in freshwater areas have been added as a regulated activity, with requirements similar to those for marinas and terminals in saltwater areas. Length, width, and grating requirements have been added for residential docks, and existing requirements have been substantially changed based on current best practices. Boat ramps and launches are no longer allowed to be located in spawning areas. Allowable dock designs have been specified for waterbodies with salmon, steelhead, and bull trout. These new provisions have proven to improve fish life protection; if they were not proven, we would not be proposing them. WDFW will continue to work closely with project proponents to ensure that designs are protective of fish life.

These regulatory changes would add constraints on where and how docks, ramps, and marinas could be constructed. The new provisions don't preempt projects; they ensure projects are protective of fish life. Additional design requirements would add to the cost and time needed to construct recreational structures; increased certainty about the requirements will reduce the time it takes to receive a permit.

Changes to the Hydraulic Code Rules that protect fish species are discussed in Section 4.1. These changes would help maintain fish productivity and improve fishing opportunities. Changes to the Hydraulic Code Rules that protect water quality are discussed in Section 4.3. These changes would maintain and improve water quality for water-contact recreation (such as swimming) as well as fishing opportunities.

#### **4.7.4.3 *Alternative 3 Provisions Affecting recreation***

Alternative 3 provisions are the same as for Alternative 2, except for the following:

- Require 100% of an overwater structure's deck to be covered in grating.
- Impose additional timing restrictions for mineral prospecting.

#### **4.7.4.4 *Alternative 4 Provisions Affecting Recreation***

- Alt. 4 retains the existing (no-action, Alternative 1) timing windows for mineral prospecting.

- Alt. 4 does not include the provision to design and locate the boat ramp or launch to avoid adverse impacts to saltwater habitats of special concern.
- Alt. 4 does not include the provision for the department to require an eelgrass/macroalgae habitat survey for all new ramp or launch construction. A survey is not required to replace an existing structure within its original footprint.
- Alt. 4 does not include the provision to design and locate boat ramps and launches to avoid and minimize excavation below the OHWL.

#### **4.7.5 Historic and Cultural Resources**

As described in Chapters 1 and 3, there is a high probability of encountering cultural resources when hydraulic projects are constructed. Neither the existing nor revised Hydraulic Code Rules include requirements to protect cultural resources, because WDFW lacks statutory authority to do so. However, other state and federal regulations do require protection of those resources and those regulations would usually be triggered by hydraulic project construction. In general, measures that reduce project footprint or minimize disturbance to sediments could also reduce risk of impacts to cultural resources that are associated with those sediments.

Alternative 2 is neutral with respect to impacts to historic and cultural resources relative to the no-action alternative. Some provisions of Alternative 3 reduce the risk of impact to historic and cultural resources over the no-action alternative because the provisions are more restrictive and require more professional design expertise (more knowledgeable eyes on the ground). Alternative 4 increases risk of impacts on historic and cultural resources compared to the no-action alternative.

##### ***4.7.5.1 Existing conditions (Alternative 1) that affect historic and cultural resources***

Impacts to cultural resources from hydraulic projects would remain the same as under current conditions.

##### ***4.7.5.2 Provisions of Alternative 2 that affect historic and cultural resources***

The revised Hydraulic Code Rules do not include requirements to protect cultural resources; therefore, protection of cultural resources would continue to be provided by other regulations (Section 1). Provisions in the proposed Hydraulic Code Rules (Alternative 2) that reduce the footprint of hydraulic projects would help reduce potential impacts to cultural resources by reducing the amount of soil disturbance.

##### ***4.7.5.3 Provisions of Alternative 3 that affect historic and cultural resources***

Several provisions of Alternative 3 affect the footprint of the disturbed area during hydraulic project construction, and would therefore reduce risk of impacts to historic and cultural resources:

- Before allowing any form of bulkhead or armoring work in freshwater areas, require an engineer's report that unequivocally determines that bank protection or shoreline stabilization is needed to protect infrastructure.
- If protection in freshwater areas is warranted, require a biotechnical ("soft") solution unless an engineer clearly finds that a hard bulkhead is the only option.
- Add provisions for removing gravel and debris from small streams.

- Require scientific justification to prove that dredging will resolve flooding problems before any HPAs for dredging are issued.
- Require permittees to install stream simulation culverts unless the permittee can show that stream simulation is not feasible, or that another design will provide equal or better protection of fish life.
- Retain the current (Alternative 1) WDFW priorities for water crossings.
- Remove the no-slope design alternative
- Require a shorter bridge design be based on engineering constraints and not constraints caused by existing infrastructure and levee setback opportunities.
- Hydraulic design option culverts would have limited application in exceptional circumstances where constraints prevent the use of bridges, no-slope, and stream simulation culverts.
- Require that conduit lines in watercourses would not constrict the channel or preclude future opportunities for bridges or other less-impacting approaches to water crossings.

#### ***4.7.5.4 Provisions of Alternative 4 that affect historic and cultural resources***

Several provisions of Alternative 4 might affect the footprint of the disturbed area during hydraulic project construction, and might therefore affect the risk of impacts to historic and cultural resources:

- Alt. 4 does not include the culvert design standards
- Amend the bridge design standards.
- Amend the rules to use a channel forming flow, such as the 2-year flood, instead of a rare flood like the 100-year to evaluate how changes in flow velocity will affect fish life
- Alt. 4 does not include the provision to design and locate boat ramps and launches to avoid and minimize excavation below the OHWL

#### **4.7.6 Agriculture**

Agricultural production is a significant contributor to economic activity in the state of Washington, and many agriculture activities occur adjacent to rivers. Some agricultural practices present risk to the aquatic environment. Impacts to water quality are the primary concerns, including turbidity, temperature, and the presence of fertilizer and pesticide residue. These effects are regulated by Ecology under their Clean Water Act authority. Other agricultural impacts can include stream flow, which is also regulated by Ecology, and fish passage and screening issues related to irrigation diversions. Fish passage and screening are regulated by WDFW through chapter 77.57 RCW, and not through the Hydraulic Code Statute 77.55 RCW. Fish passage and screening project construction, however, is regulated under chapter 77.55 RCW.

Hydraulic Code Rules and changes to those rules affect agriculture in many of the same ways other land and shoreline uses are impacted. However, some agricultural hydraulic projects are exempt from some HPA procedural requirements. Hydraulic projects that divert water for agricultural irrigation or stock watering purposes and that involve seasonal construction or other work require an initial HPA, but annual renewal is not necessary. A permit for streambank stabilization projects to protect farm and agricultural land remains in effect without need for periodic renewal if the problem causing the need for the streambank stabilization occurs on an annual or more frequent basis. In all cases, the agricultural

permittee must notify WDFW before commencing any construction, maintenance, or other work within the area covered by the permit.

Hydraulic Code Rules affect aquaculture by regulating many aspects about aquaculture infrastructure design and location. However, the proposed rule changes do not include new provisions that are specific to aquaculture.

Most of the new provisions described in Sections 4.1 through 4.6 affect agricultural hydraulic projects to differing degrees. Provisions on HPA projects relating to agriculture could increase the overall costs associated with the project and could also influence the timing of the activity relative to the applicant's agricultural production sequence. WDFW encourages agricultural hydraulic project proponents to consult with a WDFW HPA biologist early in project planning in order to reduce the potential for delays in processing permit applications.

In general, Alternative 2 increases risk of adverse impacts to agriculture; Alternative 3 further increases risk of impacts; and Alternative 4 neither increases nor decreases risk of impacts.

#### ***4.7.6.1 Alternative 2 Provisions Affecting Agriculture***

Following are selections from Table 2-6 summarizing Alternative 2 provisions that can affect agricultural hydraulic projects:

- Maintains ability to issue "general" or "simplified" HPAs for repair and maintenance projects because these are typically routine in nature and can be pre-conditioned, reserving limited resources for projects that pose higher risk to fish life.
- Establishes procedures for applying for new "chronic danger" HPA type.
- Clarifies the procedures for applying for existing HPA types including standard, emergency, imminent danger, expedited, and pamphlet HPAs.
- Two new standard HPA types, "general HPAs" and "model HPAs" are proposed to streamline the permitting process for low risk hydraulic projects.
- Delays issuing HPAs for a minimum of 7 days to allow the Tribes and other entities an opportunity to comment on complete HPA applications.
- Allows subsequent minor modifications to an existing HPA permit provided the modifications do not adversely affect fish life. Clarifies how the department processes HPA applications.
- Does not require compensatory mitigation for maintenance projects (routine, repair, rehabilitation, and replacement) unless the maintenance work caused a new impact not associated with the original work.
- Requires design and construction of rehabilitation and replacement projects to comply with the proposed rules.
- Identifies freshwater habitats of special concern for priority fish species. This habitat requires protective measures for priority fish species due to their population status or sensitivity to habitat alteration.
- A new section is added for design, construction, and maintenance of fish ladders, weirs constructed for fish passage, roughened channels, trap and haul operations, and hydraulic design culvert retrofits. Designs must have an engineer's approval and meet specific criteria. The structures must be inspected and maintained.

- Addition of new language in the Aquatic plant removal and control section that clarifies the statutory limits of WDFW authority.
- Freshwater work windows section specifies the criteria the department will follow to determine when work should occur. The criteria include life history stages of fish life present, the expected impact of the work, BMPs proposed by the project proponent, weather, and other conditions. Requires the department to publish the times when spawning salmonids and their eggs and fry are least likely to be in freshwaters of Washington.

Changes to streambank protection and lake shoreline stabilization include:

- Separate provisions for design and construction to clarify when standards apply.
- Allows the department to require an applicant to submit a qualified professional's rationale with the HPA application for a new or replacement structure extending waterward of the existing structure or bankline. Requires the permittee to avoid or minimize adverse impacts to fish life by using the least impacting technically feasible alternative. Benchmarks must be established so the department can verify compliance with the approved plans.
- In cases where the bankline of a river or stream has changed as a result of meander migration or lateral erosion and a new ordinary high water line has formed landward of an existing lake bulkhead, the rule requires the current location of the new bank be maintained with some exceptions.

Beaver dam management and pond construction include:

- A new section is added for beaver dam removal, breaching, or modification and the design and construction of beaver deceivers and pond water level control devices.
- Retains current rules except the provision requiring pond construction activities that divert state waters to demonstrate a valid water right is removed because the department does not have the authority to enforce the provision.

Water Diversions and Intakes:

- Retains current rules except the following provision is removed because the department cannot enforce the provision:
- The exercise of project activity associated with the diversion of state waters shall be dependent upon first obtaining a water right.

Outfall structures in freshwater areas:

- The department may not provision HPAs for storm water discharges in locations covered by a national pollution discharge elimination system municipal storm water general permit for water quality or quantity impacts. The HPA is required only for the actual construction of any storm water outfall or associated structures.
- In locations not covered by a national pollution discharge elimination system municipal storm water general permit, the department may provision HPAs to protect fish life from adverse effects, such as scouring or erosion of the bed of the water body, resulting from the direct hydraulic impacts of the discharge.

Bank Protection in Saltwater Areas

The non-single family and single-family residence bank protection provisions are combined into one section. The current rules are retained except for the following changes:

- If a new OHWL re-establishes landward of a bulkhead protection structure because of a breach, the department will consider this re-established OHWL to be the existing OHWL if the structure isn't repaired within three years.
- Design alternatives are listed from the most preferred to the least.
- An HPA application for new, replacement, or rehabilitated bulkhead or other bank protection work must include a site assessment, alternatives analysis, and design rationale by a qualified professional. This only applies to non-single family bank protection structures.

Outfalls and tide and flood gates in saltwater areas: This new section includes the statutory limits of our authority, and provisions for the design and construction of stormwater outfall and tide and floodgate projects including the following:

- The department may not provision HPAs for storm water discharges in locations covered by a national pollution discharge elimination system municipal storm water general permit for water quality or quantity impacts. An HPA is required only for the actual construction of any stormwater outfall or associated structures.
- In locations not covered by a national pollution discharge elimination system municipal storm water general permit, the department may issue HPAs that contain provisions to protect fish life from the direct hydraulic impacts of the discharge, such as scouring or erosion of the waterbody bed.
- The department may not require a fishway on a tide gate, flood gate, or other associated human-made agricultural drainage facilities as a provision of a permit if such a fishway was not originally installed as part of an agricultural drainage system existing on or before May 20, 2003.

#### ***4.7.6.2 Alternative 3 Provisions Affecting Agriculture***

In addition to the Alternative 2 provisions shown above, Alternative 3 includes:

- All in-water work would be prohibited during times of the year when spawning salmonids and their incubating eggs are likely to be present regardless of the expected impact from the work, best management practices, weather, and other conditions.
- The department would always require an engineer's report that unequivocally determines bank protection or shoreline stabilization is needed to protect infrastructure before allowing any form of bulkhead or armoring work. If protection is warranted, the department would firmly require a biotechnical solution unless an engineer clearly finds that a hard bulkhead is the only option.
- The placement of new and replacement structures would have to consider climate change.
- The department would require a professional determination that there is an imminent threat to property or the environment before issuing an HPA for removal of a beaver dam.
- Applicants would be required to demonstrate they have a valid water right to apply for HPA for water diversions and pond construction.

#### **4.7.6.3 *Alternative 4 Provisions Affecting Agriculture***

Alternative 4 provisions in most of these areas are identical to Alternative 2 provisions, with the following exceptions:

- Do not require compensatory mitigation for routine maintenance, repair, rehabilitation, or replacement of the structure even if new impacts to fish life occurred as a result of the work.
- Delete the provision "mitigation must compensate for temporal loss, uncertainty of performance, and differences in habitat functions, type, and value" because these values are difficult to quantify

#### **4.7.7 *Transportation***

Hydraulic projects can affect traffic circulation and hazards, and Hydraulic Code Rules directly affect construction and maintenance of transportation facilities. Many existing highway culverts are barriers to fish passage and were installed years before we understood and recognized the needs of fish. Both private water crossings and public stream crossings and culverts are regulated by the Hydraulic Code Rules.

Other transportation effects include impacts to construction or maintenance/repair of marine terminals, marinas and docks, and impacts to dredging as it relates to maintaining shipping channels.

##### **4.7.7.1 *Fish barriers and state highways***

Washington State Department of Transportation (WSDOT) is required to install and maintain all culverts, fishways, and bridges to provide unrestricted fish passage as per Washington law, RCW 77.57.030. Design of fish barrier correction is based on the latest version of the Washington Department of Fish and Wildlife's (WDFW) Water Crossing Design Guidelines manual. Through use of this design guidance and in coordination between WSDOT and WDFW, we do not expect that new highway construction at stream crossings will result in additional barriers to fish passage.

Upgrading or replacing existing barriers, however, has been a financial challenge for the state. In March, 2013, the Washington State Supreme Court issued an injunction that requires the state to significantly increase its efforts to remove state-owned culverts that block habitat for salmon and steelhead. WDFW, WSDOT, and other partners are working together to plan how to accomplish this work (WSDOT 2014).

WDFW and WSDOT have been collaborating to steadily improve the HPA permitting process for transportation projects, and have improved the administrative process. Science and technology around stream crossing design and construction have also steadily improved. The proposed rule changes represented in Alternative 2 (preferred alternative) include the most up-to-date provisions for culvert and water crossing design. However, many still disagree on the extent to which protective provisions should be included in the proposed rule changes, and differences among the interests are reflected in proposed rule changes under Alternatives 3 and 4.

##### **4.7.7.2 *Existing conditions (Alternative 1) that affect transportation***

WSDOT and WDFW are committed to fixing fish barrier culverts and have been working together since 1991 to inventory and assess barriers statewide, as well as to develop the best culvert and bridge designs to use under particular conditions.

WSDOT currently removes fish barriers associated with state-managed highways one of three ways. First, WSDOT fixes many culverts through the construction of highway mobility and safety projects. Second, WSDOT operates an Environmental Retrofit program that funds standalone fish barrier removal projects that targets correction of the highest priority culverts that would otherwise not be fixed by a highway construction project anytime in the near future. And third, some limited work on fish passage barrier correction and repair is done as part of routine road maintenance or road preservation projects (WSDOT 2014).

Existing provisions that affect transportation include rules about project location, size, sediment and vegetation impact, and construction practices. No provisions would be changed under Alternative 1.

#### **4.7.7.3 Alternative 2 Provisions Affecting Transportation**

A new WAC section has additional construction provisions for job site access, equipment use, and sediment and erosion control to reduce impacts to sensitive areas and water quality. New provisions for construction materials and work area isolation reduce impacts to water quality. The new work area isolation and fish removal provisions also protect fish from entrainment, stranding, and handling.

Other provisions of Alternative 2 that affect transportation include:

Fish passage improvement projects:

- Work windows will minimize overlap of authorized work with presence of sensitive life history stages of fish.
- Design must allow for upstream and downstream passage at all flows.

Overwater structure provisions:

- More robust design requirements will minimize impacts to habitat (e.g., most excavation to occur in upland).
- Construction methods and material requirements will minimize impacts to fish and habitat (e.g., treated wood can no longer be used for decking material for docks/piers and bubble curtains must be used to minimize underwater noise during pile driving activities).
- Work windows will minimize overlap of authorized work with presence of sensitive life history stages of fish.
- Restricting facility placement outside of breeding areas will minimize potential for injury and death as well as preserving breeding habitat.
- Requiring mitigation that will adequately compensate for loss of habitat and function.

Marinas and terminals in saltwater areas:

- Requirements for facility siting will minimize impacts to sensitive life history stages and habitat (e.g., facilities to be located outside of forage fish spawning areas and in areas of low or impaired biological integrity).
- More robust design requirements will minimize impacts to habitat (e.g., marina/terminal dimensions will be reduced).
- Construction methods and material requirements will minimize impacts to fish and habitat (e.g., light penetration required via adequate grating)

- Work windows will minimize overlap of authorized work with presence of sensitive life history stages of fish.
- Requiring mitigation that will adequately compensate for loss of habitat and function

Dredging in saltwater areas:

- Methods and material requirements will minimize injury to fish and shellfish (e.g., keeping suction dredge intakes at or near bottom to prevent entrainment)
- Work windows will minimize overlap of authorized work with presence of sensitive life history stages of fish.
- Dredging in forage fish spawning areas or habitats of special concern is prohibited (e.g., no dredging allowed in herring spawning habitat).
- May require hydrodynamic modeling

#### ***4.7.7.4 Alternative 3 Provisions Affecting Transportation***

Provisions of Alternative 3 can affect the risk of impacts to transportation:

- Require scientific justification to prove that dredging will resolve flooding problems before any HPAs for dredging are issued.
- Require permittees to install stream simulation culverts unless the permittee can show that stream simulation is not feasible, or that another design will provide equal or better protection of fish life.
- Retain the current (Alternative 1) WDFW priorities for water crossings.
- Remove the no-slope design alternative
- Require a shorter bridge design be based on engineering constraints and not constraints caused by existing infrastructure and levee setback opportunities.
- Roughened channel would be a temporary fish passage improvement solution used only in extreme circumstances with a valid reason why a more reliable fish passage method (e.g. stream simulation or bridge) cannot be used.
- Hydraulic design option culverts would have limited application in exceptional circumstances where constraints prevent the use of bridges, no-slope, and stream simulation culverts.
- Require that conduit lines in watercourses would not constrict the channel or preclude future opportunities for bridges or other less-impacting approaches to water crossings.
- New and expanded docks, wharves, piers, marinas, rafts, shipyards, and terminals must be at least a specified buffer distance from existing native aquatic vegetation attached to or rooted in substrate.

#### ***4.7.7.5 Alternative 4 Provisions Affecting Transportation***

- Authorize dredging in fish spawning areas.
- Amend the rules to allow American Association of State Highway and Transportation Officials and Federal Highway Administration [bridge/culvert design] standards (by name) because they have been well vetted by the engineering community.
- Remove the culvert design standards. The designs proposed are not based on technically sound engineering practices and are not justified by significant research.

- Amend the bridge design standards because they may require the preparation of multiple designs so that the cost differential can be quantified, thus increasing the time and costs associated with all bridge projects.
- Amend the rules to use a channel forming flow, such as the 2-year flood, instead of a rare flood like the 100-year to evaluate how changes in flow velocity will affect fish life.
- The department would not require compensatory mitigation if a fish passage structure cannot pass all fish species present at all mobile life stages.

#### **4.7.8 Public Services and Utilities**

This section includes impacts to public services such as fire, police, schools, and parks, and utilities/infrastructure that deliver communications, water supply, stormwater, sewer, solid waste, electricity, and natural gas. Most hydraulic projects don't adversely impact fire, police, schools and parks outside of the effects discussed under noise, light, aesthetics, recreation, and transportation. Hydraulic Code Rules do contain provisions that regulate outfall structures, utility crossings, tide- and flood-gate structures, utility lines in aquatic environments, and boring in aquatic environments.

The purpose of Hydraulic Code Rules is to protect fish life as projects are being constructed. Provisions under the Hydraulic Code Rules could cause design delays and cost increases for public services and utility projects.

##### ***4.7.8.1 Existing conditions (Alternative 1) that affect public services and utilities***

Impacts of the Hydraulic Code Rules on public services and utilities would remain the same as under current conditions.

##### ***4.7.8.2 Alternative 2 Provisions Affecting Public Services and Utilities***

A new WAC section has additional construction provisions for job site access, equipment use, sediment and erosion control to reduce impacts to sensitive areas and water quality. New provisions for construction materials and work area isolation reduce impacts to water quality. The new work area isolation and fish removal provisions also protect fish from entrainment, stranding, and handling. Alternative 3 includes a provision that an HPA is not required for utility crossings attached to bridge structures.

Marinas and terminals in freshwater areas:

- Require designs to avoid impacts to fish spawning areas and juvenile salmon migration corridors, rearing, and feeding areas. This reduces risk of altering the light regime and migration patterns.
- Require new facilities to avoid and minimize impacts to aquatic vegetation.
- Require facilities to be located in areas that will reduce impacts to fish life, where possible. This reduces the risk of impacts from modifying aquatic vegetation, altering migration patterns, disturbing substrate, and altering stream morphology and sediment movement and delivery.
- Pile driving provisions reduce the risk of impacts from elevated sound levels.
- New provisions for removing treated wood piling reduce risk from water quality modification.

Water diversions and intakes:

- Minimize impacts by requiring screening of all diversions to prevent fish entry.
- Minimize impacts by requiring that all upstream and downstream passage be maintained at points of diversion.

Outfalls in freshwater areas:

- Recommend use of flow spreaders in buffer area rather than outfall in stream.
- Design must prevent fish entrainment.
- More robust design requirements will minimize impacts to habitat.
- Construction methods and material requirements will minimize impacts to fish and habitat.

Utility crossings in freshwater areas:

- Recommend use of less invasive techniques such as directional drilling and punch and bore drilling below scour potential of streambed.
- Locate crossings in stable areas (no meanders, no active floodplain) minimizes risk of erosion and damage to facility.
- Locate crossings outside of spawning areas.

Outfall and tide and flood gate structures in saltwater areas:

- Location of outfalls and energy dissipaters must not cause the loss of fish/shellfish habitat.
- More robust design requirements will minimize impacts to habitat .
- Construction methods and material requirements will minimize impacts to fish and habitat.

Boring in saltwater areas:

- Require construction methods and material that minimize turbidity.
- All boreholes must be sealed following construction.

Utility lines in saltwater areas:

- Construction methods and materials must minimize impacts to aquatic life and habitat.
- Lines must be located outside of saltwater habitats of special concern (e.g., forage fish spawning habitat).
- Lines must be placed during approved work windows.

**4.7.8.3 *Alternative 3 Provisions Affecting Public Services and Utilities***

- A tee diffusor outfall would be the only design method authorized in low flow situations.
- Require that conduit lines in watercourses would not constrict the channel or preclude future opportunities for bridges or other less-impacting approaches to water crossings.
- All fish passage improvement structures would be temporary and a timeframe would be established in rule for a permanent solution to be implemented.

**4.7.8.4 *Alternative 4 Provisions Affecting Public Services and Utilities***

- Remove the limit on the number of sites covered in a multi-site HPA.
- Do not require compensatory mitigation for routine maintenance, repair, rehabilitation or replacement of the structure even if new impacts to fish life occurred as a result of the work.

- Eliminate need for HPA every 5 years for annual removal and reinstallation of docks to prevent storm and ice damage.
- Roughened channel would be a temporary fish passage improvement solution used only in extreme circumstances with a valid reason why a more reliable fish passage method (e.g. stream simulation or bridge) cannot be used.

#### 4.7.9 Effects of the Alternatives on the Built Environment

For the purposes of this evaluation, we are measuring the increase or decrease of risk of impacts to the built environment against the no-action alternative. The question is “How much do the alternatives change the risk of impacts to elements of the built environment compared with today?” The results of our evaluation are discussed throughout this section and summarized on Table 4-9. We expect Alternative 2 will reduce risk of impacts to environmental health and safety, land and shoreline use, light, glare, noise, and visual aesthetics, and to recreation. Alternative 2 will increase risk of impacts to agriculture, transportation, and public services/utilities, and is neutral with respect to historic and cultural resources.

The proposed changes to the Hydraulic Code Rules in Alternative 2 would increase the cost of compliance for applicants. The stricter design standards will likely increase the cost of constructing some hydraulic projects; for example, provisions for mooring buoys limit the type of materials that can be used for the buoys (WAC 220-660-140). Change to general construction practices, new requirements for maintenance and repair of in-water structures, and changes in work windows will also increase the cost of some projects.

Table 4-9 Comparison of Risk of Probable Significant Adverse Environmental Impacts of the Alternatives on the Built Environment Relative to the No-Action Alternative

ELEMENT IMPACTED	CHANGE IN RISK OF IMPACTS RELATIVE TO ALTERNATIVE 1		
	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4
Environmental Health and Safety	Reduced Risk	Reduced Risk	No change in risk
Land and Shoreline Use	Reduced Risk	Reduced Risk	Increased Risk
Light, Glare, Noise, Visual Aesthetics	Reduced Risk	Reduced Risk	Slight Increase in Risk
Recreation	Reduced Risk	Increased Risk	Increased Risk
Historic and Cultural Resources	No change in risk	Reduced Risk	Increased Risk
Agriculture	Increased Risk	Increased Risk	No change in risk
Transportation	Increased Risk	Increased Risk	Reduced Risk
Public Services and Utilities	Increased Risk	Increased Risk	Reduced Risk

Alternative 3 increases risk of impacts to recreation, and reduces risk for historic and cultural resources compared to the no-action alternative. Alternative 4 increases risk of impacts to land and shoreline use, recreation, and cultural resources, slightly increases risk to light, glare, noise, and visual aesthetics, reduces risk to transportation and public services/utilities, and is neutral with respect to environmental

health and safety and agriculture. Again, these are measured as increases or decreases in risk compared to the existing rule.

So, if a project proponent believes that the existing rule (no-action; Alternative 1) is too impacting on his/her project type or activity, an increase in risk, as shown on Table 4-9, means that the alternative has even more potential to impact his/her activity. Likewise, if an alternative is shown on Table 2-9 to reduce risk with respect to a particular element or activity, that project is likely to encounter fewer constraints than it would under the existing rules.

Reduced process design costs, process streamlining, and reduced permitting time have not been incorporated into the evaluations in this chapter because the benefit is extremely difficult to evaluate. We do not attempt to imply that these benefits can offset any of the increased impacts to the built environment that are discussed in this chapter. However, streamlining the permit process and providing greater transparency regarding requirements does provide a positive value for customers, and this benefit could be overriding for some applicants. Among WDFW's objectives for the proposed rule changes is not only to improve protections and increase transparency, but also to improve the quality of the customer experience moving forward from rule adoption. Every permittee will learn, by the time the permit is issued, how the permit protects fish life, and why that is important.

## **4.8 Economic Issues**

Many of the impacts to the built environment mentioned above manifest as increased project cost. SEPA requires an EIS to include a cost/benefit analysis, while rulemaking procedures require that agencies prepare a Small Business Economic Impact Statement (SBEIS) document. A document was prepared that incorporated both analyses, and that document is hereby incorporated into this PEIS. The citation for the document is:

Cardno-Entrix. 2014. Hydraulic Code Rulemaking (Chapter 220.660 WAC)-Cost/Benefit Analysis & SmallBusiness Economic Impact Statement. Prepared by Cardno Entrix under contract to WDFW.

The document can be accessed from the WDFW HPA rulemaking web page at:

<http://wdfw.wa.gov/licensing/hpa/rulemaking/>

RCW 19.85.030 (Agency rules – Small business economic impact statement – Reduction of costs imposed by rule) requires that an SBEIS be prepared when any rule change imposes more than minor costs on businesses in an industry. The SBEIS compares the cost of compliance for a small business with the cost of compliance for large businesses on a cost per employee, hour of labor, or one hundred dollars of sales basis. The SBEIS also includes a list of industries that will need to comply with the rule, and an estimate of the number of jobs created or lost as a result of the rule. Data on the annual number of projects by project type and geographical area are also provided in the SBEIS.

## **4.9 Cumulative Impacts**

The State Environmental Policy Act (SEPA) does not define cumulative impacts; however, the National Environmental Policy Act (NEPA) defines them as “the effects that may result from the incremental impact of an action when added to other past, present, and reasonably foreseeable future actions” (40

CFR 1508.7). This definition is generally accepted and used as a guideline by lead agencies to define cumulative impacts under SEPA. An impact can be considered cumulative if: a) effects of several actions occur in the same locale; b) effects on a particular resource are similar in nature; and c) effects are long-term in nature. Based on those three criteria, construction of individual hydraulic projects could result in adverse cumulative impacts to the aquatic environment. Hydraulic projects are often concentrated in one area, the effects of many hydraulic projects are similar in nature, and they have the potential to result in long-term impacts.

Past shoreline and upland development has significantly altered the aquatic environment throughout the State of Washington. This development is considered a major factor contributing to the decline of fish and aquatic species and their habitat. The decline of aquatic habitat conditions has been well documented, especially in the Puget Sound area. For example, the Puget Sound Nearshore Ecosystem Restoration Project documented historic changes to the shoreline and found that very few areas were unchanged and that the “vast majority of changes are due to human alterations” (Simenstad et al., 2011). While many of the alterations to the aquatic environment predate regulations, including the Hydraulic Code Rules, development in the aquatic environment is on-going. On-going and future development would exacerbate these past impacts to aquatic habitat. Citizens’ best hope for preventing further decline in aquatic function, or even for improving habitat conditions, lies in our ability to identify ways to develop and maintain uses of aquatic areas that are least impactful to natural processes and habitat function than the developments of the past.

WDFW has developed the proposed changes to the Hydraulic Code Rules in order to incorporate current knowledge about fish science and design technology for hydraulic projects. The improved design requirements and specific mitigation measures included in the proposed changes are intended to decrease the impacts associated with individual hydraulic projects when compared to the existing rules (the no-action alternative). WDFW is also working with other agencies and entities throughout the state to restore aquatic habitat that has been affected by past development.

This Programmatic EIS evaluates the general impacts of changes to the Hydraulic Code Rules. It is the first step in a phased review of hydraulic projects. Potential impacts of individual hydraulic projects would be evaluated as they are proposed. Individual project proposals would be required to implement certain design and mitigation requirements projects to decrease potential impacts to the aquatic environment. As indicated in Chapter 4, the proposed rule changes are expected to result in improved or maintained conditions over the No Action Alternative. Examples of these regulations are new design requirements for docks, boat ramps and marinas that will reduce the impacts to habitat; new work windows that will minimize the overlap of work with species presence; and requirements for construction methods and materials will minimize impacts to fish and habitat.

In addition to the requirement that hydraulic projects meet the Hydraulic Code Rules, most hydraulic projects undergo additional environmental review and compliance with the requirements of local critical areas ordinances and Shoreline Management Programs, as well as federal requirements of Corps of Engineers Sections 10 and 404 of the Clean Water Act permitting and Section 7 consultation under the Endangered Species Act. These additional regulations may help further minimize and mitigate the impacts of individual projects.

#### **4.9.1 Adaptive Management**

Many commenters on the rules and supplemental draft PEIS expressed concern about the absence of a mechanism for evaluating cumulative impacts related to hydraulic projects. WDFW's current statutory authority is limited in this regard, however many stakeholders indicated support for finding a solution to this shortcoming.

While the HPA program, itself is not geared to evaluation of long-term impacts, these evaluations are conducted by many other programs within WDFW. WDFW has recently implemented an HPA compliance and effectiveness monitoring program. Under this program, past hydraulic projects are monitored for compliance with permit provisions and success in meeting performance standards. While this is another under-funded program, WDFW is demonstrating good faith in moving forward with this work. The results of the work help WDFW evaluate the regulations, policies, or practices governing the HPA program to ensure we are meeting the program goals and objectives. If monitoring indicates the department needs to make changes, WDFW will adjust the action not meeting goals and objectives and continue monitoring.

Most relevant in assessing long-term impacts in shoreline habitat condition is the work of the Priority Habitats and Species group, who is engaged in mapping shoreline development status and habitat condition. The Puget Sound Nearshore Ecosystem Restoration Project is also involved in quantifying these aspects along the marine shorelines of Puget Sound.

Arguably the most relevant of the measurements taken by WDFW and tribal co-managers is the annual estimation of population abundance for key native fish and shellfish species. While fish counts can't tell us what mortality factors are most impacting to a particular population (habitat losses or harvest, for example) the abundance estimates provide us a way to track performance of fish in response to all of our protection and restoration work.

#### **4.9.2 Conclusion**

While the improved design requirements and specific mitigation measures in the proposed Hydraulic Code Rules are intended to decrease the impacts associated with individual hydraulic projects, cumulative impacts will continue to occur as human population and the number of projects constructed increases. Even with implementation of the revised Hydraulic Code Rules, there will continue to be shoreline modifications and other changes that will cause loss of habitat. WDFW will fulfill its statutory obligations and implement the new rules so that the overall habitat losses attributable to hydraulic projects can be minimized.

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## **Chapter 5 Supplemental Programmatic EIS References**

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Following are references cited within this EIS document. Each reference is categorized for its level of peer review pursuant to Substitute House Bill 2261, which passed the Washington Legislature in 2014 and is codified as RCW 34.05.271. A key to the review categories under RCW 34.05.271 is provided following the reference list.

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**Table 5-1 Key to RCW 34.05.271 Categories Relating to Level of Peer Review:**

CATEGORY CODE	RCW 34.05.271 SECTION 1(c)
i	(i) Independent peer review: Review is overseen by an independent third party
ii	(ii) Internal peer review: Review by staff internal to the department of fish and wildlife;
iii	(iii) External peer review: Review by persons that are external to and selected by the department of fish and wildlife;
iv	(iv) Open review: Documented open public review process that is not limited to invited organizations or individuals;
v	(v) Legal and policy document: Documents related to the legal framework for the significant agency action including but not limited to: (A) Federal and state statutes; (B) Court and hearings board decisions; (C) Federal and state administrative rules and regulations; and (D) Policy and regulatory documents adopted by local governments;
vi	(vi) Data from primary research, monitoring activities, or other sources, but that has not been incorporated as part of documents reviewed under the processes described in (c)(i), (ii), (iii), and (iv) of this subsection;
vii	(vii) Records of the best professional judgment of department of fish and wildlife employees or other individuals; or
viii	(viii) Other: Sources of information that do not fit into one of the categories identified in this subsection (1)(c).

A separate document on *Science and Technical Literature Supporting the Proposed HPA Rule Changes* contains citations for the more than 1,900 reference papers that were reviewed by WDFW staff during development of the Hydraulic Code Rules changes. Each reference in that bibliography is categorized for its level of peer review pursuant to RCW 34.05.271. The science references document for HPA rulemaking can be found on the Hydraulic Code Rulemaking web page at:

<http://wdfw.wa.gov/licensing/hpa/rulemaking/>

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# HYDRAULIC CODE RULE CHANGES

Title 220-660 Washington Administrative Code

## Final Programmatic Environmental Impact Statement Appendices



Habitat Improvement



Buoys



Flood Control Devices



Bank Protection



Boat & Equipment Access



Overwater Structures



Aquatic Plant Control



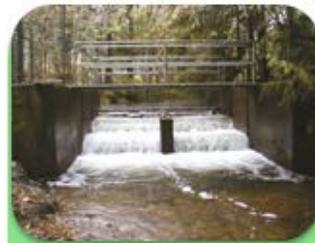
Marinas



Dredging



Culverts



Fish Passage Correction



Fish Screens

## APPENDIX A – COMMENTS RECEIVED

## APPENDIX B – SPECIES LISTED UNDER THE STATE AND FEDERAL ENDANGERED SPECIES ACTS

## APPENDIX C –HYDRAULIC CODE RULE CHANGE WORKGROUP PARTICIPANTS

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## **APPENDIX A**

**COMMENTS RECEIVED ON DRAFT PEIS; SUPPLEMENTAL DRAFT PEIS;  
VERSIONS 4 & 6 OF HYDRAULIC CODE RULES**

## **Appendix A      COMMENTS RECEIVED**

Included in this appendix are comments received on each of the environmental and rules documents related to the current rule making process. They include:

- A.1      Comments on the HPA Supplemental Draft Programmatic EIS
- A.2      Comments on Proposed Changes to the Hydraulic Code Rules ~ Version 6
- A.3      Comments on Economic Analyses
- A.4      Comments on September 2013 (“Version 4”) Draft Hydraulic Code Rules
- A.5      Comments on Draft Programmatic EIS

WDFW prepared a Supplemental EIS to add analysis to areas not adequately addressed in the original Draft Programmatic EIS that was issued in September 2013. A Supplemental Draft EIS does not typically include a formal response to comments that were received on the previous Draft EIS.

This appendix provides responses to comments received on the Supplemental Draft EIS in section A.1, and on the original draft EIS in section A.4.

### ***A.1 Comments on the HPA Supplemental Draft Programmatic EIS***

The Supplemental Draft Programmatic Environmental Impact Statement (SDPEIS) and the Final Draft Hydraulic Code Rules were released for a 60-day public comment period from July 15 through September 15, 2014. During this time, the Washington Department of Fish and Wildlife (WDFW) received 197 individual comment letters. Among the comment letters there were two distinct form letters that numerous individuals submitted. These form letters represented 106 of the letters submitted, or about 54 percent. The remaining letters were counted as unique letters.

Each comment letter was assigned a unique identification number and then the individual comments from each letter were evaluated. Table A-1 identifies each numbered comment letter, the name of the individual or organization that submitted the letter and the FPEIS Appendix A section number in which the response can be found. WDFW encourages the reader to review all comments and responses in their entirety to gain a full understanding of the breadth of comments received and the department’s response to those comments.

Table A-1 lists the names of individuals submitting the 106 form letters and where responses can be found for those letters.

A similar process was used for comments on the SDPEIS. In many cases, comments from many individuals expressed similar concerns, so we summarized the comments before composing a response. In other cases, the individual comment is provided more or less as submitted.

Staff from WDFW Habitat Program responded to the comments.

#### **A.1.1 Comments Received**

One hundred ninety-seven comments were submitted during the EIS/rule comment period, including 90 short form letters and 16 long form letters. Comments are generally grouped into the following categories:

- A.1.1 Comments Received
- A.1.2 Statutory authority and geographic jurisdiction
- A.1.3 Process for rule development and SEPA
- A.1.4 Mitigation
- A.1.5 Overlap between HPA and other laws and rules
- A.1.6 Protection and Recovery of ESA listed species
- A.1.7 Science in support of rulemaking
- A.1.8 EIS Comments

Table A-1 identifies each numbered public comment letter, the name of the individual or organization that submitted the letter and the FPEIS Appendix A section number in which the response can be found. WDFW encourages the reader to review all comments and responses in their entirety to gain a full understanding of the breadth of comments received and the department’s response to those comments.

**Table A-1 Comments Received by Name, Date, and Comment Categories\***

COM-MENT NO.	DATE RECEIVED	NAME	REPRESENTING	FPEIS APPENDIX A RESPONSE SECTION
1	7/16/2014	Matthew Van Camp		This comment did not apply to the Hydraulic Code rule change
2	7/23/2014	Don Russell		A.2
3	7/28/2014	Bruce Beatty		A.2
4	7/28/2014	Bruce Beatty		A.2
5	7/28/2014	Bruce Beatty		A.2
6	7/29/2014	Elizabeth Braun	Pend Oreille County	A.3
7	7/31/2014	Christina Martinez	WSDOT	Inquiry only
8	7/31/2014	David Bugher	City of Lakewood	A.2
9	7/31/2014	Kim McDonald	Fish Not Gold	A.2
10	7/31/2014	Regional Forum	Regional Road Maintenance Forum Permit Subcommittee	A.3
11	7/31/2014	Amy Carey	SoundAction	A.2
12	7/31/2014	Christina Martinez	WSDOT	Inquiry only
13	8/1/2014	Jane Lamensdorf-Bucher	King County	A.1.2
14	8/1/2014	Daniel Mathis	Federal Highways Administration	A.1.7
15	8/1/2014	Larry Johnson	Natural Resource Conservation Service	A.1.3
16	8/1/2014	William Rehe	Port of Tacoma	A.2
17	8/1/2014	Megan White	Washington State Department of Transportation	A.3
18	8/3/2014	Bruce Beatty		A.2
19	8/4/2014	Diana MacDonald	Cowlitz PUD #1	A.2

COM- MENT NO.	DATE RECEIVED	NAME	REPRESENTING	FPEIS APPENDIX A RESPONSE SECTION
20	8/7/2014	Sue Chickman		A.2
21	8/7/2014	Jim Whitbread	Stevens County Public Works	A.1.2; A.1.8; A.2; A.3
22	8/11/2014	Harry Branch		A.2
23	8/11/2014	Victor Woodward	Habitat Bank et al.	A.2
24	8/12/2014	Kimberly Cauvel	Skagit County Herald	Inquiry only
25	8/14/2014	Calhoun, Rory	Washington Recreation and Conservation Office	A.2
26	8/14/2014	Peter Haase		A.2
27	8/15/2014	Kirk Kirkland	Tahoma Audubon	A.2
28	8/16/2014	Kit Rawson		A.2
29	8/17/2014	Laurel Kuehl		A.1.8
30	8/26/2014	Don Russell		A.1.6
31	8/28/2014	Anonymous		A.1.8
32	9/2/2014	Richard Jahnke	Admiralty Audubon	A.1.8
33	9/2/2014	Mike Racine	Washington Scuba Alliance	A.2
34	9/3/2014	Alan Richards & Ann Musche`		A.2
35	9/4/2014	Craig Zora		A.2
36	9/5/2014	Don Russell		A.2
37	9/8/2014	Dan & Gloria Clark	Spokane Chapter Citizens' Alliance for Property Rights	A.1.8; A.2
53	9/10/2014	Mike McCormick		A.1.8
73	9/10/2014	Patricia Pyle		A.1.8; A.2
74	9/10/2014	Marc Hutchinson		A.2
79	9/10/2014	Ralph Wood		A.1.8
118	9/10/2014	Jack Tull		A.2
122	9/10/2014	Don Russell		A.2
124	9/10/2014	Peter Schrappen	Northwest Marine Trade Association	A.1.3;A.1.4; A.1.8
125	9/10/2014	Peter Schrappen	Northwest Marine Trade Association	A.2
137	9/11/2014	Anne & Vincent Murray		A.1.8
138	9/11/2014	John Anderson		A.2
143	9/11/2014	Trina Bayard	Audubon Washington	A.2
144	9/11/2014	Art Swannack	Whitman County	A.1.2; A.1.8; A.2; A.3
145	9/11/2014	Andrew Lee	Bellevue Utilities	A.2
147	9/12/2014	Megan White	Washington State Department of Transportation	A.3

COM- MENT NO.	DATE RECEIVED	NAME	REPRESENTING	FPEIS APPENDIX A RESPONSE SECTION
149	9/12/2014	Rosendo Guerrero	Trout Unlimited	A.1.2; A.1.8; A.2; A.3
150	9/12/2014	Regional Forum	Regional Forum Permit Subcommittee	A.3
151	9/12/2014	Regional Forum	Regional Forum Permit Subcommittee	A.1.7
152	9/12/2014	Regional Forum	Regional Road Maintenance Forum Permit Subcommittee	A.1.2; A.1.5; A.1.8; A.3
154	9/12/2014	Tom Wilbert	Chevron Products	A.2
155	9/12/2014	John Shultz	Skagit Dike Dists 1 & 12	A.1.2; A.1.5; A.1.8
157	9/12/2014	Christine Brewer	Avista	A.1.2; A.1.3; A.1.8; A.2; A.3
158	9/12/2014	Gary Jones		A.1.2
159	9/12/2014	Jim Matthews	Yakama Nation Fisheries	A.1.3; A.1.6; A.1.8
160	9/12/2014	Matthew Baerwalde	Snoqualmie Indian Tribe	A.2
162	9/13/2014	Judy Murphy	Nisqually Reach Aquatic Reserve Citizen Stewardship Committee	A.1.3
163	9/13/2014	Janine Schutt	Kitsap Audubon	A.1.8; A.2
164	9/14/2014	Don Russell		A.2
165	9/14/2014	Robert Cunningham		A.1.3
169	9/15/2014	Kathleen Collins	Pacific Power	A.1.2; A.1.8; A.2; A.3
170	9/15/2014	Amy Carey	SoundAction et al.	A.1.2; A.1.8; A.2; A.3
171	9/15/2014	Larry Johnson	Natural Resource Conservation Service	A.1.8
172	9/15/2014	Rochelle Goss	Washington Department of Natural Resources	A.1.5; A.1.8; A.2
173	9/15/2014	Gary Rowe	Washington State Association of County Engineers	A.1.2; A.1.7
174	9/15/2014	Timothy Manns	Skagit Audubon	A.1.3; A.2
175	9/15/2014	Tim Hyatt	Skagit River Systems Cooperative	A.1.6; A.1.8; A.2
176	9/15/2014	Mike Maudlin	Nooksack Tribe	A.1.6; A.1.8; A.2
177	9/15/2014	Karen Walter	Muckleshoot Tribe	A.1.6; A.1.8; A.2
178	9/15/2014	Jim Bolger	Puget Sound Partnership	A.1.7; A.2
179	9/15/2014	Dan Holdenmeyer	Chevron Lubricants	A.2
180	9/15/2014	Allen Gibbs	Pilchuck Audubon	A.1.8
181	9/15/2014	Mary & Brian Jokela		A.1.8; A.2
182	9/15/2014	Ramiro Chavez	Thurston County Public Works	A.3
183	9/15/2014	Jim Weber	Northwest Indian Fisheries Commission	A.1.4; A.1.5; A.1.6; A.1.8; A.2

COM-MENT No.	DATE RECEIVED	NAME	REPRESENTING	FPEIS APPENDIX A RESPONSE SECTION
184	9/15/2014	Jon-Paul Shannahan	Upper Skagit Tribe	A.1.4; A.1.6; A.1.8
185	9/15/2014	Peter Ojala	French Slough Flood Control District	A.1.5; A.1.8
186	9/15/2014	Kevin Tyler	Clark County	A.1.2; A.1.8; A.2
187	9/15/2014	Stephanie Williams	Phillips 66	A.2
189	9/15/2014	Timothy Ibbetson	SNR Co.	A.1.2; A.1.5; A.1.7; A.1.8
190	9/15/2014	Bill Thomas		A.1.8
191	9/15/2014	Henry Lippek	Stillaguamish Flood Control District	A.1.8
192	9/15/2014	Wes McCart	Stevens County Board of Commissioners	A.1.3; A.1.8; A.2
193	9/15/2014	Grant County PUD	Grant County PUD Commissioners	A.1.2; A.1.5; A.1.8; A.2; A.3
195	9/15/2014	Karen Terwilleger	Washington Forest Practices Association	A.1.2; A.1.7; A.1.8; A.2
196	9/15/2014	Karen Walter	Muckleshoot Tribe	A.1.8
197	9/17/2014	Ross Hendrick	Grant County PUD	A.2

\* Gaps in Comment Number sequence are covered on Table Error! **No text of specified style in document.**-B.

### A.1.1.1 Individuals Sending Form Letters

WDFW received 90 copies of a short form letter and 16 copies (or adoptions) of a longer form letter. The short form letter expressed preference for Alternative 3 in the EIS and requested decreased impacts to fish life, as follows:

*Thank you for the opportunity to provide comment on WDFW’s Hydraulic Code Proposed Rulemaking and SPEIS.*

*I appreciate the effort that WDFW has made to incorporate provisions into the update that may decrease potential impacts from hydraulic projects, but believe that the SEPA preferred alternative likely will not protect fish life (currently defined as “prevention of loss or injury to fish or shellfish, and protection of the habitat that supports fish and shellfish populations”). For example, the proposed rules will not be able to prevent loss or injury to fish or protect their habitats because it does not require the denial of a Hydraulic Project Approval in any particular instances, instead directing applicants to “avoid and minimize” impacts. In practice, the ambiguity in this phrase can lead to the selection of a project alternative that causes impacts, even where decreased, rather than an alternative that would avoid those impacts. Given the low likelihood of success and long-term cumulative impacts associated with compensatory mitigation efforts, we encourage WDFW to establish an implementable, firm decision making hierarchy that requires the avoidance of impacts to saltwater habitats of special concern and denies projects that will lead to unavoidable impacts unless approval is mandated by the Hydraulic Code. Specifically WDFW should:*

- Retain the existing definition for the “Protection of fish life” meaning the “prevention of loss or injury to fish or shellfish, and protection of the habitat that supports fish and shellfish populations,” rather than amending proposed rule language to define it as “avoiding and minimizing impacts to fish life and fish habitat through mitigation sequencing.” We urge WDFW to avoid this heavy reliance on the mitigation sequence because WDFW studies have found that HPAs have difficulty compensating for impacts.*
- Eliminate general and model HPAs*
- Protect forage fish spawning areas*

· protect against impacts from shoreline hard armoring  
 · Amend the proposed definition of “No Net Loss” to clearly reflect a meaningful definition of the term- that existing conditions of shoreline ecological functions remain the same as before a development action is implemented.  
 I support Alternative 3 in the proposed rulemaking.

The long form letter contained more detailed comments, primarily addressing the impacts of marine shoreline modifications, under the following headings:

*Proposed rulemaking:*  
*Correct Key Definitions*  
*Strengthen General Provisions*  
*Correct Gaps in Mitigation Requirements*  
*Provide Appropriate Protections for Forage Fish*  
*Protect Nearshore Habitats from Unnecessary Armoring Impacts*  
*Protect Nearshore Habitats from Overwater structure Impacts*  
*Establish Clear Directives and Requirements to Protect Habitat*  
*Supplemental Draft Programmatic Environmental Impact Statement (SDPEIS)*

Names of individuals submitting form letters to WDFW are provided on Table A-2.

**Table A-2 Individuals Submitting Form Letter Comments**

Comment Numbers	Commenters	Comment Category
38, 39, 40, 41, 42, 43, 44, 45, 103, 153, 161, 163, 167, 174, 188, 194	Jim McRoberts, Dennis & Martha Taylor, Wendy Feltham, Candice Boyd, Jill Janow, Monika Wieland, Diane Sonntag, Linda Edson, Rein Attemann, Maradel Gale, Rick Clark, Janine Schutt (Kitsap Audubon), Brooke Nelson, Timothy Manns (Skagit Audubon), David Proctor, Whitney Neugebauer	A.1.8, A.2
46, 47, 48, 49, 50, 51, 52, 54, 55, 56, 57, 58, 59, 60, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 75, 76, 77, 78, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 119, 120, 121, 123, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 139,	Jana Wiley, Kimberly Leeper, Sherri Cassuto, Elizabeth Taylor, Michael Bluske, Angela Kelly, Ryan Swanson, Christi Damico, Ellen Kissman, Mark Myers, Shelley Cort, Donna Maupin, Brian Gunn, Melodie Martin, Timothy Keeler, Donna Hendrix, Janette Cunningham, Bob Triggs, Judy Burnstin, Kevin Jones, Elizabeth Hauser, James Day, Dick Jacke, Brian Larson, Carmen Edwards, Justin Hahn, Mike Sherman, Anna Porter, Ed Fickbohm, Richard Heggen, Codi Hamblin, Liz White, Thomas Fawell, Marita Graube, Tracy Diederich, David Mayer, Janna Rolland, Vicki Elledge, Joy Kosola, Connie Segal, Richard Horner, Jane Steadman, Mary Keeler, John Lee, R Gamboa, Judith Cohen, Gerald Burnett, Adele Reynolds, Rebecca Beener, Gary Murrow, Marcia Kilbane, Mary Gallagher, Michael & Barbara Hill, Carolyn Savage, Jeanne Dodds, Gordon Padelford, Dorothy Moritz, David R Hirst, Allycia Godbee, Stuart Mork, Heather Murawski, Gail Lassman, Emily Lubahn, Ted Steege, Kate McClure, James Murphy, Kathryn Connelly, Ross Baker, Kiwibob Glanzman, Nan McMurry, Tim Rymer, Kathleen Kemper, Shannon Markley, Jerry Lyszak, Scott Sebelky, Terry Nightingale, Conor Corkrum, Scott Fortman, Ed Chadd, James Michel,	A.1.8, A.2

140, 141, 142, 146, 148, 166, 168	Tara Demers, Colleen Cunningham, Stephen Condit, Terrill Chang, Larry Phillips, Valerie Rose, Ron Sikes, Vanessa Woo, Laura Scott	
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### A.1.1.2 “Sound Action et al.” Letter Signers

Comment item 170 was submitted by SoundAction on behalf of several key advocates within the environmental community. Signers to the letter are:

Amy Carey, Executive Director, Sound Action  
 Kurt Beardslee, Executive Director, Wild Fish Conservancy  
 Stephanie Buffum, Executive Director, Friends of the San Juans  
 Crina Hoyer, Executive Director, RE Sources  
 Anne Shaffer, Executive Director, Coastal Watershed Institute  
 Mark Powell, Puget Sound Program Director, Washington Environmental Council  
 Pat Dickason, 1st Vice President, Action Chair, League of Women Voters of Washington  
 Sam Merrill, Chair Conservation Committee, Black Hills Audubon Society  
 Krystal McArthur Kyer, Executive Director, Tahoma Audubon Society  
 Howard Garrett, Executive Director, Orca Network  
 Brian Windrope, Executive Director, Seattle Audubon  
 Gail Gatton, Executive Director, Audubon Washington  
 Sue Patnude, Executive Director, Deschutes Estuary Restoration Team

### A.1.2 Statutory authority and geographic jurisdiction

Several comments were received regarding WDFW’s statutory authority. Many expressed concern that WDFW’s proposed rules, along with WDFW’s application of science guidance, extend the rules beyond the authority of chapter 77.55 RCW. A number of commenters addressed the geographic extent of WDFW’s authority directly.

RCW 77.55.011(11) defines a “hydraulic project” as *“the construction or performance of work that will use, divert, obstruct, or change the natural flow or bed of any of the salt or freshwaters of the state.”* Based on this definition, a hydraulic project can include construction or performance of work landward of the ordinary high water line if the project will change the natural flow or bed. Although both “waters of the state” (RCW 77.55.011(25)) and “bed” (RCW 77.55.011(1)) are defined as land or waters waterward of the “ordinary high water line” (RCW 77.55.011(16)), hydraulic projects that occur landward of the ordinary high water line can affect the “bed” and/or “natural flow”. For this reason, the department will continue to regulate hydraulic projects that occur landward of the ordinary high water line.

Hydraulic projects that occur landward of the ordinary high water line include the construction, replacement, repair, and maintenance of dikes, levees, bank protection, outfalls, and bridges. These projects can adversely impact fish life if they are not properly designed and constructed. For example, stream bank protection alters the bed and the physical processes that form and maintain habitat that supports fish life. Direct loss of habitat may include loss of cover, spawning beds, large woody material, riparian zone function, and floodplain connectivity as well as alteration of the channel/beach. These losses and alterations decrease the complexity and diversity of habitat. The permit issued by the department is the only construction permit specifically issued to ensure hydraulic projects are designed and constructed in a manner that protects fish life.

### A.1.3 Process for rule development and SEPA

Many people were unhappy with the short comment period, which was later extended through September 15. Others named organizations they felt were left out of the rule development public process, and/or asked to be included in future discussions. Individual comments and responses are provided on Table A-3.

**Table A-3 Comments and Responses Regarding Process for Rulemaking and SEPA**

COMMENTS	COMMENT	RESPONSE
Several commenters	Please extend the comment review timeline.	WDFW extended the comment deadline an additional 30 days, based on the multitude of requests for more review time.
Avista	There was limited engagement between the Department and Avista; the management of hydropower facilities warrants unique considerations that have critical consequences for both the environment and the cost and reliability of electric service for Washington ratepayers.	Comment noted. WDFW has added Avista to our distribution lists. We welcome ongoing input about how our program affects Avista.
Northwest Marine Trade Association	NMTA seeks involvement in any future public processes undertaken by WDFW and requests notification for all remaining components of the rulemaking process to provide timely review and input to WDFW.	Comment noted. WDFW has added NMTA to our distribution lists.
Northwest Marine Trade Association	Responding to EIS section 1.2.3, p. 1-4, NMTA comments that the stakeholder group did not provide adequate representation from water-oriented businesses. WDFW should address this in the SDPEIS. The Stakeholder Advisory Group should have included representatives from this sector as well as those from the construction industry.	Changes to the PEIS have been made to better explain the stakeholder process. The stakeholder advisory group did not include a representative from NMTA but it did include representatives from the Washington Association of Public Ports, Port of Tacoma, the Association of Washington Business, and Washington General Contractors.
Regional Road Maintenance Forum	We would like to reiterate that WDFW is required by the state SEPA rules to include definitions and terms within the state SEPA document. This includes the definition of “environment”, “maintenance”, and other key elements of the SEPA rules that cannot be changed and must be consistent through all state agencies.	SEPA does not require that definitions be provided for common terms that can be found in a dictionary, unless the meaning we are using for the term is different than the common definition. Terms unique to the application of the hydraulic code are defined in the proposed rules. The term “environment” along with other key elements of SEPA are defined in SEPA rules; they do not need to be repeated in chapter 220-660 WAC.
Regional Road Maintenance Forum	The draft rules are inconsistent with the rule-making process because the rules incorporate draft guidance documents which may be changed by the	The statement cited is intended as guidance/assistance. The statement does not directly incorporate permit

COMMENTS	COMMENT	RESPONSE
	<p>Department at any time without adherence to the rule-making process. For instance, the draft rule states that “A person can find appropriate methods to design water crossing structures in the Department’s Water Crossing Design Guidelines, or other published manuals and guidelines.”</p>	<p>provisions from the cited document. The statement identifies resources available to the applicant.</p>
<p>Regional Road Maintenance Forum</p>	<p>The current proposal 220-660 has incorporated processes and procedures that were developed for the Water Crossing Design Guidelines 2013 document. The Water Crossing Design Guidelines document itself warns that the content of the document comprises suggestions for the benefit of the crossing owner and designer, and are not intended as regulations.</p> <p>“The current WAC draft 6 appears to be implementing rule-making through incorporating guidance documents that were clearly developed to maximize protection of the river system, the floodplain, and extending into riparian areas, which is not consistent with the State statute of permitting work as listed in RCW 77.55 and 77.55.021. “</p> <p>“Extending the jurisdiction of Fish and Wildlife's authority in issuing HPA permits using guidance documents that were not developed as regulation to override the legislative intent of the statute we do not believe is consistent with the current rule-making process and is not consistent with the Administrative Procedures Act for rule-making.”</p>	<p>Guidance documents are cited in rule as resources for project applicants, consistent with the spirit in which they were developed. There is not a blanket requirement in the rule for projects to conform to the guideline document design criteria.</p> <p>However, criteria gleaned from these and other science documents inform decisionmaking as it relates to provisioning an HPA.</p> <p>This guidance can also help an applicant develop a project that is properly protective of fish life and can help shorten WDFW review time.</p>
<p>Short Form Letter</p>	<p>Letters encourage WDFW to establish an implementable, firm decisionmaking hierarchy that requires the avoidance of impacts to saltwater habitats of special concern and denies projects that will lead to unavoidable impacts unless approval is mandated by the Hydraulic Code.</p>	<p>WDFW appreciates the comment and the time taken by multiple people to send us this message.</p>
<p>Skagit County Dike District No. 1, and Skagit County Dike, Drainage and Irrigation District No. 12</p>	<p>“Implementing the proposed rulemaking would constitute arbitrary and capricious agency action, as it grants new benefits to some and denies similar benefits to others.</p> <p>[The District] was advised by WDFW that the grant of any exemption or exception to the HPA process for "routine dike maintenance" would have to result from legislative action.</p> <p>WDFW is now proposing an exemption/exception in the supplemental amendments for "utility crossings attached to bridge structures." Granting a request for an exception to the utility companies, while denying a similar request for an exception to the Dike Districts, shows a clear ambivalence to flood protection interests, and an arbitrary application of the rulemaking process.”</p>	<p>WDFW has clarified that utility crossings attached to bridge structures are exempt from HPA permit requirements because such attachments do not affect the flow or bed of state waters. The bridge to which these utilities are attached likely does affect the flow or bed of state waters and therefore fall under HPA jurisdiction. Similarly, routine dike maintenance could affect the flow or bed of waters of the state, so the proposed work needs to be reviewed before a determination can be made about whether a permit is needed.</p>

COMMENTS	COMMENT	RESPONSE
<p>Skagit County Dike District No. 1, and Skagit County Dike, Drainage and Irrigation District No. 12</p>	<p>“Implementing the proposed rulemaking would constitute arbitrary and capricious agency action, as certain interest groups were allowed to influence proposed changes prior to publication.                      “RCW 34.05.310(2), an agency should “use new procedures for reaching agreement among interested parties before publication of notice and the adoption hearing on a proposed rule.”                      “This has certainly not been the case between WDFW and the Dike Districts, although it clearly has occurred between WDFW and the Tribes, the environmental coalition, and utility companies. As identified in the Working Draft WDFW Staff Recommended Amendments to Chapter 220-660 (Revised August 5, 2014), numerous changes are being implemented based on apparent pre-notice consultation with various interest groups, most visibly the tribes and environmental groups. Not a single revision proposed by the Dike Districts has been incorporated, though similar revisions were included which benefitted others.”</p>	<p>We engaged in a lengthy outreach process in the development of the rules. But we did not use the optional negotiated rulemaking or pilot rulemaking processes in RCW 34.05.310(2). We considered all suggestions and incorporated those that comply with the Hydraulic Code statute 77.55 RCW and that protect fish life.</p>
<p>Skagit County Dike District No. 1, and Skagit County Dike, Drainage and Irrigation District No. 12</p>	<p>The process to take comments on the proposed rules is confusing and appears to provide privilege to tribes and other special interests. For example, the comment period was extended after some comments were already received.</p>	<p>Many individuals who commented on the proposed rules within the original timeline submitted a second set of more detailed comments during the extended comment period. This option was available to any commenter.</p>
<p>Stevens County Board of Commissioners</p>	<p>The adoption process itself is flawed. The rule is 157-pages long and there are two supplemental documents that have come out; one ten-pages, the other thirteen pages in length which are recommended amendments to the proposed hydraulic code rules. Since these are not part of the CR102, and original draft document, the public is not aware that comment should be made on these. It is also difficult to insert these suggested changes in a manner in which commenting and reading lead to logical and precise suggested changes. This eliminates the public process and violates the APA.</p>	<p>WDFW provided the public with the opportunity to review minor changes that staff recommended in response to comments it was receiving. The procedures and timelines for submitting written comments were posted on WDFW’s website.</p>
<p>Stevens County Board of Commissioners</p>	<p>We strongly suggest that this entire document, after being revised, be placed under a new CR102 and made available for a new round of adequate public comment.</p>	<p>Comment noted.</p>
<p>Stevens County Board of Commissioners</p>	<p>We request that Stevens County be given stakeholder status in revising this draft rule prior to putting it out for public comment again, or adoption.</p>	<p>People interested in more opportunity for interaction with staff are encouraged to contact Randi Thurston as noted on the SEPA Fact Sheet.</p>
<p>Timothy Ibbetson</p>	<p>“How does the commission's authority compare to the USEPA, Corps of Engineers, the US Coast Guard,</p>	<p>The Commission’s authority is unique among state and federal agencies and</p>

COMMENTER	COMMENT	RESPONSE
	<p>USFWS, and the NOAA NMFS, the Department of Ecology, the Department of Natural resources and the requirements of the Growth Management Act/Shoreline Management Act? How can the commission regulate areas that are not waters of the state and what are the impacts to citizen's constitutional rights (federal and state)."</p>	<p>commissions. It's authority to govern the Department of Fish and Wildlife and adopt rules, including those implementing the hydraulic code, comes from Title 77 RCW. While the Commission has several responsibilities, its primary role is to establish policy and direction for fish and wildlife species and their habitats in Washington and to monitor the Department's implementation of the goals, policies, and objectives established by the Commission. The Commission also classifies wildlife and establishes the basic rules and regulations governing the time, place, manner, and methods used to harvest or enjoy fish and wildlife. The Commission exercises its authority within the boundaries of the federal and state constitutions.</p>
<p>Timothy Ibbetson</p>	<p>"What about the BIAW, the Agricultural Associations and mining interests? The meetings only provide limited comment periods and do not allow adequate discussion time."</p>	<p>Thank you for the feedback about our outreach meetings. By their very nature, meetings provide only limited opportunity for comment and discussion. That is why there is a public comment period outside of the public meetings.</p>
<p>Upper Skagit Indian Tribe</p>	<p>"The Upper Skagit Indian Tribe (Tribe) appreciates the opportunity to provide comments on the latest version of the WAC 220-110 Proposed HPA Rules (Code) and accompanying Supplemental Draft Programmatic Environmental Impact Statement (SDPEIS). The Tribe also appreciates the efforts of Washington Department of Fish and Wildlife (WDFW) to work collaboratively on this revision process and we look forward to improved habitat protection and restoration measures that these rules should provide over the current Code. ... That being said, the Tribe hopes for more extensive protection and restoration opportunities under the revised Code through adoption of the suggestions offered in the NWIFC's comment letters. The Tribe looks forward to seeing the new Code in action and to working with WDFW to make the needed gains in fish and shellfish habitat quantity and quality."</p>	<p>Thank you for your comment. We look forward to working with you through implementation of updated Hydraulic Code rules.</p>

### A.1.4 Mitigation

A few comments were received expressing differing views on mitigation, or requesting more clarity on WDFW’s intent. Comments that were not submitted under specific rule sections appear on Table A-4, along with WDFW’s responses.

**Table A-4 Comments and Responses on Mitigation**

COMMENTS	COMMENT	RESPONSE
Northwest Marine Trade Association	It is unclear if opportunity exists for mitigation sequencing to be an option where rules prohibit and restrict certain types of activities. Prohibitions on project locations and activities should not be included in rule. Instead, mitigation sequencing should be used as a basis for permit decisions over prohibitions.	The goal of each hydraulic project approval is to achieve no net loss through a sequence of mitigation actions that can include compensatory mitigation. See Section 220-660-080 in the proposed rules.
NWIFC	The HPA rules are not self-mitigating; they allow actions that WDFW admits result in impacts that cannot be mitigated. As with freshwater bank armoring, marine shoreline armoring damages habitat that continues to cause lost fish production for as long as the habitat remains altered. There is no provision in the rules that requires compensatory mitigation for lost production of fish and/or shellfish for as long as the habitat remains altered.	The goal of each hydraulic project approval is to achieve no net loss through a sequence of mitigation actions that can include compensatory mitigation. See Section 220-660-080 in the proposed rules.
Upper Skagit Indian Tribe	WDFW should require mitigation for repairs or replacements of previously built structures, where the baseline condition from which mitigation is quantified should be that of a fully functioning natural ecosystem void of any human built structures. Without such a policy, WDFW is promoting maintenance of currently degraded habitat conditions over the improvements that are necessary to return fish populations to sustainably harvestable levels.	RCW 77.55.231 requires the hydraulic project approval to provide proper protection of fish life from the actual work proposed. For this reason, the baseline for assessing impacts is the existing condition. However, please note that rehabilitated and replacement structures must meet the current design and construction standards.

### A.1.5 Overlap between HPA and other laws and rules

WDFW received many comments about overlap between HPA authorities and the authorities of other agencies under other statutes and federal laws. Most comments were directed at Section 1.5 of the SDPEIS, but others were not directly associated with any one EIS section. Comments and responses on this topic appear on Table A-5.

**Table A-5 Comments and Responses Regarding Overlapping Authorities**

COMMENTS	COMMENT	RESPONSE
Grant County PUD	Section 1.5.1 Aquatic Resources Protection Permits: This section states that WDFW accepts JARPA form for HPAs; however, since implementation of the online	WDFW appreciates your feedback on our new "APPS" online HPA application system. Though the

COMMENTER	COMMENT	RESPONSE
	<p>system of applying for permits, WDFW representatives have consistently stated that using the JARPA would result in substantial delays to applicants. Grant PUD believes that the new online system defeats the original purpose of the JARPA form process because it requires applicants to now submit both the JARPA to other agencies and the online WDFW form, with additional time and expense to the applicants.</p>	<p>system is off to a rocky start, WDFW is confident that the application process will be much improved once all staff are trained and bugs corrected. WDFW hopes the other agencies that use JARPA will join WDFW in using an online system. To address customer needs in the meantime, the next release of APPS will allow applicants to automatically produce a JARPA from the information they enter.</p>
<p>NWIFC</p>	<p>“...neither the draft nor supplemental draft EISs provide information on the ... frequency of occurrence for the various hydraulic project types to be reviewed, conditioned and approved. One cannot assess the impacts on fish life of the proposed action- adoption of a rule package- without knowing this.”</p>	<p>Information about the frequency of project type can be found on Tables 4 and 5 of the economic analysis that is supplemental to the rulemaking process.</p>
<p>Peter Ojala, French Slough Flood Control District</p>	<p>“The proposed rules being suggested by WDFW, a state agency taking action subject to RCW 43.21C.011(2), do absolutely nothing to incorporate the mandates of RCW 43.21C.011(2) to protect agricultural lands within Washington, namely: "to identify and take into account the adverse effects of these actions on the preservation and conservation of the agricultural lands; to consider alternative actions, as appropriate, that could lessen such adverse effects; and to assure that such actions appropriately mitigate for unavoidable impacts to agricultural resources." The Supplemental Draft Programmatic EIS discusses agriculture only in the context of agricultural practices' impacts on the aquatic environment and riparian conditions, not the proposed rules potential impacts on agriculture (i.e. the other way around)(e.g. Page 4-44 of Supplemental Draft Programmatic EIS §4.7.6).”</p>	<p>RCW 43.21C.011(2) was decodified in 2014. The section’s requirements were previously implemented by Ecology, and “agriculture” is now included as an element to be evaluated in the SEPA Checklist and other environmental review documents. Please refer to Final PEIS Chapter 4 for an updated discussion of the impacts of the new rules on agriculture.</p>
<p>Peter Ojala, French Slough Flood Control District</p>	<p>“Consider impacts on RCW 85 and RCW 86 special purpose districts (and the purposes thereof) and the lands within such districts, including shorelines and agricultural lands. The proposed rule changes should or could consider alternatives to streamline any required permitting in these types of districts' facilities and improvements, and clarify those drainage infrastructure items requiring permitting and those that plainly do not. “</p>	<p>Please refer to Final PEIS Chapter 4 for discussion of impacts of the proposed new rules on agriculture, transportation, development, and other elements of the built environment.</p>
<p>Regional Road Maintenance Forum</p>	<p>“[ESA] is a different process with different statutes than the HPA permit. The ESA consultation is between the agency performing the activity and the services.</p>	<p>Thank you for noting this distinction; we will attempt to make this clearer in the final EIS.</p>
<p>Regional Road Maintenance Forum</p>	<p>“[Clean Water Act description] is a different process with different statutes than the HPA permit. The Clean</p>	<p>Comment noted.</p>

COMMENTS	COMMENTER	RESPONSE
Water Act also has provisions for exemptions of maintenance of pre-existing fills in waters of the US.”		
“Some of the revisions proposed by the Department are currently in direct conflict with pertinent USACE regulations, vegetation management practices, annual inspection requirements, and PL84-99 repairs which the Districts must comply with in order to obtain disaster assistance for protection of human life and property. To the extent the Army Corps of Engineers requires certain ongoing maintenance, inspection, and vegetation management practices, equipment cannot always and should not be confined to a specific corridor or access.”	Skagit County Dike District No. 1, and Skagit County Dike, Drainage and Irrigation District No. 12	Please note these are typical provisions for common project types. The construction provisions in section 120 may not be applicable to your work. Section 070 allows the department to add, modify or delete technical provisions so the HPA has only the provisions applicable to your project.
“DNR’s WAC directs us to rely on shoreline master program planning as “the preferred means for identifying and mitigating adverse impacts on resources and uses of statewide value.” (WAC 332-30-107 (6)). Please provide information about how WDFW’s mitigation requirements for hydraulic projects interact with shoreline master program planning mitigation requirements.”	Washington Department of Natural Resources	Thank you for the comment; WDFW made changes in the final EIS to address this concern.
Commenter submitted numerous comments conveying the perspective that the HPA is duplicative of other laws and that those laws provide adequate protection of fish life. Laws cited as overlapping HPA authority included the federal Clean Water Act, Growth Management Act, Shoreline Management Act, State and federal Environmental Policy Acts, federal Endangered Species Act, Forest Practices Act, and National Historic Preservation Act. Commenter also incorrectly refers to JARPA (Joint Aquatic Resource Permit Application) as a permit in its own right.	Timothy Ibbetson	Please refer to section 1.5.7 in the final EIS for a discussion of the unique role of the HPA in environmental protection.
The legislature should address the need for the WDFW to conduct these activities and should consider removing the HPA requirements and focus on requirements in other codes such as the Clean Water Act, the ESA, the GMA and SMA critical areas etc.	Timothy Ibbetson	Comment noted.

### A.1.6 Protection and Recovery of ESA listed species

At least half the comments WDFW received on the rules and EIS indicated that the proposed rules weakened current protections of fish life and many also asserted that the rules do not contribute to recovery of ESA-listed fish life. Most of those comments were linked to rule sections; responses to these can be found on Table A-7. The comments below capture the range and specific issues of concerns.

Northwest Indian Fisheries Commission noted that “...neither the draft nor supplemental draft EISs provide information on the likelihood of take ... for the various hydraulic project types to be reviewed, conditioned and approved.” WDFW responds that the concepts of "take" and "jeopardy" are unique to the federal ESA; WDFW does not have the authority to make these determinations, nor does SEPA require

that they be addressed in an EIS. There are assessments of fish life that do not involve the "take" and "jeopardy" determinations, however quantitative estimates are best made at the project scale, and not at the scale of the programmatic EIS. The Supplemental PEIS includes coarse-scale qualitative assessments of the impacts of the alternatives on fish life.

WDFW issues HPAs to protect fish life regardless of their ESA status. The HPA is a short-term construction permit, not an ESA recovery tool. Each HPA is conditioned to result in no net loss of habitat function, value, and quantity for that particular project(s). This minimizes the risk of cumulative impacts. The proposed rule changes help maintain the current baseline and this will help prevent the further decline of ESA listed species.

The proposed rules will not preclude recovery but they do not restore lost habitat. The rules have to comply with state law. RCW 77.55.231 states "Conditions imposed upon a permit must be reasonably related to the project. The permit conditions must ensure that the project provides proper protection for fish life, but the department may not impose conditions that attempt to optimize conditions for fish life that are out of proportion to the impact of the proposed project." The department can only require a permittee to mitigate for the impact of their hydraulic project(s).

The proposed rules do require rehabilitated and replacement structures to meet the current design and construction standards. In many cases this will improve habitat conditions.

### A.1.7 Science in support of rulemaking

Fifty-seven comments from twenty-four individual commenters were directed toward the science supporting the Hydraulic Code rules. Some key points, representative comments, and WDFW responses follow.

**Table A-6 Comments on Science Supporting Rulemaking**

COMMENTER	COMMENT	RESPONSE
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#### A.1.7.1 Science is flawed

Many commenters	The science supporting proposed rulemaking is flawed because it is not up-to-date or because more recent papers are missing. Some commenters referenced newer papers, and other requested that papers from agricultural and farm land associations should be included.	WDFW's proposed rules are supported by good science. New science is always evolving, and will be incorporated into permit decisions. The list of references reviewed for this rulemaking activity is available on the WDFW web site.
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#### A.1.7.2 Incorporating guidance extends beyond statutory authority

Some commenters	Science incorporated into the rules (by reference to the aquatic habitat guidelines documents) extends the rules past the limits of authority established in Chapter 77.55 RCW.	<p>Incorporation of the science into the HPA WAC is appropriate because the rules should have a good scientific foundation. However, there are many scientific studies to support provisions that extend beyond WDFW's authority, and those are not reflected in the proposed rules.</p> <p>WDFW and the rest of the Aquatic Habitat Guidelines group have incorporated a broad range of science within the guidance documents so that the project proponent can voluntarily choose designs that work best for fish and the specific project objectives and conditions.</p> <p>The rules provide a foundation from which to build a permitted project; the guidelines show proponents how they can optimize projects for fish recovery if that is their objective.</p>
Regional Roads Maintenance Forum	"The draft rules are inconsistent with the rule-making process because the rules incorporate draft guidance documents which may be changed by the Department at any time without adherence to the rule-making process. For instance, the draft WAC (Crosswalk Code Reviser Draft HPA rules 052714.docx page 84 and 85) states that "A person can find appropriate methods to design water crossing structures in the Department's Water Crossing Design Guidelines, or other published manuals and guidelines." The incorporation of incomplete draft guidance documents and white papers as appropriate methods to condition a permit expands	<p>The statement cited is intended as guidance or assistance. The statement does not say that permit provisions will be taken from the cited document; however the document and other scientific material did contribute to the development of some of the criteria set forth in the new rule.</p> <p>Because science is constantly evolving, but funding to maintain a process of science review and interpretation is lacking, it has been difficult to come to completion on some of these documents.</p>

	the HPA permit process beyond statute limitations and gives the Department the ability to change the rules in the future without additional rule-making."	WDFW strongly encourages applicants with difficult design circumstances to consult with WDFW in the early planning stages of project development.
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**A.1.7.3 “Draft” science should not be used for decisionmaking**

COMMENTS	COMMENT	RESPONSE
Many commenters	Papers appearing on the SHB2261 list should all be peer reviewed. White papers and guidance documents have not been "externally peer reviewed."	RCW 34.05.271 requires WDFW to make available a list of documents relied upon when taking a significant agency action - adopting revised Hydraulic Code rules qualifies as significant. The statute identifies categories and directs that items are to be both listed and categorized. Categories were created to represent several levels of peer review as well as so-called “gray literature” common to agencies like WDFW. The statute is clear that categorization does not imply or infer any hierarchy or level of quality. The statute does not establish an expectation that all science used in public decision-making will have been externally peer reviewed.
	“Draft” status white papers and guidelines documents should not be used in rulemaking until they are final.	The white papers represent syntheses of the most current science when they were compiled. Some guidelines documents remain labeled as “draft,” and newer science could affect changes to the documents. Funding has not been available to maintain a process of science review and interpretation, so it has been difficult to complete some of these documents.

**A.1.7.4 Science too dynamic for rule reference**

COMMENTS	COMMENT	RESPONSE
Timothy Ibbetson	Science should not be directly referenced in the rules because science is constantly being updated.	It is difficult to strike the right balance for design standards and construction procedures when those designs and procedures are continually evolving. On the other hand, our rule writers have a lot of experience with what does and doesn't work for common project types. We have noted that success for particular project types is based on some common design and construction elements, so we've included those in rule. Every permit is tailored to the specific circumstances at each project site.

**A.1.7.5 White paper approach is invalid**

COMMENTS	COMMENT	RESPONSE
Timothy Ibbetson	Because the white paper compilations were done for the HCP process, the white papers are not valid for use in updating HPA rules	Distillation of fish habitat science for practical application in HPA permitting began in 1999 under the commission of the Governor's Salmon Recovery Office. This work proved useful in support of the HCP that WDFW subsequently began to develop. Even after HCP development was discontinued, this work remains the most relevant to WDFW to support Hydraulic Code rule changes.
Timothy Ibbetson	The process of consolidating information learned from individual science papers into the "white papers" and thence into "guidelines" documents is an invalid approach;	Interpreting the results of scientific studies for practical application requires a series of steps of compilation and distillation. In this case, scientists reviewed about 1,800 science papers while they were developing the white papers and guidance documents that are now available. Distilling scientific papers into application guidance employing the perspectives of a wide range of professional experts is still the best method we know of to convert the results of scientific inquiry for practical use.  The individual white papers, and the Compiled White Papers document remain the best information available to us in the fields relevant to Hydraulic Code rulemaking.
Other commenters	The white papers are "the department's own" and are therefore not credible.	The "white papers" are not the "Department's own," but in fact were developed by a team that included professionals from private industry, WDFW, Ecology, WSDOT, the Army Corps of Engineers, US Fish and Wildlife Service, DNR, and the Recreation and Conservation Office. The documents display the WDFW logo because WDFW contracted with consultants for the work to distill the science and develop the documents. The documents are collectively assembled on the WDFW web site because they are most relevant to WDFW permitting activities.  WDFW, our sister agencies, consultants, and industry groups employ some of the most eminent scientists in this field worldwide, and WDFW is proud to be able to apply their work to our activities.

**A.1.7.6 Annotate rules with science citations**

COMMENTS	COMMENT	RESPONSE
Timothy Ibbetson	How, exactly, is the science used in each rule? WDFW should annotate the rules with scientific citations	WDFW complied with RCW 34.05.271 by posting on its web site the information upon

COMMENTS	COMMENT	RESPONSE
		which it relied in developing the draft rules. But WDFW did not annotate the proposed rules because sections in the Washington Administrative Code do not typically carry literature citations within the text of the rules. Please contact us directly with specific questions.
NWIFC	WDFW has not taken [the white paper discussions of project impacts] information and applied it to the hydraulic projects that it permits. It has not shown how it has used the science to develop a set of rules. Our previous comments provided several examples and many more examples are contained within WDFW's white paper addressing risk of [impacts to fish life]. Unfortunately, it appears that WDFW has ignored these comments.	WDFW uses the best science available and applies it within the statutory limitations placed on the permitting of hydraulic projects. WDFW believes we have incorporated the white paper information appropriately into the provisions of the proposed rules.

**A.1.7.7 Credentials of professionals working on the Hydraulic Code rulemaking project**

COMMENTS	COMMENT	RESPONSE
Timothy Ibbetson	What are the credentials of scientists and engineers who participated in developing the reference list and white papers?	Scientists and engineers from many agencies and the private sector were involved in developing the white papers and guidance documents. WDFW employs fish and wildlife biologists, environmental engineers, environmental specialists and planners, natural resource scientists, research scientists, information technology specialists and many other categories of science professionals. Qualifications for those job classifications can be obtained from the Washington Department of Human Resources: <a href="http://dop.wa.gov">http://dop.wa.gov</a>
Timothy Ibbetson	Commenter submitted multiple comments about WDFW's involvement in project design and engineering, and asked about the qualifications of professionals involved in the HPA program.	WDFW employs environmental engineers who design structures for WDFW and our partners that provide appropriate fish passage or other types of habitat restoration. WDFW engineers are also available on a limited basis to assist others with their project designs. Please refer to EIS section 2.1 for further discussion about the services WDFW provides to project applicants. At the time of this response, WDFW employed a dozen environmental engineers within the program responsible for providing technical assistance for engineering designs. An additional number of engineers are dedicated to facilities owned and operated by WDFW. In general, an environmental engineer position must meet the state's statutory definition for professional

COMMENTS	RESPONSE
	engineering. Qualifications for all position types can be found as above.

**A.1.7.8 Low flow streams**

COMMENTS	RESPONSE
A few commenters	Challenging the science supporting HPA jurisdiction in small, low flow streams. The concern is that most of these small streams are really just agricultural or stormwater runoff conveyances and/or are not covered by the Shoreline Management Act, and should not be regulated under the hydraulic code.
	Here is a circumstance where it is important to distinguish between the jurisdiction of the HPA program and the SMA program . WDFW is directed to protect fish life, and fish sometimes live in streams with less than 20cfs. Not all streams below 20cfs are necessarily man-made conveyances, in fact, most headwaters start out less than this streamflow. Many small streams provide critical habitats for fish. Any project proponent who is unsure whether fish protection is required at their hydraulic project site should consult with WDFW before working on that project.

**A.1.7.9 Errors and typos**

COMMENTS	RESPONSE
Two commenters	One commenter pointed out an error in Table 2-2, another found a typo in reference to SHB 2261.
	We have made corrections to Table 2-2 and to references for SHB 2261. Thanks for catching the errors.

**A.1.8 EIS Comments**

Following (Table A-7) are many of the comments received in reference to sections of the SDPEIS. Comments submitted in multiple letters are summarized and combined in the table. The table is organized by chapter and topic.

**Table A-7 Comments on the SDPEIS**

**A.1.8.1 General Comments**

COMMENTS	RESPONSE
Clark County	Clark County indicated support for comments previously submitted by the Regional Roads Forum. Upper Skagit Indian Tribe indicated support for comments submitted by NWIFC. Form letters indicated support for other comments being submitted by SoundAction et al., or Washington Audubon.
Karen Walter, Muckleshoot Tribe	We are concerned that nowhere in this document is there a consideration of tribal treaty rights and how the rules could affect fish populations and the Tribe’s ability to
	Your additional support for these submitted comments is noted.
	WDFW agrees that a discussion of tribal treaty rights and Washington State's government-to-government relationship, and how they affect, and are affected by,

COMMENTER	COMMENT	RESPONSE
	<p>exercise its treaty rights. For example, the term “treaty” is never even mentioned in either the draft programmatic EIS, the draft supplemental programmatic EIS, or the proposed rules. The DSPEIS analysis of environmental impacts does not address how the Department’s preferred alternative will sufficiently protect and restore salmon populations to meet the treaty obligations.</p>	<p>hydraulic code rules, should appear in the EIS. Please look for a correction to this omission in the final PEIS.</p>
<p>Ralph Wood</p>	<p>I am not permitted to do anything which would alter [the river's] course or prevent it from eating away at my lot (which it is doing) as it decides to meander along a different path. Absent the regulations i would certainly have placed rip-rap along the bank - as some older homes in the neighborhood did years ago. After living here for 5 years now I have come to the conclusion that it is best not to mess with the River. I want to allow the river to figure out it's own hydraulics and i will adapt as required. It has been here for a long time and will be here long after I am gone. It deserves respect. The same consideration is certainly owed to Puget Sound. There are good and natural reasons why it does what it does and it does not deserve to be constrained for the convenience of the current inhabitants of its shores. I hope you will act to protect this marvelous feature of our area - and not contribute to it's further alteration.</p>	<p>Thank you for taking the time to share your thoughts and experiences with us.</p>
<p>Regional Road Maintenance Forum</p>	<p>The Regional Roads Maintenance Forum, Skagit County Dike Districts, WSDOT, and others submitted analysis papers and comments to previous DEIS and rule versions, and asked that they be incorporated into the public record for this action.</p>	<p>Incorporated into the record as requested. Also see response to comment on Appendix A provided by the Northwest Marine Trade Association.</p>
<p>Regional Road Maintenance Forum</p>	<p>Regional Road Maintenance Forum and Timothy Ibbetson submitted comments on cover letters written by WDFW in October 2013, as well as on the July 2014 SEPA cover letter and fact sheet.</p>	<p>We appreciate the time taken to provide feedback on these documents.</p>
<p>Stillaguamish Flood Control District</p>	<p>It makes no sense at all to seek to restore habitat as it existed in any particular past point in time--especially attempting to replicate conditions as they may have existed prior to European settlement. Natural systems are dynamic--constantly changing and adapting to new conditions. Most fish and wildlife "management" to date has been dysfunctional because it takes much longer to</p>	<p>Thank you for your comment.</p>

COMMENTS	RESPONSE
amend entrenched rules and procedures than it does for natural systems to adapt, and in many cases, thrive under new conditions.	

### A.1.8.2 Chapter 1 Introduction and Background

COMMENTS	RESPONSE
Timothy Ibbetson [re: HPA purpose] "What about JARPA?"	JARPA is a Joint Aquatic Resource Permit Application form, not a permit itself. We are unsure how to respond to this comment.
Timothy Ibbetson "So, the ESA is administered by the NOAA NMFS and the USFWS, why does the WDFW need to duplicated federal and other state codes (the GMA, SMA, and the Clean Water Act)."	Please refer to EIS section 1.5
Timothy Ibbetson "So? Why are critical areas necessary when waters of the State and United States (and fish and wildlife habitat conservation areas/endangered and threatened species) are already provided by the GMA, SMA, CWA, and the ESA? The existing state and federal codes already address these issues. Why spend more money and impact development even more by adding more redundant codes?"	Please refer to EIS section 1.5. "Critical Areas" are a construct of the GMA. Neither the GMA, nor SMA, nor CWA, nor ESA has the unique purpose of protecting all fish life.
Timothy Ibbetson "What does this [HCPs] have to do with protecting fish from projects? There are already habitat conservation projects being conducted under other codes and by agencies (and non-profit entities such as the Nature Conservancy) and municipalities (such as the Snohomish County Smith Island Salmon Habitat Restoration Project at a cost of \$30 million), plus the tribe projects. Not to mention mitigation and enhancement projects associated with the Shoreline Master Programs and GMA critical areas ordinances."	The HCP was intended to provide an additional layer of ESA certainty for project proponents. Currently, project proponents must work directly with the federal services for ESA take authorization. Please refer to section 1.5 for further information on the role of the Hydraulic Code rules.
Timothy Ibbetson "The NOAA NMFS and the USFWS administer the ESA. Why does the WDFW need to be involved? As previously discussed, there are PLENTY of other federal and state codes that already address this. There is no need for additional code requirements or agency oversight. The proposed revision is redundant, costly, and will impact projects even more than they are with existing codes. Mitigation is already required by federal and state codes, such as the ESA, CWA, GMA, and SMA. Why do the citizens need more redundant codes; there are already more	Please refer to EIS section 1.5 for more information about the unique role of the hydraulics code and its implementing rules.

COMMENTS	COMMENT	RESPONSE
	than necessary because the GMA and SMA critical areas codes are redundant since federal codes supersede the state codes. Plus any determination on a state or municipal level can potentially violate federal codes that are enforced by federal agencies.”	
Timothy Ibbetson	“The ESA is a federal code administered by the NOAA NMFS and the USFWS, there is no need for the WDFW involvement. The WDFW only needs to focus on protecting fish that are not on the ESA list when issuing HPAs (and JARPAs).”	We agree that WDFW's role is to protect fish, and that state protection is critical for fish not on the federal endangered species list. Please note, JARPA is not a permit, it's a Joint Aquatic Resources Permit Application form.
Timothy Ibbetson	“Why was a "major overhaul of the hydraulic code required? How was the existing code deficient? Which statutes? RCW Title 77 is the only code that specifically pertains to the WDFW. Is the WDFW referring to specific sections of this code, if so, which ones?”	Please refer to EIS Chapter 2 Table 2-1 for a listing of legislative bills affecting the hydraulic code.

**A.1.8.3 Chapter 1 - Project Purpose and Need**

COMMENTS	COMMENT	RESPONSE
Timothy Ibbetson	Which statute? [the commenter expresses confusion about this topic in several locations throughout the EIS.] I think there is confusion over what a statute is and what a code is. A statute is a part of a code (a section), RCW Chapter 77 is a code, (Revised Code of Washington), the sections in this code can be described as statutes.	For the purposes of this EIS, WDFW chooses to refer to the Hydraulic Code (chapter 77.55 RCW) as "statute" to distinguish it from chapter 220-110 or 220-660 WAC, which we refer to as the "rules."
Timothy Ibbetson	The science and engineering methods change continuously, these must be adhered to by the scientists and engineers who design the projects and cannot be codified any more that the Best Available Science in the GMA can be codified; it is a concept, not a listing of science that is changing daily. As previously discussed, science is changing daily, the code simply needs to require Best Available Science as the GMA requires.	Ultimately BAS must be applied as project provisions in order to be clearly understood and enforceable. WDFW has included common provisions in the rules so that applicants know before applying for an HPA what some of the standards will be.
Timothy Ibbetson	How many cases are overly restrictive vs overly "permissive"? What is this based on? What percentage of the projects will be simplified? How much more will it cost to conduct the majority of the projects under these proposed rules? [re: Saving applicants time and costs...] What percentage, where is the data? WSDOT published a document that suggests these proposed rules will triple the cost of WSDOT projects.	WDFW based our assessment of "overly restrictive" versus "overly permissive" using informal feedback from permit applicants and reviewers. We refer you to the Economic Analysis provided with the proposed rule changes for answers to some of your more specific questions.

COMMENTER	COMMENT	RESPONSE
Timothy Ibbetson	Why does this need to be codified in the WAC. Simple administrative changes in processing should not be in the WAC to begin with or can be simply adopted as a policy like the geologist licensing board does.	Thanks for your perspective. Please refer to EIS section 2.1.1 regarding considerations in bringing the Hydraulic Code rules up to date.
Timothy Ibbetson	The introduction states that there are no permits involved related to this SEPA document. It also lists that no licenses are required, however, stream, lake/pond, marine shoreline studies all fall under the geologic sciences (RCW 18.220, RCW 18.235, and 308-15 WAC) which require licensing to conduct these studies.	This SEPA document is evaluating at a programmatic level the decision to adopt new administrative rules for the hydraulic code. There are no permits, per se, associated with rule adoption. Please refer to chapter 173-802 WAC for SEPA procedures and chapter 43.21C RCW State Environmental Policy.
Timothy Ibbetson	Why add redundancy to existing state and federal codes?	HPA criteria and provisions are not redundant with other existing state and federal codes; please refer to EIS section 1.5.7 for more information about the role of the hydraulic code.
Timothy Ibbetson	This [effectiveness monitoring] adds significant costs to any project, especially state projects conducted by WSDOT and any construction, development, flood control, storm water, and other projects.	Thank you for the comment. Please note, the effectiveness monitoring referenced here is monitoring done by the WDFW Science Program.
Timothy Ibbetson	Does this [incorporation of available science] comply with the changes to the state code regarding the WDFW's requirement to use science? The review of the references does not suggest that it did and it is unclear how these references were applied to the changes in the WAC (considering these references are not cited in the WAC). Regardless, as previously stated, science is changing daily, the requirement should be for Best Available Science to be used by licensed engineers and licensed scientists and the WAC should not specify design or scientific methods. It should simply state that Best Available Science be used.	Your comment is unclear: on the one hand you express concern that we did not cite specific science within the rules, and on the other hand you are suggesting that the WAC should not specify scientific designs or methods. We are unsure how to respond to your comments. Please refer to EIS section 2.1.1.2 for more discussion on incorporation of science into development of the rules.
Timothy Ibbetson	Who evaluated these [additional alternatives]? These persons should be identified somewhere as should their qualifications.	Please refer to EIS section 2.1 for a discussion on the development of the EIS alternatives. Names of staff members who participated in EIS development appear on the SEPA Fact Sheet that precedes the EIS document.
Timothy Ibbetson	Who prepared the economic impact statement, what are their qualifications and how was the process conducted? Does this factor in the redundancy of the proposed rule changes to other State and Federal codes	Cardno Entrix is the contractor who conducted the economic analysis, as identified on the SEPA Fact Sheet. Because WDFW does not have an economist on staff, and no other state economists were available to help us, a personal services

COMMENTS	COMMENTER	RESPONSE
		contract was advertised, applicants screened, and a contract made with the identified contractor; for more about state contracting, please refer to chapter 39.26 RCW <i>Procurement Of Goods And Services</i> .
Why is less detail available for proposed changes to a WAC? The goal is to demonstrate that there are no adverse impacts (including financial) and that there is an environmental need to make the changes. It must be clearly demonstrated that the changes address needs to improve environmental conditions and existing codes must be evaluated such as the GMA, SMA, CWA, and the ESA. To avoid the no action alternative, the WDFW must demonstrate that existing code is insufficient to protect fish and it must demonstrate that there are no other codes that provide equivalent protection to what is being proposed. It also must be demonstrated that the proposed code changes are not burdensome and do not substantially increase costs relative to the benefits gained. Considering most of what is proposed is already addressed in other state and federal codes, the proposed changes would be both burdensome and the cost compared to benefit cannot be justified.	Timothy Ibbetson	SEPA is designed to provide disclosure of probable significant adverse environmental impacts from a proposal – in this case, the proposed Hydraulic Code rule change. We do not concur with your interpretation of SEPA requirements.  Please refer to EIS section 2.1 for a discussion on the content of the EIS alternatives, including the preferred alternative.
Rule change forms should be submitted.	Timothy Ibbetson	WDFW agrees that it would have been a good idea to provide the public with a comment-submission form. We will keep this in mind for future agency rulemaking.

**A.1.8.4 Chapter 2 - Alternatives**

COMMENTS	COMMENTER	RESPONSE
	Brooke Nelson	Ten commenters (Plus 90 short form letter commenters) expressed a preference for Alternative 3. We appreciate receiving these comments.
	Kitsap Audubon	
	Laura Scott	
	Mike McCormick	
	Rick Clark	
	Ron Sikes	
	Valerie Rose	
	Vanessa Woo	
	Washington Department of Natural Resources	
	Short Form Letter	

COMMENTER	COMMENT	RESPONSE
SoundAction et al.	<p>life; support alternative 3.</p> <p>As an overall request, we urge WDFW to adopt the version of the proposed update that the SDPEIS identifies as Alternative 3 at Table 2-6. As recognized by that SDPEIS, Alternative 3 offers increased protection for the natural environment, consistent with the Hydraulic Code’s directive to protect fish life.</p>	
Karen Walter, Muckleshoot Tribe	<p>The DSPEIS is inadequate in its analysis in that it merely compares four alternative rule packages with each other and fails to disclose the actual impacts on the environment.</p>	<p>SEPA directs us to include a No-Action alternative in the SEPA document and to compare other alternatives with the No-Action alternative (Alternative 1 in this EIS). Impacts of the alternatives in this EIS are compared to the No-Action baseline condition.</p>
Larry Johnson, NRCS	<p>We are concerned that the proposed WDFW rules will reduce the level of interest of landowners to be proactive in addressing resource concerns that affect the fisheries.</p>	<p>WDFW implements outreach with landowners to provide technical assistance in meeting landowner needs while protecting the environment. This WDFW assistance, coupled with efforts among the community of local experts who help landowners, has yielded the opposite of your concern: more landowners than ever are contacting us for help to design their project to be protective fish life and natural habitat functions.</p>
Long Form Letter	<p>The SDPEIS does not provide evaluation of alternatives 3 and 4 in relationship to no action alternative. In most discussions, the document evaluates the preferred alternative in comparison to no action alternative, but provides only a bulleted list of provisions for alternatives 3 and 4. Please amend the SPDEIS to evaluate each alternative in comparison to the no-action alternative to ensure the highest degree of fish and habitat protection is met.</p>	<p>Comparison of Alternatives 3 and 4 to the no-action alternative (Alternative 1) can be found in EIS Chapter 4, with tables under each heading comparing impact to each topic area across the alternatives. The no-action alternative (Alternative 1) represents the provisions that exist in current rule: chapter 220-110 WAC.</p> <p>Because this EIS is programmatic, the evaluation of impacts is necessarily coarse in scale, and might not appear satisfactory to individuals wishing for finer-scale information. WDFW reviewed the formatting of Chapter 4 and made improvements to readability.</p>
Long Form Letter	<p>Although the SDPEIS states that the preferred alternative would result in improved protections over existing rules, the proposed rules contain language changes which result in a generalized weakening of the regulations. For example, amending “avoid to “avoid or minimize” weakens the rules by allowing new impacts. And, “Protection of Fish Life” has moved from a definition of protection to a</p>	<p>Many commenters (including 15 commenters who submitted long form letters) indicated that even if Alternative 2 did provide more protection than no-action, protection was not enough to provide recovery of salmon populations. Responses to these specific rule suggestions appear on in section A.2. Responses to questions regarding recovery as an impact standard</p>

COMMENTER	COMMENT	RESPONSE
	description of mitigation sequencing.	are referred to section A.1.6.
Long Form Letter	Requesting WDFW take actions that result in clear increases in habitat and fish protection. Prefer Alternative 3 as the alternative most consistent with the Hydraulic Code's directive to protect fish life.	WDFW appreciates the time people spent to submit comments on proposed Hydraulic Code rulemaking; your preferences are noted.
Nooksack Tribe	Although the proposed rule update presented as the preferred alternative includes changes that should result in increased protection of the habitat required to support a sustainable, harvestable surplus of salmon and shellfish, several of the sections as currently proposed need some revision so that they do not weaken that protection. We are concerned that the alternatives analysis presented in the Supplemental Draft Programmatic EIS are not evaluated relative to the habitat needed for salmon recovery, but rather are compared against the current rules.	Please refer to section A.2 for responses to comments on specific rule sections, and to section A.1.6 regarding recovery needs.
Northwest Marine Trade Association	Section 2.2.2 states that "Changes were made to the Preferred Alternative based on comments received during the last review round." A full description of these changes should be provided in the SDPEIS or as an appendix to the SDPEIS so that interested parties can identify and track what changes were made as they relate to provided comments.	Please refer to Chapter 1 in the final EIS for an improved discussion of the evolution of the rules proposal.
Northwest Marine Trade Association	Section 2.4, Adaptive Management: As the other alternatives "meet the purpose and need for the action," adoption of other alternatives would still provide for the establishment of a baseline from which adaptive management strategies could be developed. Consideration of changing science and technology should also be provided in an adaptive management strategy for information that would make regulations less restrictive while implementing protections for fish life. As the scientific and regulatory communities continue to increase the understanding of the natural environment, adaptive management strategies should not preclude options or introduce bias. At a minimum, a conceptual adaptive management strategy should be developed and included for public/review and comment based on the proposed rules prior to adoption of any new rules by the Fish and Wildlife Commission.	WDFW agrees that adaptive management is critical in continuing to implement a permitting program that is both protective of fish life and responsive to the changing technological environment. An adaptive management strategy will be developed when WDFW moves into implementation of new rules.

COMMENTS	COMMENT	RESPONSE
Bill Thomas	The SBEIS and CAB incorrectly states that "the rule changes will: ...Establish a structure for adaptive management in response to changing science and technology and/or the results of effectiveness monitoring." Adaptive management was eliminated in a prior draft due to public comment.	
NWIFC	Comment 3: WDFW's claim that the preferred alternative and alternative 3 are "self-mitigating" is completely misleading. WDFW's approach of simply comparing the impacts of alternative rule packages to the existing rule package leads it to reach faulty conclusions. ...Just because WDFW believes that its new rules are somewhat less harmful than its old rules, it doesn't mean that the new rules adequately protect fish life. The Department's claims that it's preferred alternative is "self-mitigating" is both misleading and incorrect and is a fatal flaw in its SEPA analysis.	Some commenters expressed concern over the characterization of Alternative 2 as "self-mitigating." This language has been clarified in the final EIS.
NWIFC	Unfortunately, it appears that WDFW has ignored these [previous NWIFC] comments and continues its approach of analyzing the impacts of the alternatives relative to each other and ignoring the impacts to fish life.	SEPA directs us to evaluate the alternatives for probable significant adverse environmental impacts, and to compare the impacts of the various alternatives to no-action (which is Alternative 1 in this EIS);
Pat Collier	The SPDEIS does not provide evaluation of alternatives 3 and 4 in relationship to no action alternative. In most discussions, the document evaluates the preferred alternative in comparison to no action alternative, but provides only a bulleted list of provisions for alternatives 3 and 4. Please amend the SPDEIS to evaluate each alternative in comparison to the no-action alternative to ensure the highest degree of fish and habitat protection is met.	WDFW has provided these analyses in the EIS.
Regional Road Maintenance Forum	Although there are recommendations of some comments and concerns, Alternative 3 does not have enough information or data to determine if it's consistent with RCW 77.55 statute; therefore, it does not comply with the State's rule making process.	
Regional Road Maintenance Forum	Although there are recommendations of some comments and concerns, Alternative 4 does not have enough information or data to determine if it's consistent with RCW 77.55 statute; therefore, it does not comply with the State's rule making process.	
Regional Road	Alternative 1 is the only alternative that was	Thank you for your comment.

COMMENTS	COMMENT	RESPONSE
Maintenance Forum	offered that is the closest to meeting the current HPA permit statute. It is the only alternative that meets the state’s rule making process for adoption.	
Regional Road Maintenance Forum	Alternative 2 does not meet the state’s rule making process for adoption criteria. We are concerned that the sixth draft of WAC 220-660 impermissibly expands the WDFW’s jurisdiction, imposes requirements inconsistent with statutory authority, and is inconsistent with the rule-making process.	The commenter did not provide enough information about why Alt. 2 does not meet APA requirements. Also see response in section A.1.2 regarding statutory authority.
Regional Road Maintenance Forum	We agree with the purpose of the proposed rule changes to update the hydraulic code rules provision to respond to statutory changes, integrate current fish science and design technology, and improve procedural and administrative requirements. We believe the proposed preferred alternative expanded the proposed rule changes beyond the RCW 77.55 statutes for issuing hydraulic project approvals. Changes to the rule should reflect the authority issued in the statute and guidance documents should also reflect the authority issued in the statutes. We believe that the only alternative that is close to meeting the statute requirements is Alternative 1.	Your preference is noted.
Regional Road Maintenance Forum	We agree as stated in Chapter 1 and in Chapter 2 that updating the rules to better align with current statute is one important purpose of the hydraulic code rules update. The key component of the rules update is the statute that the rules are to implement. We believe that the technology, the science, permitting, procedural and administrative requirements should all be in alignment with the current statutes. The statutes should drive the guidance documents, as well as the rule. We do not believe the guidance documents should drive the rules to override the statute.	Statutes do not prescribe the science that should be used to implement the laws. Guidance documents are tools that help implementation of rules and are not binding; rules are tools that support implementation of the law. Other commenters have remarked that science changes faster than laws can be changed; this is another good reason not to dictate specific science in laws.
Skagit County Dike District No. 1, and Skagit County Dike, Drainage and Irrigation District No. 12	As stated previously, the Districts primary concern is that the WDFW proposal (Alternative 2) as well as (Alternative 3), would significantly modify the HPA permit process, would result in a drastic increase in permit applications, impose more onerous permitting requirements, and thus drastically increase costs to the District and its taxpaying constituents whenever an HPA is required. This shift in policy is not only unnecessary,	Your perspectives are noted.

COMMENTER	COMMENT	RESPONSE
	[because] the current rules have worked for many years, but is unlikely to streamline the HPA process, as stated in the rulemaking materials, or to provide any meaningful benefit to fish or habitat.	
SoundAction et al.	Overall the SDPEIS provides inadequate evaluation of both alternatives 3 and 4 in relationship to no action alternative. For example, the earth resources impact discussion in section 4.2 evaluates the preferred alternative in comparison to no action alternative, but provides only a bulleted list of provisions for alternatives 3 and 4 “that could affect risk of impacts to earth resources” with no analysis as to the benefits or negative impacts in comparison to the no action alternative. This overall pattern is generally found in subsequent sections as well.	Your perspectives are noted.
SoundAction et al.	We appreciate the effort that WDFW has made to incorporate provisions into the update that may decrease potential impacts from hydraulic projects, but believe that the SEPA preferred alternative likely will not protect fish life (currently defined as “prevention of loss or injury to fish or shellfish, and protection of the habitat that supports fish and shellfish populations”). For example, the proposed rules will not be able to prevent loss or injury to fish or protect their habitats because it does not require the denial of a Hydraulic Project Approval in any particular instances, instead directing applicants to “avoid and minimize” impacts. In practice, the ambiguity in this phrase can lead to the selection of a project alternative that causes impacts, even where decreased, rather than an alternative that would avoid those impacts. Given the low likelihood of success and long-term cumulative impacts associated with compensatory mitigation efforts, we encourage WDFW to establish an implementable, firm decision making hierarchy that requires the avoidance of impacts to critical freshwater habitats and saltwater habitats of special concern, and denies projects that will lead to unavoidable impacts unless approval is mandated by the Hydraulic Code.	Your perspectives are noted.
SoundAction et al.	The SDPEIS suggests at 4.1.1 that Alternative 2 would be “self-mitigating with respect to	Your perspectives are noted.

COMMENTS	COMMENT	RESPONSE
	<p>impacts to the natural environment, meaning that no additional mitigation is needed to offset potential significant adverse environmental impacts of adopting these proposed rule changes.” However, because Alternative 2 does not prevent potential impacts to habitats of special concern, such as bulkheading of surf smelt spawning beaches and vegetation clearing on the shoreline, and because marine compensatory mitigation is unproven at best, Alternative 2 cannot be considered self-mitigating. It may decrease impacts to nearshore resources as compared to uncontrolled hydraulic development, but will not prevent or compensate for likely impacts. In addition, these impacts likely will be exacerbated as sea level rise narrows the band of spawning habitat between rising tides and a fixed shoreline.</p>	
<p>SoundAction et al.</p>	<p>The proposed rules contain language changes which result in a generalized weakening of the regulations. Thus, the general SDPEIS assertion that the preferred alternative would result in improved fish protections over existing conditions is incorrect. For example, as noted in the above comments on the proposed rulemaking language, the change from “avoid” in the current regulations to “avoid or minimize” fundamentally weakens the rules by allowing impacts that were previously not allowed under certain circumstances. Similar effects result with the proposed new definition of “Protection of Fish Life” which has moved from a term of outright protection to a description of mitigation sequencing - which has been documented to have a high rate of failure.</p>	<p>Your perspectives are noted.</p>
<p>SoundAction et al.</p>	<p>We appreciate the effort that WDFW has made to incorporate provisions into the update that may decrease potential impacts from hydraulic projects, but believe that the SEPA preferred alternative likely will not protect fish life (currently defined as “prevention of loss or injury to fish or shellfish, and protection of the habitat that supports fish and shellfish populations”). For example, the proposed rules will not be able to prevent loss or injury to fish or protect their habitats because it does not require the denial of a Hydraulic Project Approval in any</p>	<p>Your perspectives are noted.</p>

COMMENTS	COMMENT	RESPONSE
	<p>particular instances, instead directing applicants to “avoid and minimize” impacts. In practice, the ambiguity in this phrase can lead to the selection of a project alternative that causes impacts, even where decreased, rather than an alternative that would avoid those impacts. Given the low likelihood of success and long-term cumulative impacts associated with compensatory mitigation efforts, we encourage WDFW to establish an implementable, firm decision making hierarchy that requires the avoidance of impacts to critical freshwater habitats and saltwater habitats of special concern, and denies projects that will lead to unavoidable impacts unless approval is mandated by the Hydraulic Code.</p>	
<p>Stillaguamish Flood Control District</p>	<p>HPA rules should be simplified, shortened, and conformed to other requirements [e.g. to GMA statutes]. Legalistic rules and adversary proceedings in general have proven to be less effective than voluntary efforts, incentives, and genuine public input. Many of the staff-recommended HPA amendments go in the wrong direction, and should not be adopted.</p>	<p>The HPA purpose and authority are unique; refer to EIS section 1.5.</p>
<p>Upper Skagit Indian Tribe</p>	<p>In the Tribe's view, the Code and SDPEIS are inadequate in that there is no effort to improve or restore current habitat conditions. Rather, the rules as written focus on protecting those conditions currently in place (and for numerous types of projects there may even be a failure to require compensating mitigation, resulting in a net loss over current conditions).</p>	<p>Your perspective is noted.</p>
<p>Washington Department of Natural Resources</p>	<p>After reviewing the four alternatives that were proposed, DNR finds that a combination for most cases of alternative 2 AND alternative 3 would be the best choice forward. Given DFW’s charge to protect fish and wildlife for the state of Washington, this balance should be ever focused on the protection side of that equation.</p>	<p>Your perspectives are noted.</p>
<p>Timothy Ibbetson</p>	<p>[re: Alternative 1 description] There is no indication and procedural or administrated requirements will be improved and the proposed changes strongly suggest that they are redundant with other federal and state codes, are burdensome, and are costly. The proposed rules can also have a direct impact on human health and property. There is no science presented regarding BAS studies that</p>	<p>Your perspectives are noted.</p>

COMMENTS	COMMENT	RESPONSE
	<p>were conducted in Washington State including the salt-waters and Puget Lowland that support the assertions make by the Department. The No Action alternative is the only viable option and in reality the legislature should address Title 77 and remove sections that are redundant with other federal and state codes.</p>	
<p>Timothy Ibbetson</p>	<p>[re: alternatives not evaluated] As previously discussed, the NMFS and USFWS (ESA) and other federal and state codes supersede Title 77 and the hydraulic code (rules). Most of the proposed changes are redundant or are not supported by BAS conducted in Washington State or, more importantly the Puget Lowlands (or Pacific shoreline).</p>	<p>Your perspective is noted.</p>
<p>Timothy Ibbetson</p>	<p>Commenter provided 35 comments on the provisions for the 3 alternatives on individual rows in Table 2-6.</p>	<p>Comments on provisions would have been more appropriately submitted as comments on the proposed rule sections. WDFW appreciates the comments.</p>
<p>Timothy Ibbetson</p>	<p>[re: Alternative 2 description] Preferred by whom? The WDFW to create requirements for more staff and more regulatory oversight for redundant code requirements that are covered by other federal and state codes that supersede the hydraulic code?</p>	<p>Yes, Alternative 2 was chosen as the preferred alternative by the action agency, which is WDFW.</p>
<p>Timothy Ibbetson</p>	<p>[re: alternatives not evaluated] The proposed code does not provide transparency or predictability either. It is redundant and burdensome and can lead to significant impacts to citizen's right, health, and costs. It will also impact municipal and state road building projects and storm water management systems. It is clear that multidisciplinary BAS that pertains to Washington state and specifically Washington's marine area was not used. Also, BAS must be defined; a list of publications is not BAS, especially when this list is not specific to Washington and none of the references used are cited anywhere.</p>	<p>Your perspective is noted.</p>
<p>Timothy Ibbetson</p>	<p>[re: alternatives not evaluated] All codes, even those that protect fish life must still consider citizen's constitutional rights and human safety and the protection of property. No code can ignore these fundamental concepts.</p>	<p>Thank you for the comment.</p>
<p>Timothy Ibbetson</p>	<p>[re: alternatives not evaluated] Commenter provided 12 comments to individual rows of Table 2-7 Suggested Rule Changes that are</p>	<p>Thank you for the comments.</p>

COMMENTS	COMMENT	RESPONSE
	Inconsistent with Current Statute.	
Timothy Ibbetson	<p>What statute changes, does this mean changes to the codes by sections? This includes several statutes within each code but which code(s)? Fish and other sciences are constantly changing, the science must be multidisciplinary and the science used for the definition for a stream in WAC 220 is not scientifically correct and is inconsistent with the instream flow rule. It is also inconsistent with most critical areas ordinances (GMA and SMA). Licensed engineers and scientists (geologists) are required to provide the best designs based on the best available science. It is unclear why the WDFW is providing design specifications that can become outdated within months after the proposed rule is adopted. This is one of the problems with the existing hydraulic code. The WDFW should simply require that BAS be used when designing projects that can impact fish.</p>	<p>Commenter is understandably confused about the distinction between the statute (Revised Code of Washington – the “law” passed by the legislature) and the code (Washington Administrative Code – also called “rules”).</p> <p>“Best Available Science” is not a standard that can be measured for compliance. Each hydraulic project has unique characteristics and circumstances for which individualized provisions are more appropriate.</p>
Timothy Ibbetson	<p>Either 1 or 4 should be chose (preferably 1). However, the legislature should address the need for the WDFW to conduct these activities and should consider removing the HPA requirements and focus on requirements in other codes such as the Clean Water Act, the ESA, the GMA and SMA critical areas etc.</p>	<p>Your preference is noted.</p>
Timothy Ibbetson	<p>There is no evidence that the proposed rule will accomplish these goals, but it is clear that they are redundant, burdensome, and will not meet Best Available Science because science and designs change as more is learned. There is certainly NO evidence the process will be streamlined, but there is evidence that the costs to implement the proposed changes will enormous and will impact the citizens of this state in many ways, including higher costs for housing and higher costs for road construction.</p>	<p>Thank you for your insights; we would like to see your evidence about costs to implement the proposal. WDFW acknowledges that it's difficult to determine to what level the application process has been streamlined until implementation provides that evidence.</p>
Timothy Ibbetson	<p>No examples are provided. However, the hydraulic code is outdated and redundant. It should not exist anymore because there are plenty of more recent federal and state codes that protect all fish and endangered species equally (and all aquatic organisms, even vegetation).</p>	<p>Please refer to EIS Table 2-1 for a listing of statutes that are not reflected in the existing Hydraulic Code Rules.</p>
Timothy Ibbetson	<p>Each project is unique and the science is changing daily as are the methods and designs for projects and even for mining. The</p>	<p>WDFW works with environmental engineers in other agencies and in the private sector. WDFW provides technical assistance to HPA</p>

COMMENTS	COMMENT	RESPONSE
	design by a licensed engineer or scientist must meet BAS and this should be sufficient (it is for the other federal, state, and municipal codes). It is unclear how WDFW staff are considered to be the only experts that can design a hydraulic project and it is unclear how many "experts" the WDFW has (licensed engineers and scientists).	applicants and their contractors and engineers as needed.
Timothy Ibbetson	Most of the references cited by the WDFW are not applicable to all water bodies or are specific to the state of Washington which varies significantly (western Washington is very different from eastern Washington and the alpine areas are very different from the lowlands (and the marine areas are very different from the rest of the state). This is why there are different storm water management manuals published by the Department of Ecology.	Most of the scientific studies conducted in the field of fisheries habitat are conducted at a local scale. WDFW HPA provisions are tailored to the specific site characteristics and project needs of the applicant.
Timothy Ibbetson	The proposed version of the hydraulic code is not user friendly either. It is redundant and will be very costly to those affected by this revised code without creating any significant benefits.	Thank you for the comment; others have told us the revised organization makes it easier to find the information they are looking for.
Timothy Ibbetson	Commenter included 20 separate comments within Table 2-1 primarily providing alternative interpretations of the effects of each bill.	Thank you for your comments.

### A.1.8.5 Chapter 3 – Affected Environment

COMMENTS	COMMENT	RESPONSE
Northwest Marine Trade Association	Section 3.8 of the SDPEIS states "Recreation that is related to the presence of healthy fish life is a major economic engine in Washington, particularly in more rural areas. USFWS estimates in its 2011 report that expenditures for recreational fishing in Washington tops \$974,615,000. It is vital to the ecological health and community sustainability of Washington State that fish resources be protected." Much of this recreational fishing is conducted by the 238,000 recreational boaters in Washington State (not to mention visiting boats and non-registered human-powered craft). As the mission of the NMTA is to promote the growth of recreational boating in Washington State, it is imperative that the recreational fishing community have access to waters containing healthy fish life. Access and	WDFW agrees that it is critical to provide access for recreationists that support fish and wildlife conservation in Washington. It is also important while implementing recreational access projects to maintain protection for the fish that are the object of that recreation.

COMMENTER	COMMENT	RESPONSE
	<p>facilities that provide access to these fisheries should be considered when determining economic impacts from this rulemaking process especially as it relates to restriction(s) on construction of new facilities and replacement and rehabilitation of existing facilities. These comments should also be considered under Section 3.10 "Social and Economic Issues".</p>	
<p>Timothy Ibbetson</p>	<p>[Ch. 3 Affected Environment - Fish] Could this decline be due to fisheries cross breeding salmon species? Could it be caused by over fishing due to incorrect run predictions. Also could it be due to misidentifying ephemeral drainage systems, manmade ditches, and point sources as streams?</p>	<p>Thanks for your comment listing several other factors limiting salmon recovery. WDFW has implemented improvements in all the limiting factor areas that we can affect. WDFW has implemented harvest and hatchery reforms, and is very active in restoring and preserving habitats. Please also refer to the response in section A.1.7 regarding small-flow streams.</p>
<p>Timothy Ibbetson</p>	<p>[Ch. 3 Affected Environment - Fish] Some of these are "new species" created by the fisheries by cross breeding species that do not normally mate.</p>	<p>Opening fisheries to harvest fish does not create species. WDFW hatchery reforms are reducing or eliminating hybridization that can cause negative effects between hatchery and wild fish. WDFW hatchery programs have also served to preserve the genetic material of wild stocks that are close to extinction. Each hatchery program is tailored to the specific management objectives of the species and geography involved.</p> <p>Many new and invasive species are introduced into Washington waters unintentionally or carelessly. WDFW is very involved in work to prevent and respond to the introduction of invasive species. WDFW, Ecology, other agencies, local governments, and extension agents all provide information on invasive species and how to prevent their introduction.</p>
<p>Timothy Ibbetson</p>	<p>[Ch. 3 Affected Environment - Water] Water quality is already protected by federal and state codes, including the Clean Water Act administered by the USEPA. The problems arise when manmade features, including ponds, drainage ditches, irrigation systems, and point sources are misidentified as natural features.</p>	<p>Commenter provided a number of comments suggesting changes to sections of the "Affected Environment" chapter; changes were made as appropriate.</p>
<p>Timothy Ibbetson</p>	<p>[re: wetlands] The USEPA and Corps supersede all state codes if the feature is determined to be waters of the United States and the USEPA and Corps are the only two</p>	

COMMENTER	COMMENT	RESPONSE
	<p>entities that can make this determination. Both the GMA and SMA require that wetlands be identified using the Corps of Engineers 1987 and 2010 manuals (regional supplement). These manuals require hydric soils, which require aquic conditions, which means that the water is anaerobic and highly reducing. No fish or other water breathing organisms can survive in these conditions.</p>	
<p>Timothy Ibbetson</p>	<p>Most of these [wetlands] (90 or greater percent) wetlands are located in marine shoreline areas. Per the Corps of Engineers 1987 manual, Page 44 2(b) "Analyze hydrologic data. Subject the hydrologic data to appropriate analytical procedures. Either use duration curves or a computer program developed by WES (available from the Environmental Laboratory upon request) for determining the mean sea level elevation representing the upper limits of wetland hydrology."</p>	

**A.1.8.6 Chapter 4 - Impacts**

COMMENTER	COMMENT	RESPONSE
<p>Dan &amp; Gloria Clark for Spokane Chapter Citizens' Alliance for Property Rights</p>	<p>The updates do not show how the proposed changes will affect the health and safety of citizens, their habitat, city and county government, drinking water resources, businesses, and possessions such as homes, bulkheads, docks, yards, and livestock.</p>	<p>EIS sections 4.7.1 through 4.7.9 provide an overview of impacts to the topics you mention.</p>
<p>Karen Walter, Muckleshoot Tribe</p>	<p>the Department is knowingly implementing a program that will, at best, continue incremental degradation of fish habitat at an unknown rate. No explanation is provided as to how this is consistent with the concept of "protecting" fish life, or meeting WDFW's obligations as a co-manager of treaty-protected resources. At a minimum, if there are impacts that the Department is barred from addressing by state law or other circumstances, such as impacts stemming from freshwater and marine bank stabilization, channel dredging, or tidegate replacement, then the Department needs to disclose these obstacles and the impacts they cause as part of this environmental review. The DSPEIS fails to do so.</p>	<p>WDFW appreciates the comment; we have modified the EIS to provide additional clarity about the limits of WDFW's authority to provide the protections you describe.</p>
<p>Northwest Marine Trade Association</p>	<p>The SPDEIS does not consider the Washington Department of Natural Resources (DNR) proprietary role in managing state-owned</p>	<p>Thank you for the comment; the EIS has been modified accordingly.</p>

COMMENTS	COMMENT	RESPONSE
	<p>aquatic lands (SOAL). Many projects that require an HPA occur on SOAL. DNR is currently developing a Habitat Conservation Plan (HCP) that will define requirements for the protection of species and habitats on SOAL. The DNR role in managing SOAL and development of the HCP should have been included in Section 1.5, Related Regulations and Policies.</p>	
<p>Northwest Marine Trade Association</p>	<p>Although considered in the SDPEIS, potential impacts to wildlife already covered by other regulatory agencies should not be included in determinations of HPA related projects or hydraulic code rule changes. Indirect benefits to wildlife from hydraulic code rules are positive outcomes, but hydraulic code rules are designed to protect fish life and associated habitats, not wildlife directly.</p>	<p>WDFW agrees with the commenter's statement and changes have been made to the EIS to clarify this matter.</p>
<p>Northwest Marine Trade Association</p>	<p>Section 4. 7.2.5 {p. 4-40) describes that although Alternative 2 places more restrictions on locations of hydraulic projects, the new rules would provide certainty about locating the projects. The level of increased restriction from the new rules does not provide increased certainty for applicants, it only provides less opportunity for potential projects that require an HPA. With the increased timing, location and construction restrictions, the agency is effectively eliminating projects from occurring in any locations that are not currently developed. Project proponents have greater certainty when they have an opportunity to demonstrate how their project can avoid, minimize and compensate for impacts versus overly restrictive rules that don't provide for this type of consideration.</p>	<p>WDFW has reviewed the EIS section cited and made revisions as appropriate. A person can see in the proposed rules and by referencing optional guidance document, the range of likely permit requirements for his/her project type. Providing this information up front gives applicants greater certainty about what project attributes are most likely to be permitted.</p>
<p>Northwest Marine Trade Association</p>	<p>Section 4.7.3 states "Most projects are unattractive when under construction." This would not appear to be pertinent when considering new rules for the protection of fish life and habitat. Attractiveness is a subjective consideration especially if it is temporary due to construction activities. The families who are supported by the careers and jobs around these projects and the communities that benefit from increased tax revenue find these projects very attractive.</p>	<p>The EIS has been clarified in this regard: the light, glare, noise, and aesthetics of projects under construction are usually annoying when compared to the pre- and post-project condition. These issues are project impacts that SEPA is intended be disclosed in an EIS.</p>
<p>Northwest Marine Trade Association</p>	<p>As the DEIS states, the recreational fishing industry in Washington is a billion dollar annual industry. Access and facilities that</p>	<p>WDFW agrees that it is critical to provide access for the recreational fishing industry. It is also WDFW's responsibility to preserve,</p>

COMMENTER	COMMENT	RESPONSE
	provide access to these fisheries should be considered when determining impacts from this rulemaking process especially as it relates to prohibitions and restrictions on construction of new facilities and maintenance and repair of existing facilities.	protect, and enhance the fish that are the object of that recreation. WDFW believes that Alternative 2 strikes a balance between these two needs.
Northwest Marine Trade Association	Sections 4.7.4.2 {p. 4-42} and 4.7.4.5 {p.4-43} describe provisions from alternative 2 that affect recreation and mitigation. Section 4.7.4.2 discusses that new regulations covering recreation related activities have been added that will have significant constraints on location, design and construction and increased costs and time to complete projects. Section 4.7.4.5 describes that procedural changes for hydraulic projects could offset some of these increases. If this is the case, a further discussion of how the procedural changes will help offset some of increases should be provided.	The EIS has been modified in response to this concern.
Northwest Marine Trade Association	Section 4. 7.9.2 discusses that "property owners may experience higher long term costs ..... if they are not able to develop their property as expected" and "there is a greater potential for property owners to experience higher development costs." The proposed new rules may prevent a property owner from developing their property. Mitigation for impacts should be developed to "offset negative effects to the built environment" in these cases.	The EIS has been modified in response to this concern.
Northwest Marine Trade Association	Section 4.7.9.2 also describes that Alternative 2 would reduce the risk of negative impacts to the built environment as compared to Alternative 1. Reduction in risk is not described nor is it pertinent as Alternative 1 is not a viable alternative because it "does not meet the purpose and needs for the action." This section goes on to say that the Preferred Alternative "provide(s) flexibility for project-specific conditions instead of the current one-size-fits-all approach." One of the primary themes and reasoning for the proposed new rules is to provide certainty (one-size-fits-all) for applicants to reduce the need for site specific considerations (project specific conditions) and decision making that occurs currently. This is a contradictory statement to the intent of the rulemaking process.	The EIS has been modified in response to this concern.
Northwest Marine Trade	Appendix A- Even though this section states "A Supplemental Draft EIS does not typically	Thank you for this comment. WDFW agrees this might have been helpful to readers.

COMMENTS	COMMENT	RESPONSE
Association	include a formal response to comments that were received on the previous Draft EIS", these comments should have been provided in the Supplemental Draft EIS for transparency and to assist interested parties in identifying the input from all prior commenters.	Please refer to Appendix A in the final EIS for comments and responses to Version 4 and 5 rules, and the Draft and supplemental EIS documents.
NWIFC	The SDPEIS does not disclose how many of each of type of projects /improvements are expected annually nor how likely these projects are to result in long-term impacts to fish and/or shellfish habitat. From all indications, it does not appear that the Department requires that the impacts of these projects/activities be fully mitigated. Consequently, it is incorrect to state or imply that any of the alternatives are "self-mitigating" or that the rules are designed to achieve no net loss of fish habitat.	Frequency of project types was provided in the economic analysis document. Responses to concerns about mitigation are addressed in section A.2 and section A.1.4. Language implying alternatives are "self-mitigating" was modified for clarity in the EIS.
Peter Ojala, French Slough Flood Control District	The draft supplemental EIS does nothing to discuss the conversion of agricultural land to non-agricultural uses through mitigation efforts encouraged by the draft rules in the mitigation and compensatory mitigation provisions, and other provisions.	Conversion of agricultural and forest land to residential development is a huge concern for us all. We are unclear how your comment links this concern with mitigation provisions.
SoundAction et al.	The SDPEIS declares at Table 4-4 (row titled P 220-66-370, page 4-18) that new provisions in the preferred alternative for re-establishment landward of a breached bulkhead, preference for least impacting alternative, site assessment, alternatives analysis, and design rationale by qualified professional "reduce impacts from shoreline modifications." However, while these procedural provisions may result in a more-informed permitting decision, they do not offer substantive, implementable protections for fish life. For example, they do not prevent the construction of bulkheads on surf smelt spawning beaches, or prevent the associated vegetation removal.	Thank you for the comment.
SoundAction et al.	The SDPEIS declares at 4.3 that "[o]utcomes related to implementing the proposed rule changes would improve conditions for fish that would help them withstand the impacts of climate change." However, the SDPEIS does not explain how it would do so and, in the context of shoreline modifications like bulkheading, the absence of an enforceable limitation against bulkheads would lead to narrowing beaches that would decrease	Thank you for the comment; the EIS has been modified to reflect your concern.

COMMENTS	COMMENT	RESPONSE
	<p>spawning habitat and thus diminish forage fish resiliency for responding to climate change.</p>	
<p>SoundAction et al.</p>	<p>In its discussion of the Impacts of Hydraulic Projects to Vegetation, at 4.6.1, the SDPEIS omits a candid assessment of the infeasibility of replanting riparian vegetation and low likelihood of success for at least some hydraulic projects. For example, hard rock associated with bulkheads provides a much poorer substrate for vegetation growth than does a natural, soil shoreline. In addition, even where the original substrate remains along the shoreline, inhospitable marine conditions can make reestablishment of vegetation difficult.</p>	<p>The EIS has been modified to address your concern.</p>
<p>Yakama Nation</p>	<p>Yakama Nation has comments concerning cultural resources. As we noted, the PEIS did not comply with State Environmental Policy Act (SEPA) concerning cultural resources. The new SPDEIS has even less discussion on cultural resources. Hydraulic projects can damage and destroy significant cultural resources. A reasonable process to identify and protect historic, archaeological and traditional cultural properties needs to be adopted into the approval process of hydraulic projects if WDFW does not intend to survey all of the waterways of Washington where hydraulic projects can be proposed.</p>	<p>Projects requiring HPAs are more likely than non-HPA projects to be located where ground disturbance can reveal artifacts from Washington's rich Native American cultures. The draft EIS indicates that project proponents are responsible to identify and protect cultural resources. The Washington State Office of Archaeology and Historic Preservation has established a process for assessments of cultural resources at construction sites. Changes have been made to the EIS to clarify the language about cultural resources.</p>
<p>Timothy Ibbetson</p>	<p>[re: physiological barriers to fish migration] What science is this base on? This is where the citations should be included (from the references list). None of this is supported by science and ignores natural impacts such as beaver dams, landslides, forest fires, large woody debris (including log jams), wind thrown trees, etc.</p>	<p>Please refer to the EIS reference list in Chapter 5 for documents used in developing this EIS discussion.</p>
<p>Timothy Ibbetson</p>	<p>Large woody debris, including log jams, vegetation on the shoreline, and other in water and on shoreline features (including beaver dams) reduce light and impact the hydrology of the fluvial system (or lacustrine/marine system). It is unclear why docks, piers, or other over or in water features create any more impacts than those that are created by restoration projects or nature. It is also unclear why it is assumed that aquatic vegetation will not replenish itself considering terrestrial vegetation does re-vegetate itself (look at Mount St. Helen's).</p>	<p>Your perspective is noted.</p>

COMMENTS	COMMENT	RESPONSE
	It is also unclear if eelgrass and kelp are endangered species.	
Timothy Ibbetson	[re: impacts to water resources] Where is the science? Citations are needed. Also, no stream or river (or marine shoreline) is static, these are hydrologic systems that are continuously changing. Natural is change and fish have evolutionarily adapted to change. Approximately 15,000 years to 12,000 years ago the Puget Sound and all mountain ranges were completely covered with ice, there was no direct communication with the Pacific Ocean and water was fresh water that was much higher in glacial lakes. The salmon and other species survived these conditions because they are here today. It is unclear why the WDFW believes that any minor change will impact these species considering their heartiness is proven based on the Pacific Northwest's glacial history.	Please refer to the EIS reference list in Chapter 5 for documents used in developing this EIS discussion.
Timothy Ibbetson	How will the proposed rules impact agriculture?	Please refer to EIS section 4.7.6 for a discussion of impacts of the alternatives on agriculture.

**A.1.8.7 Chapter 4 Cumulative Effects**

COMMENTS	COMMENT	RESPONSE
Long Form Letter	Add language [to rules] to require the evaluation of cumulative impacts to ensure an overall no net loss standard is met. (to comply with WDFW policy for requiring and recommending mitigation.)	The HPA is a short-term construction permit, not a planning process or land use permit such as SMA or GMA.
SoundAction et al.	In its discussion of cumulative impacts, the SDPEIS states at the bottom of page 4-52 that the new regulations will reduce overall habitat losses. However, the SDPEIS does not evaluate the likelihood that Hydraulic Project Approvals will be used to justify approvals for shoreline development under more strict local Shoreline Master Programs (“SMP”). Given the history of occasional testimony by WDFW staff on behalf of applicants for SMP permits, the SDPEIS should evaluate the potential for the proposed rulemaking to result in approval of projects under SMPs that might otherwise be denied.	The current and proposed technical provisions represent common provisions for the protection of fish life for typical projects proposed to the department. Implementation of these provisions is necessary to minimize project specific and cumulative impacts to fish life. Each application must be reviewed on an individual basis.
Trout Unlimited	Trout Unlimited is concerned about the absence of a mechanism for evaluating cumulative impacts related to hydraulic projects. This is a concern shared by many	Under the proposed rules, hydraulic projects are reviewed, and HPAs are conditioned, for project-specific impacts to achieve no loss of fish life. The goal of no loss per project minimizes cumulative impacts. No-net-loss means: <i>(a) Sequentially avoid, minimize, and compensate for unavoidable adverse impacts to fish life.</i> <i>(b) Sequentially avoid, minimize, and compensate for unavoidable net loss of</i>

COMMENTS	COMMENT	RESPONSE
	<p>staff within WDFW and in other resource management agencies, and we understand that the WDFW's current statutory authority is limited in this regard. However, this is one of TU's largest concerns with the State's existing system for permitting hydraulic projects and we are committed to working with WDFW to find a solution to this shortcoming. We believe it is imperative that updated regulations include consideration of cumulative impacts with regard to review/administration of HPAs, as acute impacts to aquatic habitats in any given sub-watershed often are exacerbated by the compounding effects of many individual projects within a relatively small area.</p>	<p><i>habitat functions necessary to sustain fish life.</i></p> <p><i>(c) Sequentially avoid, minimize, and compensate for unavoidable loss of area by habitat type.</i></p> <p>The Hydraulic Code (chapter 77.55 RCW) sets boundaries on the scope of HPAs. HPAs may not be unreasonably withheld or unreasonably conditioned (RCW 77.55.021(7)(a)). Also HPA provisions must be reasonably related to the project, and not an attempt to optimize conditions for fish that are out of proportion to the impact of the proposed project (RCW 77.55.231). The following are some further examples of the statutory limitations on HPA authority:</p>
<p>Upper Skagit Indian Tribe</p>	<p>The SDPEIS states that addressing cumulative impacts is beyond the scope of the Code. The Tribe does not agree with this interpretation and urges WDFW to develop approaches to quantify the cumulative impacts from decades of HPA project construction.</p>	<p>Marine bulkheads are a significant cause of cumulative impacts in Puget Sound. However, RCW 77.55.141 directs that WDFW shall issue HPAs, with or without restrictions, for single-family marine bulkheads that meet specified criteria.</p>
<p>Yakama Nation</p>	<p>Also, cumulative impacts from projects haven't been addressed in the revisions and EIS. Cumulative impacts of projects can have a significant adverse impact on fish life. The SDPEIS admits, "...we can't deny that there are cumulative effects to the environment from hydraulic projects and development." It goes on to state, "While the improved design requirements and specific mitigation measures in the proposed Hydraulic Code Rules are intended to decrease impacts associated with individual hydraulic projects, cumulative impacts will continue to occur as the number of projects constructed increases." How does this meet the department's statutory mandate and SEPA requirements? Quite clearly, cumulative impacts to fish life must be addressed in the Rule revisions and SPDEIS.</p>	<p>Permits issued in locations covered by a national pollution discharge elimination system municipal storm water general permit may not be conditioned or denied for water quality or quantity impacts arising from storm water discharges. A permit is required only for the actual construction of any storm water outfall or associated structures pursuant to this chapter (RCW 77.55.161(2)).</p> <p>Fish passage may not be required for existing tide gates, flood gates, or other associated man-made agricultural drainage facilities (RCW 77.55.281).</p> <p>The department is required to immediately approve certain activities when a state of emergency has been declared (RCW 77.55.021(12)).</p> <p>The department is required to approve applications for specified activities when appropriate authorities have determined that an imminent danger or chronic danger exists (RCW 77.55.021(14), (15)).</p> <p>These limitations render an individual HPA unsuitable for addressing broad scale cumulative impacts. They also demonstrate a legislative intent for HPAs to authorize work without requiring prevention of cumulative impacts.</p>



## ***A.2 Comments on Proposed Changes to the Hydraulic Code Rules ~ Version 6***

The pace for rulemaking caused some procedural glitches that, while complying with rulemaking procedures under the Administrative Procedures Act, understandably confused reviewers. On July 2, 2014 WDFW filed a Notice of Proposed Rulemaking (CR-102) that provided a draft of the proposed rule changes as of that date (“Version 5”). Because WDFW discussions with stakeholders were ongoing through the spring and summer, the July 2 draft of the rule changes did not reflect all of the rule updates WDFW and stakeholders were pursuing. Those last few changes were summarized in an addendum to the rulemaking documents called “*WDFW Staff Recommended Amendments to CR-102 (July 15, 2014) Chapter 220-660 Hydraulic Code Rules (OTS-6463.1 Final)*”. The rules incorporating these staff-recommended amendments are called “Version 6.” The comments below were directed at Version 6 of the proposed Hydraulic Code rules.

As with the EIS comments, individual comments regarding specific Hydraulic Code rule sections were entered onto a table and categorized by section. Individual commenter names were not identified on the comment table because many commenters remarked on the same section of the rules. We elected not to repeat the same concern or change request in the table.

Rules comments ranged from very specific language changes to more general concerns that certain sections of the rules weaken protection of fish life. Some commenters expressed concern that the mitigation provisions of the rules are not strong enough to fully mitigate for impacts. A few commenters requested rule changes that would require legislation to change WDFW’s authorities under chapter 77.55 RCW.

Comments on rule content have been organized by rule section and summarized on Table A-8

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**Table A-8 Comments on Proposed Hydraulic Code Rule Changes Version 6**

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
010		Amend to retain existing opening language which reads: It is the intent of the department to provide protection for all fish life through the development of a statewide system of consistent and predictable rules	Comment noted.	No
020		First paragraph, 4th sentence, delete "cumulative". In Response to Comments, Draft 2, Fish & Wildlife made the following statement: <i>Under RCW 77.55 we do not have authority to regulate cumulative impacts.</i>	This simply describes the benefits of the rules. The rules do "minimize" cumulative impacts however; we don't require compensatory mitigation for cumulative impacts. As an example, mitigation for the first dock would be the same as mitigation for the fifth dock built on a lake if the impacts from each dock were the same. We wouldn't require the applicant for the fifth dock to compensate for the cumulative impacts from all five docks. However, the mitigation required to offset unavoidable impacts caused by the fifth dock will minimize cumulative impacts.	No
020		In the last sentence, delete "the department will incorporate new science and technology as it becomes available." Adding or incorporating information and calling it "adaptive management" to change the WAC without going through rule-making would not be following the administrative procedures act.	If an applicant proposes a project that uses new science or technology that provides equal or better protection for fish life we want the flexibility to allow that. We agree that if the new science or technology becomes a standard requirement it must go through rule-making.	No
020		In the second paragraph the department may modify or delete common technical provisions, or add special provisions. Are there limits or constraints to these modifications? It is not clear in subsection 070 and this section seems to give unlimited authority to local Department personnel. Please change.	The department is constrained by statute. See RCW 77.55.021(7)(a) and RCW 77.55.231(1)	No
020		The department will incorporate new science and technology as it becomes available (This statement needs to be substantiated to be valid. How will WDFW incorporate new science? DNR recommends WDFW through the Fish and Wildlife Commission adopt a process much like the Forest Practices Adaptive Management Program to invoke a public process under which they will make future rule changes based on	The rule-making process does invoke public process. If an applicant proposes a project that uses new science or technology that provides equal or better protection for fish life we want the flexibility to allow that. We agree that if the new science or technology becomes a standard requirement it must go through rule-making.	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
		science),		
030	(011)	Second sentence, delete "constrains the water" and use original language of "contains it". "Containing" is a more accurate description of what banks do, according to common usage.	It is common for waterbodies to overflow their banks during high-flow events. For this reason "constrains" is an accurate description.	No
030	(012)	Delete all of the second sentence. There is no relationship between flood flow reoccurrences and the bankfull width.	The bankfull discharge often has a flood frequency of approximately 1.5 years on the annual series, but the frequency can vary widely depending on the particular watershed and stream reach characteristics (FISRWG 1998). We will add the word "often" to clarify.	Yes
030	(020)	Section 220-660-(030)(20): "Channel bed width" means the width of the bankfull channel, although bankfull may not be well defined in some channels. For those streams which are non-alluvial or do not have floodplains, the channel width must be determined using features that do not depend on a floodplain." The request for the addition was attributed to WFPA; however, WFPA does not support this definition. Again, the reliance on "bankfull" width is an expansion of the Department's authority	Comment noted. Will attribute the definition to WDFW.	No
030	(020)	Channel bed width - How can a stream be non-alluvial? A stream, by definition, must have flow of water adequate to form and maintain a channel. If it is non-alluvial, then there inadequate flow of water to form a stream. Maybe it is intended here that the bed and banks are "non-alluvial" meaning they are essentially bedrock. Clarification may be needed here.	Comment noted.	No
030	(021)	Definitions (20) and (21) referring to chronic danger, defines the condition as having experienced at least two consecutive years of flooding. How does this differ from an emergency or imminent danger HPA. Also, what about damage to property (land which is being used for economic gain, or personal use). Please clarify.	The Legislature created an additional HPA type: "chronic danger". The language in the definition is from RCW 77.55.021(15).	No
030	(024)	After "minimization" add "mitigation sequencing."	This definition is consistent with RCW 90.74.010(1).	No
030	(026)	Keep existing definition of "control." The new definition cannot be attained at any location. This would	This definition is consistent with 16-750-003(2)(a) State noxious weed list definitions.	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
		automatically place anyone out of compliance.		
030	(033)	This definition refers to an alteration by humans. It does not give a timeframe, or the manner of alterations. Currently, there are many classified streams that would be considered to be a ditch if time-frames were not included.	Comment noted.	No
030	(037)	The definition of "Emergency" does not include the designation of an "Emergency" as declared by the local legislative authority. I recommend that this definition include such a clarification regarding the authority of the local legislative authority to declare an emergency in order to eliminate any confusion regarding the validity of actions taken subsequent to the declaration by local government forces to preserve life and property.	The authority to declare an emergency (with respect to hydraulic projects ) is stated in chapter 77.55.021(12) as <i>"The department, the county legislative authority, or the governor may declare and continue an emergency."</i> Your proposal would not be consistent with this statute, or would require a legislated change. The process for declaring an emergency is in section 050(4).	No
030	(041)	Keep existing definition of "eradication." The new definition cannot be attained at any location. This would automatically place anyone out of compliance.	This definition is consistent with WAC 16-750-003(2)(c) State noxious weed list definitions.	No
030	(046)	Please provide a definition or parameters for "significant hardship"	WDFW declines to provide a definition at this time, though we agree that defining this term could be very helpful for applicants and the department. We note that there are hundreds of statutes that provide exceptions for "significant" or "undue" hardship, and few that actually define the term. This is not meant to justify WDFW's decision, but is merely an observation and acknowledgement of the difficulty agencies have experienced in defining the term.	No
030	(050)	I support the definition.	Comment noted.	No
030	(050)	Amend to read: Fish habitat" means habitat, which is used by fish life at any life stage at any time of the year including potential habitat likely to be used by fish life, which could reasonably be recovered by restoration or management and includes off-channel habitat. Fish habitat also include habitats and ecosystems that indirectly support fish life habitats.	To reduce conflicting interpretations, the definition provided in this section is the same as the definition in forest practices rules.	No
030	(050)	WDFW should provide clarity in the rule by removing the phrase "including potential habitat" from this	Section 080 states clearly that maintenance and repair work does not require compensatory mitigation unless	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
		definition or including a statement in this section of the rule and elsewhere that it will not require mitigation for impacts to potential habitat on previously existing and currently serviceable structures when an applicant is performing maintenance work on those structures.	the work will result in a new impact not associated with the original construction, or the work does not comply with common and project/site specific construction provisions.	
030	(051)	This definition is blatantly set up to promote fish life habitat restoration, particularly on private/agricultural drainage ditches that are not streams.	A fish habitat enhancement project is defined in RCW 77.55.181.	No
030	(052)	What about stream channel improvements that alleviate flooding and improve "human conditions" and are fish neutral? Please add this.	This definition describes restoration work to improve fish habitat.	No
030	(052)	After "placed in" delete "or next to" to be consistent with RCW 77.55.021.	"Fish habitat improvement structures" (the definition at which your edit was directed) include materials placed in or next to the water to improve fish habitat. The Term "or next to" is appropriate here. Please see our response in Appendix A Section A.1.2 regarding jurisdictional boundaries.	No
030	(054)	Under RCW 77.55.021(7)(a) , " protection of fish life is the only ground upon which approval of a perm it may be denied or conditioned ." "Fish life" however is not defined in the RCWs. Therefore, WDFW seeks to define "fish life" through the rulemaking process, irrespective of what the legislature intended that to mean. To do so is to define and expand unilaterally its own jurisdiction. WDFWs jurisdiction and rulemaking authority is limited only to the HPA approval process, in so far as the legislature intended it, and not with respect to when an HPA will be required.	The purpose of WAC is to implement RCW. This language does not conflict with the RCW. Fish life has been defined in WAC 220-110-020(36) since at least 1994.	No
030	(061)	This needs to be added to the definition of fish life habitat...otherwise there is a disconnect between what is not a freshwater area and what is fish life habitat; fish life habitat could be protected in a non-freshwater area.	Comment noted. Our jurisdiction is defined in RCW 77.55.021(1). There is work that occurs in non-fish bearing freshwaters of the state that impacts fish life and their habitats downstream. An example is a project that blocks the transport of sediment and wood by the stream to downstream spawning areas.	No
030	(062)	Structural components (i.e. framing) should not be considered in this calculation as there is no other way to support the grating.	The proposed definition is consistent with other regulations. Another option is to increase the amount of surface area coverage to account for structural	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
			components	
030	(066)	This new guideline appears to expand the definition of "protection of fish life" as given in the RCW, and therefore reaches beyond its scope.	"Protection of fish life" is mandated but not defined in chapter 77.55 RCW. Please see existing WAC 220-110-020(68) and proposed WAC 220-660-030 paragraph 116 in version 6; 118 in the final adopted rule.	No
030	(067)	This new guideline appears to expand the definition of "protection of fish life" as given in the RCW, and therefore reaches beyond its scope.		No
030	(071)	Does this include net-pens?	Yes in a broad sense.	No
030	(077)	The timeframe for imminent danger needs to be expanded beyond 60-days to at least 90-days.	This expansion would require a legislative change. 60 days is in the definition in statute (RCW 77.55.011(12)).	No
030	(079)	This definition refers to use of explosives on "any location adjacent to the waters". What does this mean? Adjacent to waters is not defined and who makes the determination. Please correct. This comment also applies to definition (80) "immediately adjacent".	Adjacent is determined by the impact to fish life and the habitat that supports fish life. This could vary depending on the amount of explosives, the sound attenuation, and physical characteristics of the site.	No
030	(079)	After "under, or in waters of the state" delete "or in any location adjacent to any waters of the state". In-water blasting does not define blasting in upland areas that are out of the water. These are two definitions contained into one.	This is our definition of this hydraulic project. Please see our response regarding our jurisdiction.	No
030	(080)	After "area of ground" add "below the OHWL" and after "immediately adjacent" add "upstream or downstream". After "conducted under" add "the authority of" to be consistent with RCW 77.55.021.	Please see our response in Appendix A Section A.1.2 regarding jurisdictional boundaries.	No
030	(082)	Your definition of "lake" needs to be refined. As defined currently, this could include man-made ponds and it should not. The Department of Ecology and law currently allows the impoundment of water up to ten-feet high and one acre in size of which WDFW does not have jurisdiction for said waters.	We'll add "artificially impounded natural fresh waters of the state" to provide clarity.	Yes
030	(085)	To be consistent with other State laws and regulations, Dept. of Fish and Wildlife should use the same definition that the Dept. of Ecology, as included in the Stormwater Manual, and has required all agencies to adopt as part of stormwater ordinances, NPDES permits, construction site permits, and other water	This definition accurately explains how the term is used in this chapter. No citation for a RCW or WAC definition is provided. Repair and maintenance is mentioned in SEPA but is not defined in WAC 194-11-040 or chapter 43.21C RCW. The purpose of having definitions in rule is to clarify how the term is used in that rule.	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
		quality regulations that WDFW was also required to adopt.		
030	(085)	The definition of maintenance and the associated definition of rehabilitation are too limited to allow counties to maintain existing infrastructure. This limitation has and will lead to county infrastructure failing over time with potential environmental degradation. We believe it is important to establish a process that addresses this issue. At a minimum the definition for maintenance should be expanded to include some activities that restore a structure to a condition that will not likely fail and cause other environmental problems.	The rules do not preclude activities that restore a structure to a condition that will not likely fail or cause environmental problems.	No
030	(086) and (098)	Refer to major and minor modification. These are not definitions at all as they are circular and wholly left up to the discretion of local Department personnel. This level of discretion of a defined term is inappropriate and should be reworked, or eliminated.	The language from the minor modification definition is from RCW 77.55.231(3). All other modification are considered major and require modification of the HPA. Proposed section 050(16) and (17) provides the rules for modifications.	No
030	(089)	Delete "all of the annual peak floods of record" and replace with "the average of all one-year flood elevations." Annual peak floods would indicate the hundred year flood or higher and is not a flood that occurs annually every year. This would indicate the one-year flood level to be consistent with RCW 77.55.021.	This is defined as an <u>average</u> of the annual peak flows.	No
030	(105)	Ordinary high-water line can be skewed by one year of flooding and therefore would not be considered ordinary. Please revise the definition.	This definition is from the statute RCW 77.55.011(16).	No
030	(106)	Need to define habitat functions to be protected.	See proposed WAC 220-660-100(3) and WAC 220-660-320(3) and (4).	No
030	(106)	Add a definition "no net loss" outlining that existing conditions of shoreline ecological functions should remain the same as before a development action is implemented, and that the no net loss standard is designed to halt the introduction of new impacts to shoreline ecological functions and resulting habitat loss resulting from new development.	The existing definition of no-net-loss is retained with some minor modification. Because our authority is limited to the protection of fish life, our definition of no-net-loss is specific to fish life and the habitat that supports fish life.	Yes

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
030	(114)	Amend to read: When certification is not required the professional must have: obtained a B.S., B.A., or equivalent degree in biology, engineering, environmental studies, fisheries, geomorphology, or related field, and have at least five years of related work experience.	Your suggestion seems overly prescriptive to us. Many of the DFW scientific technicians who conduct habitat surveys have two-year degrees, and are considered "qualified professionals." Please refer to the response to the next comment.	See next
030	(114)	We believe that the WDFW definition for a "Qualified Professional" is in conflict with WA State engineering practice law definition. The RCW defines the practice of engineering as being "any professional service or creative work requiring engineering education, training, and experience and the application of special knowledge of the mathematical, physical, and engineering sciences to such professional services, creative work as consultation, investigation, evaluation, planning, design, and supervision of construction for the purpose of assuring compliance with specifications and design, in connection with any public or private utilities, structures, buildings, machines, equipment, processes, works, or projects."	The term qualified professional can apply to several occupations including biologist. Proposed WAC 220-160-010 states "The purpose of the HPA is to ensure that construction or performance of other work is done in a manner that protects fish life." Engineering certification is not required to comply with the proposed rules, but someone with the proper understanding of the processes that create and maintain fish habitat is required ("qualified professional"). Building codes, and other rules and laws, exist for the protection of the public health and safety. The applicant must obtain appropriate permits for building a civil structure and an engineer has to back that up with their stamp. Based on legal advice, we will amend the proposed rule by adding the following disclaimer: "This definition does not supersede other state laws that govern the qualifications of professionals that perform hydraulic projects."	Yes
030	(116)	Protection of fish life - this definition implies that mitigation sequencing is required when proposed activities will avoid impacts. If avoidance is achieved then mitigation should not be required.	Avoidance is the first step in the mitigation sequence. If avoidance is achieved the subsequent steps are not required.	No
030	(116)	Amend to read: Protection of fish life means prevention of loss or injury to fish or shellfish, and protection of the habitat that supports fish and shellfish populations.	Comment noted. The proposed amended rule definition accurately reflects how the authority under chapter 77.55 RCW is implemented.	No
030	(116)	It is recommended that a variation of the previously proposed definition be utilized, as follows: "Protection of fish life "means the prevention of loss or injury to fish life and the protection of fish life habitat by avoiding and mitigating adverse impacts through mitigation sequencing."	See response above.	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
030	(118)	We believe the inclusion of 'compensating for' is too ambiguous and itself needs to be defined. Different stakeholders may have conflicting definitions for 'compensation.' For example, the tribes in their comments stated that they would like to remove language within 080(4)(d) which we believe helps define how you would determine compensatory mitigation.	Definitions, in general, describe the term and not how it is applied. Please see our response related to section 080(4)(d).	No
030	(120)	Rehabilitation means "major work". What is major work, and who determines major work, versus ordinary work. Please revise.	The key part of the definitions is "... needed to restore the integrity of a structurally deficient or functionally obsolete structure." This would be work beyond routine maintenance and repair.	No
030	(120)	Delete this definition. Rehabilitation is a type of maintenance as used in the State definition of "maintenance."	Repair and maintenance is mentioned in SEPA but is not defined in WAC 194-11-040 or chapter 43.21C RCW. The purpose of having definitions in rule is to clarify how the term is used in that rule.	No
030	(121)	Delete this definition. Replacement is a type of maintenance as used in the State definition of "maintenance."	Repair and maintenance is mentioned in SEPA but is not defined in WAC 194-11-040 or chapter 43.21C RCW. The purpose of having definitions in rule is to clarify how the term is used in that rule.	No
030	(124)	"Riparian Zones" seems to include flood plains, which it should not. Please refine this definition.	Your comment was noted but this statement is contrary to the science. See Management Recommendations for Washington's Priority Habitats: Riparian for the science <a href="http://wdfw.wa.gov/publications/00029/">http://wdfw.wa.gov/publications/00029/</a> .	No
030	(124)	Delete the last sentence. Aquatic zones are areas below the OHWL. This definition implies that all riparian zones have both aquatic and upland habitats. But not all riparian zones do.	We have added the word "often" to clarify that most riparian zones have elements of both ecosystems.	Yes
030	(128)	Keep the old definition. After the second sentence, starting with "saltwater areas include" delete the rest of sentence. It is arbitrary and needs to be consistent with other regulations and boundary limits which do not currently include freshwater areas that are below the 35 parts per million saltwater definition.	We have modified this definition.	Yes
030	(130)	"fish" should not be deleted here, but could be changed to "fish life". deleting "fish" here opens the HPA rules to regulating non-fish life habitat.	For consistency this was amended to "habitat that supports fish life".	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
030	(144)	After "mobile life stage" add "when fish would be expected to move or to travel."	The definition accurately explains how the terms are used in this chapter.	No
030	(149)	Delete the sentence "A 'watercourse' includes all surface-water-connected wetlands that provide or maintain fish habitat." A watercourse is a separate definition from the definition of a "wetland" and should not combine the two.	This definition accurately explains how the term is used in this chapter. The purpose of amending the definition is to provide clarity. In the past 20 years people have failed to obtain an HPA for work in wetlands that are salt or freshwaters of the state as required in RCW 77.55.021(1).	No
030	(151)	The inclusion of "watercourse" was introduced to expand jurisdiction from just "streams" to smaller formerly unregulated "watercourses".	We respectfully disagree. "Watercourse" is defined in our current rules, WAC 220-110-020(105) and we are not proposing substantive changes. Our jurisdiction is governed by the statutory definition of "hydraulic project" in RCW 77.55.011(11).	No
030	Add	Add definition for "fishway"	A fishway is any structure covered under chapter WAC 220-660-200 Fish passage improvement structures. An exception is a trap-and-haul operation that would not, typically, be called a fishway, but it is a fish passage improvement structure.	No
030	Add	The definition of "impact" should be provided.	See no-net-loss.	No
030	Add	The term "water body" is used in the rules in a few different places, yet there is no definition in Section 030. For example, the term "water body" is used in Section 190 (Water Crossings). Section 030(147) defines water crossing structures as "...structures that span over, through, or under a watercourse. Examples are bridges, culverts, conduits, and fords." Yet Section 190 states that an HPA is required for any structures that cross a stream, river, or water body. What is the definition of a water body? Should "water body" be replaced with "watercourse", "lake", or some other text that is defined in Section 030?	The definition: "Waterbody means 'waters of the state' has been added to 220-660-030.	Yes
030	Add	Add definition for "infrastructure"	We assumed that this term fell under common parlance and didn't require a definition. But the usage in these rules, and in many contemporary documents related to environmental issues, is quite a bit broader than a strict definition of infrastructure according to Webster: "the basic equipment and structures (such as roads and	Yes

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
			bridges) that are needed for a country, region, or organization to function properly." Clearly, what we call infrastructure is any structure, public or private, essential or non-essential, that is of value. We will replace "infrastructure" with "structures or other improvements of value."	
040	(2)	Exemptions should be aligned with Corps 404 exemptions, SEPA exemptions, and Shoreline Permit exemptions.	The exemptions are defined in chapter 77.55 RCW.	No
040	(2)(i)(vi)	Does "other structures that add surface area to the hoist" include shade covers?	Will add "shade" to this section in order to clarify.	Yes
040	(2)(j)	Amend to read: Instrument installation, operation or removal does not impede or interfere with spawning, feeding or migration needs of fish life.	This is restricted to work by hand or with hand tools and the work cannot block fish passage.	No
040	(2)(k)	Restate or add to (k) to read, . . . the provisions within WAC 220-660 do not apply to Forest Practices Hydraulic Projects which are defined and governed in chapter 222 WAC.	We'll amend to read "Forest Practices Hydraulic Projects, as defined in chapter 76.09 RCW and governed in Title 222 WAC."	Yes
040	(2)(l)	Omit exemption for floating raft systems used for private or commercial shellfish culture facilities.	This would require a statutory change. See RCW 77.12.047(3)	No
050	(2)	Section 2 should be deleted or moved to a guidance document. Using the language with words such as "can, could, may" is purely speculative and inappropriate to be listed for a WAC as rule-making. This language is appropriate for guidance. The WAC should implement the RCW and not provide guidance language.	"Must" is mandatory. "May" is appropriate when a requirement may not apply in all situations. This flexibility ensures the requirement is reasonably related to the project. The use of can, could and should is not associated with a requirement. Please refer to WAC 197-11-700 for more about definitions.	No
050	(3)	Risk to public safety appears discretionary and should contain some standards. For example, ' if the structure creates conditions above and beyond the natural dangers of a river.'	An emergency is defined in Hydraulic Code rules section 030(38) as "an immediate threat to life, the public, property, or environmental degradation." This definition comes directly from RCW 77.55.011(7).	No
050	(3)(b)(i)(B)	Some flexibility should be afforded fish habitat enhancement projects that are not directly related to and result from another project impacting wetlands, riparian areas, or waters of the state.	Fish habitat enhancement projects are defined in RCW 77.55.181. They are not mitigation projects but restoration projects.	No
050	(3)(b)(i)(D)	Applicants who have been rejected for a Streamlined Fish Habitat Enhancement project should not have to	They don't. An applicant may request the department process their application as a standard individual HPA.	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
		submit a new complete written application for standard processing if they want the project reviewed under standard HPA processing procedures.		
050	(3)(b)(ii)	Delete last sentence. It is not consistent with RCW 77.55. The RCW does not limit the number of locations per HPA issued; this is contrary to current practices.	The purpose of WAC is to implement RCW. This language does not conflict with the RCW.	No
050	(3)(ii)(A)	Change " A standard HPA may authorize work at multiple project site if:" to " A multisite HPA may authorize work if ."	The language is changed to clarify that an individual standard HPA is limited to a single project site.	Yes
050	(3)(iii)	Eliminate General HPA	Comment noted. See our response related to HPA permit streamlining.	No
050	(3)(iv)	Eliminate Model HPA	Comment noted. See our response related to HPA permit streamlining.	No
050	(4)(a)(i)	The level of authority allowed to declare an emergency is too restrictive (governor, department or county legislative authority). Permittees or those that may require an emergency HPA should be able to work directly with WDFW staff to determine if an emergency situation exists without a formal emergency declaration being issued.	See RCW 77.55.021(12)(a). Applicants can work directly with the department but the department, not the applicant, must make the emergency declaration.	No
050	(4)(a)(ii)	The requirement that the county legislative authority "must notify the department, in writing, if it declares an emergency;" is unreasonable and not supported by statute.	Notification is required in statute - See RCW 77.55.021(12)(a). We cannot process HPA under the emergency declaration if we don't know it exists.	No
050	(4)(a)(iv)	Permittees or those that may require an emergency HPA should be able to work directly with WDFW staff to determine if an emergency situation exists without a formal emergency declaration being issued.	WDFW is authorized to make a determination that an emergency exists; we do so by working directly with an applicant. It is unclear what is being suggested. If we contact an applicant about their emergency and we don't hear back from them, we send them a written HPA. If suggestion is that the work would begin without securing approval from the department this would violate RCW 77.55.021(1)	No
050	(4)(d)	The requirement for "as-built drawing within thirty days after the hydraulic project is authorized" is burdensome and unreasonable. There should be adequate time, at least 90-120 days,	The language reads "...within thirty days after the hydraulic project authorized in the emergency HPA is <u>completed</u> ."	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
050	(4)(e)	Motivation for submitting an acceptable mitigation plan after the emergency actions have been completed cannot be determined. Language should specify that the materials used for an emergency action will be removed (e.g. rip rap) if an acceptable mitigation plan cannot be produced.	If the HPA authorized the materials to remain in place after the emergency then this would be a compliance issue. The statute and rules regarding compliance and enforcement must be followed by the department.	No
050	(5)( e)	After "HPA is issued" add "or the date of the last permit is issued through the JARPA process that includes federal, state, or local agency."	This suggestion does not comply with RCW 77.55.021(14)	No
050	(5)(e )	In the case of imminent danger to public health and safety, there must be issuance of the HPA earlier than 15 calendar days after receiving a complete written application.	This suggestion does not comply with RCW 77.55.021(14)	No
050	(5)(f)	A mitigation plan should be provided before the work is conducted rather than within 90 days after completion.	Ideally it would, but since the HPA must be issued within 15 days this may not be possible.	No
050	(6)	There must be provisions for mitigation, as none are required as per this section. We recommend [missing what was recommended]	The project must satisfy the requirements for fish habitat enhancement projects identified in RCW 77.55.181 (1)(a)(ii) so a mitigation plan may not be necessary. The biologist would include the appropriate avoidance and minimization provisions in the HPA and compensatory mitigation (if necessary).	No
050	(6)(b)	Please add property to the list of items that are damaged or threatened.	This language comes directly from RCW 77.55.021(15).	No
050	(7)	There does not seem to be a compelling reason why a mitigation plan cannot be submitted prior to an Expedited HPA rather than after it is completed.	Ideally we would have a plan but since the HPA must be issued within 15 days this may not be possible.	No
050	(7)(a)	Who determines "significant hardship"?	The department. See RCW 77.55.021(16)	No
050	(7)(a)	WDFW should provide more detail on what constitutes a significant hardship or unacceptable environmental damage and who has the authority to designate this. An imminent danger HPA is very similar to an expedited HPA and further clarification is necessary.	You are correct; both are processed in the same timeframe. See RCW 77.55.021(14) and (16) for additional clarification.	No
050	(7)(d)	After "or a mitigation plan" add "per RCW 90.74.020". Mitigation plans are authorized by the legislature in 90.74 for off-site mitigation, not for RCW 77.55.	See RCW 77.55.251	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
050	(9)(c)(iii)(D)	Proposed WAC 220-660-050(9)(c)(iii)(D) relates to fish life and habitat, while the RCW 77.55.021(2)(c) definition of a complete application specifically only refers to "proper protection of fish life." There should be no discretion on what constitutes an incomplete application - while there may conversely be discretion on what constitutes a "complete application."	Comment noted. However the rules should define what constitutes "complete plans and specification for the proper protection of fish life."	No
050	(9)(c)(iii)(D)	After "habitats, and plans" add "per RCW 90.74.020." After "mitigate those impacts to insure the project" delete "results in no-net loss of fish habitat function, value, or quantity" and add "that is protective of fish life" to be consistent with RCW 77.55.021. RCW 90.74.020 the legislature authorized off-site mitigation plans that included fish habitat, function, value, and quantity of the off-site plan. Expanding these same requirement to the WAC 220-660 is not consistent with RCW 77.55 or RCW 90.74 and is an expansion of authority of the HPA process. The WDFW Policy 5002 Requiring or Recommending Mitigation is an internal document stating goals of the WDFW which appear to be unrelated to the guidance and statute 77.55 to require no-net loss. Goals within department policies should not drive the development of rules beyond the limit of the statute.	We respectfully disagree that requesting a description of the measures that will be implemented for the protection of fish life and habitat that supports fish life is going beyond our authority.	No
050	(9)(b)	After "emergency HPA" add "if no reply, leave required information on the voicemail or an email to meet this requirement."	If we don't hear back from the applicant we send them a written HPA. If suggestion is that the work would begin without securing approval from the department this would violate RCW 77.55.021(1)	No
050	(9)(c)	There is no listing for imminent danger HPA. Please address the imminent danger HPA's and how they are obtained.	See proposed section 050(5). If you meant minor modifications see proposed section (14)(e).	No
050	(9)(c)(iii)(B)	WDFW should verify that technical work products comply with all relative state laws including the Washington State Engineering Practice Regulations.	Our authority is limited to the protection of fish life. We do not have the authority to enforce other state laws such as Washington State Engineering Practice Regulations. The applicant must assume responsibility for all other aspects of the project's design, permitting and performance.	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
050	(9)(c)(iii)(C)	Change "work waterward of the mean higher high water line in salt water..." to "work waterward of the ordinary high water line..."	See RCW 77.55.021(2)(b).	No
050	(9)(c)(iii)(D)	WDFW should include language here that states "or biological assessment and biological opinion issued as part of consultation with NMFS & USFWS if including the protection of fish life." (WAC 220-660-050.9.C.iii.D ) Preparing this level of documentation for federal agencies to demonstrate measures taken to protect the life of endangered species should be sufficient for a state agency.	Often the BA is sufficient but since these documents address impacts to federally listed species only, the mitigation measures may not protect some fish life. See Freshwater Habitats of Special Concern (100) and Saltwater Habitats of Special Concern (320).	No
050	(9)(c)(iii)(D)	Conditions imposed upon a permit must be reasonably related to the project. The permit conditions must ensure that the project provides proper protection for fish life, but WDFW may not impose conditions that attempt to optimize conditions for fish life out of proportion to the impact of the proposed project. RCW 77.55.231.	Your comment was noted but it wasn't specific enough to respond to. Please see section 080 Mitigation	No
050	(12)(a)	The proposed code changes show that WDFW will notify other agencies of the proposal and provide a review period. This additional step is not necessary. It should be the applicant's responsibility to coordinate with other agencies and tribes, not WDFW	RCW 77.55.351 requires the department to provide access to local governments and others to hydraulic approval applications.	No
050	(12)(a)	Seven days is too short a time-frame for the Tribes to review and comment on many HPA. We suggest at least a 15-day review period.	Comment noted. We need to maintain the 7-day comment period in order to maintain compliance with our statutorily-mandated time frame.	No
050	(12)(e)	DNR has a proprietary role as the manager of state owned aquatic land and is not a "permitting" agency; if this (12)(a) was re-written to state "local, state and federal permitting or authorizing agencies," it would then technically include DNR.	We added the recommended language to clarify that DNR can access the public system.	Yes
050	(13)(b)(v)	Similar comment on 220-660-050 (13) (b) (v); if it said "and all participating agencies" or "and all participating or authorizing agencies," it would then technically include DNR.	We added the recommended language to clarify that DNR can access the public system.	Yes
050	(14)(a)	Who determines, unreasonably withhold, or condition	Ultimately it would be the Pollution Control Hearings	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
		and how is the situation remedied, or determined? The Department in issuing a permit should not be able to determine whether or not it is reasonably held or conditioned and local legislative authority should have jurisdiction.	Board if a denial or HPA conditions are appealed on the grounds they are unreasonable.	
050	(14)(a)	WDFW needs to clearly define "out of proportion" so that applicants have some certainty in knowing how the agency will ensure that its biologists consistently impose conditions that are not out of proportion to the project's impacts.	This language is from the statute. What is "out-of-proportion" is project specific. A permittee can appeal HPA conditions if they think the conditions are "out-of-proportion".	No
050	(14)(b)	Omit "unless enough mitigation can be assured by provisioning the HPA or modifying he proposal"	This accurately reflects agency practice of provisioning the HPA or modifying the proposal to protect fish life. The latter is done after consultation with the permittee.	No
050	(14)(b)	Omit "the department may not deny an HPA for a project that complies with the conditions of RCW 77.55.141.	Implementing this suggestion would require a statutory change. See RCW 77.55.141(2)	No
050	(14)(d)	Change "may require a person to notify the department..." to "must and/or will require..."	"Must" is mandatory. "May" is appropriate when a requirement may not apply in all situations. This flexibility ensures the requirement is reasonably related to the project. The use of can, could and should is not associated with a requirement	No
050	(14)(d)	Add section containing requirement for start work notification and AHB approval of work start.	See 220-660-050(14)(d)	No
050	(15)(d)	This provision should further clarify it applies to other maintenance work that occurs periodically.	This language is from RCW 77.55.021(9)(c).	No
050	(16)(c)	WDFW should be capable of responding to requests for in-water work extensions in a timely fashion. Many in-water work extension requests will occur during construction, late in the season for example, and knowing sooner than 45 days will be critical for continuing construction. Waiting 45 days for an in-water work extension is unacceptable.	The language is from RCW 77.55.021(10). A time extension is different than a work window extension. A time extension would be requested if your HPA expired in November 2014 but you couldn't do the work until July 2015. A work window extension is usually a minor modification so the biologist can give verbal authorization without modifying the HPA.	No
050	(17)	County projects requiring HPAs can be subjected to delays or changes due to changed conditions during a project. RCW 77.55.021(10) authorizes DFW to modify a permit due to changed conditions. The proposed rules	The statute requires the department to consult with the permittee. The statute requires the department to be reasonable and we cannot optimize. If you do not agree that the modification is reasonable or you think the	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
		do nothing to clarify or limit the ability of DFW to require new permits or new permit conditions due to changed conditions. All too often, counties have experienced new permit requirements during a project adding substantial costs and have felt pressured into accepting these requirements to avoid projects being stopped. DFW required permit modifications should show that new permit requirements are necessary to protect fish life. It would be helpful to have language added to the proposed rules establishing a review process to ensure permit modifications are truly warranted and that added conditions are reasonable.	modification is optimizing you can appeal the HPA.	
050	(17)(a)	Change "the department may modify a permit due to changed conditions..." to "the department may modify an hap due to changed conditions, new information, to correct errors or to add additional conditions as necessary to ensure the protection of fish life."	Implementing this suggestion would require a statutory change. See RCW 77.55.021(10) & (11)	No
060		There continues to be conflict between definitions of "shellfish", "fish life" and "fish life habitat" and "fish bearing" streams between the FPA definitions and the Hydraulic Code. The definitions of the Hydraulic Code must be retained as the two codes are integrated in order to maintain protection levels for fish life and fish life habitat, and the technical guidance required to be developed as specified in WAC 220-660-060(b), must clarify any differences in definitions to provide adequate fish life and fish life habitat protection for forest practices hydraulic projects.	Terms used in this section, as in every section of the Hydraulic Code rules, refer to definitions provided in the rule (section 030) unless an alternative definition is provided in a specific subsection. The definition for fish life and shellfish are unchanged. There isn't an existing or proposed definition for a fish bearing stream. The only change is to the definition of fish habitat so it better aligns with the FPA definition WDFW agrees that these terms need to be commonly understood in both the HPA and Forest Practices programs, and will continue to work with DNR and others to ensure this is indeed the case.	No
060		RCW 77.55.361 specifically relates to "fish protection standards" not "fish life protection standards." WFPA is concerned that adding "fish life" to WAC 220-660-060 creates an inconsistency with RCW 77.55.361. We ask that you retain the current "fish protection standard" language in WAC 220-660-060 in appropriate deference to the statutory language.	We have changed "fish life protection standards" to "fish protection standards".	Yes
060	(1)(b)	In April 2012, the Washington state legislature, through Second Engrossed Substitute Senate Bill 6406, amended	This proposed revision is focused on changing the verb to past tense, rather than projecting into the future.	Yes, change

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
		<p>the Forest Practices Act in chapter 76.09 RCW and the hydraulic code statutes in chapter 77.55 RCW. The amendment <del>requires</del> <u>resulted in the integrating integration of the</u> hydraulic code rule fish protection standards (Title 220 WAC) into the forest practices rules <u>and the addition of technical guidance in the Forest Practices Board Manual</u> for hydraulic projects in fish-bearing waters on forest land. As codified in RCW 77.55.361 and 76.09.040, <u>forest practices hydraulic projects are regulated under forest practices rules and</u> the requirements of the hydraulic code rules <del>will</del> no longer apply to any forest practices hydraulic projects <del>as soon as fish protection standards have been integrated into the forest practices rules, and technical guidance has been developed and approved for inclusion in the Forest Practices Board Manual. Thereafter, forest practices hydraulic projects will be regulated under forest practices rules.</del> The amended statutes also include a requirement that the department adopt rules establishing the procedures for the concurrence review process. This process is outlined in subsection (3) of this section.</p>	<p>This comment is appropriate, since HPA/FPA Integration has already occurred.</p>	<p>verb tense to past tense.</p>
060	(2)(a)	<p>For FPAs that include a forest practices hydraulic project involving fish bearing waters or shorelines of the state, the department must review the forest practices hydraulic projects and <u>notify the department of natural resources (DNR) to</u> either provide comments <del>to the department of natural resources (DNR),</del> or document that the review has occurred without the need for comments. Before commenting, the department will strive to communicate with the applicant regarding any concerns relating to consistency with fish protection standards. The department <del>will</del> <u>shall also strive to</u> maintain communications with DNR <del>as concerns arise and</del> to inform DNR of communications with applicants.</p>	<p>The original language is more appropriate for the concurrence review process being described in this section. Current (original) language is more consistent with the legislature's direction because: (1) with the very limited timeframe for "standard" reviews (non-concurrence), WDFW will attempt to communicate with DNR as concerns arise during the review of a FPHP; however, this is not always possible prior to providing comments; (2) if there <u>is</u> time to actually work with the landowner to address concerns prior to commenting, WDFW will inform DNR of those communications.</p>	No
060	(2)(c)	<p>"Preapplication collaboration with the department will result in more efficient and successful outcomes for forest landowners and their proposed hydraulic</p>	<p>Agree with suggested revision.</p>	Yes

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		projects." While one certainly hopes this is true, I'm not sure this statement belongs in WAC. Consider rewording to, "The intent of preapplication collaboration with the department is to provide more efficient and successful outcomes..."		
060	(3)(a)	The department must review <del>forest practices hydraulic projects meeting the following criteria and provide written comments to DNR on the project's ability to meet fish protection standards:</del> <u>the plans and specifications provided through the Department of Natural Resources for the purpose of providing written comments in plain speak to the Department of Natural Resources regarding fish protection standards:</u>	The original language is consistent with legislative direction for WDFW's review of those FPHPs with specified criteria for concurrence reviews.	No
060	(3)(d)	...If information is missing, the department will immediately contact the applicant to request the missing information. The department will also provide written notification to DNR, indicating <del>in plain talk what that</del> <u>specific information is missing from the project design as it relates to fish protection standards</u> and that the applicant has been notified.	We respectfully disagree with proposed revision. Original language is more appropriate for WDFW's direction to staff related to missing information. Missing information may not always directly relate to fish protection standards, but may be needed in order for WDFW staff to understand the specifics of the project plan and design, so that they can assess whether or not the project meets fish protection standards. Specific details and guidance can be provided to staff as the need arises.	No
060	(3)(f)	The department must provide written notification of concurrence or nonconcurrence to DNR within the thirty-day review period, stating whether or not the hydraulic project is consistent with fish protection standards <del>and cite the forest practices rule the project does not meet.</del> As part of the written notification to DNR, the department must provide information about the outcomes of any meetings with the applicant <u>and any missing design specifications regarding fish protection standard.</u> <del>including agreements or disagreements, any missing information requested, and any proposed changes needed to meet fish protection standards</del>	We respectfully disagree with recommended revisions. The first revision should not be necessary if the FP rules contain all the appropriate fish protection standards from the Hydraulic Code. Fish protection standards are the criteria to measure against.	No
060	(3)(g)	. . . The department will recommend that DNR <del>deny</del> <u>disapprove</u> the FPA when efforts described in	We have changed "deny" to "disapprove" and "provisions" to "conditions". We respectfully disagree	Yes

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
		subsection (3)(e) of this section <del>have not resulted in a successful outcome, the project will result in direct or indirect harm to fish life, and enough mitigation cannot be assured by modifying the hydraulic project proposal or by DNR's agreement to add appropriate provisions</del> <u>conditions to the FPA. A recommendation for disapproval must be accompanied by an explanation, written in plain talk, as to which fish protection standards are not being met, and what changes would be required to achieve the standard.</u>	with rest of suggested revisions. WDFW will also recommend that DNR disapprove an FPA if adequate information is never provided for WDFW to assess the project for its ability to meet fish protection standards.	
070	(1)	Who at the department can modify or delete technical provisions when one of the items listed is demonstrated?	All habitat biologists who process HPA applications can modify or delete technical provisions. They are the director's designees.	No
070	(1)	Omit "through establishing conditions on an HPA permit."	This is an accurate statement. Only those conditions on the permit apply.	No
070	(1)(d)	Amend to read: The modification or deletion of the provision will not contribute to net loss of fish life or habitat.	Comment noted.	No
070	(1)(h)	Omit	If an applicant proposes a project that uses new technology that provides equal or better protection for fish life we want the flexibility to allow that.	No
080		Retain this language "The department must require a mitigation plan for projects with significant impacts and those with ongoing, complex, and experimental mitigation actions."	We have changed the language to read "The department may require a mitigation plan for projects with significant impacts. The department must require a mitigation plan for those projects with ongoing, complex, and experimental mitigation actions." A mitigation plan isn't needed if the HPA can be conditioned to cover all mitigation actions required.	Yes
080		Drainage maintenance plans are currently being utilized or encouraged by WDFW and diking and drainage districts, but there is no provision or mechanism in the proposed rules that address the elements of such a plan independent of an amorphous mitigation plan. A drainage maintenance plan can be utilized as a tool, but is not required. The rule should spell out a mechanism to implement these drainage maintenance plans and elements thereof, if used.	The department would continue to accept drainage maintenance plans submitted with the HPA application. The language for what constitutes a complete application is the same as the existing rule language.	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
080		The rules should further clarify that certain periodic agricultural maintenance, particularly the maintenance work of established flood control facilities that protect and enhance agricultural lands, should be exempted from the no net loss standards of fish life that are too onerous or costly to endure.	Chapter 77.55 RCW doesn't exempt hydraulic projects conducted on agricultural so the department has to process HPA applications for this work to comply with the law. The no-net-loss standard has not changed. The proposed language is virtually the same as that in the existing rules. In addition, most maintenance activities do not require compensatory mitigation	No
080	(1)	Delete the last sentence "This mitigation minimizes loss of fish habitat function, value, and quantity."	This is the definition of no-net-loss. See WAC 220-110-020(68).	No
080	(1)	Amend to read: The department defines mitigation as sequentially avoiding impacts, minimizing impacts, and compensating for remaining unavoidable impacts. The department applies the technical and special provisions to mitigate impacts to fish life from hydraulic projects. This mitigation may lessen the loss of fish habitat function, value, and quantity however mitigation does not always ensure that unavoidable impacts and the resulting habitat or species loss are fully offset.	Comment noted - this language was changed to reflect (3)(c).	Yes
080	(2)	Change "and revegetation" to "retaining existing vegetation."	This is rectifying the impact by restoring the affected environment.	No
080	(2)	Delete all of "Fish Life Concerns." Section 2 should be deleted or moved to a guidance document. Using the language with words such as "can, could, may" is purely speculative and inappropriate to be listed for a WAC as rule-making. This language is appropriate for guidance. The WAC should implement the RCW and not provide guidance language.	Comment noted - our attorneys who reviewed the rules said while this is unusual it is acceptable.	No
080	(3)(a)	What type of information can be used to make these determinations? Are these science based decisions only? This wording is vague and may cause confusion toward making permit decisions.	It can be information provided in the permit application or other information the department has available.	No
080	(3)(a)	At the end of the first sentence, after "on available information" add "within the worksite" to be consistent with RCW 77.55.021 and 77.55.231.	Your comment was noted. Please see our response in section A.1.2 of Appendix A regarding our jurisdiction	No
080	(3)(a)	Delete "to fish life, including fish habitat function, value, and quantity based on available information" and	A role of the Fish and Wildlife Commission is to define protection of fish life through the adoption of the rules.	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
		replace with "for the proper protection of fish life" per RCW 77.55.021. This new guideline appears to expand the definition as given in the RCW, and therefore reaches beyond its scope.		
080	(3)(b)	Delete all of (3)(b) because it is arbitrary. This new guideline appears to expand the definition of "Protection of fish" as given in RCW 77.55.021, and therefore reaches beyond its scope. It appears that it's an open-ended requirement that would extend beyond the area being permitted, which expands the HPA beyond RCW 77.55.021. 77.55.231 states: (1) Conditions imposed upon a permit must be reasonably related to the project. The permit conditions must ensure that the project provides proper protection for fish life, but the department may not impose conditions that attempt to optimize conditions for fish life that are out of proportion to the impact of the proposed project.	We are constrained in the implementation of the Hydraulic Code rules to the authority conveyed to us in statute. We agree that surveys, studies, or reports requested by the department must be reasonably related to the project, and that we cannot optimize.	No
080	(3)(b)	In the first sentence, after "impacts to fish life" add "that are reasonably related to the project."	We have changed the language in (2) to clarify this would only be needed to assess impacts reasonably related to the hydraulic project.	Yes
080	(3)(d)	"prevent" should be replaced with "avoid" for consistency.	We have made this change to improve consistency.	Yes
080	(3)(d)	After "impacts to fish life" add "that are reasonably related to the project."	We have changed the language in (2) to clarify this would only be needed to assess impacts reasonably related to the hydraulic project.	Yes
080	(3)(e)	Under Section 3e, the Department may require advance mitigation of an experimental mitigation technique. If the mitigation works from the new technique, we would be supplying twice the mitigation needed. Please rework this section to enable one to one mitigation, perhaps by requiring a bond, or other financial incentive rather than the actual work prior to mitigation.	The department cannot require financial assurances. We agree that if the advanced mitigation is fully functioning prior to the impact that a 1:1 ratio is appropriate. Please note the use of the word "should" here indicates this isn't a firm requirement.	No
080	(3)(f)	Delete all of (f). Replacement of any portion of any structure may not be able to use other types of materials since replacement is part of maintenance, which is maintaining a structure under mitigation and the State definition of "maintenance." This would be	This would be an exception as allowed for in 220-660-070(g).	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
		mitigation required for implementing mitigation.		
080	(4)(3)	Omit	Comment noted	No
080	(4)(b)	Compensatory mitigation is being set up to be regulated much like wetland mitigation which will significantly increase costs to affected project proponents, and such that mitigation/conservation banks can be set up or layered on existing banks. Ultimately the costs will stifle agricultural ditch cleaning and result in the loss of farmland.	We respectfully disagree. "Mitigation" and "No-net-loss" are in the existing rules in effect since 1994. The purpose of this section is to provide clarity about when mitigation including compensation is required. The bank or in-lieu fee provision recognizes these tools are out there and gives the applicant the flexibility to use them with some sideboards.	No
080	(4)(b)	After "offset impacts" add "that are reasonably related to the project."	We have changed the language in (2) to clarify this would only be needed to assess impacts reasonably related to the hydraulic project.	Yes
080	(4)(b)	We request that the word "same" on the revised comments be removed and the condition that the department may waive the no net loss mitigation be added. This section should recognize that the "same" habitat types and fish populations may not be beneficial if these are invasive or non-native.	Comment noted. Impacts to non-native invasive species would not require compensatory mitigation.	No
080	(4)(c)	Amend to read: When reviewing a mitigation plan, the department shall, at the request of the project proponent, follow the guidance contained in RCW 90.74.005 through 90.74.030. When using this guidance, the department may not limit the scope of compensatory mitigation options to areas on or near the project site, or to habitat types that are the same type as those on the project site. The department must fully review and give due consideration to compensatory mitigation proposals that improve the overall biological functions and values of the watershed or bay. The department must also accommodate the mitigation needs of the infrastructure or non-infrastructure development, including proposals or portions of proposals that are explored or developed in RCW 90.74.040. However, the department is not required to approve an off-site mitigation plan and will not approve compensatory mitigation that does not provide equal or better fish habitat functions and	Language was modified to read ... At the request of the project proponent, the department must also accommodate the mitigation needs of the infrastructure or non-infrastructure development, including proposals or portions of proposals that are explored or developed in RCW 90.74.040.	Yes

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
		values.		
080	(4)(c)	The current draft code underscores the preference for on-site, but does not emphasize the parallel importance of in-kind mitigation. DNR recommends that WAC 220-660-080(4)(c) be modified to reflect the importance of in-kind mitigation, especially in consideration of potential impacts to high priority aquatic habitats such as eelgrass. Allowances for out-of-kind mitigation can contribute to a net loss of ecosystem function and undermine extensive efforts to conserve and restore critical aquatic habitats.	We'll amend the language to read <i>"...the department prefers compensatory mitigation actions that restore impacted habitat types and functions ..."</i> See (4)(b)	Yes
080	(4)(d)	Omit	Comment noted.	No
080	(4)(d)	The rules should state measures which will be used to compare baseline conditions to those expected following project implementation.	There are many different tools to do this so we want the applicant to have the flexibility to use the most suitable methodology.	No
080	(4)(d)	After "mitigation credit and debits" add "at a mitigation site."	Comment noted - debits would occur at the impact site and credits would occur at the mitigation site. However, the mitigation credits could also be generated at the impact site. We think the language is clear.	No
080	(4)(d)	Add a provision to 220-660-80 that provides a compensatory mitigation analysis tool appropriate for analyzing the impacts of large wood relocation, in addition to those provided for analyzing impacts to land. We still have some concern about the level of complexity. We also request the proposed technique be made available for review.	Comment noted. The department is working on a mitigation guidance document that will go through SEPA before being used by the department.	No
080	(4)(d) and (e )	While DNR has no specific comment on the proposed wording for WAC 220-660-080 (4) (c), please note that DNR will consider these requests that affect state-owned aquatic land on a case-by-case basis. DNR preference is authorize only those mitigation projects that restore or enhance ecological processes and functions to state-owned aquatic lands; compensation projects should not adversely affect naturally occurring aquatic habitats or species on state-owned aquatic lands. In addition, project proposals must not conflict with DNR habitat stewardship goals or DNR landscape	The department must comply with statute, RCW 77.55.241.	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
		scale plans, including aquatic reserve management plans.		
080	(4)(e)	Eliminate the mitigation banking and in-lieu fee programs that have been introduced. These proposed programs do not have any statutory direction and allowing a project applicant to pay a fee or purchase credits for habitat damage rather than undertake department evaluated and monitored mitigation that can be measured for success is a step backwards in the State's efforts to restore Puget Sound.	Please see Ecology's website regarding mitigation banks and in-lieu fee programs at <a href="http://www.ecy.wa.gov/mitigation/options.html">http://www.ecy.wa.gov/mitigation/options.html</a> These programs are intensively monitored.	No
080	(4)(e)	Mitigation banks are often a better solution than permittee responsible projects	Comment noted	No
080	(4)(e)	We ask that the new Hydraulic Permit Application rules provide a mitigation sequencing process that puts WDFW rules, in conformance with other State and Federal mitigation rules whereby approved conservation banks with appropriate habitat credits are the preferred mitigation option for HPA permits when this is the best environmental alternative.	The approach suggested doesn't reflect our mitigation policy. The policy has a preference for in-kind and on-site mitigation.	No
080	(4)(e)	Delete the last sentence, to be consistent with RCW 90.74.010(1)( c)	The work can still benefit the same fish populations and accomplish RCW 90.74.010(1). Note the use of "should" indicates a preference as opposed to "must" that indicates it's required.	No
080	(4)(f)	If the habitat conditions is degraded, then the compensatory mitigation should strive to improve on a degraded state rather than trying to maintain it.	What you are suggesting would be "optimizing" and would not comply with RCW 77.55.231.	No
080	(4)(g)	After "condition of the habitat" add "within the project worksite."	Comment noted. Please see our response regarding our jurisdiction.	No
080	(4)(h)	Require compensatory mitigation for the repair or replacement of structures due to the increased duration of habitat impact.	The baseline for assessing impacts is the existing condition not the pre-project construction condition.	No
080	(4)(h)	DFW has asserted that most of this work {maintenance, rehabilitation and replacement} will not require any mitigation above and beyond avoidance and minimization measures. As such, WDFW should provide the needed clarity within the rule by removing the	We do clearly state this but there are stated exceptions.	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
		definition for "rehabilitation" and delete references to "work that rehabilitates" or by indicating that maintenance work, even that which rehabilitates an existing structure, will not require compensatory mitigation or replacement.		
080	(4)(h) & (i)	Join and amend to read: Maintenance, repair and replacement on a legally constructed structure must comply with the applicable common technical provisions and project-specific and site-specific provisions. Maintenance does not require compensatory mitigation unless: The maintenance causes a new loss of fish life habitat function, value or quantity not associated with the original construction of the structure. Mitigation will be required for repair and replacement of a legally constructed structure that extends the timeframe for habitat impacts.	We modified (4)(i) to clarify when compensatory mitigation may be required for maintenance work.	Yes
080	(4)(i)	Delete all of (i) to be consistent with (h).	There are no inconsistencies. These build on one another but we have added a sentence for clarity.	Yes
080	(4)(i)	The term "replacement" occurs at least 35 times in the CR-102 version of the rule update, and several of these instances would benefit from a definition with a time limit. Without such a time limit it is fully possible (indeed, we can provide examples) to replace a structure that was destroyed years or even a decade ago, encroach on an inter-tidal area, regardless of the impact, with no mitigation, even when a clear mitigation option is at hand. This could be changed easily here, by including a one-year limit on applications for replacement, and a similar limit on repairs and rehabilitation. In the current rule update the proposed limit is three years for a bulkhead that has been breached.	WAC 220-660-140(3)(h) and WAC 220-660-380 (3)(h) of the proposed rule both indicate that a structure must have been usable at the site within the twelve months immediately before the time of application submittal to be considered a replacement. We have made some minor changes to these sections to clarify this.	Yes
080	(4)(j)	Amend to read: Removal of a legally constructed human-made or engineered structure does not require compensatory mitigation unless project work creates a new impact that is not offset by the removal of the structure. Removal of any illegally constructed human-made or engineered structure will require	Comment noted. The statute of limitations for enforcement of a hydraulic code violation is two years. Removal of a structure under a court order would be subject to compensatory mitigation.	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
		compensatory mitigation with the pre-construction habitat considered the baseline		
080	(4)(k)	After "impacts" add "reasonably related to the project."	See previous comment.	No
080	(5)(a)	Change "may" to "will"	Comment noted.	No
080	(5)(a)	This implies that a mitigation plan may not be required...but if they are going to do things on a credit/debit methodology, then everything has to be documented to the extent that credit/debits can be calculated essentially requiring a formal mitigation plan.	A mitigation plan isn't needed if the HPA can be conditioned to cover all mitigation actions required.	No
080	(5)(a)	Delete "department may require" and add "Proponents may use" to be consistent with RCW 90.74.020.	WDFW can require a mitigation plan. However, upon request of the applicant, we have to follow the <u>guidance</u> contained in RCW 90.74.005 through 90.74.030.	Yes
080	(5)(b)	Delete all of (b) and rewrite to say "Project proponents may use a mitigation plan to propose compensatory mitigation within a watershed" to be consistent with RCW 90.74.020.	WDFW can require a mitigation plan. However, upon request of the applicant, we have to follow the guidance contained in RCW 90.74.005 through 90.74.030.	No
080	(5)(c)	Amend to read: A mitigation plan to propose off-site mitigation that upon request of the applicant is reviewed by the department using the guidance in RCW 90.70.20 must:	We have changed the language to read: "When reviewing a mitigation plan under RCW 77.55.021, the department must, at the request of the applicant, follow the guidance contained in RCW 90.74.005 through 90.74.030. Pursuant to RCW 90.74.020, a mitigation plan must do the following:..."	Yes
080	(5)(d)(i)	Amend to read: The relative value of the mitigation for the targeted habitat and fish life resources, in terms of the quality and quantity of biological functions and values provided	Our authority is specific to fish life. The suggested language could be interpreted to mean we were expanding our protection beyond fish life.	No
080	(5)(d)(ii)	Again, mitigation is to fit into bigger restoration plans, leading to more control by agencies and tribes of any proposed mitigation.	Comment noted, however your comment wasn't specific enough to respond to.	No
080	(5)(d)(ii)	WDFW must consider whether the mitigation plan provides equal or greater fish habitat functions and values compared to the existing conditions, based upon a number of factors. Among those factors are, "the compatibility of the proposal with broader resource management and habitat management objectives and plans, such as existing resource management plans,	"Existing" means plans that exist at the time the mitigation plan is submitted for approval.	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
		species recovery plans..." Does "existing" include only plans that are in place at the time WAC 220-660 is adopted, or does it include plans that "exist" at whatever time in the future WDFW is considering a particular mitigation plan?		
080	(5)(d)(iii)	Change "fish habitat functions" to "habitat functions supporting fish life" or similar.	"Fish habitat functions" was changed to "habitat functions". The term "habitat functions" appears five times. The term "habitat function" is defined>	No
080	(5)(d)(iv)	Amend to read: The benefits of the proposal to the broader watershed landscape, including the benefits of connecting various habitats, ecological processes and fish life units and reducing population-limiting habitats or functions for target species;	Comment noted	No
080	(5)(d)(vi)	How is "significance" measured?	The impact to the productive capacity of the habitat and the population status of the non-target fish species.	No
080	(5)(f)	After "department" delete "will require" and add "may develop." After "applicant the department" delete "if" and add "for". After "including monitoring" add "not to", to be consistent with 77.55.021(9)(b).	Comment noted. The RCW citation doesn't pertain to the comment.	No
080		Compensatory mitigation is required for restoration projects such as the removal of fine sediment from urban streams.	Compensatory mitigation is compensating for impacts by replacing or providing substitute resources and environments. The department would not require the fine sediment removed to be placed back in the stream. This would be counterproductive. Nor would we require additional stream habitat restoration to compensate for impacts.	No
090		In the last sentence, after "tidally influenced" delete "areas upstream of river mouths and" to be consistent with the definition of freshwater, which is less than 35 parts per million.	The language is accurate. Most freshwater waterbodies have less than 0.5 ppm of dissolved salts. Estuaries are considered saltwater.	No
100	(1)(a)	How are "habitats of special concern" different from essential habitat. Is this a second protected class of habitat? Is this a different definition of "Priority" than the WDFW priority habitat and species program. "Priority" fish species need to be listed somewhere with a rationale provided for their listing.	Freshwater (100) and saltwater (320) habitats of special concern are defined as those areas that provide essential functions in the developmental life histories of fish. We use the term "essential" in its common meaning: essential functions are necessary functions. We modified language referring to "essential fish	Yes

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
			<p>habitat functions” because “Essential Fish Habitat” (EFH) was defined by the U.S. Congress in the 1996 amendments to the Magnuson-Stevens Fishery Conservation and Management Act. We do not use this term with its federal meaning in the hydraulic code rules.</p> <p>The “Priority Habitats and Species” designation is a construct of the Washington State “Priority Habitats and Species” (PHS) program, which was developed by WDFW to support county and local government implementation of the Growth Management and Shoreline Management Acts. “Priority species” include species appearing on federal and state endangered species lists, but also includes other saltwater and freshwater species of commercial, recreational, and tribal importance in Washington. “Priority Habitats” support one or more “priority species.”</p> <p>Both federal EFH and state PHS are distinct from the “Critical Habitat” designated by NOAA or USFWS for a species listed under federal Endangered Species Act. “Habitats of Special Concern” in the hydraulic code rules could include areas designated as EFH, “Critical Habitat,” “Priority Species,” or “Priority Habitat” and are specified within each rule section.</p>	
100	(2)	Delete all of (2). Section 2 should be deleted or moved to a guidance document. Using the language with words such as "can, could, may, the potential" is purely speculative and inappropriate to be listed for a WAC as rule-making. This language is appropriate for guidance. The WAC should implement the RCW and not provide guidance language.	"Must" is mandatory. "May" is appropriate when a requirement may not apply in all situations. This flexibility ensures the requirement is reasonably related to the project. The use of can, could and should is not associated with a requirement	No
100	(3)	For clarity of this section, we suggest that connected wetlands be added to off-channel habitat, and that wording be changed to clarify important geomorphic processes, as follows: (a)(v) Off-channel habitat including wall-based channels, flood swales, side channels, <u>and</u> floodplain spring channels <u>and</u> <u>connected wetlands</u> :	We changed the language to improve clarity.	Yes

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
		(b)(i) Woody material and sediment <u>supply</u> , delivery and transport:		
100	(3)	Shade is an important riparian function that should be included here.	It is mentioned in section (2)(a)	No
110	(1)	Are "critical periods" defined anywhere, or is this undefined still?	These are defined in (3)(a)(i)	No
110	(2)	Delete all of (2). Section 2 should be deleted or moved to a guidance document. Using the language with words such as "can, could, may, the potential" is purely speculative and inappropriate to be listed for a WAC as rule-making. This language is appropriate for guidance. The WAC should implement the RCW and not provide guidance language.	"Must" is mandatory. "May" is appropriate when a requirement may not apply in all situations. This flexibility ensures the requirement is reasonably related to the project. The use of can, could and should is not associated with a requirement	No
110	(3)	WDFW should include language that requires the department to develop in water work windows in conjunction with federal agencies. Conflicting work windows can be a substantial challenge during construction for applicants. Requiring the applicant to coordinate between state and federal agencies on in water work windows is a dis-service to the applicant.	The work windows established by the Services cover only ESA-listed fish species. The department conditions HPAs to protect more than just ESA-listed fish species. As a result of the different authorities the work windows may be different for the same project.	No
110	(3)	To provide increased certainty to project proponents/permit applicants, authorized work times should be detailed in this section as in "Authorized Work Times in Saltwater" and "Mineral Prospecting" (Table 2, page 91).	The department publishes on its public web site the times when spawning salmonids and their incubating eggs and fry, or other critical life history stage are least likely to be within Washington state fresh waters. In many cases these times would be more restrictive than a site and project-specific work window specified by the biologist.	No
110	(3)(a)	After "hydraulic projects in" delete "or near" to be consistent with 77.55.021.	Comment noted. Please see our response in section A.1.2 of Appendix A regarding our jurisdiction.	No
110	(3)(a)(vi)	As written, this is too broad and encompassing. WDFW should consider modifying this text to state (vi) <del>Other circumstances and conditions</del> <u>Other circumstances and conditions pertaining to fish life and habitat needs.</u>	We changed the language to improve clarity.	Yes
120		Fresh water habitats of special concern. "Freshwater habitats of special concern provide essential functions in the developmental life history of priority fish species.	Many people who construct hydraulic projects don't know how to identify native from non-native fish. This should be discussed with the habitat biologist on a	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
		These include spawning and rearing habitats for state and federal listed species, and species of recreational, commercial or tribal importance." In the past, we have been required to release non-native predators back into these waters along with ESA-listed native species when captured during HPA authorized activities. Please amend this section to require euthanasia of non-native predator species regardless of their recreational importance when encountered during HPA authorized activities in fresh water habitats of special concern.	project-specific basis.	
120	(2)	Delete all of (2). Section 2 should be deleted or moved to a guidance document. Using the language with words such as "can, could, may, the potential" is purely speculative and inappropriate to be listed for a WAC as rule-making. This language is appropriate for guidance. The WAC should implement the RCW and not provide guidance language.	"Must" is mandatory. "May" is appropriate when a requirement may not apply in all situations. This flexibility ensures the requirement is reasonably related to the project. The use of can, could and should is not associated with a requirement	No
120	(2)	220-660-120 (2) could be read permissively; "can" as in "it's okay to kill or injure fish." Please consider adding a sentence saying that the purpose of the following sections is to prevent/ minimize impacts to fish life.	The section describes fish life concerns. It doesn't authorize adverse impacts.	No
120	(3)(a)	In our recent meetings with WDFW, they have expressed that they do not intend to require qualified professional assessment or engineered mitigation for erosion repair work (i.e., scour at a culvert inlet, road fill protection, etc.) The proposed WAC should be updated to clarify such.	See 130(3)(a)	No
120	(4)(d)	In the third sentence, after "woody vegetation" add "below the OHWL" to be consistent with RCW 77.55.021.	Comment noted. Please see our response in section A.1.2 of Appendix A regarding our jurisdiction.	No
120	(4)(d)	Regulatory creep.	We respectfully disagree. The importance of riparian areas to fish life is well documented in the science. Requiring avoidance, minimization of unavoidable impacts, and replanting of riparian vegetation damaged by construction of a hydraulic project is within our authority.	No
120	(5)(a)	Clarify native vegetation when referring to avoidance	Certainly native vegetation is more desirable than non-	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
		and minimizing damage to riparian, aquatic, and wetland vegetation.	native. However, retaining vegetation in general helps control erosion. In addition, many people who construct hydraulic projects don't know how to identify native from non-native plant species.	
120	(5)(c)	"...wet and muddy...." This is vague terminology that should be better defined if this will be a permit condition.	Comment noted.	No
120	(5)(e)	We believe the proposed modifications will provide a benefit for operations when we have equipment in or near water.	Comment noted.	No
120	(5)(e)	Should be one work week (5 or 6 days) regardless of hours.	Comment noted.	No
120	(5)(e)	We request that waivers be allowed on projects of a longer duration using equipment that does not have vegetable based lubricants to be used in or near water with proper containment and approval.	Comment noted.	No
120	(6)(b)	What is "OHML"? Do you mean "OHWL"?	Yes, error corrected.	Yes
120	(6)(d)	Clarify who at the department can approve the use of angular rock and the design flow that it must withstand if outside of the normal peak 100-year flow requirement?	The biologist processing the HPA application.	No
120	(6)(f)	DNR continues to disagree with WDFW for allowing the use of treated wood in fresh water. DNR's standards for state-owned aquatic land require no treated wood in the water.	Comment noted.	No
120	(6)(h)	DNR continues to disagree with WDFW for allowing the use of tires in fresh water	Comment noted.	No
120	(10)(a)	In-water work area isolation using a cofferdam structure – define short term?	We removed the term "short-term" .	No
120	(12)	HPAs should require QA/QC plan to ensure fish capture efficiency and thoroughness	See (12)(f)	No
120	(13)( e)	After "upland are above" delete "limits of the anticipated floodwaters" and add "below the OHWL" to be consistent with RCW 77.55.021.	Comment noted. Please see our response in section A.1.2 of Appendix A regarding our jurisdiction.	No
120	(13)(a)	After "disturbed bed" add "and". After bank, delete	Comment noted. Please see our response in section	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
		"and riparian zone" to be consistent with RCW 77.55.021. It should read "Restore disturbed bed and bank." The riparian zone is above the OHWL and outside Waters of the State.	A.1.2 of Appendix A regarding our jurisdiction.	
120	(13)(a)	Is grass seeding and mulching acceptable?	This depends on the pre-project condition.	No
120	(13)(b)	After "remove any temporary fill" add "below the OHWL" to be consistent with RCW 77.55.021.	Comment noted. Please see our response in section A.1.2 of Appendix A regarding our jurisdiction.	No
120	(13)(i)	After "proven methodology, replace" delete "native riparian" to be consistent with RCW 77.55.021.	Comment noted. Please see our response in section A.1.2 of Appendix A regarding our jurisdiction.	No
120	(13)(j)	After "maintenance requirements for replanting" add "below the OHWL" to be consistent with RCW 77.55.021	Comment noted. Please see our response in section A.1.2 of Appendix A regarding our jurisdiction.	No
120	(13)(j)	Does the planting plan have to be included in the engineering design packet – who approves these plans?	It should be part of the application the biologist approves.	No
120	(13)(j)	We believe the addition of "species composition" could cause an issue if the approving agent requests that the re-vegetation area be replanted with unique or hard to grow species. We respectfully request that "similar to surrounding native vegetation" be added to this section.	We'll amend the provision language to clarify.	Yes
120	(13)(k)	After "complete replanting" add "below the OHWL" to be consistent with RCW 77.55.021.	Comment noted. Please see our response in section A.1.2 of Appendix A regarding our jurisdiction.	No
120	(13)(l)	Who can waive the plant vegetation requirement if natural revegetation is likely to occur?	The biologist processing the HPA application.	No
130	(1)(a)	Add 'spawning and incubation gravel' to this list.	See section (2)	No
130	(2)	Section 2 should be deleted or moved to a guidance document. Using the language with words such as "can, could, may, and potential" is purely speculative and inappropriate to be listed for a WAC as rule-making. This language is appropriate for guidance. The WAC should implement the RCW and not provide guidance language.	"Must" is mandatory. "May" is appropriate when a requirement may not apply in all situations. This flexibility ensures the requirement is reasonably related to the project. The use of can, could and should is not associated with a requirement	No
130	(2)	220-660-130 (2): As with 220-660-120 (2), this section could be read permissively; "can" as in "it is okay to kill or injure fish." Please consider adding a sentence saying that the purpose of the following sections is to prevent/minimize impacts to fish life.	The section describes fish life concerns. It doesn't authorize adverse impacts.	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
130	(2)(a)	220-660-130: Please consider adding language to cross-reference the potential for state ownership. The JARPA has been designed specifically for this purpose.	Comment noted. We have language elsewhere in the proposed rules regarding compliance with other agency regulations.	No
130	(3)	Work accomplished under this section is by definition professional engineering. Execution of this work and its review and approval constitute the practice of professional engineering and should be limited to those individuals specifically permitted in RCW 18.43.	Comment noted. A geologist or fluvial geomorphologist would also be qualified to provide this rationale.	No
130	(3)(a)(ii)	After "project design" delete "such as a reach and" to be consistent with RCW 77.55.021.	Comment noted. Please see our response in section A.1.2 of Appendix A regarding our jurisdiction.	No
130	(3)(e )	This item implies that Flow-Redirection Techniques such as Stream Barbs, Porous Weirs, and Engineered Log Jams that are discussed in Chapter 6 of the "Integrated Stream Bank Protection Guidelines" cannot be installed because they would be installed water ward of the OHWL. We recommend removing this statement from the proposed HPA rules or re- writing the rule that effectively addresses the impacts stated.	The flow-redirection techniques you describe must show clear net benefit to fish. If you can show that by using, say, a stream barb, there will be less rock used, that channel response and complexity will be enhanced over, say, a revetment alternative, then it is better to work waterward of OHW. The following language should allow such alternatives to be permitted. Proposed language: (e) Where technically feasible, the toe of the structure must be located landward of the OHWL. Restrict the placement of material waterward of the OHWL to installing mitigation features (e.g., logs and rootwads) approved by the department, unless an alternative is shown to have net benefit to fish life.	Yes
130	(3)(e)	The term 'technically feasible' has no defined limitations. Items such as cost should not be included under this definition.	Comment noted.	No
130	(4)	Change the term "existing" to 'potential', as spawning may not currently be occurring due to a degraded condition.	Comment noted. The department cannot apply mitigation for habitat functions that don't currently exist	No
130	(5)(b)(i)	After "eroding shoreline" add "within the easement where possible."	This requirement is not related to fish life protection.	No
140	(2)	Section 2 should be deleted or moved to a guidance document. Using the language with words such as "can, could, may, and potential" is purely speculative and inappropriate to be listed for a WAC as rule-making. This language is appropriate for guidance. The WAC	"Must" is mandatory. "May" is appropriate when a requirement may not apply in all situations. This flexibility ensures the requirement is reasonably related to the project. The use of can, could and should is not associated with a requirement	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
		should implement the RCW and not provide guidance language.		
140	(2)(a) and (2)(b)	This section could be read permissively; “can” as in “it is okay to kill or injure fish.” Please consider adding a sentence saying that the purpose of the following sections is to prevent/ minimize impacts to fish life.	The section describes fish life concerns. It doesn't authorize adverse impacts.	No
140	(3)(c)(i)	The width of residential piers and docks should be based on intended use (consistent with recreational piers in this proposed section). Intended use may vary for residential piers and docks based on activities, Americans with Disability Act (ADA) requirements or other factors.	Proposed WAC section 070(g) allows changes to the technical provisions for geological, engineering or environmental constraints or safety concerns. (f) allows changes if the provisions conflict with other regulations such as ADA.	No
140	(3)(f)	The term "embedded anchor" should be used instead of "helical screw, duckbill". This is a more generic and accepted term.	We have changed the language to "embedded anchors"	Yes
140	(3)(h)	"usable" should not be the basis for allowing a replacement structure. Allowance to replace a structure should be provided if it is within the same footprint as the existing structure. Usable is a subjective term.	This does not prohibit the construction of a new structure but it may affect the mitigation required. We amended the language and added "Usable means no major deterioration or section loss in critical structural components is present."	Yes
140	(3)(i)	250 ft2 seems to be an arbitrary determination. Use percentage based approach. If required to install grating based on this rule, it is not clear if the entire surface needs to be replaced or just the area planned for replacement.	250 square feet is the size of a typical residential float. We have changed the language clarifying that the grating is required in the replaced section only.	Yes
140	(4)(b)	For residential docks, minimum piling diameter should be determined by intended use and site conditions not arbitrarily set at 6".	Section 070(g) allows changes to the technical provisions for geological, engineering or environmental constraints or safety concerns. (f) allows changes if the provisions conflict with other regulations such as ADA.	No
140	(5)(a)	Please see the question in comment 1 (hoists) and associated photo.	The language is amended to read “The design of the watercraft lift/grid must follow the mitigation sequence to protect juvenile salmonid migration, feeding, and rearing areas where shading impacts are a concern.”	Yes
140	(7)(a)	"...such that they do not adversely impact native submerged aquatic vegetation." should read ".....in a manner that minimizes impacts to native submerged	We changed the language to "Operate and anchor vessels and barges during construction in a manner that protects native aquatic vegetation."	Yes

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
		aquatic vegetation."		
140 and 160		<p>In your definitions use section 140, 380 Was 220-660-140 220-110-060 I suggest you use terms that are used in the boating and marine industry for Docks, piers and gangways and ramps. Boat Launch Ramp: A sloped surface designed for launching and retrieving trailered boats and other water craft to and from a body of water.</p> <p>Ramp: is a sloped surface over 5% running slope ( as used in the building codes and the ADA )</p> <p>Gangway: A variable-sloped pedestrian walkway that links a fixed structure or land with a floating structure. (Gangways that connect to passenger vessels are not a gangway).</p> <p>Boarding Float: A portion of a pier where a boat is temporarily secured for the purpose of embarking or disembarking</p> <p>Boat Slip: That portion of a main pier, finger pier, or float where a boat is moored for the purpose of berthing , embarking, or disembarking.</p>	The existing description matches the descriptions used by other regulatory agencies. For example, "pier, ramp and float" is commonly used.	No
150	(2)	Section 2 should be deleted or moved to a guidance document. Using the language with words such as "can, could, may, and potential" is purely speculative and inappropriate to be listed for a WAC as rule-making. This language is appropriate for guidance. The WAC should implement the RCW and not provide guidance language.	"Must" is mandatory. "May" is appropriate when a requirement may not apply in all situations. This flexibility ensures the requirement is reasonably related to the project. The use of can, could and should is not associated with a requirement	No
150	(2)	This section could be read permissively; "can" (or "may") as in "it is okay to kill or injure fish." Please consider adding a sentence saying that the purpose of the following sections is to prevent/ minimize impacts to fish life. Please apply this comment to other "fish life concerns" sections throughout the draft.	The section describes fish life concerns. It doesn't authorize adverse impacts.	No
160	(2)	Section 2 should be deleted or moved to a guidance document. Using the language with words such as "can, could, may, and potential" is purely speculative and inappropriate to be listed for a WAC as rule-making. This language is appropriate for guidance. The WAC	"Must" is mandatory. "May" is appropriate when a requirement may not apply in all situations. This flexibility ensures the requirement is reasonably related to the project. The use of can, could and should is not	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
		should implement the RCW and not provide guidance language.	associated with a requirement	
160	(3)(a)	This section should read ".....to avoid and minimize impacts to fish spawning..."	Comment noted.	No
160	(4)(b)	Should use functional grating standards to be consistent. By definition, structural framing is required to be under grating to support the pier, dock and/or float.	We changed the language to clarify this doesn't apply to structural components.	Yes
170	(2)	Section 2 should be deleted or moved to a guidance document. Using the language with words such as "can, could, may, and potential" is purely speculative and inappropriate to be listed for a WAC as rule-making. This language is appropriate for guidance. The WAC should implement the RCW and not provide guidance language.	"Must" is mandatory. "May" is appropriate when a requirement may not apply in all situations. This flexibility ensures the requirement is reasonably related to the project. The use of can, could and should is not associated with a requirement	No
170	(3)(a)	After "the department may" delete "not". After "spawning beds" delete "unless" and add "if". After "restoration project" add "or the authorized dredging is mitigated."	This suggestion would reduce the current fish protection standard. See WAC 220-110-130(1)	No
170	(3)(c)	We request that maintenance dredging be recognized as a routine and necessary operational function for hydroelectric facilities.	We have changed the language to read: The department may require a pre-project channel survey or assessment by a qualified professional to determine the root causes of a sediment deposition problem and the potential channel changes that may result from dredging. This provision does not apply to maintenance dredging of navigational channels and berthing areas, hydroelectric facilities, and boat ramp and boat launch approaches.	Yes
170	(3)(c)	After "navigational channels" add "ditches, stormwater systems".	This section is not specific to sediment removal in small streams. The department will work with interested stakeholders to development rules for sediment removal from small streams in the 2015-2017 biennium. Until then, habitat biologists will provision the HPAs for this work on a project-by-project basis.	No
170	(3)(c)	We support the proposed edits form the Ports. These modifications will benefit us in maintaining boat ramps	Comment noted.	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
		and boat launch approaches at our reservoirs.		
170	(3)(c)	In our recent meetings with WDFW, they have indicated that this subsection applies to dredging of large rivers for the purpose of navigation and flood prevention. WDFW has indicated that they will work with stakeholders in the 2015-2017 timeframe to develop a separate chapter for sediment removal from small streams. As such, WDFW should clarify in WAC that this subsection does not apply to work associated with maintaining existing structures that remove sediment from small channels and culverts .	WDFW will work with stakeholders in the 2015-2017 timeframe to develop a separate chapter for sediment removal from small streams. It would be inappropriate to include the commitment to work on this in WAC, and any other change to this section at this time would be premature until new provisions are developed so they can be cited.	No
170	(3)(c)	Suggested text change: "The department may require a preproject channel survey or assessment by a qualified professional to determine the root causes of a sediment deposition problem and the potential channel changes and effects to salmonid habitat that may result from dredging."	Our authority and responsibility under the hydraulic code is not limited to salmonids so that change would be inappropriate. The department, not the applicant, should determine the impacts to fish life from any proposed channel change.	No
170	(4)( e)	After "in water disposal site or" delete "outside of the floodplain" and add "in an area above the OHWL."	Comment noted. Please see our response regarding our jurisdiction.	No
170 and 180		The freshwater dredging section applies to river dredging for vessel navigation, but not necessarily to dredging small creeks using backhoes. There are few provisions in either section that would prevent headcutting resulting from gravel removal, although this is a common provision in small stream HPAs. There should be provisions requiring dredging to be conducted when streams are dry, if they go dry. Small stream dredging should not result in gravel starvation in downstream reaches.	We agreed dredging should not result in gravel starvation to downstream reaches. WDFW will work with stakeholders in the 2015-2017 timeframe to develop a separate chapter for sediment removal from small streams.	No
170 and 180		Dredging is frequently used to temporarily solve problems caused by other factors, such as undersized or misplaced culverts that impede sediment transport. Requiring a technical justification could clarify these problems and the potential solutions. The lack of protective provisions in the proposed code is unfortunate, because in certain circumstances sediment removal can actually be used to improve some habitats,	This is one reason the language reads "The department may require...". It wouldn't be needed in this case because the project is a beneficial project for fish life.	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
		such as creating off-channel and backwater refugia. As proposed the improvement is limited to fish spawning areas only. These two dredging sections could be greatly improved to protect, rather than diminish, habitat in small streams.		
180		This section may warrant clarification to make the distinction between "sand and gravel removal" and allowable dredging activity.	Comment noted.	No
180	(2)	Section 2 should be deleted or moved to a guidance document. Using the language with words such as "can, could, may, and potential" is purely speculative and inappropriate to be listed for a WAC as rule-making. This language is appropriate for guidance. The WAC should implement the RCW and not provide guidance language.	"Must" is mandatory. "May" is appropriate when a requirement may not apply in all situations. This flexibility ensures the requirement is reasonably related to the project. The use of can, could and should is not associated with a requirement	No
180	(4)(k)	After "must take place above the" delete "above the limits of the anticipated floodwater" and add "OHWL" to be consistent with RCW 77.55.021.	Comment noted. Please see our response regarding our jurisdiction.	No
190		Construction of culverts to an arbitrary design standard of 100-year recurrence is inconsistent with current engineering practice. Further, the accommodation of such an extreme weather event for all culvert installations will constitute a serious financial burden to local government and is an unfunded mandate. The section further broadens the WDFW area of authority to beyond the OHWM which is unreasonable and excessively broad.	The proposed rule changes are not substantively different than the standards already being implemented. The statewide climate adaptation strategy suggests that expected future conditions be factored in to project design, including accommodation for changes in stream discharge or tidal influence. We will continue to work with proponents to incorporate new science and balance risk and cost for designs that are adequately protective of fish life. Also, please see our response in section A.1.2 of Appendix A regarding our jurisdiction.	No
190		Delete the first sentence in the third paragraph. To indicate that an HPA is needed regardless of the location of the proposed work is not consistent with RCW 77.55, which indicates HPA authority is the below the OHWL of waters of the State.	Comment noted. Please see our response in section A.1.2 of Appendix A regarding our jurisdiction.	No
190		Language in current version of rule is not changed, but proposed WDFW staff amendments would add the language: "A list of approved manuals and guidelines is	WDFW has posted the referenced documents on our Habitat Guidelines web site. WDFW typically runs design standards through an Aquatic Habitat Guidelines	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
		in the department's website. (WSDOT)" Alternative 4 in the Supplemental Draft Programmatic EIS includes the following provision: "Amend the rules to allow American Association of State Highway and Transportation Officials and Federal Highway Administration standards (by name) because they have been well vetted by the engineering community."	committee, which includes fisheries professionals and environmental engineers as well as WSDOT engineers and professionals related to other aspects of HPA project development. Once that team is comfortable with the guidance, WDFW can post them.	
190		The new proposed code mentions StreamSim design, but is ambiguous on whether StreamSim is required or merely suggested. The WDFW crossing guidelines, as well as testimony from WDFW engineers and biologists, make clear that StreamSim culverts are the best solution to eliminating fish passage barriers, passing flood flows, passing debris, and reducing maintenance due to gravel and wood accumulation, all of which are implied in the proposed code. Given these advantages, the code should reflect the best available science and give WDFW the authority to require StreamSim as the first acceptable standard.	All water crossings must provide unimpeded fish passage and protect channel functions and processes. The stream simulation design method achieves this. But the no-slope and alternative culvert design methods can also achieve this provided the design is appropriate for the site. WDFW has the authority to approve a less costly design approach as long as the project will protect fish life.	No
190	(1)	In our recent meetings with WDFW, they have indicated that they will revise this language to state that "Crossings on streams with no fish must be designed to pass wood and sediment expected in the stream reach to reduce the risk of catastrophic failure of the crossing." We look forward to seeing this edit in the final version of the WAC.	This change has been made	Yes
190	(1)	In our conversations with WDFW, they have expressed that they accept water crossing designs that are compliant with Federal Highway and AASHTO guidelines. The WAC should be updated to establish this assurance.	The proposed rules do not require compliance with any specific design criteria. The rule points to guidance that can be helpful in designing projects, and WSDOT and FHWA design methodologies are among those helpful guidance documents. Any method used must protect fish life and provide fish passage. WDFW will issue an HPA for projects that meet this standard regardless of the guidelines used.	No
190	(2)	Section 2 should be deleted or moved to a guidance document. Using the language with words such as "can, could, may, and potential" is purely speculative and inappropriate to be listed for a WAC as rule-making.	"Must" is mandatory. "May" is appropriate when a requirement may not apply in all situations. This flexibility ensures the requirement is reasonably related to the project. The use of can, could and should is not	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
		This language is appropriate for guidance. The WAC should implement the RCW and not provide guidance language.	associated with a requirement	
190	(2)	Suggested text modification: "A person must design water crossing structures in fish-bearing streams to allow all fish at all life stages to move freely through them at all flows when fish are expected to move."	"Fish" is used here in the general sense, just as it is in chapter 77.57 RCW, which we interpret as "all fish."	No
190	(2)(a)	Who will determine if the impacts of encroachment are minimal to fish and their habitat?	The permitting biologist is an authorized agent of the Director and determines whether a proposal meets the requirements of the hydraulic code. The applicant supplies the information that the biologist evaluates. The biologist may seek the assistance of a habitat engineer in technical matters. Our guidance documents give the applicant and biologist the background for the design and evaluation of a given project.	No
190	(3)(e)	After "three typical widths" delete "bankfull" and add "bed width" to be consistent with RCW 77.55.011, definition of "bed". Delete the second half of the sentence, starting with "measure in the stream reach" and ending with "self-forming stream" to be consistent with RCW 77.55.231	Comment noted. Please see our response in section A.1.2 of Appendix A regarding our jurisdiction.	No
190	(3)(a)	Delete all of the second sentence, starting with "passage." It is arbitrary.	Comment noted. This language was added to provide clarity at the request of the regulated community.	No
190	(3)(b)	After "crossing design" delete "must ensure" and add "should consider". After "unconstrained by the structure" delete "so they do not cause discernable impacts to fish life." Delete all of the second sentence - an HPA is not authorized to be issued into the floodplain outside of work being done below the OHWL, per RCW 77.55.021, and 77.55.011 (25).	Comment noted. Please see our response in section A.1.2 of Appendix A regarding our jurisdiction.	No
190	(3)(c)	Does this mean that the slope must match the slope of what you'd find in the reference reach or the slope of the area that's been altered?	You appear to have misunderstood the nature of this section and the statement, and maybe a little about the structure of these two chapters (220-660-190 and -200). Water Crossing Structures must be designed to, (3)a, "ensure that upstream and downstream channel processes and functions commonly associated with the type of channel found at the site are unconstrained by	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
			the structure so they do not cause discernible impacts to fish life.” If they do not and, for instance, require grade control (roughened channels, rock weirs, etc.), then they would fall under 220-660-200 Fish Passage Improvement Structures. The provision (3)c concerns the design of a water crossing in an area that has been altered and does not give us a clear impression of what would take place at the site under more natural conditions. We are giving you an opportunity to use expected channel processes for the design of the structure at that site by estimating the slope and cross section.	
190	(3)(c)	We recommend including additional channel stabilization measures that do not impact fish migration. Roughened channels, rock weirs, and other methods should be allowable considering the species of fish present.	All of the methods you mention are acceptable and covered under the provisions in WAC 220-660-200.	No
190	(3)(c)(iii)	Who determines what an extreme and unusual site condition is that would allow a designer to use a fish passage improvement structure? Could an example of this be when we have many feet of grade change to make up due to a perched culvert?	Ideally, it is the applicant who determines this. Your example might be a good one, but an assessment of the site conditions must provide the justification for it. The permit biologist can help with this decision, and is the person who determines what’s appropriate in a given situation. An HPA will be issued if you present a clear case that complies with the appropriate provisions of the code.	No
190	(3)(c)(ix)	The reference to this term appears to have been removed from section 190. It appears in another section, but there is no definition.	We don't know what term you are referring to.	No
190	(3)(d)	25. 220-660-190 (3) (d): Is there a reason for different levels of permission in (i), (ii), and (iii)? A person “ ‘can’ design a water crossing ...” in (i), “ ‘may’ use an alternative design...” in (ii), and “ ‘can’ use methods...” in (iii).	The section describes fish life concerns. It doesn't authorize adverse impacts.	No
190	(3)(d)	To address the gaps in the science and provide alternatives, WSPA strongly supports the appropriate inclusion of a provision for alternative culvert designs in WAC 220-660-190(3)( d).	Comment noted	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
190	(3)(d)(i)	After "protection of fish habitat" delete "and the maintenance of the expected channel processes defined by the site conditions" to be consistent with RCW 77.55.021.	Comment noted. Please see our response in section A.1.2 of Appendix A regarding our jurisdiction.	No
190	(3)(e)	The language requiring use of a minimum of three typical bankfull widths has remained. The discussion on economic impacts in the Supplemental Draft EIS does not address this potential impact on agencies such as King County Dept. of Transportation.	We do not believe that the additional effort needed to measure bankfull width in three locations has significant adverse economic impact. If you are onsite, taking a measurement is relatively quick.	No
190	(3)(f)	In our recent meetings with WFDW, they have indicated that removal of existing bridge components, including approach fill, would only be required if existing components are causing impacts to fish and their habitat. If there are no impacts, then components can be left in place. The proposed rule should be updated to clarify this intent. Additionally, the proposed rule should identify the fish protection criteria for which components, especially approach fill, can remain.	The provision reads: "(f) When removing an existing crossing in preparation for a new crossing, a person must remove all the existing components (approach fill, foundations, stringers, deck, riprap, guide walls, culverts, aprons, etc.) likely to cause impacts to fish and their habitat. The department may approve the partial removal of certain components when leaving them has been shown to have no measurable, or minor, impact."	No
190	(4)(c)	After "active floodplain" delete "must have" and add "should consider". After "typically evaluated in" delete "a reach analysis" and add "that are reasonably related to the project site." We'd prefer to delete all of (c). Referencing active floodplain span width and major encroachments into the floodplain and defining thresholds within the floodplain and reach analysis for stream crossings would be implementing the Water Crossing Guidelines 2013 document and other publications and manuals as rule, which are inappropriate to be used to develop conditions for the WAC. Any guidance, published materials, or white papers that never went through rule-making or that are not completed and are "draft" documents, would be unacceptable to be used as rules without going through rule-making. This requirement as listed in (4)(c) should be deleted from the entire WAC. It goes beyond the authority of RCW 77.55 by expanding the HPA permit process beyond the borders of waters of the state, which is defined as the OHWL.	Comment noted. Please see our response in section A.1.2 of Appendix A regarding our jurisdiction. Please see our responses in the "science" section regarding your comment on the 2013 guidelines document.	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
190	(4)(a)	The requirement that the bridge design accommodate “ice, large wood and associated woody material, and sediment likely to move under the bridge during the 100-year flood flows or the design flood flow approved by the department” is unreasonable, impossible to accurately calculate and excessively broad in scope.	Comment noted.	No
190	(4)(b)	After "wingwalls, and approach fill" delete "must be" and add "should consider placement."	Comment noted.	No
190	(4)(c)	In our recent meetings with WDFW, they have indicated that they will not require compliance with any specific design criteria. They have indicated that WSDOT and FHWA bridge design methodologies are typically adequate for the protection of fish life. Additionally, WDFW does not expect this rule change to increase the span length of bridge projects in comparison to bridges designed to comply with current WAC. WDFW should make the needed clarification within this section of the WAC.	The proposed rules do not require compliance with any specific design criteria. The rule points to guidance that can be helpful in designing projects, and WSDOT and FHWA design methodologies are among those helpful guidance documents. Anyone can propose any bridge design developed through any method providing that it protects fish life. This is outlined in 220-660-190(3)d.	No
190	(4)(d)	Delete the first sentence. Too many unknowns and variables when considering the lifespan of a bridge structure, or the lateral movement of a watercourse -- and is outside the authority of an HPA permit. Delete the second sentence. 77.55.011 definition states <u>(11) "Hydraulic project" means the construction or performance of work that will use, divert, obstruct, or change the natural flow or bed of any of the salt or freshwaters of the state.</u> The natural flow or bed is limited to waters of the State, which is defined as below the OHWL. We recommend removing this statement from the proposed HPA rules or re- writing the rule that effectively addresses the impacts stated.	In response to this and other comments, this provision has been changed to provide more clarity.	Yes
190	(4)(f)	Who from the department is authorized to grant exception based on engineering justification?	The habitat biologist who is processing the HPA application often with the help of a WDFW environmental engineer.	No
190	(4)(f)	We recommend defining the term “engineering justification” and describing the exception process for this rule. It is recommended to identify, in rule, specific	In response to other comments this provision has been changed: 190(4)(f) The design must have at least three feet of clearance between the bottom of the bridge	Yes

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
		situations that would be excepted considering the impacts stated above.	structure and the water surface at the 100-year peak flow or engineering justification for sufficient clearance that allows for the free passage of anticipated debris.	
190	(4)(g)	NRCS shares this approach to all in-stream projects, however there is potential for conflicting opinions that will be project and personnel specific.	We understand that there are differences between permit writers, but we are working hard to provide good guidance documents and training opportunities to help consistently interpret these rules.	No
190	(4)(g)	Design of bridge piers, abutments and scour protection is exclusively limited to the licensed professional engineer in responsible charge of the design in accordance with RCW 18.43.	<p>The protection of fish life is one aspect of a complete water crossing design. The other studies required are the responsibility of the owner and designer and it is these studies in combination with fish protection which form a “technically sound engineering practice.” We do not pretend that compliance with these rules will result in a fully engineered structure. All that is required in these rules is to provide fish passage and protect their habitat.</p> <p>There has been on-going research into crossing design for fish protection by WDFW, USDA Forest Service, several universities and other researchers (Barnard 2003, Inter-Fluve 2008, Robertson, Bair et al. 2011, Barnard, Yokers et al. In preparation), among others. A study is in progress by D. Cenderelli and M. Weinhold, USDA Forest Service on the physical effectiveness monitoring of channels at road-stream crossings – a statistically-based approach. Others are keenly interested in the effectiveness of water crossings for fish passage and channel processes – names and studies can be supplied. It will take some time to develop a strong scientific foundation in this area. In the meantime we are required to protect fish and we are applying criteria to guide designers to achieve acceptable results.</p>	No
190	(6)(a)	The design process required in this section is onerous and unreasonable for small culverts. I recommend that this section be applicable only to culverts greater than 24 inches in diameter.	Please note the provisions in this section apply to fish bearing waters only.	No
190	(6)(a)(iii)	To clarify, is the prevailing stream gradient or the	The assumption is that these are the same. We would not intentionally choose a reference reach that was at a	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
		stream reference reach gradient?	significantly different slope.	
190	(6)(b)	I recommend that this section be applicable only to culverts greater than 24 inches in diameter.	Please note the provisions in this section apply to fish bearing waters only.	No
190	(6)(b)(i)	After "must generally have" delete "a channel bed width that is ten feet or less and". Limiting the width of a culvert is arbitrary and should be established by the design engineer.	This statement does not limit the design. Using the term "generally" signals that there can be exceptions to this general requirement.	No
190	(6)(b)(ii)	Delete all of (ii). Limiting the length of a culvert is arbitrary and should be established by the design engineer.	WDFW has carefully considered this length criteria and think that it gives a person ample flexibility within the range of this method. A person can also propose an alternative method in section -190(3)d; the rule provides a wide range of flexibility while maintaining adequate protection for fish life..	No
190	(6)(b)(iii)( E)1	After "area where the channel" add "stream".	Comment noted.	No
190	(6)(b)(iii)(B)	After "equal to or greater than the average" delete "channel" and add "stream."	Comment noted.	No
190	(6)(b)(iii)(B)	After "the width of the" delete "channel" and add "stream". After "greater than the average" delete "channel" and add "stream." Delete "channel bed width" relating to "stream bed width" from the entire document. Changing the definition of "bed full width" to "channel bed width" but defining that as "bankfull width" would be designing a stream crossing as described in the Water Crossing Guidelines 2013 document and other publications and manuals as rule, which are inappropriate to be used to develop conditions for the WAC. Any guidance, published materials, or white papers that never went through rule-making or that are not completed and are "draft" documents, would be unacceptable to be used as rules without going through rule-making. This requirement as listed in (6)(b)(iii)(B) should be deleted from the entire WAC. It goes beyond the authority of RCW 77.55 by expanding the HPA permit process beyond the borders of waters of the state, which is defined as the OHWL.	Comment noted.	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
190	(6)(b)(iii)(D)1	After "greater than the average" delete "channel" and add "stream."	Comment noted.	No
190	(6)(b)(iii)(D)2	After "greater than the average" delete "channel" and add "stream."	Comment noted.	No
190	(6)(b)(iii)(D)3	After "greater than the average" delete "channel" and add "stream."	Comment noted.	No
190	(6)(b)(v)	The requirement for culvert countersink should be determined on a case by case basis.	Establishing a minimum countersink requirement does not limit the engineer's ability to choose an appropriate depth of fill above that. Some countersink is required and this is the minimum we think is necessary. In addition, a person can propose an alternative method in WAC 220-660-190(3)d.	No
190	(6)(b)(vi)	The determination of the median particle size is not practical.	This provision creates a measurable criterion by which to judge whether the material selected is appropriate for the project site. In most cases, particle size won't be an issue. If you are asked to verify your particle size, the median is by far the simplest statistic to employ.	No
190	(6)(d)(l)	The horizontal width must be equal to or greater than the average channel bed width plus twenty-five percent" is unreasonable and not supported by engineering practice or published standards.	A person can propose an alternative method by following criteria in WAC 220-660-190(3)d.	No
190	(7)( c)	After "unimpeded fish passage" add "when fish are expected to move."	Suggestion noted.	No
190	(7)( c)	The company supports the additional language providing for the use of a temporary culvert that does not meet fish passage criteria.	Comment noted.	No
190	(8)	There is no specified time limit until a culvert becomes constructed. Under the emergency provision, this limit should be a maximum of one year, where a scoping design is provided at the time of the proposed emergency fish passage.	Ideally, a year is appropriate. Unfortunately, emergencies create conditions that are less than ideal and the applicant often needs more flexibility to resolve the situation.	No
190	(8)(b)	From our recent meetings with WDFW, we understand that if a water crossing provided fish passage prior to an emergency situation, then WDFW will expect the replacement/repair structure to provide fish passage. Structures that had not provided fish passage prior to	Fish passage is required, regardless of prior conditions. The language reads "Fish passage must be provided at the times of the year when fish are expected to move. If the culvert design does not provide unimpeded fish passage, a person can use methods found in WAC 220-	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
		the emergency would not require fish passage as a part of the emergency fix. WDFW will expect the emergency repair/replacement to be of a size equal or greater than the structure that existed prior to the emergency. We also understand that WDFW will expect the temporary structure to pass adult fish during upstream salmon migration if they are blocked. The WAC should be updated to clarify this information.	660-200 (fish passage improvement structures) to pass fish until a culvert is constructed."	
190	(10)(f)	Does this mean that the surface of the ford must exceed water elevation? Driving through low water depth is assumed when utilizing a ford. How is traffic to be "separated from flowing water?"	We changed the language to read "Vented (grade-separated) fords are preferred over at-grade fords because there is less aquatic disturbance and delivery of sediment and contaminants when traffic is separated from flowing water."	Yes
190	(12)(f)	Is angular rock acceptable fill in a ford since this will not attract spawning fish?	We have tried to leave the specifics of many provisions open to give the applicant and the permittees the flexibility to choose the most appropriate material. The basic requirement is to prevent spawning in the ford. Quarry stone will often be the most available and appropriate, but other materials might also be acceptable, for example cobbles from a near-by pit, when the fish present are too small to dig such heavy stones.	No
190	Intro	must be?	Comment noted. We could not determine what this comment referred to.	No
190	Intro	change "with debris" to "including debris"	The language is amended to "... and debris..."	Yes
200		As these types of structures are known to fail or have less certainty for fish passage as more permanent solutions, we suggest establishing a time limit for the emergency and temporary use of these fish passage improvement structures. This will help avoid 'indefinite' structures that may fail to pass fish. Further, fish passage needs to be monitored for the life of the structure to ensure that periods of insufficient fish passage are minimal and if needed, corrections are made timely.	Comment noted. This would be site-specific. For example, the approved timeframe for fish ladder on a dam may be different than a trap and haul operation around a failing culvert. Please note chapter 77.57 RCW requires fish passage structures on dams or other manmade obstructions.	No
200		Section 220-660-200(2) mentions that removing gravel disrupts the sediment balance and can cause	The biologist would condition the HPA with applicable dredging provisions.	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
		unforeseen channel adjustments in rivers, but has no provisions to alleviate this concern. There are also no provisions to assure that LWD and riparian vegetation will be protected during freshwater dredging projects. Most of all, there is no requirement to show that the dredging is necessary, or will be effective, as in other sections (e.g. shore protection). This is important because small stream dredging is often proposed by landowners and county departments that have only minimal knowledge of (and little regard for) sediment transport processes, and thus "maintenance dredging" becomes a chronic impact to habitat. Dredging is frequently used to temporarily solve problems caused by other factors, such as undersized or misplaced culverts that impede sediment transport.		
200	(1)	Weirs and roughened channels should not be included in this category for fish barrier removal projects. Weirs should be defined within the code.	Because the population of fish above a fishway depends on the proper functioning of the structure for survival, we categorize them differently with added provisions for their inspection and maintenance. We understand that there are circumstances that require a fishway and we do not discourage it.	No
200	(2)	Section 2 should be deleted or moved to a guidance document. Using the language with words such as "can, could, may, and potential" is purely speculative and inappropriate to be listed for a WAC as rule-making. This language is appropriate for guidance. The WAC should implement the RCW and not provide guidance language.	"Must" is mandatory. "May" is appropriate when a requirement may not apply in all situations. This flexibility ensures the requirement is reasonably related to the project. The use of can and could is not associated with a requirement	No
200	(3)(c)	What types of compensatory mitigation might be required when fish passage improvement structures are used? Who would make this determination?	The type of compensatory mitigation would be project-specific. The habitat biologist would approve the proposed compensatory mitigation.	No
200	(3)(h)	To clarify, if fish passage improvement structures are used then periodic inspection will be required. Who will be required to perform this inspection? Who will determine the inspection interval?	In your application you would provide an inspection and maintenance plan, such as that outlined in the Water Crossing Design Guidelines p. 138. The specifics of that plan are determined by the designer and must address the protection of fish life. The inspection and maintenance is the responsibility of the owner of the fishway, or their agent, who provides the personnel and	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
			materials to execute it. The permitting biologist approves the plan as part of the HPA. The HPA is in effect for 5 years, but RCW 77.57.030 requires that the owner maintain that fishway in perpetuity.	
200	(7)(a)	In our meetings with WDFW, they have indicated that if a fish ladder facility is not equipped to control the flow, then WDFW will not expect it. They have indicated that this provision is only relevant to facilities where the flow is managed, as in an irrigation diversion, hydropower, or an off-channel fishway and it does not apply to WSDOT owned fishways. As such, WDFW should update the proposed WAC to provide this needed clarification.	The language is amended to read "If target fish species are present and actively migrating, fish ladders with managed flow must have enough water available ..."	Yes
200	(9)	Roughened channels and weirs are considered to be fishways or designed as a component of fishways and the use of both will be discouraged?	The basis for design in 220-660-190 is expected channel processes. If your proposal creates a structure that would not be supported by prevailing stream processes, it is a fishway that must meet specific criteria and be inspected and maintained for its lifespan. We have built hundreds of weirs, fishways, baffled culverts, and other structures in our streams over the last 30 years or so and, for the most part, they were constructed and forgotten, falling out of compliance and isolating fish populations or extirpating them. Either you allow the stream to respond to changes in bed elevation or you take responsibility for the structure that prevents it.	No
200	(9)	In our recent meetings with WDFW, they have indicated that the proposed rule does not preclude the design of roughened channels as water crossing structures. As such, the WAC should be updated to provide that clarification or WDFW should move the Roughened Channel Design criteria found in WAC 220-660-200 to the Water Crossing Section (WAC 220-660-190).	We apologize for any misunderstanding, but roughened channels are fish passage improvement structures and are covered under WAC 220-660-200. They are appropriate for water crossings, but since they are engineered structures that have operating criteria, they must be monitored to make sure that they stay within compliance.	No
200	(011)	In the first paragraph, after "trap and haul operations" delete "and hydraulic design culvert retrofits". Culverts are stream crossings and should be in that section.	Since hydraulic culverts designs are only intended to provide fish passage and do not protect habitat, they are in this section	No
200	Table 1	The table prescribes water velocities suited only to adult fish. The table should be revised to include a maximum velocity option for juvenile fish when a crossing requires	The assumption is that these velocities are calculated at a high fish passage design flow (when adults are expected to move) and that at lower flows the velocity	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
		upstream juvenile passage.	will be proportionately lower and provide passage conditions for smaller fish. The movement of juveniles is not as time-dependent as that of adults and is also more complicated in terms of stimulus and the passage pathways through the bed. It is very difficult to determine an appropriate velocity for juveniles because of this.	
210	(1)	What documentation will have to be done or provided to demonstrate the benefit or lack of adverse impact to fish life. Who will be able to approve these projects?	Sections (3) and (4) describe the design and construction of these channels. Documentation that addresses these provisions will be adequate, provided that the level of detail is commensurate with the scale and complexity of the project. The plans are approved by the permitting biologist.	No
210	(2)	Section 2 should be deleted or moved to a guidance document. Using the language with words such as "can, could, may, and potential" is purely speculative and inappropriate to be listed for a WAC as rule-making. This language is appropriate for guidance. The WAC should implement the RCW and not provide guidance language.	"Must" is mandatory. "May" is appropriate when a requirement may not apply in all situations. This flexibility ensures the requirement is reasonably related to the project. The use of can and could is not associated with a requirement	No
210	(3)(a)	Typically when re-meandering straightened channels we are changing the configuration back to what was there historically or what the reference reach presents - the length, width, depth and floodplain configuration may be very different to the straightened incised channel – is this going to make it difficult to get these projects permitted?	No. What you describe is a good example of a channel realignment that benefits fish and should be easily permitted.	No
220		The proposed section on large woody material removal (220-660-220) actually has weaker habitat protection than the current code. Whereas the proposed code says the department will approve requests for LWD removal for protection of property, or where necessary to construct a hydraulic project, the current code (WAC 220-110-150) provides that LWD removal ...shall only be approved where necessary to address safety considerations, or its removal would not diminish the fish habitat quality of the watercourse..	We respectfully disagree that (3)(a) weakens habitat protection given existing WAC 220-110-032(3).	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
220		We are concerned that removal or cutting of wood from the channel will continue to degrade habitat faster than it is being restored. The current code (WAC 220-110-150} provides a much stronger statement about the importance of wood in the river, saying wood removal "shall only be approved where necessary to address safety considerations, or its removal would not diminish fish habitat quality of the watercourse" . The proposed wording states that removing wood will require mitigation, but should also include mitigation for cutting or other actions that diminish its function.	The language is amended to include cutting of LWM.	Yes
220	(1)	The company respectfully disagrees with the tribes assessment that large woody material is "trees and tree parts larger than 4 inches in diameter and longer than 6 feet or rootwads". In our opinion, material of this size will not provide sustained long-term fish habitat.	This reflects our current and proposed definition of large woody material.	No
220	(2)	Section 2 should be deleted or moved to a guidance document. Using the language with words such as "can, could, may, and potential" is purely speculative and inappropriate to be listed for a WAC as rule-making. This language is appropriate for guidance. The WAC should implement the RCW and not provide guidance language.	"Must" is mandatory. "May" is appropriate when a requirement may not apply in all situations. This flexibility ensures the requirement is reasonably related to the project. The use of can and could is not associated with a requirement	No
220	(3)	An inventory of all pieces removed or reposition should be recorded and reported as a permit requirement. This enables tracking of impacts to fish habitat, documents problem frequency and magnitude at the site, and describes the fate of each piece of wood.	The approved plan should specify the number of pieces removed or repositioned. If this is a GHPA this can be added to the annual reporting provision. The department would not require tracking of repositioned. Wood removed and placed back in the stream would result in no loss of habitat function or value.	No
220	(3)(a)	In the last sentence, after "function of value" add "within the project site."	Actually, this would likely occur downstream as well.	No
220	(3)(b)	At the end of the third sentence, delete "floodplain" and add "bed or bank."	Comment noted. Please see our response in section A.1.2 of Appendix A regarding our jurisdiction.	No
220	(3)(b)	Does this mean logs that span the bed of the channel below the OHWM or span the bank of the channel suspended above the active channel?	Above the active channel.	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
220	(3)(b)	NRCS staff have recently been told that we would not be permitted to do this because of the effects it would have on the riparian vegetation.	We should be able to address conflicts between rule and interpretation. First, consult our Aquatic Habitat Guidelines publications for a more in-depth discussion of the topic. Then, discuss the conflict with the permitting biologist. If that is not satisfactory, suggest that the biologist consult with the Habitat engineering staff or Habitat management for a clarification of the rule and an agency interpretation. Finally, you can enter into the appeal process for a more formal ruling on the application.	No
220	(3)(b)	The rule does not allow for other viable methods of anchoring. We routinely utilizes timber piling and large boulders to ballast LWM. In lieu of having these anchoring methods available we are concerned that excess material and/or excavation and earth fill may be required. In some cases burying the LWM would be inadequate to resist buoyancy and drag forces.	You are fully covered by this provision. "Anchoring" is a general term and may be accomplished in any number of ways, including timber piles and boulder ballast. Please see Stream Habitat Restoration Guidelines or Integrated Streambank Protection Guidelines for a more complete explanation of anchoring.	No
220	(4)	NRCS is requesting confirmation that all wood material to be placed as part of a restoration project must now be suspended to move and can no longer be dragged into place.	This sounds as though it is consistent with the new provisions. Suspension is preferred, but a yarding corridor can be established to localize the disturbance and dragging logs over skid logs is also approved.	No
230	(2)	Section 2 should be deleted or moved to a guidance document. Using the language with words such as "can, could, may, and potential" is purely speculative and inappropriate to be listed for a WAC as rule-making. This language is appropriate for guidance. The WAC should implement the RCW and not provide guidance language.	"Must" is mandatory. "May" is appropriate when a requirement may not apply in all situations. This flexibility ensures the requirement is reasonably related to the project. The use of can, could and should is not associated with a requirement	No
230	(3)(a)	Subsections (i) and (ii) could be in direct conflict with one another if a beaver dam is more than 1year old, but has been modified by recent beaver activity and is now threatening ng a water crossing structure or public/private lands.	We changed (3)(a) to clarify "Beaver dams may be removed or modified <u>without compensatory mitigation only</u> when:..." We'll remove the last sentence in (3)(b) since it is redundant.	Yes
230	(3)(b)	Requiring compensatory mitigation for beaver dam removal or breaching for maintenance of a water crossing structure or other infrastructure is disproportional to the minor, temporary impacts of the	We agree if the beaver are not removed from the site and may rebuild. However, if impacts from fish habitat in the established wetland will occur, compensatory mitigation may be required.	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
		action. Beavers will rebuild in the same location or elsewhere thereby providing essentially the same functions.		
240	(2)	Section 2 should be deleted or moved to a guidance document. Using the language with words such as "can, could, may, and potential" is purely speculative and inappropriate to be listed for a WAC as rule-making. This language is appropriate for guidance. The WAC should implement the RCW and not provide guidance language.	"Must" is mandatory. "May" is appropriate when a requirement may not apply in all situations. This flexibility ensures the requirement is reasonably related to the project. The use of can, could and should is not associated with a requirement	No
240	(3)	Does the WDFW have policy on replacement structures for existing ponds? Simply letting ponds fail over time may release large stored sediment plumes into water courses. Is there a process to allow landowners maintenance opportunities on existing ponds?	No, we don't have a policy. We cannot compel a property owner to maintain their ponds. They have to request an HPA. The specifics of each case would determine the way it is managed and those details would be worked out between the permitting biologist and the applicant.	No
240	(3)(i)	To clarify, if landowner builds an irrigation pond (gravity fed) but WDFW views this pond as beneficial to salmon as an off channel habitat then the pond inlet/outlet would then have to be designed for fish passage?	The irrigation system must be isolated from fish bearing water. If the pond is considered fish habitat then the irrigation withdrawal must be screened.	No
250	(2)	Section 2 should be deleted or moved to a guidance document. Using the language with words such as "can, could, may, and potential" is purely speculative and inappropriate to be listed for a WAC as rule-making. This language is appropriate for guidance. The WAC should implement the RCW and not provide guidance language.	"Must" is mandatory. "May" is appropriate when a requirement may not apply in all situations. This flexibility ensures the requirement is reasonably related to the project. The use of can, could and should is not associated with a requirement	No
260	(2)	Section 2 should be deleted or moved to a guidance document. Using the language with words such as "can, could, may, and potential" is purely speculative and inappropriate to be listed for a WAC as rule-making. This language is appropriate for guidance. The WAC should implement the RCW and not provide guidance language.	"Must" is mandatory. "May" is appropriate when a requirement may not apply in all situations. This flexibility ensures the requirement is reasonably related to the project. The use of can, could and should is not associated with a requirement	No
260	(4)	Are road cross drain outlets (forest or agricultural road) considered to be outfalls? Are roof runoff structure outlets considered to be an outfall? Subsurface drainage	If the cross drain does not discharge to, or affect the bed or flow of waters of the state, it does not require a permit.	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
		outlets?		
260	(4)(a)	After "associated structures" add "below the OHWL."	Comment noted. Please see our response in section A.1.2 of Appendix A regarding our jurisdiction.	No
260	(4)(a)	220-660-260 (4) (a) needs a couple more commas to be clear. As it is, it could be read to mean that people should consider alternatives to avoid LID techniques. I suggest: (a) Before designing and constructing an outfall,(<-added) consider alternatives such as tying into existing municipal storm water lines to avoid multiple storm water discharge points, (<- added) and low impact development (LID) techniques utilizing pervious pavement, infiltration galleries, green roofs, etc., to minimize discharge impacts.	We added appropriate commas to clarify the intent.	Yes
260	(4)(d)(vi)	In forestry settings we primarily use angular rock for energy dissipaters – if cross drains are considered outfalls then we may want to discuss.	If the cross drain does not discharge to, or affect the bed or flow of waters of the state, it does not require a permit. If the cross drain or a stormwater system outfalls to waters of the state, then it will require a permit and the design must conform to these provisions. Provision (vi) states that quarry stone outfalls are acceptable but only after other methods to reduce scour (provisions (i) through (v)) have been shown to be infeasible.	No
270	(1)	Public Utility District No. 1 of Cowlitz County, Washington (Cowlitz PUD) supports the proposed amendment to the Hydraulic Project Approval Rules listed below: "Amendment to Section 270 Utility crossings in freshwater areas 270(1) Utility lines are cables and pipelines that transport gas, telecommunications, fiber optics, power, sewer, oil, and water lines from one side of a watercourse to the other. An HPA is not required for utility crossings attached to bridge structures. (WDFW)"	Comment noted	No
270	(2)	Section 2 should be deleted or moved to a guidance document. Using the language with words such as "can, could, may, and potential" is purely speculative and inappropriate to be listed for a WAC as rule-making.	"Must" is mandatory. "May" is appropriate when a requirement may not apply in all situations. This flexibility ensures the requirement is reasonably related to the project. The use of can, could and should is not	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
		This language is appropriate for guidance. The WAC should implement the RCW and not provide guidance language.	associated with a requirement	
280		The use of the word "timber" implies a forest practice activity; DNR suggests changing to "trees" to avoid confusion with forest practices rules governing these practices. This entire section alludes to forest practices which are governed under WAC 222 for certain forest practices hydraulic projects. DNR recommends a header in parenthesis that states "(Projects that meet the definition of FPHP found in WAC 222 are governed under that WAC and the provisions of this chapter do not apply)". This helps create a clear separation between the two jurisdictions and avoiding confusion.	We changed "timber" to "trees".	Yes
280		Suggested text modification: "The number of cable crossings over the stream must be minimized to reduce damage or disturbance to RMZ trees. Use of equipment that minimizes the number of yarding corridors shall be used, such as 'slack-line pulling carriages' or equivalent. Place cable tailholds across watercourses with identifiable bed or banks, if they minimize the number of new yarding roads needed. When changing roads, a person must move the cable around or over the riparian vegetation and banks to avoid damaging the vegetation and banks. "	The language is amended to read "Use equipment that minimizes the number of cable crossings over the stream to reduce damage or disturbance ..."	Yes
280	(2)	Section 2 should be deleted or moved to a guidance document. Using the language with words such as "can, could, may, and potential" is purely speculative and inappropriate to be listed for a WAC as rule-making. This language is appropriate for guidance. The WAC should implement the RCW and not provide guidance language.	"Must" is mandatory. "May" is appropriate when a requirement may not apply in all situations. This flexibility ensures the requirement is reasonably related to the project. The use of can, could and should is not associated with a requirement	No
280	(3)( e)	After "other small debris above the" delete "anticipated limits of floodwater" and add " OHWL."	Comment noted. Please see our response in section A.1.2 of Appendix A regarding our jurisdiction.	No
290	(2)	Section 2 should be deleted or moved to a guidance document. Using the language with words such as "can, could, may, and potential" is purely speculative and	"Must" is mandatory. "May" is appropriate when a requirement may not apply in all situations. This flexibility ensures the requirement is reasonably related	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
		inappropriate to be listed for a WAC as rule-making. This language is appropriate for guidance. The WAC should implement the RCW and not provide guidance language.	to the project. The use of can, could and should is not associated with a requirement	
290	(7)(iii)	The definition of "Aquatic plant" is broad and includes common plants encountered by NRCS when planning riparian, freshwater wetland, and estuary restoration projects. Typically undesirable weed species are controlled as a part of restoring native plant communities. In many cases reed canary grass and common rush (J. effuses) (undesirable) is intermixed with sparse native plants (slough sedge, cottonwood seedlings less than 24" tall, etc.). These projects may or may not contain other engineering practices requiring in-water work in waters of the state. Section 7 (ii) requires advance notification to remove aquatic beneficial plants. Is there a threshold for notification required on the amount of native plant materials removed or is removing a single native plant constitute the need to notification? This seems like an area where some level of professional judgment can be made to exempt aquatic plant control activities from the notification requirement when the overall objective is native habitat restoration.	This is specific to someone working under the "Aquatic Plants and Fish" pamphlet. Please look at Aquatic Plants and Fish <a href="http://wdfw.wa.gov/publications/00713/wdfw00713.pdf">http://wdfw.wa.gov/publications/00713/wdfw00713.pdf</a> for clarification in this matter.	No
300		The proposed revisions do very little to bolster fish life and habitat protections surrounding suction dredge mining. While the current revisions are being undertaken, it is an excellent time to implement long-needed changes to the Hydraulic Code surrounding small scale · placer mining. Neighboring states with similar threatened and endangered fish such as California, Oregon, and Idaho have seen fit to recently change their permitting practices to better protect threatened and endangered species that use aquatic habitat subject to suction dredge mining. Maine and Tennessee have undertaken similar actions to reduce risk to their own vulnerable aquatic organisms. Given the threatened nature re of many of Washington's own	Comment noted. The rules for mineral prospecting have been updated twice since 1994. The most recent version of the Gold and Fish pamphlet was published in April 2009. Because of this we decided to focus our limited resources on updating the rules that hadn't been updated since 1994.	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
		fish populations, it makes sense that WDFW should undertake similar precautions to protect our state's valuable natural resources.		
300		Additionally, the rules covering mineral prospecting are inconsistent with many of the other HPA rules and need to be rewritten to maintain consistency with other habitat impacts. Examples of these inconsistencies include: Including motorized equipment and suction dredges as "tools", and allowing prospecting without timing restrictions with these pieces of equipment. Allowing a person to relocate wood and boulders is inconsistent with the repositioning of wood in Section 220-110-220. There is no mention of the need to replace wood that has been removed.	Comment noted. The rules for mineral prospecting have been updated twice since 1994. The most recent version of the Gold and Fish pamphlet was published in April 2009. Because of this we decided to focus our limited resources on updating the rules that hadn't been updated since 1994. Please note work without timing restriction can only occur outside the wetted stream perimeter. Boulders and wood can be move but must be retained in the frequent scour zone. Wood cannot be cut.	No
300		Don't require the refilling of dredge holes. Suction dredger make ideal holes for fish life by producing refugia for fry and resting locations for salmon and steelhead, refugia for protection from attacking birds, and other wildlife. The deeper the water the cooler it is and is sometimes vital for survival in the warm summer months, may even get cool upwelling waters coming up from the bedrock. Pools also serve as catch basis for small sands and silts during flooding, etc. thus preventing some silting from reaching the redds. Also, the rocks piled up along the holes serves as refugia for the newly hatched fry because the spaces (voids) between the rocks and boulders provide protection from larger fish. Research says that this is the most critical time for survival of fish fry and smolts.	The only change we proposed to the Gold and Fish Pamphlet was the addition of the rules for small scale mineral prospecting on ocean beaches. During the rule making process we received science supporting timing window changes. The rules for mineral prospecting have been updated twice since 1994. The most recent version of the Gold and Fish pamphlet was published in April 2009. Because of this we decided to focus our limited resources on updating the rules that hadn't been updated since 1994.  No science was provided to support this comment.	No
300		Several rules found in the current April 2009 Gold and Fish pamphlet are to be deemed as interfering, prohibitive, and not scientifically necessary per House Bill 2261 or common sense.	The only change we proposed to the Gold and Fish Pamphlet was the addition of the rules for small scale mineral prospecting on ocean beaches. During the rule making process we received science supporting timing window changes. The rules for mineral prospecting have been updated twice since 1994. The most recent version of the Gold and Fish pamphlet was published in April 2009. Because of this we decided to focus our limited resources on updating the rules that hadn't been	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
			updated since 1994.	
320		"Because (1) considerable recent (2013) research by the Department of Ecology and Department of Fish and Wildlife has been focused on the mapping of feeder bluffs and especially, exceptional feeder bluffs, in the "Feeder Bluff Mapping of Puget Sound" report by Coastal Geologic Services, and (2) the Puget Sound Vital Sign target for shoreline armoring calls for a reduction in existing armoring along "feeder bluffs" - we believe this key shoreline category deserves explicit mention due to its role in supporting geomorphic processes. Therefore, we recommend that the following underlined language be added to the start of the sentence: "Feeder bluffs and other shoreform that support geomorphic processes ..."	Feeder bluffs are eroding bluffs that supply sediment. We changed the language to clarify that feeder bluffs and other shoreforms support geomorphic processes.	Yes
320	(1)	Description - Based on this section it would appear that the vast majority, if not all, of saltwater areas fit within this category. It doesn't appear that this designation would need its own distinct WAC section especially when considering 220-660-320(l)(b) that includes adjacent areas to saltwater habitats of special concern.	Comment noted	No
320	(2)	Section 2 should be deleted or moved to a guidance document. Using the language with words such as "can, could, may, and potential" is purely speculative and inappropriate to be listed for a WAC as rule-making. This language is appropriate for guidance. The WAC should implement the RCW and not provide guidance language.	"Must" is mandatory. "May" is appropriate when a requirement may not apply in all situations. This flexibility ensures the requirement is reasonably related to the project. The use of can, could and should is not associated with a requirement	No
320	(2)(b)	How is "higher level of protection" defined vs. areas that are not saltwater habitats of concern? Providing additional information related to this will provide greater certainty for applicants.	Please refer to (1)(b) Description	No
320	(3)(a)(iv)	Add Lingcod nesting sites.	Lingcod nesting sites were added	Yes
320	(3)(b)(ii)	Change " small gravel" to "pea gravel" and omit shell material	Our fish program recommended that the description remain as is.	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
320	(3)(b)(iv)	Add Lingcod nesting site information	Description was added.	Yes
320	(3)(b)(v)	Add macroalgae as a “saltwater habitat of special concern” and do not limit protection to only to those macroalgae beds in herring spawning areas. Macroalgae is used by a wide range of species – including juvenile salmon.	Macroalgae is ubiquitous throughout shallow nearshore saltwater areas. This would make virtually every place in Puget Sound a saltwater habitat of special concern.	No
320	(3)(b)(v)	Add "macroalgae beds"	Added "Macroalgae species Pacific herring use as spawning substrate; "	Yes
320	(4)(a)	Change "should" to "must"	This cannot always be achieved. This flexibility ensures the requirement is reasonably related to the project.	No
320	(4)(a)	Grammar seems incorrect.	We corrected this.	Yes
320	(4)(a)(vi)	Amend to read: Feeder bluffs and Drift cells that form and maintain spits and beaches and provide substrates required for plant propagation, fish and shellfish settlement and rearing, and forage fish spawning	This is covered in (b)(i) and (ii)	No
330		Include language that timing may change with new information on spawning times and use of nearshore by juvenile salmonids	This is covered in 070(2)	No
330		Include timing information for Surf Smelt in Tidal Reference Area 1. Amend Herring Window in Tidal Reference Area 9 to include Cherry point herring spawning through full month of June.	Because eggs have been found only once in November 1993 and Hammersley Inlet where the eggs were found has been repeatedly surveyed since, our scientist recommends that a timing restriction isn't warranted at this time.	No
330		I really wish the Hydraulic Codes and requirements were written such that any proposed in-water, potentially habitat-degrading, work along a saltwater beach shoreline must show beyond any doubt that there is no surf smelt spawning there. That would mean at least a full year of certified, approved surveys and analysis. Unless that has already been done recently.	To require surveys for a year is overly burdensome and would likely be deemed unreasonable by the PCHB.	No
330		Establish provisions requiring pre-construction forage fish spawning surveys in areas adjacent to known spawning areas or were there are significant gaps in the habitat survey work.	The new rules allow the department to require surveys in areas adjacent to documented areas if the habitat is suitable.	No
330		Omit language related to “documented” forage fish	Many suitable areas have been inventoried several	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
		spawning areas. Add provisions to fully protect forage fish spawning habitats that have not yet been adequately inventoried from construction impacts. In section 220-660-330, Change the word "documented" to inventoried.	times and no forage fish eggs have been found.	
330		Add provisions to work timing conditions to include the protection of adult fish from construction impacts during spawning and pre-spawning activity.	The intent of timing windows is to protect fish life during vulnerable life history stages. Adult fish are mobile and able to react to the disturbance caused by construction activities.	No
330		We suggest you strengthen this measure by adding the following language: <i>In areas that are not documented as spawning sites, but have characteristics that would support forage fish spawning, surveys must be conducted over a two year period throughout the assumed local spawning season to determine if the site is used for spawning. Surveys must be conducted by individuals certified in WDFW forage fish spawning survey protocols. In the absence of such a survey, the project must be designed and operated under the presumption that forage fish spawning could occur at the site. WDFW will not require implementation of forage fish protections if no spawning is detected during two consecutive survey years.</i>	Comment noted. Until we have additional scientific information we will maintain the proposed language. Our science division is currently collecting new data on forage fish presence/absence. These data will be used to develop an occupancy model that will predict the likelihood of egg presence. Once the model is developed it will go through the rule adoption process so we can use the model to determine whether surveys are needed.	No
330	(1)	Omit "unless a person can take mitigation measures to eliminate risk during critical periods"	If there is no or minimal risk then a timing restriction isn't warranted.	No
330	(2)	Section 2 should be deleted or moved to a guidance document. Using the language with words such as "can, could, may, and potential" is purely speculative and inappropriate to be listed for a WAC as rule-making. This language is appropriate for guidance. The WAC should implement the RCW and not provide guidance language.	"Must" is mandatory. "May" is appropriate when a requirement may not apply in all situations. This flexibility ensures the requirement is reasonably related to the project. The use of can, could and should is not associated with a requirement	No
330	(2)	Omit "unless the risk can be avoided"	If there is no or minimal risk then a timing restriction isn't warranted.	No
330	(3)(a)	Omit "documented"	Comment noted	No
330	(3)(a)	Omit "adjacent"	Comment noted	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
330	(3)(e)	Omit "documented"	Comment noted	No
330	(3)(e)	Omit "documented"	Comment noted	No
330	(3)(e)	Habitat biologists should have the discretion to work with the project proponent to develop best practices and/or mitigation actions that will allow for the necessary work to take place. As is, these authorized work times are overly restrictive.	This is allowed under (3)(i) and under proposed section 070.	No
330	(3)(f)(i)	Correction "per WAC 220-660-370" should be "per WAC 220-660-340"	Correction made	Yes
330	(3)(f)(ii) & (iii)	Join and amend to read: If the survey shows eggs are not present the person may start work after submitting the survey report to the department and receiving start work approval. If the permittee does not complete the work within seven days of the start of project, an additional survey, with department approval, is required. The biologist must conduct a survey every seven days until the work is completed. If a survey shows eggs are present, work must stop and the department must prohibit work waterward of the OHWL for a minimum of three weeks. Work may not begin until a new survey shows there are no eggs present	This language was in earlier draft versions of the rules. Our scientists, Dr. Phil Dionne and Dr. Timothy Quinn, both indicated a subsequent survey isn't warranted.	No
330	(3)(g)	Omit "adjacent"	Comment noted	No
330	(3)(g)	Omit "documented"	Comment noted	No
330	(3)(h)	Amend to read: Timing restrictions related to forage fish spawning areas will be applied to sites in or near known spawning areas. Timing conditions may also be applied to other areas with suitable habitat and bed materials when the department determines that use of the area for spawning is likely. ( or similar)	Until we have additional scientific information we will maintain the proposed language. Our science division is working on an occupancy model that will predict forage spawning areas. Once the model is developed it will go through rule adoption process so we can use the model.	No
340	(1)	Amend to read: The department uses intertidal forage fish spawning bed surveys to determine presence, absence, quantity, and timing of surf smelt and Pacific sand lance spawning. The department may require an applicant to hire a qualified, department-trained biologist to conduct an	See previous comments	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
		intertidal forage fish spawning survey. The presence of suitable spawning habitat or eggs may restrict project type, design, location, and timing.		
340	(1) and (3)	As with aquatic vegetation surveys, WDFW should only require that forage fish spawning surveys be conducted by a qualified professional using the approved WDFW survey protocol. WDFW should not require additional training of qualified professionals. This would be similar to qualified engineering professionals discussed in these proposed rules as well.	Comment noted. Completion of the one-day training is an important step to ensure the protocol is implemented correctly.	No
340	(2)	Section 2 should be deleted or moved to a guidance document. Using the language with words such as "can, could, may, and potential" is purely speculative and inappropriate to be listed for a WAC as rule-making. This language is appropriate for guidance. The WAC should implement the RCW and not provide guidance language.	"Must" is mandatory. "May" is appropriate when a requirement may not apply in all situations. This flexibility ensures the requirement is reasonably related to the project. The use of can, could and should is not associated with a requirement	No
340	(2)	Add: "or on potential spawning reaches that have not been adequately surveyed but that contain suitable spawning substrates." to end of paragraph	See previous comments	No
340	(3)(b)	Omit " the department may modify this protocol when only presence or absence are required."	Documenting the development stage isn't needed to determine presence and absence.	No
350		. The upper beach, where forage fish spawn, is typically shaded by overhanging vegetation. A structure overhanging the upper beach might mimic this natural shade. This shade might even be beneficial to forage fish eggs by protecting them from direct sunlight and reducing desiccation. By contrast, a bulkhead eliminates the upper beach.	Comment noted	No
350	(2)	Section 2 should be deleted or moved to a guidance document. Using the language with words such as "can, could, may, and potential" is purely speculative and inappropriate to be listed for a WAC as rule-making. This language is appropriate for guidance. The WAC should implement the RCW and not provide guidance language.	"Must" is mandatory. "May" is appropriate when a requirement may not apply in all situations. This flexibility ensures the requirement is reasonably related to the project. The use of can, could and should is not associated with a requirement	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
350	(3)	Omit " unless the department can determine the project will not impact seagrass and macroalgae"	If we can determine there is no impact it is unreasonable to require an unnecessary survey.	No
350	(3)(a)(i)	Amend to read: Constructing a new dock, mooring buoy, float, marina or marine terminal, jetty or breakwater, boat ramp, or other project that may cover or disturb seagrass or macroalgae habitats.	These are all covered in (a)(i) - (iv).	No
350	(3)(a)(iii) & (iv)	Combine and amend to read: Maintenance dredging, trenching, filling or grading.	This is not required for all maintenance dredging. See RCW 77.55.271	No
350	(3)(b)	Amend to read: Surveys shall follow the protocols identified the departments Eelgrass/Macroalgae Habitat Interim Survey Guidelines which can be found on the department website. Survey work must be conducted by biologists who are qualified to identify the predominant eelgrass and macroalgae species in the project area and survey results and interpretation will be subject to WDFW approval. The department will use the preliminary survey to:	WDFW allows the use of other protocols if they meet our monitoring standards.	No
350	(3)(b)	If a preliminary survey shows that seagrasses and macroalgae are absent, is a determination made that the project proposal will not impact aquatic vegetation? If so, this should be clearly describe bed in this section to provide certainty to project proponents/permit applicants.	If seagrass/macroalgae is not present how could project impact these resources? We don't require mitigation for loss/damage to a resource that isn't present. This is covered in proposed section (080)(4)(f).	No
350	(3)(b)(ii)	Omit "or minimize"	Comment noted	No
350	(3)(c)	Omit " in herring spawning beds"	Comment noted	No
350	(3)(c)	WAC 220-660-350(3)(c) acknowledges the seasonal and temporal variation of aquatic vegetation and states a department preference for conducting preliminary surveys between June 1 and October 1 when aquatic vegetation is at its fullest extent. Allowing preliminary surveys to be completed outside of this window could allow a project to improperly conclude it can be completed without adverse impacts aquatic vegetation. It is not clear what the threshold is to trigger an advanced survey if the preliminary survey is completed between October 2 and May 31. DNR recommends	We amended the language to read "Seagrass and macroalgae surveys must be conducted between June 1 and October 1 because the full extent of seagrass and macroalgae distribution can be more accurately mapped."	Yes

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
		preliminary surveys used for concluding no impact should be completed during June 1 to October 1 to ensure conservation and recovery efforts are not undermined.		
350	(3)(f)	Omit "the predominant"	Comment noted	No
350	(3)(g)	Change "may" to "will"	Change made	Yes
360	(2)	Section 2 should be deleted or moved to a guidance document. Using the language with words such as "can, could, may, and potential" is purely speculative and inappropriate to be listed for a WAC as rule-making. This language is appropriate for guidance. The WAC should implement the RCW and not provide guidance language.	"Must" is mandatory. "May" is appropriate when a requirement may not apply in all situations. This flexibility ensures the requirement is reasonably related to the project. The use of can, could and should is not associated with a requirement.	No
360	(2)	Amend to read: Construction and other work can negatively affect fish life. Some activities may kill or injure fish while others behavioral changes or a physical interruption to spawning, foraging or migratory behaviors which reduces fish growth and survival. Some activities can damage the habitat used for spawning and egg incubation, rearing, feeding, hiding from predators, and migration.	The current language covers these points.	No
360	(4)(b)	Change "six inches" to "four inches."	Change made	Yes
360	(4)(b)	The word "vegetation" is omitted after "native" in the first sentence of this section.	Change made	Yes
360	(6)(a) & (b)	Change "seagrass and kelp beds" to "seagrass and macroalgae beds" or "seagrass, macroalgae and kelp beds"	Changed to "seagrass, kelp, and forage fish spawning beds."	Yes
360	(8)	"undated" should read "inundated".	Change made	Yes
360	(010)	Omit "causing harm" and change "Activities related to the fish kill or fish distress must not resume..." to "Work must not resume..."	This is overly burdensome. Many times other work is occurring concurrently with the hydraulic project.	No
370		The proposed change by the ports would allow up to 3 years from a breach in a bank protection structure for submission of a permit for repairs. Combining these maximum time limits would allow inundation and	Comment noted. The ports and others expressed concern that they may not be able to obtain all necessary permits to repair the bank protection within three years of a breach. Please note the existing and	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
		establishment of a new OHWL to potentially occur for up to an 8 year period. Such a long time period would potentially allow for development of a new OHWL and aquatic functions could become well established. Such habitat would then be lost if a bulkhead is re-constructed in the old footprint. We recommend that this section revert to the previous language and require repairs be completed (rather than a permit submitted) within 3 years, or the newly established OHWL will become the existing OHWL for permitting purposes.	proposed rules require a permittee to demonstrate substantial progress on the project within two years of the date of HPA issuance.	
370		Add language noting that due to significant impacts, single family bulkhead projects often result in the permanent loss of critical food fish and shellfish habitat, and that many bulkhead projects are processed under 77.55.021.	Added "The department may deny bank protection applications processed under RCW 77.55.021 that do not provide proper protection of fish life."	Yes
370	(1)	Change "are either soft or hard techniques to " include both soft or hard techniques."	"either" is accurate here.	No
370	(1)	WAC 220-660-370 (1): replace the word "aerial" with the word "areal," or re-word to say "...to be considered soft, at least eighty-five percent of the total project area must consist of naturally occurring materials..." There is also something missing or unclear in the next sentence in this section, "The remaining fifteen percent of the total project area must not interrupt sediment delivery to the beach (e.g., must not bulkhead a feeder bluff) and still be called soft." Consider instead, "In order to be considered soft, the remaining fifteen percent of the total project area must not interrupt sediment delivery to the beach (e.g., must not bulkhead a feeder bluff)." This section also defines "area" as extending cross-shore from MLLW to OHW; does this mean that bank protection installed below MLLW will not be considered "soft"?	We replaced the word "aerial" with "areal."	Yes
370	(2)	Section 2 should be deleted or moved to a guidance document. Using the language with words such as "can, could, may, and potential" is purely speculative and inappropriate to be listed for a WAC as rule-making. This language is appropriate for guidance. The WAC	"Must" is mandatory. "May" is appropriate when a requirement may not apply in all situations. This flexibility ensures the requirement is reasonably related to the project. The use of can, could and should is not	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
		should implement the RCW and not provide guidance language.	associated with a requirement	
370	(2)	Change "protects the beaches where critical food fish or shellfish habitat occur and the nearshore..." to "protects critical food fish or shellfish habitat and the beaches where these habitats occur and the nearshore..."	The section accurately reflects the concern.	No
370	(3)(a)	Change "three years" to "two years"	Other commenters said three years is more reasonable.	No
370	(3)(d)	Amend to read: An HPA application for new, replacement, or rehabilitated bulkhead or other bank protection work must include a site assessment which includes evaluation of need, alternatives analysis and design rationale by a qualified professional (such as a coastal geologist, geomorphologist, etc.) for the proposed project and selected technique. New and replacement armoring will not be allowed unless a need is clearly determined by a qualified professional. If a need for stabilization is confirmed, hard armoring will not be allowed unless evaluation determines soft stabilization techniques are not possible. This requirement applies to projects processed under both RCW 77.55.141. and RCW 77.55.021. This report must include:	This doesn't comply with RCW 77.55.141(2)	No
370	(4)(a) & (b)	Merge sections with application section applying to bulkheads processed under both statutes.	This doesn't comply with RCW 77.55.141(2)	No
370	(5)(a)	Is there scientific justification for "no greater than 6 feet" waterward of the OHWM? This should be a site specific decision based on need and the existing language "least distance needed" should provide acceptable protection without what seems to be an arbitrary distance determination.	This is in statute RCW 77.55.141.	No
380	(2)	Section 2 should be deleted or moved to a guidance document. Using the language with words such as "can, could, may, and potential" is purely speculative and inappropriate to be listed for a WAC as rule-making. This language is appropriate for guidance. The WAC	"Must" is mandatory. "May" is appropriate when a requirement may not apply in all situations. This flexibility ensures the requirement is reasonably related to the project. The use of can, could and should is not associated with a requirement	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
		should implement the RCW and not provide guidance language.		
380	(3)(a)	Omit "if possible."	Must is mandatory. "May" is appropriate when a requirement may not apply in all situations.	No
380	(3)(b)	Omit "or minimize" throughout entire subsection.	Comment noted	No
380	(3)(b)(iii)	Change "may" to "will"	Change made	Yes
380	(3)(b)(iii)(A)	The term "must" should be replaced with "should" to allow for situations where this buffer may not be achievable but minimization and mitigation may be an acceptable outcome.	Exceptions can be allowed under proposed section 070(1)(c).	No
380	(3)(b)(iii)(A)	Amend to read: Structures must be located at least twenty-five horizontal feet and four vertical feet away from seagrass and macroalgae at extreme low tide.	Term "algae species" is removed.	Yes
380	(3)(b)(iii)(B)	Omit	Comment noted	No
380	(3)(b)(iii)(B)	"at least" should be replaced with a qualifying ng statement that structures should be placed the maximum distance possible from species of concern to avoid and minimize impacts. Minimization and mitigation for impacts may provide for acceptable alternative strategies/outcomes than defining specific distances.	Comment noted. Exceptions can be allowed under proposed section 070(1)(c).	No
380	(3)(b)(iv)	"mitigation" should be "migration"	The language is amended to "migration"	Yes
380	(3)(d)	"usable" should not be the basis for allowing a replacement structure. Allowance to replace a structure should be provided if it is within the same footprint as the existing structure. Usable is a subjective term.	This does not prohibit the construction of a new structure but it may affect the mitigation required. We have added "Usable means no major deterioration or section loss in critical structural components is present."	Yes
380	(3)(e)	Replacement of more than XX percent of decking or replacement of decking substrate requires installation of functional grating. The grating must conform to the requirements in this section	Comment noted	No
380	(3)(e)	250 ft2 seems to be an arbitrary determination. Use percentage based approach. If required to install grating based on this rule, it is not clear if the entire surface needs to be replaced or just the area planned for replacement.	250 square feet is the size of a typical residential float. We have changed the language to clarify that the grating is required in the replaced section only.	Yes

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
380	(4)(a)	Change "six feet" to "XX" feet	Comment noted. The comment was not specific enough to respond to.	No
380	(4)(a)	Is the minimum height requirement of 6' at the landward end of piers and docks scientifically derived? This height seems arbitrary and may not be possible based on site characteristics.	The importance of light in the nearshore is well documented in the literature. This height requirement is typically achievable on marine shorelines. Section 070(1)(g) allows deviations from this standards for geological or engineering constraints.	No
380	(4)(b)	Change "six feet" to "four feet". Add allowance for ADA residential piers to be six feet in width and add width parameter limit for recreational piers i.e. "no more than"	Comment noted. No science was provided to support this comment.	No
380	(4)(c) & (d)	Merge sections and amend to read: New Piers, ramps and floats must have grating installed over the entire deck, ramp or float surface. Grating must be installed parallel to the wide of the pier, ramp or float and have an open area of at least sixty percent.	Comment noted. No science was provided to support this comment. Please note, grating over flotation does nothing to improve light penetration.	No
380	(4)(e)	Amend to read: Limit the width of residential ramps to four feet wide. Limit the width of recreational ramps to the minimum width needed to accommodate the intended use with maximum width not to exceed XX feet. Cover the entire ramp surface with grating.	Comment noted. The comment was not specific enough to respond to.	No
380	(5)(a)	Omit " if possible"	WDFW will not require if it's not possible.	No
380	(5)(b)	Amend to read: Limit the width of residential floats to eight feet . Limit the width of recreational floats to the minimum width needed to accommodate the intended use with maximum width not to exceed XX feet. Cover the entire float surface with grating.	Comment noted. The comment was not specific enough to respond to.	No
380	(5)(c)	Omit "if possible."	The size of the vessel(s) may limit what's possible.	No
380	(5)(d)	How were the maximum float size dimensions determined? This section should read "...minimum size needed for the site and intended use..."	The importance of light in the nearshore is well documented in the literature. This width requirement is typically achievable. Proposed WAC section 070(1)(g) allows changes to the technical provisions for geological, engineering or environmental constraints or safety concerns. (1)(f) allows changes if the provisions conflict with other regulations such as ADA.	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
380	(5)(f)	Amend to require one hundred percent grating with at least sixty percent open area over the entire float surface.	Comment noted. No science was provided to support this comment. Please note, grating over flotation does not improve light penetration. See definition of functional grating.	No
380	(5)(f)	"...below should not block light penetration ..." An allowance should be made for structural framing under the grating as this is the only way a float can be supported.	We have added language to clarify this doesn't apply structural components.	Yes
380	(5)(i)	The term "embedded anchor" should be used instead of "helical screw, duckbill". This is a more generic and accepted term.	We have changed the language to "embedded anchors".	Yes
380	(6)(b)	This section should not define maximum piling diameter for residential docks. It should be the same for public recreational docks: "minimum diameter needed to accommodate the intended use". Should be based on use and site characteristics.	Section 070(g) allows changes to the technical provisions for geological, engineering or environmental constraints or safety concerns. (f) allows changes if the provisions conflict with other regulations such as ADA.	No
380	(7)(c)	In WAC 220-660-380 (7) (c), please consider adding language similar to that in 220-660- 140 (3) (g), i.e., "the design should not use treated wood for the decking of the structure."	This is 03(c).	No
380	(8)(a)(i)	The term "embedded anchor" should be used. Helix and Manta are brand names and not the only options on the market.	We have changed the language to "embedded anchors"	Yes
380	(8)(a)(i)(a) & (B)	Join and amend to read: Seagrass and Macroalgae habitat surveys are required for all new mooring buoy systems to ensure any submerged aquatic vegetation will not be damaged from buoy installation, vessel propellers or shading from moored vessels.	Not required for installation of an embedment style anchor because these are installed by divers. As a result, the HPA can be conditioned to require the diver to install the anchor away from important vegetation.	No
380	(9)	The replaced structure must be removed and disposed of upland such that it does not reenter state waters." What if the replaced structure meets permit requirements? Can it be reused if permissible? Can it be recycled instead of "disposed of upland"? Recycling should be encouraged when appropriate.	A replaced structure can be reused but it must be specifically permitted in the HPA. Materials can also be recycled.	No
380	(9)(d)	Amend to require one hundred percent grating with at least sixty percent open area over the entire float	Comment noted. No science was provided to support this comment. Please note, grating over flotation does	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
		surface.	not improve light penetration. See definition of functional grating.	
380	(10)(a)	Change "adversely impact seagrass, kelp, or forage fish spawning beds" to "seagrass, kelp, macroalgae, or forage fish spawning beds."	Comment noted	No
380	(10)(a)	This should be a best management practice (BMP) and not in rule as it is only a guideline and not enforceable.	(10)(a) is removed because this requirement is already in proposed section 360.	Yes
380	(10)(g)(v)(A)	Remove word "sausage". Absorbent boom is clear and understandable term and does not preclude other appropriate types of absorbent boom and potential future changes in technology.	We have changed the language to "absorbent boom"	Yes
380	(10)(h)	"Dispose of replaced piers, ramps, floats .....in an upland disposal site". Replaced materials should be allowed for reuse if they meet current standards. Recycling should be encouraged when appropriate.	A replaced structure can be reused but it must be specifically permitted in the HPA. Materials can also be recycled.	No
390		WAC 220-660-390 should incorporate language to limit new private boat launches associated with single family residences and encourage public and community launches a means to avoid/minimize impacts to the marine nearshore ecosystem. Sec 390(a) should be modified to state that design and location of new boat launches and ramps "must avoid" saltwater habitats of special concern (e.g., forage fish spawning habitat and native aquatic vegetation), similar to the way Section 410(3)(c) "prohibits" new dredging in sand lance, surf smelt, herring spawning beds, etc.	Comment noted. The "must" is implied but the language was changed to make it clear.	Yes
390	(2)	Section 2 should be deleted or moved to a guidance document. Using the language with words such as "can, could, may, and potential" is purely speculative and inappropriate to be listed for a WAC as rule-making. This language is appropriate for guidance. The WAC should implement the RCW and not provide guidance language.	"Must" is mandatory. "May" is appropriate when a requirement may not apply in all situations. This flexibility ensures the requirement is reasonably related to the project. The use of can, could and should is not associated with a requirement	No
390	(3)(a)	"...to avoid and minimize adverse impacts"	This would be less protective than the current rules.	No
390	(3)(b)	Change "may" to "will"	Change made	Yes
390	(3)(c)	Omit "and minimize"	Excavation below the OHWL may not be avoidable.	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
390	(3)(d)	Change "to minimize impacts" to "avoid impacts"	Impacts from boat ramps below the OHWL may not be avoidable.	No
390	(3)(g)	Side slope requirements should be site specific determinations nations and not predetermined.	Comment noted. Exceptions can be allowed under proposed section 070(1)(c).	No
400	(2)	Section 2 should be deleted or moved to a guidance document. Using the language with words such as "can, could, may, and potential" is purely speculative and inappropriate to be listed for a WAC as rule-making. This language is appropriate for guidance. The WAC should implement the RCW and not provide guidance language.	"Must" is mandatory. "May" is appropriate when a requirement may not apply in all situations. This flexibility ensures the requirement is reasonably related to the project. The use of can, could and should is not associated with a requirement	No
400	(3)( c)(iv)	...existing low or impaired biological value." How is this defined and who makes the decision of what locations have this type of status? As written this is ambiguous and does not provide project proponents or permit applicants with any certainty about how it would apply.	We agree it's a bit ambiguous. That's why (3)(c) says "where possible."	No
400	(3)( c)(v)(D)	Amend to require the use of grating over one hundred percent of all overwater surfaces. Grating must have a minimum of sixty percent open area. Grating must be oriented so the lengthwise opening maximizes light penetration. Materials may not be stored on grated areas and portions of the structure that are not grated areas i.e. boathouse or loading ramps must use light reflecting materials on the underside of the OWS	Marine terminals cannot install grating in many cases because of the intended use.	No
400	(3)(a)	Change "may" to "will"	Must is mandatory. "May" is appropriate when a requirement may not apply in all situations. This flexibility ensures the requirement is reasonably related to the project.	No
400	(3)(b)	Change "may" to "will"	Must is mandatory. "May" is appropriate when a requirement may not apply in all situations. This flexibility ensures the requirement is reasonably related to the project.	No
400	(3)(c)	Omit "when possible"	This may not always be possible.	No
400	(3)(c)(i)	Omit "and minimize"	Avoidance may not always be possible.	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
400	(3)(c)(ii)	Omit "or minimize"	Avoidance may not always be possible.	No
400	(3)(c)(iii)	Omit "or minimize"	Avoidance may not always be possible.	No
400	(3)(c)(v)(B)	Add width parameters/limit i.e. "no more than"	The width of a terminal supporting large ships will depend on the intended use.	No
400	(3)(c)(v)(C)	Add height parameters i.e. "at least six feet"	The height of a terminal supporting large ships will depend on the intended use but this is often much greater than six feet.	No
400	(4)(a)	Amend to read: The department prohibits constructing marinas on or over the following saltwater habitats of special concern: Pacific herring spawning beds, lingcod and rockfish settlement and nursery areas, eelgrass, macroalgae and kelp beds.	The proposed language maintains the current restrictions.	No
400	(4)(a)	This section should be rewritten. Why are marinas singled out for this prohibition and not marine terminals? "Prohibit precludes any opportunity to avoid, minimize and mitigate impacts and should not be used.	The current rules do not have a specific section for marine terminals, just marinas. The prohibition is in the current rules so changing it to avoid and minimize reduces current fish protection standards.	No
400	(4)(b)	Omit and add habitats of special concern listed to 220-660-400(4)(a)	The proposed language maintains the current restrictions.	No
400	(4)(d)	Omit "if possible."	This may not always be possible.	No
400	(4)(d) - (d)(iii)	Omit	The proposed language increases protection for juvenile salmonids.	No
400	(4)(e)	Amend to add a depth value or a definition of "phototrophic zone"	The common definition is adequate. It varies depending on where you are in the Salish Sea.	No
400	(4)(f)	39. WAC 220-660-400 (4) (f) needs to be edited; "Any replacement roof...in landward.	We have changed the language.	Yes
400	(4)(h)(i)	"single entrance should be better described or defined, especially due to the fact that the requirement is landward of OHWM. How does this help avoid, minimize fish life concerns?"	This language is in the current rule and we are not proposing to change it. The language says "A single entrance may be required..." Proposed section 070 allows modification of the rules to address engineering constraints.	No
400	(4)(h)(ii) - (j)(v)	Amend to restrict new breakwater construction.	Breakwaters are sometimes needed for new marinas.	No
400	(4)(i)(ii)	Horizontal/vertical ratios should be based on site specific characteristics/requirements and pre-determined.	This language is in the current rule and we are not proposing to change it. Proposed section 070 allows modification of the rules to address engineering	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
			constraints.	
400	(4)(j)(iii)	Breaches between breakwaters should be engineering decisions based on site specific characteristics/requirements and not predetermined.	This language is in the current rule and we are not proposing to change it. Proposed section 070 allows modification of the rules to address engineering constraints.	No
400	(5)	How are saltwater habitats of special concern established and listed/documentated for use by permitting community.	See Section 320.	No
400	(6)(h)(i)	Remove word "sausage". Absorbent boom is clear and understandable term and does not preclude other appropriate types of absorbent boom and future changes in technology.	We have changed the language to "absorbent boom"	Yes
400	(6)(j)	"Dispose of replaced piers, ramps, floats .....in an upland disposal site". Replaced materials should be allowed for reuse if they meet current standards. Recycling should be encouraged when appropriate.	A replaced structure can be reused but it must be specifically permitted in the HPA. Materials can also be recycled.	No
410	(2)	Section 2 should be deleted or moved to a guidance document. Using the language with words such as "can, could, may, and potential" is purely speculative and inappropriate to be listed for a WAC as rule-making. This language is appropriate for guidance. The WAC should implement the RCW and not provide guidance language.	"Must" is mandatory. "May" is appropriate when a requirement may not apply in all situations. This flexibility ensures the requirement is reasonably related to the project. The use of can, could and should is not associated with a requirement	No
410	(2)	WAC 220-660-410 (2): Similar to previous comments about using "can" or "may" in sections describing fish life concerns: Using "may" as you do in this section could be read as "it is permissible to...", particularly because in 220-660-410 (3)(a), I believe you are using "may" in the sense of "it is permissible for the department to require hydrodynamic modeling."	The section describes fish life concerns. It doesn't authorize adverse impacts.	No
410	(3)(a)	Change "may" to "will"	Must is mandatory. "May" is appropriate when a requirement may not apply in all situations. This flexibility ensures the requirement is reasonably related to the project.	No
410	(3)(b)	Design project to avoid dredging and expansions that convert intertidal to subtidal habitat, where possible.	We have clarified the language.	Yes

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
410	(3)(c)	Project proponents should be provided the opportunity to demonstrate how their project design will avoid, minimize and mitigate for impacts to these habitats instead of an outright prohibition in the rule. The rule would need to be changed if adaptive management and/or new technology/science provides alternatives.	This is language in the current rule. The change would reduce fish protection from the current standard. Proposed section 070(c) allows modification of the rules if the original provision would result in a denial of an HPA when there is enough mitigation to allow the project.	No
410	(3)(d)	Omit "new". Omit "Surveys are not required for maintenance dredging within their original footprint"	This would not comply with RCW 77.55.271	No
410	(3)(e )	Omit	Comment noted. This would reduce fish protection.	No
410	(3)(e)	"Dredging must avoid and minimize adverse impacts to ..."	The language is amended.	Yes
410	(3)(f)	Should allow for dredged depths based on use, need and prior dredged depths not arbitrary existing depth at seaward end and for some uses versus others. Existing depth at seaward end may not be suitable for current uses.	This is language in the current rule. Proposed WAC section 070(g) allows changes to the technical provisions for geological, engineering or environmental constraints or safety concerns.	No
410	(4)(f)	Omit "when possible"	Limiting to daylight hours lengthens the overall time dredging will take. So it may not be possible or desirable in some cases.	No
420		WAC 220-660-420 Artificial reefs should only be utilized to advance species- specific conservation and recovery objectives as part of a larger coordinated management strategy. Permitting an artificial reef as a means to enhance a recreational fish viewing opportunity does not fill a specified habitat void or advance a species-specific recovery objective. DNR recommends that artificial reefs not be permitted as a generic addition to aquatic habitats as this can result in displacement of existing soft-bottom ecological communities and have unintended ecological impacts. Although viewing opportunities may be an indirect benefit of an artificial reef, it should not be considered an adequate justification for a proposal.	Comment noted. WDFW has a different perspective.	No
420	(2)	Section 2 should be deleted or moved to a guidance document. Using the language with words such as "can, could, may, and potential" is purely speculative and	"Must" is mandatory. "May" is appropriate when a requirement may not apply in all situations. This flexibility ensures the requirement is reasonably related	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
		inappropriate to be listed for a WAC as rule-making. This language is appropriate for guidance. The WAC should implement the RCW and not provide guidance language.	to the project. The use of can, could and should is not associated with a requirement	
420	(3)(a)(i)	The Washington Scuba Alliance supports the draft language proposed for section WAC 220-660-420 regarding "Artificial aquatic habitat structures in saltwater areas." Specifically, the language in proposed section WAC 220-660-420.3(a)(i) supports a design objective for artificial habitat structures to "Enhance fish viewing opportunity at a specific location."	Comment noted	No
430	(2)	Section 2 should be deleted or moved to a guidance document. Using the language with words such as "can, could, may, and potential" is purely speculative and inappropriate to be listed for a WAC as rule-making. This language is appropriate for guidance. The WAC should implement the RCW and not provide guidance language.	"Must" is mandatory. "May" is appropriate when a requirement may not apply in all situations. This flexibility ensures the requirement is reasonably related to the project. The use of can, could and should is not associated with a requirement	No
430	(3)(d)	This section discusses when a "fishway" is required on a tide gate. There is no definition or description of what is considered as a "fishway" in this section or in section WAC 220-660-030.	See "fish passage improvement structure."	No
440	(2)	Section 2 should be deleted or moved to a guidance document. Using the language with words such as "can, could, may, and potential" is purely speculative and inappropriate to be listed for a WAC as rule-making. This language is appropriate for guidance. The WAC should implement the RCW and not provide guidance language.	"Must" is mandatory. "May" is appropriate when a requirement may not apply in all situations. This flexibility ensures the requirement is reasonably related to the project. The use of can, could and should is not associated with a requirement	No
440	(4)(b)	Change "may" to "will"	Change made.	Yes
450	(2)	Section 2 should be deleted or moved to a guidance document. Using the language with words such as "can, could, may, and potential" is purely speculative and inappropriate to be listed for a WAC as rule-making. This language is appropriate for guidance. The WAC should implement the RCW and not provide guidance language.	"Must" is mandatory. "May" is appropriate when a requirement may not apply in all situations. This flexibility ensures the requirement is reasonably related to the project. The use of can, could and should is not associated with a requirement	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
450	(3)(a)	Project proponents/permit applicants may need to conduct additional borings outside of a proposed footprint depending on the project proposal/site characteristics. These should be allowed if a qualified professional determines that they are necessary. Rule language should be revised to reflect this.	The boring is the hydraulic project and the plans approved by the department would delineate the project footprint.	No
460	(3)	WDFW should allow 90 days for submission of a request for an informal appeal.	Comment noted. This is current language and we are not proposing to change this section.	No
460	(6)	WDFW should develop an appropriate time period for issuing a decision on an informal appeal instead of just suspending the process during the informal appeal conference process.	Comment noted. This is current language and we are not proposing to change this section. Please note the decision to participate in an informal conference is the appellant's.	No
470	(3)	WDFW should provide 90 days for a formal appeal to be served on the department. The rule currently requires 30 days.	This timeline is in statute. RCW 77.55.021(8)(b).	No
470	(5)	WDFW should provide 90 days for requesting a formal appeal during the described process.	This timeline is in statute. RCW 77.55.021(8)(b).	No
480	(3)	Change "Notice of correction" to "Notice of correction and stop work condition." Add section creating a common stop work condition that will be added to approved permits allowing the department to temporarily require a cessation of work when any violation of permit conditions is discovered.	WDFW cannot ask a permittee to incriminate themselves in a potential gross misdemeanor.	No
480	(4)	WDFW should provide 90 days for civil penalty payments.	This timeline is in statute. RCW 77.55.291(4).	No
170	(1)	Dredging can restore sediment impaired salmon spawning and rearing habitat in small urban streams and restore the natural toxic algae free function of sediment impaired lakes. The latter in-water salmon habitat enhancement activity needs to be encouraged and facilitated by WDFW drafting and promulgating appropriate instructions and a simplified no fee permitting process that will enable local governmental agency personnel including the Pierce Conservation District and its volunteers, tribal members, enlightened	The department will support an amendment to RCW 77.55.181 to allow this activity under the Fish Habitat Improvement Process.	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
		environmental organizations and volunteer citizen stream stewards to responsibly execute WDFW's Stream Restoration Guidelines 2012 Technique 11 prescribed sediment removal best management practice.		
200	(1)	Are stream barbs/vanes also discouraged?	We believe that these are bank protection techniques, not fish passage structures. We would need a more specific case to evaluate them.	No
220	(3)(b)	Does this mean logs that span the bed of the channel below the OHWM or span the bank of the channel suspended above the active channel? We were recently told that bed channel spanning logs would not be permitted even though this type of feature was present throughout the reference reach because they would be considered fishway structures.	The least impacting method of stabilizing is preferred. In general, WDFW discourages grade control. If these logs are for habitat enhancement, then buried logs can help to stage and store sediment, and provide channel diversity. However, these logs must be able to respond to changes in bed elevation as they do in a natural channel.	No
130	(4)(b)(ii)	if it is determined that the "root cause" of the bank failure occurs offsite, outside of the NRCS's client's control, will the Department still permit the bank stabilization project or will the "root cause" need to be addressed?	The WAC 220-660 submitted to the code reviser does not have -130(4)(a)(ii). But, -130(4)(b)(ii) says: (ii) Use a site and reach assessment to understand the causes of erosion;... This provision does not require that you eliminate the cause, only that it be understood. The assumption is that, if the designer is aware of the cause, then his protection strategy will perform better with fewer impacts to stream processes and habitat.	No
120	(5)(e)	Chevron's suggested modification also allows non-vegetable-based lubricants to be used as long as they meet the "readily biodegradable" requirements of OECD 301B and pass the acute toxicity requirements of OECD 201 and EC-50, OECD 202. Furthermore, these readily biodegradable hydraulic oils provide better lubrication protection, which also leads to less lubricant disposal.	The provision was changed to read "Equipment used in or near water must use environmentally acceptable lubricants composed of biodegradable base oils. These are vegetable oils, synthetic esters, and polyalkylene glycols."	Yes
120	(7)(f)	After "above the limits of" delete "anticipated floodwater" and add "OHWL" to be consistent with RCW 77.55.021.	Comment noted. Please see our response in section A.1.2 of Appendix A regarding our jurisdiction.	No
120	(7)(g)	after "Upland area above the" delete "limits of anticipated floodwater" and add "OHWL." to be consistent with RCW 77.55.021.	Comment noted. Please see our response in section A.1.2 of Appendix A regarding our jurisdiction.	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
120	(7)(f)	Perhaps you mean, "Route the construction water (wastewater) <u>FROM</u> the project to an upland area above the limits of anticipated floodwater."	Yes	Yes
120	(9)(m)	DNR suggest this section be written in plain speak so that it can be understood by landowners and easily implemented? Earlier versions of the Hydraulic Code rules provided alternate screening parameter that matched readily available products. (i.e., 3/32" or smaller 1/16"). 220- 660-120 (9) (m) through (p) refer to fish "screens." 220-660-120 (9) (m) (iv) refers to a fish "guard." Is there a difference between a "guard" and a "screen?" If not, please consider rewording for consistency.	We made the language consistent. However, please note in the definition "Fish screen" means fish guard.	Yes
000	General	The Fish and Wildlife Commission can insist that HPA technical provisions are specifically and precisely written for beaver dam and sediment removal (dredging) salmon habitat enhancement projects so that WDFW biologists' discretion in determining mitigation, if any, is "...relate[d] to the project and...proportional to the impact of the project." As it now stands too much discretion is allowed WDFW's biologist in determining whether or not mitigation will be required, and if so how much, for beaver dam and sediment removal salmon habitat enhancement projects.	Hydraulic projects have many variables. Precise rules limit the flexibility of the biologist to condition the permit appropriately to mitigate impacts from the proposed work. The biologists and environmental engineers must have the flexibility to ensure the mitigation including compensatory mitigation is appropriate for the project and site specific impacts.	No
050	(9)(c)(ii)(B)	Regional WDFW staff have communicated to applicants, such as Grant PUD, that there would be delay in processing a JARPA and that the electronic online form is the fastest and best way to apply for a HPA	There is no difference in the processing time. APPS has some advantages such as being able to pay online and the ability get status updates on your application processing but these don't affect processing time.	No
120	(7)(d)	The proposed rule currently reads, it appears to allow WDFW to stop project activities for any siltation of state waters without consideration or acknowledgement of existing DOE water quality standards and general permits.	You are correct. Our authority is limited to the protection of fish life. Proposed section 070(1)(f) allows us to delete or modify technical provisions in conflict with applicable local, state, or federal regulations that provide equal or better protection for fish life. This would apply to WQ regulations and permits issued by Ecology. Our rules only require activities causing harm to fish life to immediately stop if a fish kill occurs or fish are observed in distress.	No

SECTION	PROVISION	COMMENT	RESPONSE	CHANGE RESULTED
300		<p>I feel that the Commission and the agency should do their fiduciary duty and bring forth this issue in the form of legislation and remove small scale mineral prospecting from RCW 77.55 and establish new statutes regarding lawful prospecting and mining per the federal mining laws and jurisdiction. This tiny activity (compared to historical prospecting and mining practices) is totally non-significant. Given the all the peer reviewed subject matter science pertaining to small scale mineral prospecting received by this Commission and the agency over the past decade and in spite of the workshops and public miners rallies in Okanagan County and in Kittitas County, this writer is still baffled by the actions of the State of Washington into the affairs of prospectors and miners operating on the public domain set aside for mineral entry. The presumption of preemption by the state of Washington into this activity is currently being hotly contested not only here in Washington State (Beatty v WDFW Court of Appeals, opinion pending) in Oregon and a huge case in California.</p>	Comment noted.	No

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Comments on the rules that address issues broader than a particular section of rule are summarized on Table A-9.

**Table A-9 General Comments on the Proposed Hydraulic Code Rules**

COMMENTER	COMMENT	RESPONSE
NWIFC	The draft rules fail to provide clear guidance regarding water crossings. We are disappointed that the proposed rules do not provide more clear guidance to assure that stream crossings do not block fish passage. The new proposed code mentions StreamSim design, but is ambiguous on whether StreamSim is required or merely suggested.	All water crossings must provide unimpeded fish passage and protect channel functions and processes. The stream simulation design method achieves this. But the no-slope and alternative culvert design methods can also achieve this provided the design is appropriate for the site.
Peter Ojala, French Slough Flood Control District	Rules could provide a mechanism for defining HPA jurisdiction based upon the definitions being applied to different water courses areas within a district, and what type of work is being conducted.	The jurisdiction is defined in RCW 77.55.021(1). Our jurisdiction is limited to hydraulic projects. Jurisdiction for hydraulic projects is independent of the definitions and designations of areas or activities under other statutes such as the Shoreline Management Act.
Peter Ojala, French Slough Flood Control District	The rule updates do nothing to address the mandates of RCW 77.55.131 (dike vegetation management guidelines) - though a stated purpose of updating the rules was to comply with statutes passed after the existing rules were established.	The effective date of the statute you mention was 1993. The existing rules were updated in 1994, but don't mention this law because there were no requirements in the law that affected applicants for HPAs.
Peter Ojala, French Slough Flood Control District	The rules should better define what criteria may be used to analyze whether conditions [permit provisions] are "reasonable" conditions under the facts and circumstances of a hydraulic project, or at least provide a metric when dealing with a particular hydraulic project. Reasonableness is the hallmark of looking at all facts and circumstances, not just those related to protecting fish life- and this makes sense, because WDFW only may condition HPAs as related to the protection of fish life - and RCW 77.55.021(7)(a) provides such conditions may not be unreasonable. Possible factors should be articulated that address: an economic cost benefit analysis on the conditions related to the proposed nature of the work, historical practices, advances in technology, type of fish life at issue, the economics of the work, the necessity of the work to the purposes of the applicant, the economic cost of the protection of fish life or mitigation versus the cost of the proposed work, and other factors.	During the rule-making process the department received public comments on the potential social, environmental, and economic effects of rules. Many of these public comments resulted in changes to the rules. The department has worked hard to balance the potential effects of the rule changes to ensure they are "reasonable" while still meeting our mandate to protect fish life. Factors considered in the proposed rule changes include cost, current technology, best management practices, proper protection of fish life, and mitigation.

COMMENTS	COMMENT	RESPONSE
Stillaguamish Flood Control District	In general, the District is concerned about guidance, procedures and rules that require more surveys, additional employment of experts, and compliance with increasingly detailed manuals that operate to impose delays and balloon costs without material benefit to fish and wildlife. In general, many mitigation requirements are counterproductive in achieving stated goals and objectives. Studies throughout the world have demonstrated where all natural functions and values are sought to be retained, large and small projects fail. Where preservation of one or two functions and values are prioritized, projects are more likely to be successful--the one or two functions and values are preserved and nature generally adopts and retains subsidiary functions and values.	Comment noted. It is unclear which mitigation measures you view as counterproductive, so we cannot specifically address your concern. Please see our responses to the rule comments.
Upper Skagit Indian Tribe	The Tribe is concerned that too many pathways exist that allow actions to be taken by permit holders without proper notification to and oversight by WDFW and Tribal technical staff. Adequate oversight of permitted activities is an important step in the HPA process, whereby assessments can be made of the actual impacts of HPA projects. For example, "General" and "Model" HPAs allow for a wide range of activities to take place over large geographic areas (e.g. statewide), creating the potential for inadequate notification and project oversight. This potentially creates situations where activities can be overlooked that should not be permitted or should require mitigation or improved best management practices. As a solution, WDFW should err on the side of writing individual permits or, at minimum, requiring adequate notification (e.g. 14 days) such that project activities and impacts may be avoided or properly mitigated.	General and model HPAs are issued for low-risk projects. Currently about a third of the hydraulic projects in the state are done under GHPAs. Issuing standard HPAs for these projects would represent a significant increase in workload. This increased workload would reduce staff time for PHS/GMA/SMA, salmon recovery and high risk HPA project work. The conditions the permittee must follow are listed in the permit so we are unclear how a 14-day notification would reduce impacts or improve mitigation.
Upper Skagit Indian Tribe	Many opportunities exist to reduce the footprint or impact of structures. For example, the Marine Shoreline Design Guidelines for Puget Sound describe that over the last several decades marine shorelines have been heavily armored, often to unnecessary degrees (e.g. hard armoring where soft armoring is adequate or wholly unnecessary lengths of shoreline armoring). This presents a great opportunity to improve upon mistakes made in the past. Yet, WDFW's proposed approach provides no clear pathway to remove or reduce the impacts of in-place shoreline armoring or require mitigation	The rules must comply with the statute. Your suggestions to undo or improve past actions don't comply with statutes RCW 77.55.141 and 77.55.221 because they would be considered "optimizing". Please refer to the discussion under section A.8 regarding protection and recovery.

COMMENTS	COMMENTER	RESPONSE
	for repairs. This seems counterintuitive because in the absence of repair these structures would degrade, allowing natural process to reclaim essential habitat features.	
Allen Gibbs, Pilchuck Audubon	Pilchuck Audubon Society [comments that] the suggested actions found in the federally approved Chinook Recovery plan chapters for near shore and marine survival of the species should be included in the HPA approval process.	Comment noted. However, it is unclear how you propose the suggested actions be included. Technical provisions in rule mitigate adverse impacts to fish life. To achieve recovery permittees would have to mitigate for more than just the impact of their proposed project. This would be considered "optimizing," which is prohibited by statute RCW 77.55.281.
Skagit County Dike District No. 1, and Skagit County Dike, Drainage and Irrigation District No. 12	Some of the revisions proposed by the Department are currently in direct conflict with pertinent USACE regulations, vegetation management practices, annual inspection requirements, and PL84-99 repairs which the Districts must comply with in order to obtain disaster assistance for protection of human life and property. To the extent the Army Corps of Engineers requires certain ongoing maintenance, inspection, and vegetation management practices, equipment cannot always and should not be confined to a specific corridor or access.	The technical provisions are common avoidance and minimization mitigation measures. Often, not all provisions will apply to a specific project. The department will condition HPAs with only the applicable construction provisions.
General	<ol style="list-style-type: none"> <li>1. Please extend the comment period.</li> <li>2. I support the recommendations provided to you from Sound Action.</li> <li>3. I have first-hand experience in seeing the decline of wildlife and their food sources, just since 1998...Having lived close to the shoreline of the Strait of Juan de Fuca, I have seen shellfish closures, declines in Black Brant populations from declining eelgrass, and much less gull-roosting on the shorelines. Although these aren't exactly scientific findings, it doesn't take a scientist to see and read about great damage occurring to our environment.</li> <li>4. This is not the time to be weakening the rules that are in place. Continued overpopulation and unabated negative human activity will do nothing but further degrade the environment. Please stand strong and do everything you can to protect and restore the health of the Salish Sea.</li> </ol>	Comments noted.
General	I would hope the agency would consult their own ADA program manager and the agencies internal ADA committee and the WDFW commission's ADA advisory group and seek their comments on	These are common technical provisions. Please note Section 070(f) allows the department to amend provisions to comply with

COMMENTS	COMMENT	RESPONSE
	the potential for impacts or unintended consequences to persons with disabilities when rulemaking this large happens.	laws such as ADA.
General	I am requesting that any HPA rule revisions strengthen protections for salmon and other sea life habitat in the Northwest. Please prioritize environmental protections to preserve this important ecosystem in any policy changes.	Comment noted
General	A large percentage of bird and plant species are in bad trouble in the Puget Sound area, as elsewhere. We hope you will do whatever you can to start to alleviate this tremendous pressure due primarily to human excess.	Comment noted. Please note that our authority is limited to protection of fish life.
General	Rewrite the rules again or you will face numerous legal challenges. Habitat is being lost at an alarming rate so begin denying more applications and only approve the few that do not harm habitat	Comment noted
General	The references provided by WDFW include over 1800 references, but only 21 were published in the last 5 years and are not geographically specific, especially to western Washington. The numbers of authors are too few to be valid.	Comment noted. Please see the Science section.
General	The analysis is inadequate and poorly structured. Any analysis items need to be tied to specifically referenced and annotated actual costs. Under this revised code, costs to replace bridges increase from 166% to 807%. In Spokane County, with these proposed rule changes, how much more will it cost to replace the Sullivan Road Bridge?	This report presents the findings of both the Cost Benefit Analysis (CBA), as directed under RCW 34.05.325, and the Small Business Economic Impact Statement (SBEIS), as directed under RCW 19.85.040, of adopting the proposed rule changes. Without the design and construction details for the Sullivan Road Bridge project, we cannot answer your question about cost. Please see the Appendix A ...Analysis of Eight Federally-Funded, County-Owned Bridges in Washington in the Hydraulic Code Rulemaking (chapter 220.660 WAC)-Cost/Benefit Analysis & Small Business Economic Impact Statement.
General	Add language to require the evaluation of cumulative impacts to ensure an overall no net loss standard is met and to comply with the WDFW policy outlined in the "Requiring or Recommending Mitigation," which specifies that "Cumulative impacts of projects shall be considered and appropriate measures taken to avoid or minimize those impacts."	The policy you cite applies to the entire department not just the HPA authority. Unfortunately the language in the policy conflicts with several sections of the statute, chapter 77.55 RCW.
General	the change from fish to "fish life" and "...habitat that supports fish life populations", does not relate the definition of fish life to a "protected"	The existing and proposed definition of fish life are the same. Please see 220-110-020(36). WDFW is charged

COMMENTS	COMMENT	RESPONSE
	or otherwise regulated species. Rather, it means "all" fish life, not just species that are known to be at risk. Therefore, these changes continue to broaden the species and locations that are to be protected, without consideration of the status/health of the fish life populations.	with protecting all fish life, whether at risk or not.
General	Economics are not mentioned within the code. While NRCS recognizes that these proposed rules are technical in nature, the reality of economics is one of the primary driving factors for implementing salmon habitat restoration projects on private land.	Please refer to the Hydraulic Code Rulemaking (chapter 220.660 WAC)- Cost/Benefit Analysis & Small Business Economic Impact Statement.
General	There are numerous citations contained within the WDFW proposed HPA rules that stipulate that the department may approve measures only if in their determination that there is no other option. Rules of this nature rely totally on the experience, subjectivity and opinion of the Department.	The rules state what is necessary for the protection of fish life, but also give the applicant opportunities to propose alternatives. It is up to the applicant to supply the analysis and design that proves an alternative is adequate. WDFW provides technical assistance in the form of design guideline documents and in person consultations to help you develop alternatives. Ultimately the decision about the alternative sufficiently protects fish life is made by WDFW professionals who are educated and trained to make this determination.
General	This proposed rule is too fish centric and does nothing to protect human life or property.	Chapter 77.55 RCW is the statute that gives us our authority to issue permits. It is specific to the protection of fish life.

### A.3 Comments on Economic Analyses

WDFW received many comments on the economic analysis and Small Business Economic Impact Statement developed by WDFW pursuant to the APA. WDFW followed the process required for rulemaking, and those analyses were made available to the public. It is difficult to adequately assess the economic impacts of a programmatic action because the scale is too coarse for meaningful detailed analyses. WDFW welcomes partnerships with agencies, districts, and industries affected by the Hydraulic Code rules to further pursue questions and concerns related to economics of hydraulics projects. Table A-9 shows the comments received on economic impacts of the proposed hydraulic code rule changes. Readers are directed to EIS Chapter 4 for discussion of impacts of the proposed new rules on agriculture, transportation, development, etc., and to EIS section 1.5 for more information about the unique role of the hydraulic code and its implementing rules.

**Table A-10 Comments on the Economic Analyses**

COMMENTS	COMMENT
Bill Thomas	The SBEIS and CBA incorrectly states that "None of the proposed rule changes would have a disproportionate cost impact on small businesses." It has been determined that the costs of current projects proposed by state and county entities would increase by an average of 300%. Common sense dictates that Small Business who also operate in or adjacent to a water body would see the same increase for their projects.
Bill Thomas	Table 1 of the SBEIS and CBA incorrectly indicates that 220-660- 300, Mineral prospecting, has an "Economic savings attributable to proposed rule change –proposed change is a cost savings" because there is "No need for individual permit". This is an outright lie. Changes being proposed for 220-600-300 clearly indicates that an individual HPA would be required; A) When a person conducts mineral prospecting south of the Copalis River, operating between the ordinarily low water line and the Ordinary high water line (The Seashore Conservation Zone) and a person uses fresh water from fishbearing streams during operations. B) When conducting mineral prospecting on the Nooksack River or the Tributaries in Skagit and Whatcom Counties.
Bill Thomas	The Cost Benefit Analysis does not clearly provide the answer required by RCW 34.05.328(1)(d) "Determine that the probable benefits of the rule are greater than its probable costs, taking into account both the qualitative and quantitative benefits and costs and the specific directives of the statute being implemented." The CBA states that the cost to implement the rules is "between ranges between \$291 thousand to \$3.6 million" "annually", a difference of 3.3 Million dollars each year. There is no way the department can say with any certainty that there are benefits or not when they provide figures with such a large differential.
Bill Thomas	The Cost Benefit Analysis does not comply with Administrative Procedures Act. RCW 34.05.328(1)(d) states "... that the probable benefits of the rule are greater than its probable costs, taking into account both the qualitative and quantitative benefits and costs ...". The CBA clearly states "The estimated annual benefits of the proposed rule changes were qualified rather than quantified."
Bill Thomas	The CBA does not take into account costs accrued by the department before "the CR-101 was filed in 2011" . By the Departments own admission, the process to change these rules were started in 2006 with substantial funds being expended for studies, white papers and "AD-HOC" meetings. The CBA should include these costs.
Bill Thomas	The Detailed Small Business Economic Impact Statement and Cost Benefit Analysis provides a superior argument that the Hydraulic Code Rules are far out of proportion to the original legislative intent and duplicative of other permits.

COMMENTER	COMMENT
Bill Thomas	In Prior year legislative sessions it was detailed that the elimination of the Hydraulic Project Approval would result in a cost savings of 10 Million dollars to the taxpayers. This option should be considered in the CBA.
Dan & Gloria Clark for Spokane Chapter Citizens' Alliance for Property Rights	COST BENEFIT ANALYSIS: The analysis is inadequate and poorly structured. Any analysis items need to be tied to specifically referenced and annotated actual costs. Under this revised code, costs to replace bridges increase from 166% to 807%. In Spokane County, with these proposed rule changes, how much more will it cost to replace the Sullivan Road Bridge?
Northwest Marine Trade Association	Increased costs related to the proposed new rules described throughout Section 4 of the SDPEIS should be further evaluated in the CBA/SBEIS. The assumption in the CBA/SBEIS is that the vast majority of proposed new rules are similar and/or less restrictive than other existing federal and State regulations, therefore not having a disproportionate cost impact to small business. Information in Section 4 of the SDPEIS seems to contradict this.
Peter Ojala, French Slough Flood Control District	The economic impact of the mitigation requirements were not estimated in the cost/benefit analysis or in the rule making file, particularly as applied to agriculture group which is the 3rd largest group of volume of HPA applicants and probably the 1'1 or 2"d largest in terms of cost of HPAs. The rules should not be adopted until this economic impact is estimated or can be estimated.
Regional Road Maintenance Forum	<p>We disagree with the process and the conclusions of the cost / benefit analysis and small business economic impact statement. The fiscal impact analysis is based on flawed premises:</p> <ol style="list-style-type: none"> <li>1. The analysis does not compare the proposed rule to existing but to the requirements of other State and Federal regulations.</li> <li>2. It incorrectly assumes that all proposed HPA permit conditions are also required by State/Federal regulations. Page i. states that "the implementation costs attributable to the proposed changes would be incurred by a small subset of applicants, only those that are exempt from the Corps 404 permit (e.g. farming ranching and silviculture)". For example, the activity of maintenance, as described in 33 CFR Section 323.4(a)(2), is also exempt from obtaining a Corps/404 Permit. The regulation of these activities under the proposed HPA rule should be considered in the economic analysis.</li> <li>3. The analysis incorrectly assumes that definitions are consistent with current rules and definitions found in other State/Federal regulations. The following are a partial list that we believe to be the most impactful; "No-Net Loss", "Maintenance", "Legally" (under the Mitigation Section) vs. "Illegal", and the use of words like "near" waters of the state and permitted activities in flood plain need to be clarified.</li> <li>4. It incorrectly assumes that all mitigation required by the proposed HPA would also be required by other State/Federal agencies. The proposed rule creates new mitigation requirements that are more expansive and costly than the existing rule and State/Federal requirements. (For example the new rule dictates a reduced structure lifespan, triggers retrofit, and no net loss.</li> <li>5. It incorrectly assumes that design requirements proposed under the new WAC would also be required by other agencies (i.e. culverts would require replacement with bridges, and bridge length would expand beyond FHWA design requirements).</li> <li>6. The methods used to calculate costs in Section 3 are flawed and only account for a fraction of overall activities. While the Executive Summary emphasizes that the costs will range from \$290 thousand to \$3.6 million, this is almost entirely based on the added costs of habitat surveys (291,000 to \$3,594,000). The vast majority of rule change effects are "Not Estimated" (Table 7). This type of assumption ignores some of the largest activity groups of HPA's that would be affected by the rules changes. For example, Table 4 lists "Water Crossing Structures" as the largest type of activity that would be affected by the rule changes</li> </ol>

COMMENTS	COMMENTER
	(32%), yet this cost is not estimated, based on the flawed assumption that only costs from Agriculture and Forestry (those not requiring a Section 404 permit) are incurred.
Regional Road Maintenance Forum	Existing fiscal impact assessment fails to consider or disclose the expected significant increased cost to perform new construction and maintenance activities. This inadequate analysis will result in a false understanding by the regulating community of the full extent of fiscal impacts associated with the new rules. With finite funding available for transportation infrastructure, the new rules will deliver far fewer projects. Transparency and accuracy of fiscal impacts from this analysis is essential for State, local, and private budget programming.
Regional Road Maintenance Forum	In addition to comments that were prepared by the Regional Road Maintenance Forum, we are also attaching analysis that was performed by WSDOT, outlining economic impacts to projects that would result from rule changes. Letters from the Federal Highway Administration are also included. FHWA has indicated that it will "limit federal participation to the costs required to meet a design...given our standards".
Regional Road Maintenance Forum	None of the impacts/issues that we have indicated here have been addressed by the Cost Benefit Analysis and Small Business Economic Impact Statement. The Cost/Benefit Analysis process as part of
Regional Road Maintenance Forum	SEPA requires that the issues raised in our letter and as attachments be addressed as a part of the analysis.
Regional Road Maintenance Forum	<p>COMMENTS TO THE HYDRAULIC CODE RULE "CHAPTER 220-660 WAC" COST BENEFIT ANALYSIS AND SMALL BUSINESS ECONOMIC IMPACT STATEMENT "E113007600" (text below)</p> <p>On page "i", the document says "The CBA focuses only on those sections of the proposed rule changes that are not attributable to these other existing regulation or court ruling." We disagree that the CBA should only focus on rule changes that there aren't any other existing regulations or rulings that deal with these activities, because many of the permitting authorities do not authorize permits across the entire state, but HPA's are. HPA's are a separate cost covering the conditions listed in the permit and in the rule that are separate to and compounded to other permit costs needed for the activity.</p> <p>In 2.2 Baseline, the document states "Other federal and state regulatory authorities and judicial decisions dictate the design, construction and maintenance of projects located in waters of the state." A</p>
Regional Road Maintenance Forum	A large percentage of HPAs issued are stand-alone, and do not trigger other State or Federal permits from other agencies. This fiscal impact analysis should address the impacts from new/additional permit requirements associated with the new rule.
Regional Road Maintenance Forum	We believe that WDFW has included conditions into WAC 220-660 that are outside of the state statute RCW 77.55 by extending WDFW's authority to area landward of the OHWL. Other regulations set the standards for other regulatory permit authorities that each govern their own permitting EIS 1.2.3 Process and Timings. The RCW 77.55 does not regulate any of their permitting authorities. Neither do federal or other state statutes regulate RCW 77.55.
Regional Road Maintenance Forum	Using the example stated on page 2-1, "For instance, comparing a road culvert designed according to the change proposed to Chapter 220-660-190 WAC, Water Crossing Structures, to an existing culvert size might increase the cost of the design and/or construction of the culvert, but the existing culvert does not satisfy the fish passage required by National Marine Fisheries Service Anadromous Salmonid Passage Facility Design (see Section 2.2.1.1, below)." WDFW has the authority to issue an HPA permit according to RCW 77.55. The National Marine Fisheries Service has the authority over water crossings that may be installed in waters that contain their ESA listed species, but not over waters that do not. Likewise, US Fish and Wildlife Service has authority over their listed species' waters, but not over waters that don't have their listed species. The US Dept. of Transportation Federal Highways

COMMENTS	COMMENT
	<p>Administration regulations apply to federally funded bridges, not to culverts that do not receive federal transportation monies. Under the Clean Water Act, maintenance of structures, including culverts within the original footprint of the structure, are exempt from the Clean Water Act. US Army Corp of Engineers jurisdiction is the navigable waters of the US and their tributaries; not all state waters are waters of the US, so only culverts that are within the US Army Corp jurisdiction would Army Corp permits apply, including the Nationwide. In non-Section 10 waters, culvert replacement within the original footprint of the original fill does not require a Corp permit. A new culvert involving new fill would require a Corp permit for only the areas that require fill of waters of the state. Section 10 waters -- there aren't any exceptions -- so a culvert replacement may need a nationwide 13 maintenance or an individual permit. Maintenance of an existing culvert is also exempt from the Shoreline Management Act. Shoreline Management Act for new culvert installations would only pertain to those within the 200-foot area of streams that qualify for the Shoreline Management Act flow thresholds.</p>
Regional Road Maintenance Forum	<p>The many other State and local permitting authorities also have regulations that control what and how they permit. Utilizing the other authorities to implement the most stringent aspects of permitting and including them into the updated WAC process is inappropriate and many are not authorized by RCW 77.55 statute. We believe that the assigned costs in the proposed rule changes in chapter 220-660-190 WAC grossly understates the impact of the proposed rule on small and large businesses as well as government agencies. The assumption that there is no economic impact of the proposed rule changes because of other rules and regulations is not supported in the 2014 Hydraulic Code Rule Cost Benefit Analysis because they did not analyze activities that only required an HPA permit or eliminating activities above the OHWL or outside waters of the state.</p>
Stevens County Board of Commissioners	<p>The cost benefit analysis and small business economic impact statement is woefully inadequate. For example, under mineral prospecting it is stated that the proposed rule does not require an individual permit and therefore will reduce applicants cost. However, there is no estimate given or quantified. We find it hard to believe that the Department does not keep track of how many permits were issued and the cost thereof to determine the actual cost savings.</p>
Stevens County Board of Commissioners	<p>The overall cost of these new rules was not quantified to any extent that would lead one to believe that the annual cost is only \$3,594,000 per year. In actuality, since items such as mitigation, authorized work timeframes and additional paperwork, makes the cost of this new rule in the hundreds of millions of dollars per year and should therefore be rejected.</p>
Thurston County Public Works	<p>We disagree with the process and the conclusions of the cost I benefit analysis and small business economic impact statement. The fiscal impact analysis is based on flawed premises:</p> <ol style="list-style-type: none"> <li>1. The analysis does not compare the proposed rule to existing rule, but rather to the requirements of state and federal regulations.</li> <li>2. It incorrectly assumes that all proposed HP A permit conditions are also required by State/Federal regulations. Page i. states that "the implementation costs attributable to the proposed changes would be incurred by a small subset of applicants, only those that are exempt from the Corps 404 permit (e.g. farming ranching and silviculture)". For example, any activity taking place within the original footprint - without expanding it- is also exempt from obtaining a Corps/404 Permit. The regulation of these activities under the proposed HP A rule should be considered in the economic analysis.</li> <li>3. The analysis incorrectly assumes that definitions are consistent with current rules and definitions found in other State/Federal regulations. The following are a partial list that we believe to be the most impactful; "No-Net Loss", "Maintenance", "Legally" (under the Mitigation Section) vs. 9605 Tilley Road S., Suite C- Olympia, WA 98512 - (360) 867-2300- FAX (360) 867-2291 "Illegal", and the use of words like "near" waters of the state and permitted</li> </ol>

COMMENTS	COMMENT
	<p>activities in flood plain need to be clarified.</p> <p>4. It incorrectly assumes that all mitigation required by the proposed HP A would also be required by other State/Federal agencies. The proposed rule creates new mitigation requirements that are more expansive and costly than the existing rule and State/Federal requirements. (For example the new rule dictates a reduced structure lifespan, triggers retrofit, and "no-net loss".</p> <p>5. It incorrectly assumes that design requirements proposed under the new WAC would also be required by other agencies (i.e. culverts would require replacement with bridges, and bridge length would expand beyond FHW A design requirements).</p> <p>Existing fiscal impact assessment fails to consider or disclose the expected significant increased cost to perform new construction and maintenance activities. This inadequate analysis will result in a false understanding by the regulating community of the full extent of fiscal impacts associated with the new rules. With finite funding available for transportation infrastructure, The new rules will deliver far fewer projects. Transparency and accuracy of fiscal impacts from this analysis is essential for State, local, and private budget programming.</p> <p>In addition to these comments submitted by Thurston County, we are also attaching an analysis that was performed by WSDOT, outlining economic impacts to projects that would result from rule changes. Letters from the Federal Highway Administration are also included. FHW A has indicated that it will "limit federal participation to the costs required to meet a design ... given our standards". None of the impacts/issues that we have indicated here have been addressed by the Cost Benefit Analysis and Small Business Economic Impact Statement. The Cost/Benefit Analysis process as part of SEP A requires that the issues raised in our letter and as attachments be addressed as a part of the analysis.</p>
<p>Washington Forest Practices Association</p>	<p>Flawed Economic Analysis process: WFPA is extremely concerned about inaccurate and unsupported assumptions in the cost benefit analysis and the small business economic impact statement. These legally required documents are critical in understanding the impact of the draft rule on the state's economy and local businesses, and selecting the least burdensome alternative. Unfortunately, most of the costs of the draft rule are simply discounted because the report's author assumes that all HP As must comply with provisions similar to the draft rule due to the imposition of other state or federal requirements. In many cases, the documents cited were not regulations but merely guidance documents. WFPA asks that the analyses be revised to correct the following flawed premises:</p> <p>The analysis does not compare the proposed rule to existing but to the guidance documents and requirements of other state and federal regulations.</p> <ul style="list-style-type: none"> <li>o The analysis incorrectly assumes that all or most proposed HP A permit conditions are also required by state or federal guidance documents or regulations.</li> <li>o No attempt is made to determine how many HP As would be subject to guidelines or rules from other state or federal jurisdictions.</li> <li>o The analysis does not attempt a detailed qualitative or quantitative comparison between the draft rule and other state or federal guidelines or requirements.</li> <li>o The analysis incorrectly assumes that the draft rule definitions are consistent with guidance documents or rules from other state or federal jurisdictions.</li> <li>o The analysis assumes that design requirements for culverts and bridges proposed under the draft rule would be required by other state or federal agencies without documentation.</li> <li>o The methods used to calculate costs only account for a fraction of overall activities. While the Executive Summary emphasizes that the costs will range from \$290 thousand to \$3.6 million, this is almost entirely based on the added costs of habitat surveys (\$291,000 to \$3,594,000). The vast majority of rule change effects are "Not Estimated" (Table 7). This type</li> </ul>

COMMENTS	COMMENT
	<p>of assumption ignores some of the largest activity groups of HPAs that would be affected by the rules changes. For example, Table 4 lists "Water Crossing Structures" as the largest type of activity that would be affected by the rule changes (32%), yet this cost is not estimated, based on the flawed assumption that only costs from Agriculture and Forestry are incurred.</p>
<p>Washington State Association of County Engineers</p>	<p>... counties are concerned that according to the Cost Benefit Analysis and Small Business Economic Impact Statement there is an apparent misconception that the proposed rules will not have a significant financial impact to counties. The proposed rules (as well as existing rules) have made the cost to maintain and replace infrastructure extremely expensive. It is not uncommon under current rules for counties to be required to replace a culvert with a bridge. Counties expect even higher replacement costs with the proposed rules. With limited resources, counties cannot repair or replace structures without outside resources such as state and federal grants.</p>
<p>Washington State Department of Transportation</p>	<p>WSDOT previously requested (during the comment period for the September 2013 PDEIS) that WDFW provide an analysis of the economic impacts associated with implementing the proposed rule change. Estimates to comply with the proposed rule revisions could increase WSDOT bridge replacement project costs by over 150% using the standard approach in the proposed rule. Significant cost increases will mean WSDOT can accomplish fewer projects and maintenance activities-- many of which improve the environmental conditions for fish. The costs of the rule changes are not captured in the SDPEIS or the Small Business Economic Impact Statement. It is important to consider the fiscal implications of implementing such a rule change before making a final decision. In order to fully understand the extent of fiscal impacts associated with the proposed rules we offer the following observations:</p> <ul style="list-style-type: none"> <li>• The analysis does not compare the proposed rule to the existing rule, but rather to the requirements of other state and federal regulations.</li> <li>• The analysis incorrectly assumes that all proposed HPA permit conditions are already required by other state and federal regulations.</li> <li>• The analysis incorrectly assumes that definitions are consistent with current rules and definitions found in other state and federal regulations.</li> <li>• The analysis assumes that all mitigation required by the proposed rules would also be required by other state and federal agencies. This proposed rule creates new mitigation requirements that are more expansive and costly than the existing rule and state and federal requirements.</li> <li>• The analysis incorrectly assumes that design requirements under the proposed rule are also required by other regulatory agencies.</li> </ul>
<p>Whitman County</p>	<p>Whitman County does not believe that the assessment of financial or fiscal impact is correct. The analysis does not compare the proposed rule to existing operational policies and practices. It incorrectly assumes that all proposed HPA permit conditions are also required by other State and/or Federal regulations. The assessment indicates that "the implementation costs attributable to the proposed changes would be incurred by a small subset of applicants, only those that are exempt from the Corps 404 permit (such as farming, ranching, and silviculture)". However, according to WDFW's documents supporting this rule change, agriculture accounts for 14% of all HPA permits. It should not be categorized as a "small subset of applicants" being affected by these administrative code changes but rather a large percentage of applicants affected by this action. In addition, any activity taking place within the original footprint - without expanding it - is also exempt from obtaining a Corps 404 Permit. The regulation of these activities under the proposed HPA rule should be considered in the economic analysis. The analysis assumes that definitions are consistent with current rules and definitions found in other State/Federal regulations, which is not the case. It incorrectly assumes that any mitigation activities required by the proposed HP A would also be required by other State/Federal agencies. The proposed rule creates new mitigation</p>

COMMENTS	COMMENTER
	<p>requirements that are far more expansive and costly than the existing rules and State/Federal requirements (For example the new rule dictates a reduced structure lifespan, retrofit instead of reconstruction, and no net loss). The assessment incorrectly assumes that design requirements proposed under the new WAC would also be required by other agencies (i.e. culverts would require replacement with bridges, and bridge length would dramatically expand beyond FHWA and structural design requirements). The fiscal impact assessment does not address the expected significant cost increases to perform new construction and maintenance activities, agriculture or business impacts. It results in a false understanding by WDFW and others of the real impacts associated with the new rules. With finite funding available for transportation infrastructure, and the reduced buying power of traditional funding sources, the new rules will result far fewer projects, meaning more failures of critical infrastructure at the local level. Furthermore, traditional funding sources, such as the Federal Highway Administration, typically limit their participation to the costs required to meet ordinary design standards. Local funding, even under current rules, is seldom sufficient to breach the gap left from other funding sources, and will likely result in fewer grant funded projects being considered by locals.</p>
Northwest Marine Trade Association	<p>NMTA is not convinced that WDFW has adequately addressed the impact that the increased restrictions on project locations, work windows and construction methods will have on the water-based economy. The new rules will have a negative impact on water-oriented recreational activities and small business and the overall state economy.</p>
Timothy Ibbetson	<p>[APA effects on Small Business] What about impacts to WSDOT which directly impacts citizens? What about impacts to agriculture (covered under different rules), and impacts to citizens and developers/the construction industry and impacts to housing costs (including impacts to low income housing), impacts to flood control, storm water management, and other infrastructure projects?</p>
Timothy Ibbetson	<p>What about quantitative considerations and the redundancy of the proposed changes with other state and federal codes? WSDOT suggests that the proposed rules will increase costs for a bridge by over three times the cost associated with the existing rules. This is significant, especially when it has not been demonstrated that the existing rules do not provide adequate protection for fish and other aquatic life and mitigation is already required by the SMA and GMA for impacts to fish and wildlife habitat conservation areas and federal codes also have specific mitigation requirements including the ESA and the CWA.</p>

#### A.4 Comments on September 2013 (“Version 4”) Draft Hydraulic Code Rules

Following are comments and responses about the September 2013 (“Version 4”) Draft Hydraulic Code rule changes. Table A-11 contains comments submitted to WDFW about the draft rules released for public review in September 2013. The comments are organized by rule section, and WDFW response appears in the column on the right. Version 4 of the rules still referred to chapter 220-110 WAC; once we had the comments back from this round, a decision was made to open a new chapter (220-660 WAC) to supersede the “old 110.” So, comments in this section refer to the Version 4 “110” sections.

**Table A-11 Response to Comments on September 2013 (Version 4) Proposed Hydraulic Code Rules**

PROPOSED WAC	COMMENT	RESPONSE
General	HPAs are only required for work below (waterward) of the ordinary high water line (OHWL).	RCW 77.55.021 (1) states “In the event any person or government agency desires to undertake a hydraulic project. The person or government agency shall, before commencing work thereon, secure the approval from the department in the form of a permit ... RCW 77.55.011(11) states a “hydraulic project” means construction or performance of work that will use, divert, obstruct, or change the natural flow or bed of any of the salt or freshwater of the state. Although both “bed” (RCW 77.55.011(1)) and “waters of the state” (RCW 77.55.011(25)) RCW are defined as land or waters waterward of the “ordinary high water line” (RCW 77.55.011(16)), a hydraulic project conducted landward of the ordinary high water line may use, divert, obstruct, or change the flow or bed waterward of the ordinary high water line. Impacts of a project are not necessarily limited to the project site.
General	Delete any mention of “riparian” as riparian vegetation is not under the jurisdiction of the hydraulic code.	Removal of riparian vegetation certainly affects the bed and flow of state waters. Trees and other vegetation on backshore areas, banks, and bluffs help stabilize the soil, control pollution entering waters, provide fish and wildlife habitat, and modify stressful physical conditions along riverbanks and shorelines.
General	Remove the “Definition” and “Fish Life Concerns” section from the rules. This language is appropriate for guidance. The WAC should	These sections were added to help a person understand what project types the rules apply to and the fish life concerns the technical

PROPOSED WAC	COMMENT	RESPONSE
	implement the RCW. General statements that could be interpreted to be rule because they are included in the SEPA review and the WAC should be removed.	provisions are avoiding and minimizing.
General	Replace all instances where fish habitat is mentioned with protection of fish life.	Please see the current and proposed definition of “Protection of fish life” because protecting habitat is part of protecting fish life. Without healthy habitat, there can be no healthy fish life.
General	The department should require permittees to notify the Tribes.	The HPA is an agreement solely between the department and the permittee. We do not have the authority to require the permittee to notify the Tribes or local, state, and federal agencies.
General	Add the phrase “within the project site” throughout the rules.	This is unnecessary since the permit is issued for the work and location specified in the permit application.
WAC 220-110-010	The introduction should retain the statement of rationale for the purpose of the regulations, which is to provide for the protection of fish life	The language is amended.
WAC 220-110-010	The "purpose" leaves out parts of the definition that defines the HPA permit as waterward of the OHWL.	The statute does not state that a HPA is required only for work waterward of the OHWL. 77.55.011(19) states “Permit” means a hydraulic project approval issued under this chapter. 77.55.011(11) states “Hydraulic project” means the construction or performance of work that will use, divert, obstruct or change the natural flow or bed...
WAC 220-110-020	Guidance documents can't be implemented as rule that have not undergone formal public rule making process.	The reference to guidance documents is included simply to help applicants.
WAC 220-110-020	Delete “best available science and practices” from the first paragraph.	The language is amended.
WAC 220-110-020	Delete third paragraph. The guidance is for an HCP process which is outside the HPA permit statute process.	The 2006 and 2007 white papers were prepared with funding obtained to complete a HCP. However, the recommendations still had to comply with RCW 77.55. In addition, we have several documents on our website not associated with the HCP. <a href="http://wdfw.wa.gov/publications/search.php?Cat=Habitat">http://wdfw.wa.gov/publications/search.php?Cat=Habitat</a>

PROPOSED WAC	COMMENT	RESPONSE
WAC 220-110-020	Add a definition for "best available science".	This term is not used in the rules.
WAC 220-110-020	Add a definition for "built environment".	The term is not used in the rules. It is used only in the PEIS.
WAC 220-110-020	Retain definition of "complete written application" as defined in current WAC 220-110-020(18), for transparency and for clarity, and to be consistent with RCW 77.55.021-Permits, which applies only for work waterward of the OHWL.	The definition is retained.
WAC 220-110-030	Add a definition for "dock".	Dock is defined in sections 150 and 370
WAC 220-110-030	Add a definition for "impact".	The common dictionary definition is appropriate
WAC 220-110-030	Add a definition for "nearshore".	A definition of nearshore zone is added.
WAC 220-110-030	Add a definition for "riparian".	A definition for riparian zones is added.
WAC 220-110-030	Add a definition for "state owned aquatic lands".	The term is not used in the rules.
WAC 220-110-030	Add a definition for "stream" and "river".	The terms is added to the watercourse definition.
WAC 220-110-030	Add a definition for "technical provisions".	Technical provisions are discussed in detail in section 090.
WAC 220-110-030	Add a definition for "trommel"	The term is not used in the rules.
WAC 220-110-030	Add a definition for "work window".	The term is not used in the rules.
WAC 220-110-030(6)	Delete the reference to the OHWM. The usual meaning of aquatic plant is growing in or on water. The current wording could be interpreted as any plant within the limits of the OHWM, which could include plants that only tolerate inundation for short periods.	This is the definition in the existing WAC. We are not proposing to change it. It is in the Aquatic Plants and Fish pamphlet.
WAC 220-110-030(8)	"Associated man-made agricultural drainage facilities" ... Delete "agricultural" to be consistent with RCW 77.55.021, 77.55.161, and 77.55.011.	This term is used only in proposed WAC 220-110-420 to implement RCW 77.55.281(1). The definition reflects the language in the statute.
WAC 220-110-030(11)	Definition for "Bankfull" does not incorporate all types of channels (e.g. incised channels)	Definition is amended.
WAC 220-110-030(12)	We support the Department's proposed new definition of "bed."	Actually this is same definition that is in the existing WAC and RCW.
WAC 220-110-030(14)	"Bioengineering" definition should include "bank resloping, log and	The bioengineering definition was removed from the rules. It is only

PROPOSED WAC	COMMENT	RESPONSE
	debris relocation or removal, planting of woody vegetation, bank protection using rock or woody material or placement of jetties or groins, gravel removal, or erosion control," to be consistent with RCW 77.55. "Bioengineering" and "Biotechnical bank stabilization" are components of "Streambank Stabilization" as defined in the RCW 77.55 and should be noted. (23) "Streambank stabilization" means those projects that prevent or limit erosion, slippage, and mass wasting. These projects include, but are not limited to, bank resloping, log and debris relocation or removal, planting of woody vegetation, bank protection using rock or woody material or placement of jetties or groins, gravel removal, or erosion control.	used once in section 430 and it is related to outfall design.
WAC 220-110-030(16)	Delete "biotechnical bank stabilization", as it does not appear anywhere in the body of the WAC.	The term biotechnical bank stabilization is not used in the rules so it is removed.
WAC 220-110-030(18)	A bridge shadow should be defined to say the area under bridge that receives little if any sunlight and limited direct rainfall.	The definition reflects how the term is used in the one proposed provision where it is used.
WAC 220-110-030(19)	Guidelines 2013, Appendix C, inappropriately incorporates guidance document as rule through approving this definition as part of the SEPA review and proposed WAC. The Water Crossing Design Guidelines page 8 of the Preface states: "These guidelines were written for the benefit of the crossing owner and designer, they are not to be required as regulation."	This term is not used in the proposed rules so it is removed.
WAC 220-110-030(28)	No mention of saltwater habitats of special concern in WAC 220-110-360, although critical food fish or shellfish habitat is mentioned. Perhaps this should refer to WAC 220-110-330.	Correction made.
WAC 220-110-030(30)	After "design of a project" delete "create and shape habitat". Replace with "consistent with technical methods that are supported by FHWA and AASHTO, and not change the requirements of federally funded projects required to comply with FHWA and AASHTO approved standards," After "risk" delete "e.g. the hundred year design flood".	Comment noted

PROPOSED WAC	COMMENT	RESPONSE
WAC 220-110-030(34)	The WAC "emergency" definition should use the same definition as listed in the RCW 77.55.011 (7). Delete "arising from weather or stream flow conditions, other natural conditions, or fire."	Definition amended.
WAC 220-110-030(42)	"Excavation zone" means the area between the "excavation line" and the bank or the center of the bar. Add after the term "and the bank" the phrase "at the ordinary OHWL or the MHHW" Need figure to clarify this distance. A bed is never above the OHWL, as per the definition of "bed."	Work on the bank can affect the bed or flow. When this is the case, it would meet the definition of a hydraulic project.
WAC 220-110-030(46)	New definition "Fish conservation bank". What does WDFW intend to do with these?	Currently there are only a couple of fish conservation banks in the state. However, the creation of conservation banks may continue. The appropriateness of this mitigation will be determined on a project by project case.
WAC 220-110-030(47)	The proposed definition of "fish habitat" found in WAC 220-110-030(47) would greatly expand the scope of this authority far beyond what currently exists in RCW 77.55.021(7)(a). 77.55.021 defines a complete application for the actual activity being constructed.	Currently there isn't a definition for fish habitat in RCW 77.55 or WAC 220-110. DNR requested we use the definition in the forest practice rules WAC 222-16-010 because of the integration of hydraulic projects and forest practices applications RCW 77.55.361 and 371. However, we added the word "reasonably" to the definition. You cannot protect fish life unless you protect the habitat. Impacts to fish habitat are evaluated for the actual activity being constructed.
WAC 220-110-030(49)	Dolos in themselves should not be considered habitat.	The reference to dolos is removed.
WAC 220-110-030(49)	Suggested language is as follows: "Fish habitat improvement structures or stream channel improvements" means natural (e.g. large wood, rock), synthetic (e.g. concrete dolos) or plant, or plantings (e.g. riparian or aquatic plants), placed in or next to bodies of water to make existing conditions better for fish life. Examples are engineered logjams, large woody material, boulders, and planting of native vegetation.	Definition is amended but changed slightly from the recommended language.
WAC 220-110-030(55)	Delete "Floodplain Continuity" from the 'definitions' section and within the body of the WAC. A floodplain area is landward of the	Definition removed. The term is no longer used in the rules.

PROPOSED WAC	COMMENT	RESPONSE
	OHWL. It's outside of the HPA process. Floods are outside the HPA process jurisdiction, per RCW 77.55.11(11) and 77.55.11(25). It appears to be a process of incorporating a guidance document definition by reference into the rule.	
WAC 220-110-030(61)	WDFW has changed the definition of "freshwater area" to include associated wetlands. This seemingly small change could have a big impact in the permit landscape. Wetland impacts are already regulated by local jurisdictions as well as the Army Corps of Engineers. We do not believe a third tier of agency review would be needed for the same resource. This could potentially lead to significant delay and additional resources to permit projects that already undergo extensive review under SEPA, the Growth Management Act (GMA), Critical Area Regulations, Shoreline Management Regulations and the Clean Water Act.	Definition amended.
WAC 220-110-030(72)	High flow fish passage design should be based on the weakest swimming fish.	Definition removed. The term is no longer used in the rules.
WAC 220-110-030(73)	Delete "Hydraulic Diversity" from the 'definitions' section.	Definition removed. The term is no longer used in the rules.
WAC 220-110-030(80)	"Lake" definition could be interpreted by some to include farm and decorative ponds, depending on how "impounded" is viewed. Further clarification should be considered in the final document.	Work on a farm and decorative pond does not meet the definition of a hydraulic project unless these are in a natural waterbody that has been altered by humans.
WAC 220-110-030(82)	Delete "large woody transport continuity" from the 'definitions' section as it does not appear anywhere in the body of the WAC.	Definition removed. The term is no longer used in the proposed rules.
WAC 220-110-030 (83)	Definition for Low Fish Passage Design Flow contradicts itself. First part of definition accurately describes low flow conditions. Second part of definition describes a high flow condition because it lists a flow that is "not exceeded more than 5 percent of the time".	Definition removed. The term is no longer used in the proposed rules.
WAC 220-110-030(84)	Delete "low flow continuity" from the definitions section as it does not appear anywhere in the body of the WAC.	Definition removed. The term is no longer used in the proposed rules.
WAC 220-110-030 (86)	The term "routine" should be included in the definition section, as	Definition amended.

PROPOSED WAC	COMMENT	RESPONSE
	infrequent routine maintenance at a stormwater management facility is still routine even if done only once in ten years, for example.	
WAC 220-110-030(86)	Definition should be modified to include safety; "...to keep the facility in a proper and safe condition..." and "to keep the facility or project in a properly functioning and safe condition."	Definition amended.
WAC 220-110-030(86)	Change the definition of maintenance to the SMP normal maintenance or repair.	Comment noted.
WAC 220-110-030(88)	The WAC "marina" definition should use the same definition as listed in the RCW 77.55.011 (13).	The small change to the language does not change the meaning. The phrase "but not limited to" is redundant and not plain talk. The word "include" does not limit commercial services to overnight or live-aboard boating accommodations.
WAC 220-110-030(90)	We have concerns with including 'discharge of record'. We interpret that to mean the highest flood event at the site which is not valid data to use. We suggest removing 'discharge of record' from the definition. Also, if stream gauge data is not available there is no means to determine a 2.33 year flood. In those cases we propose using the 2 year flood for determining "Mean Annual Flow".	Definition amended.
WAC 220-110-030(91) and (92)	We suggest using NOAA's definition.	Definition amended.
WAC 220-110-030(94)	Delete "Mechanism of Failure" from the 'definitions' section.	Definition removed. The term is no longer used in the proposed rules.
WAC 220-110-030(100)	The proposed rule change proposes a one-week timing modification of the work window. This change could be viewed as a minor modification; however there is no limit on subsequent modifications. If the applicant needs more than one timing modification it should not be considered minor and the applicant needs to apply for a permit revision.	Modifications depend on the specific-site circumstances.
WAC 220-110-030(100)	We have requested and received minor modifications, as defined, in the past and we appreciate the inclusion of a definition of a minor modification. We suggest that this section include provisions for	We added some language to the procedures section. Vicinity is site-specific depending on how far-reaching the impacts from a given project could extend.

PROPOSED WAC	COMMENT	RESPONSE
	requiring documentation that there are no spawning or incubating fish present within the vicinity, and that "vicinity" be defined.	
WAC 220-110-030(100)	Timing windows do not take into account the mitigation measures that the HPA process is established to implement.	Comment noted, but the comment was not specific enough to respond to.
WAC 220-110-030(101)	We propose that the removal of a fish barrier is an environmental betterment that should not require additional compensatory mitigation. We recommend that the proposed WAC make this clear.	Comment noted.
WAC 220-110-030(101)	The definition for "Mitigation" includes "minimizing impacts" with no compensation for the impacts. Even if impacts are minimal to fish life, they must be restored or adequately compensated. All unavoidable impacts should be fully restored or fully compensated. We recommend the language state, "Mitigation means sequentially avoiding impacts, or fully compensating for remaining unavoidable impacts."	This definition is in RCW 90.74.010(5). This chapter also applies to WDFW.
WAC 220-110-030(102)	The language regarding wetland mitigation banks should only apply to those banks that are certified by state and federal regulators. In lieu programs are also regulated by state and federal requirements and need a definition as the term is used.	Added definition for "in-lieu fee program".
WAC 220-110-030(102)	Mitigation banks should only include those that have been certified by state and federal regulators.	This language was added to WAC 220-110-080. See (4)(e)
WAC 220-110-030(103)	Change the mitigation sequencing definition.	Definition is changed to match the definition in the Shoreline Master Program regulation.
WAC 220-110-030(105)	Definition for "Natural Evolution of the Channel Planform and Longitudinal Profile" should only include the portion that describes natural evolution. This term should not include reference to anthropogenic features not being allowed to affect natural processes.	Definition removed. The term is not used in the proposed rules.
WAC 220-110-030(107)	Change the definition of no-net-loss	The existing definition of no-net-loss was removed but will be reinserted in the CR-102 rules.
WAC 220-110-	Eliminate the definition of no-net-loss. It is goes beyond the	No-net-loss is in the existing rules. We respectfully disagree that the

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030(107)	authority given to WDFW under RCW 77.55.	term as defined goes beyond the authority given to WDFW under chapter 77.55 RCW.
WAC 220-110-030(112)	"Permit" means a hydraulic project approval permit issued under this chapter, add "as defined in 77.55.021." Needs to be consistent with RCW 77.55.021	Definition is removed.
WAC 220-110-030(120)	"Protection of fish life" means "no-net-loss". Delete "no-net-loss" as the definition of protection of fish life. Using the WAC to unilaterally expand the term "no-net-loss" to define protection of fish life as defined in "definitions," (which states, "protection of fish life means no-net-loss"), is expanding and broadening the existing RCW 77.55.	Definition is amended for other reasons.
WAC 220-110-030(124)	Delete "rehabilitation" definition.	Definition adds clarity; the term is used in the mitigation section.
WAC 220-110-030(124)	"Rehabilitation" limits replacement to "partial" only. How is partial determined? How much of the original structure is to remain? Who makes this determination?	Partial includes replacement of any structural component.
WAC 220-110-030(125)	Delete "repair" definition.	Definition adds clarity; the term is used in the mitigation section.
WAC 220-110-030(126)	Delete "replacement" definition.	Definition adds clarity; the term is used in the mitigation section.
WAC 220-110-030(127)	There is also extensive use of the term "riffle" as a habitat element throughout this document. This second meaning of the term "riffle" should be included in the definitions.	A second definition for riffle added.
WAC 220-110-030(131)	Add wood to the definition of roughened channel.	WDFW engineers recommended the proposed definition.
WAC 220-110-030(132)	"saltwater area". Delete the last two sentences to be consistent with the definition of "freshwater" and the Golden Fish pamphlet on how to determine where the boundaries of the mouth of rivers and tributaries are located.	Comment noted. The definition in the Gold and Fish Pamphlet will be changed to the definition the FW Commission approves.

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WAC 220-110-030(135)	Delete "sediment gradation continuity" from the 'definitions' section.	Definition removed. The term is no longer used in the proposed rules.
WAC 220-110-030(136)	Delete "sediment transport continuity" from the 'definitions' section	Definition removed. The term is no longer used in the proposed rules.
WAC 220-110-030(137)	"Shellfish" - This definition should be clarified. Regulated shellfish include squid, octopus, sea stars, sea cucumbers, etc., some of which are not typically considered shellfish by the general public. The terms shellfish and fish should be consistent with the fishing regulations.	Definition is amended for clarity.
WAC 220-110-030(143)	The WAC "streambank stabilization" definition should use the same definition as listed in the RCW 77.55.011 (23).	The term is defined in RCW 77.55.011 so it is removed from the proposed rules to reduce redundancy.
WAC 220-110-030(146)	Delete "sweeping velocity" from the 'definitions' section as it does not appear anywhere in the body of the WAC. It appears to be a process of incorporating a guidance document definition by reference into the rule.	Definition removed. The term is no longer used in the proposed rules.
WAC 220-110-030(152)	"Unimpeded fish passage" Delete "unimpeded." This is an absolute that may be unattainable.	Definition adds clarity; the term is used in the proposed rules.
WAC 220-110-030(60)	"Watercourse.' Delete "and associated wetlands." The state HPA definition of "waters of the state" includes the areas waterward of the ordinary high water line.	Definition amended. This complies with the definition of waters of the state RCW 77.55.011(25). See RCW 90.48.020.
WAC 220-110-030(161)	This broad definition may be appropriate when the word is used in a general context such as in WAC 220-110-100- Common Construction Requirements- where equipment use must "avoid or minimize damage or removal of riparian aquatic or wetland vegetation." But this wetland definition should not be applied when the word is used in the term "associated wetlands.	Definition amended . This complies with the definition of waters of the state RCW 77.55.011(25).
WAC 220-110-040(1)(c)	The applicant should contact DNR prior to applying for regulatory permits to ensure consistency of the project with state laws and rules that apply to state-owned aquatic lands.	We added the following language to WAC 220-110-050 "HPAs do not exempt a person from obtaining other necessary permits and following the rules and regulations of local, federal, and other

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		Washington state agencies.”
WAC 220-110-040(1)(c)	Language is too vague	Comment noted, but the comment was not specific enough to respond to.
WAC 220-110-040(1)(c)	Delete the last sentence. Hydraulic approval includes permits, license, or written environmental documents. This section indicates approval is not required from WDFW.	This sentence is not in (1)(c). If you are referring to (2)(c) this is the language from the statute.
WAC 220-110-040(2)	There are several categories of activities that are exempted from HPA provisions in the statute that appear to be missing in the list below. It would be useful to summarize/reference these as well in this section, with reference to the statute.	All project types exempted in chapter 77.55 RCW are listed in (2) and they are referenced by RCW.
WAC 220-110-040(2)(f)	The removal of crab pots and other shellfish gear provided the gear is removed under a permit issued under RCW 77.70.500. Delete all of 'f'. If this action requires a permit as indicated, it doesn't fit into this section.	No HPA is required for this work if permitted under RCW 77.70.500. Please note RCW 77.70.500 are rules for crab pot removal permits not hydraulic projects.
WAC 220-110-050(1)	We fully support expansion of HPA types to improve issuance flexibility and expedite issuance for protection and preventive actions for public safety and infrastructure maintenance.	Comment noted.
WAC 220-110-050(2)	It is not clear where an HPA is required. This section refers to "Construction or the performance of other work activities in or near the watercourses" which indicates the proposed revision may apply to more area than the existing code, which is limited to waterward of OHWM in freshwater in WAC 222-110-030(3)	See “General Comment” at the top of this table.
22-110-050(2)	Direct damage or loss of habitat causes a direct loss of fish or shellfish production. Modify to read “may cause a direct loss of fish or shellfish production.”	The language is amended.
WAC 220-110-050(3)	Delete all of 3. This is an arbitrary statement without justification. Work completed at multiple site HPAs do not occur at the same time, so reviews by WDFW will not occur at the same time.	Any site reviews needed to condition the HPA must be completed within the 45 day application review period and before the HPA is issued. It is difficult for a biologist to conduct five site reviews for a single application within the 45-days.

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WAC 220-110-050(3)	The Tribe continues to have concerns with the General, Simplified and Pamphlet HPA provisions. In each case we are not convinced that required Tribal notification will occur or is even being considered during this update. Along with notification a process in which co-managers can appeal the issuance of these HPA's must be outlined. Additionally, we are very concerned that the opportunity for meaningful and useful project review is being removed from some of the most knowledgeable and experienced personnel in a given watershed.	Comment noted. Currently about a third of the hydraulic projects in the state are done under GHPAs. Issuing standard HPAs for these projects would represent a significant increase in workload. This increased workload would reduce staff time for PHS/GMA/SMA, salmon recovery and high risk HPA project work.
WAC 220-110-050(3)(b)(i)	Please keep streamlined permitting as a useful tool for small and medium sized restoration projects. The waiver of local fees is important in keeping restoration costs low.	Comment noted.
WAC 220-110-050(3)(b)(11)	Why are multi-site HPAs limited to the criteria in (A)?	Multi-site permits are defined in RCW 77.55.011(15). Applications for multi-site permits often require a biologist to conduct a field review of each project site before issuing the permit so they can determine which site-specific provisions are required to protect fish life. The criterion in (A) is based on the department's opinion of what is practicable for a biologist to review within the 45 days review period.
WAC 220-110-050(3)(b)(iii)	No General HPA's should be adopted without first including Tribal review and notification provisions and an opportunity to contest the use of the truncated review for HPA's. The current provisions do not provide an adequate amount of review time. WAC 220-110-050 (12) (Before approving applications for new hydraulic projects, the department will provide to Tribes and local, state, and federal permitting agencies, a seven calendar day review and comment period from the date the application is received by the department.	The Tribes will continue to have an opportunity to review and comment on applications for GHPA in APPS. The seven day review period will not start until the application is deemed statutorily complete.
WAC 220-110-050(3)(b)(iii)(B)1	Delete "have risks to fish life" and add "will protect fish life." Delete "fully".	This is the appropriate standard because GHPAs are not issued for project types that need compensatory mitigation to protect fish life.
WAC 220-110-050(3)(b)(iii)	Delete the General HPA section. Although there may be value in provisions for a General HPA, for example a General HPA (GHPA) may	The department will evaluate the elimination of GHPAs from the rules in the PEIS and present this as an alternative for the FWC to

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	<p>be an improved approach to permit fish habitat restoration activities since these types of projects are intended to improve habitat or access to habitat and are therefore to be encouraged, there is no mention in the hydraulic code (RCW 77.55) of general HPAs. As a result, there is no apparent legislative basis for implementing these provisions in the WAC. During the discussions over SB 6406 (the HPA fee bill) during the past legislative session, our understanding is that the provisions for general HPAs were deleted because there was no legislative agreement over how or whether the GHPAs could actually work. Version 4 also does not include provisions that would allow adequate tribal notification and there are no provisions in Version 4 for plans or specification or locations of the work under GHPAs. It is impossible for WDFW to protect fish life if GHPA activities not being reviewed (and also reviewed by tribes) in advance. All the GHPA provisions should be deleted from the draft code until fish protection and tribal notification procedures are fully develop.</p> <p>No simplified and general permits should be allowed for marine bulkhead or other shoreline stabilization projects due to the Puget Sound Partnership's goal that there is a net reduction in shoreline armor.</p>	<p>consider in the rule adoption process.</p>
<p>WAC 220-110-050(3)(b)(ii)(B)</p>	<p>The statement: "can be permitted without site-specific conditions" is unclear whether the conditions in WAC 220-110-110 are 'technical' provisions or 'site-specific' (special) provisions. Consider clarifying this statement.</p>	<p>The phrase means the technical provisions in the HPA are sufficient to protect fish life at all sites.</p>
<p>WAC 220-110-050(3)(b)(iii)(D)1 WAC 220-110-050(3)(b)(iv)(A)1 WAC 220-110-050(3)(b)(iv)( C)4</p>	<p>Delete. The PEIS states that "projects that comply with the technical provisions will be self-mitigating. No other mitigation is required."</p>	<p>Technical provisions include provisions added by the department to implement mitigation sequencing. For example, a technical provision that requires a person to implement a mitigation plan fits into this category. However, the HPA must contain all provisions that a person is responsible to comply with (WAC 220-110-040(a)(ii).</p>

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WAC 220-110-050(3)(b)(iv)	<p>Delete the Simplified HPA section. Simplified HPAs under this section have not been clearly defined, explained, developed or agreed upon by the fish co- managers.</p> <p>The introduction of a simplified permit, which allows approval with no impact review or site visit, is a significant step backwards and weakens the current protection in the rules.</p> <p>The new “simplified” category of the HPA would allow a troubling loophole for some nearshore construction projects to go forward with little or no environmental review, and should be revised or dropped altogether.</p>	<p>The department will evaluate the elimination of simplified (model) HPAs from the rules in the PEIS. This is in Alternative 3. .</p>
WAC 220-110-050(3)(b)(iv)	<p>a. Who is allowed to use the simplified HPA?</p> <p>b. What are the standard criteria that will be used?</p> <p>c. Opinions should not be allowed to determine what group may or may not use the Simplified HPA. It should spell out who has this right. A better description of what a low complexity project is that will clearly state who can use it. Not vague descriptions that will allow agencies to pick and choose who has that right to use the Simplified HPA.</p> <p>d. Criteria for rejection is very vague and subject to opinion. There are streams in Washington State that have no fish in them. So how can a person prove that fish life will be protected?</p> <p>e. In section (d) states resubmit application to the same department. How does that allow for a miner to get past a person whose opinion will reject every request?</p>	<p>a. Any person could apply for the simplified (model) HPA.</p> <p>b. The department would develop the standard criteria based on the project type.</p> <p>c. A list of project types is added to the rules. If a person can comply with the criteria they can use the simplified HPA. This process will be similar to the Corps general permit process.</p> <p>d. The department would reject an application for a simplified HPA only if a person cannot comply with the criteria.</p>
WAC 220-110-050(3)(b)(iv)	<p>The Port fully supports simplifying the permitting process. Simplification of the permitting process should be expanded to more or all types of projects. The Port agrees that benign projects with no impacts to fish life or cumulative impacts to the environment should be allowed in a similar fashion to current pamphlet HPA. These "lower risk" projects should be defined in partnership with the</p>	<p>Comment noted.</p>

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	regulated community. The Port feels that more can be done to streamline and simplify the permitting process for all hydraulic projects, while maintaining or improving the protection of fish life and habitat. WDFW should stride to reduce regulatory duplication and making the application process more consistent and predictable statewide.	
WAC 220-110-050(3)(b)(iv)(A)3	There was no simplified application to review.	This is an application/permit process the department would like to develop.
WAC 220-110-050(4)	The department is required to issue a written permit with exact permit conditions of the oral HPA within 30 days. The applicant should be required to provide "an as-built" to WDFW within 30 days. There have been many instances when issues later arise that require repairs or modifications and there are no plans documenting what had been done at the site.	The language is added.
WAC 220-110-050(4)	We acknowledge the need for quick action during an emergency. However, the language contains no provisions to address impacts to fish life from emergency actions. We have observed a number of HPA projects under emergencies, imminent dangers and chronic dangers where impacts to fish life have not be addressed. We recommend including an additional line item that says, "Within 90 days after completion of Emergency HPAs, any unavoidable impacts to fish life from the project shall be fully compensated by the applicant."	This language is added however it is amended slightly from the suggested language.
WAC 220-110-050(5)	We recommend adding a line item that states, "Within 90 days after completion of an Imminent Danger HPA, any unavoidable impacts to fish life from the project shall be fully compensated by the applicant."	The HPA issued under an imminent danger declaration should include all of the HPA provisions that a person must comply with. See proposed WAC 220-110-040(1)(a)(ii). The HPA must include any compensatory mitigation required.
WAC 220-110-050(5)(d)	Remove or amend this language.	This sub-section is removed.
WAC 220-110-050(6)	Similar to 22A-110-050(5), there is no clear distinction how chronic danger permits differ from imminent danger, expedited or	Please see "Definitions".

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	emergency permits.	
WAC 220-110-050(7)	Expedited HPAs contain no provisions to address impacts to fish life from the activity. We recommend adding another line item saying, "Within 90 days after completion of an Expedited HPA, any unavoidable impact to fish life from the project shall be fully compensated by the applicant."	This language is added however it is amended slightly from the suggested language.
WAC 220-110-050(8)	Pamphlet HPAs do not exempt you from obtaining other appropriate permits and following the rules and regulations of local, federal, and other Washington state agencies. "We urge that WDFW retain this language as part of the new regulations, and include it as part 050(8)(f). Operators under pamphlet HPAs are not issued individual HPAs, which would typically contain such cautionary language. The reminder to prospectors that an HPA is not necessarily the only authorization required is an important one that should remain part of the regulation and be republished in the Gold and Fish pamphlet.	WAC 220-110-050 amended.
WAC 220-110-050(8)	<p>a. Why should the mining community be subject to a standard HPA for Hydraulic Project if we are forced to be under the Gold and Fish Book Rules. Should not the permit be the Simplified HPA. And spell it out as such. Studies have shown that Dredging has no effect on the environment. We are moving sand from one location in the water to another. Collecting only a small amount of material.</p> <p>b. We have been allowed to not have the "Gold and Fish" pamphlet on site. When you are in the water dredging it is hard to keep it dry. Or keep it from being damaged.</p> <p>c. What department is allowed to demand to see the pamphlet on site. It could mean any department like the Department of Transportation. Should clearly state department and how they identify themselves. Saying you belong to a department does not make it a fact. What required documentation will they have to provide to ensure that only authorized personal are asking to see</p>	<p>a. A standard HPA is required only if a person wants to work outside the provisions of the pamphlet. Please note, a simplified HPA is a type of standard HPA.</p> <p>b. Comment is noted.</p> <p>c. Proposed WAC 220-110-030 (30) and RCW 77.55.011(5) "Department" means the Washington Department of Fish and Wildlife.</p>

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	pamphlet is on site.	
WAC 220-110-050(9)(c)(ii)(A)	Is this meant to allow that a complete application will be considered "the equivalent?" If so, the sentence needs to be revised to say so. If not, the additional information needed with the online application should be spelled out.	Language is amended.
WAC 220-110-050(9)(c)(ii)(B)	Simplified HPAs have not been clearly defined, explained, developed or agreed upon by the fish co-managers. As such, we request this language be stricken.	Comment noted. – The language for simplified HPA applications is amended and renamed "Model HPA process".
WAC 220-110-050(9)(c)(iii)	In subsection (9) concerning "How to Get an HPA," a very detailed description of application instructions is included in the proposed rulemaking, in particular section (c)(iii). This type of information is frequently subject to change and becomes out-of-date very quickly. We believe that a better and more efficient place to publish this information would be a separate set of application guidelines that can be updated more frequently. Also, the numbering in this section appears to need technical corrections.	Comment noted.
WAC 220-110-050(12)	Reviewing agencies, including tribes, should have 7 days to review projects deemed complete, not just when WDFW receives application.	The reviewing agencies, including tribes, will not be able to view the application in APPS until it is complete.
WAC 220-110-050(12)(b)	We suggest the language include Tribes in the review and comment period for HPAs. However, the proposed 7-day period is extremely short, especially for standard HPAs with up to a 45 day decision time. We would request that Tribes be given a minimum 20 day review and comment period for standard HPAs. In addition, Tribes should be given the opportunity to review and comment on emergency, expedited and modified HPAs if concerns are identified during the abbreviated time frame.	The HPA is an agreement solely between the department and the permittee. We do not have the authority to require the permittee to notify the Tribes or local, state, and federal agencies. As comment states, there is a 45-day review time, thus we need to maintain the 7 day comment period for tribes and other agencies.
WAC 220-110-050(13)(b)	What is intent behind this provision? When would WDFW ever be issuing stormwater permits?	The intent is to comply with RCW 77.55.021(7)(b)(iv) and RCW 77.55.161. We issue HPAs for outfall work.

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WAC 220-110-050(14)	We suggest that the department consider the following wording to be incorporated in this section - The department may issue, deny, or condition an HPA to protect fish life. Only true and document emergency situations should be considered with respect to exempting an Expedited permit from permit denial.	Comment noted but the suggested language would not comply with the statute RCW 77.55.021.
WAC 220-110-050(14)	The draft rule revision weakens the requirement that work must commence within 2 years to 5 years in order for the permit to remain valid (WAC 220-110-050.14 and elsewhere; removal of “Permittees shall demonstrate substantial progress on construction of that portion of the project relating to the HPA within two years of the date of issuance.”). We recommend that instead of this reduction, the 2-year timeline begin at the date of the issuance of the final needed permit authorization. Five years is too long of a grace period to allow given that science and technical knowledge about habitat impacts is evolving quickly in the Washington research community.	Language is added to (15)(a)(i). A period of more than two years may be needed for projects that are constructed over several years or in stages.
WAC 220-110-050(14)	Clarify how single-family bulkheads are processed, including whether issuing or denying section (14) applies. See comment #2 in PSP comment letter. Also, can't projects be denied for their impact on instream flow, hyporheic flow, etc.? How far removed from direct impact to fish life?	The language is amended. Projects can be denied if the department can use available science to show that unmitigated impacts to instream flow, hyporheic flow, and other impacts will adversely impact fish life.
WAC 220-110-050(14)(a)	In the third sentence, after "protection of fish life," delete "and their habitat" to be consistent with RCW 77.55.	Removed because “and their habitats” is redundant since the definition of “protection of fish life” includes habitat.
WAC 220-110-050(14)(a)	Does the impact/mitigation assessment take into account permanent versus temporary impacts? For example, WDFW may require more trees added to a mitigation planting plan (beyond a LUE 1:1 requirement) to take into account larger trees being removed. WDFW may want to require wood be added for impacts that would not otherwise be considered.	This is covered in the mitigation section.
WAC 220-110-050(14)(b)	Does the statement that the projects must meet the hydraulic code mitigation requirements in WAC eliminate the need of WDFW to	No, the statement does not eliminate the need for the department to specify mitigation requirements when providing an oral HPA for an

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	specify mitigation requirements when providing an oral HPA for an emergency action?	emergency action.
WAC 220-110-050(14)(b)	After "result in" delete "direct or indirect harm to replace or add protection of."	Language is amended.
WAC 220-110-050(14)(d)	We feel that scientific monitoring should be included in this section, as follows: The department may also require the permittee to conduct scientific monitoring and/or provide periodic written reports to assess permit compliance.	This is covered in the mitigation section.
WAC 220-110-050(14)(d)	Providing periodic reports-too ambiguous and unnecessary, and leaves up to the judgment of WDFW-too unrestricted.	Comment noted, but the comment was not specific enough to respond to.
WAC 220-110-050(14)(d)	Delete the last sentence.	This is a common requirement for projects that have a mitigation plan or for GHPAs so the language should remain.
WAC 220-110-050(14)(e)	In the first sentence and fourth sentence after "habitats," add "below the ordinary high water line," to be consistent with RCW 77.55.021.	See "General" comment at the top of this table.
WAC 220-110-050(14) – (16)	Regarding Modifications to an HPA it appears the only way modifications are processed is by submitting a written request through WDFW HQ. Historically, we communicated modifications directly with the AHB. What will the process be for modification requests that result from changing conditions on a project site that needs to be responded to immediately and otherwise could not follow the (16) (a) process? Would this be covered under (14) (e) in some way?	Habitat biologists can approve minor modifications so you can contact them directly. Major modifications require payment of the fee and creation of another version of the HPA. HQ HPA processing staff must do this.
WAC 220-110-050(14)(e)	Minor modification to work window language here again. In the second sentence, the word "subsequent" should be removed.	Language is amended.
WAC 220-110-050(15)(a)	While we are not opposed to longer term HPAs up to 5 years, there needs to be close tracking on some projects to ensure compliance. We recommend adding the following language, "If requested by the department, the applicant shall notify the department prior to commencing operations and at any other phases deemed necessary	This is covered in proposed WAC 220-110-050(14)(d).

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	by the department.	
WAC 220-110-050(16)(a)	This section appears to get rid of the appeal language.	The appeal language is covered in proposed WACs 220-110-450 and 460.
WAC 220-110-060	We are concerned that two different definitions of fish & fish-bearing waters are being utilized in this integrated regulation. The intent is not to reduce the HPA regulations on Type S & F waters and this needs to be clarified in section (3)(a)(i) that "fish" and "fish-bearing rivers" are defined by WDFW, not the FPA or WAC 222-16. In addition, recommend that monitoring should be required to assure that the WDFW regulations are not being lost in the integration effort by assuring that DNR is applying the proper regulation for activities that require an HPA.	Comment noted, however, monitoring compliance and effectiveness of forest practices hydraulic projects is the responsibility of DNR.
WAC 220-110-060	Integration of HPAs and FPAs—while we don't have a very good idea how this program will function, there are indications that there may be enough cooperative discussion between state agencies and tribes (hopefully) to ensure success of the program. Nonetheless, there remains one important element to incorporate into the HPA Rule update—consistency with the Board Manual Section 5, Guidelines for Forest Practices Hydraulic Projects. We sincerely hope the Departments of Fish and Wildlife (WDFW) and Natural Resources (DNR) will follow through to incorporate changes made in Hydraulic Code into the Forest Practices Board Manual. It is critical that both documents are consistent and up-to-date with best available science.	Comment noted.
WAC 220-110-060	We suggest that the WDFW include a new section in the proposed rules designed for forest practices hydraulic projects. This new section should be formatted so that it can be smoothly integrated into Forest Practices rules as required by integration. We continue to be concerned that the Department's approach to implementation of Hydraulic Code rules (as found out in Section WAC 220-110-010 and 020) is sufficiently different from the Forest Practices Act approach to	Comment noted. We are not proposing to change this section since it recently went through rule making.

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	implementing forest practices rules. The eventual integration of the new HC rules will be unnecessarily difficult, confusing, time consuming and costly	
WAC 220-110-060(2)(b) – (c) WAC 220-110-060(3)	The department should strive not only to communicate and coordinate with the applicant and DNR, but also Tribes as fish co-managers.	Comment is noted. We are not proposing to change this section since it recently went through rule making.
WAC 220-110-060(3)(a)(i) –(ii)	Physically speaking, one cannot be below a width, even a bankfull width. The sections should refer to "an elevation below that corresponding to the bankfull width."	Comment noted. We are not proposing to change this section since it recently went through rule making.
WAC 220-110-070(1)	Modify the description After "department must" add "condition" and delete "modify, delete, or add". Delete "avoid, minimize, or compensate for impacts" and add "are protective of".	Comment noted.
WAC 220-110-070(2)(a)(iv)	After "will not cause a" delete "loss of or injury to fish or shellfish, or the loss or permanent degradation of the habitat that supports the fish and shellfish populations" and add "will be protective of fish life."	This is the language that has been in WAC since 1994. We are not proposing to change it.
WAC 220-110—070(2)(a)(vii)	Under conditions where new scientific information is made available that would result in equal or greater protection of fish and shellfish, and their related habitat.	This could include new science that demonstrates a new design or construction method provides equal or better protection.
WAC 220-110-070(2)(b)	After "may add requirements" add "from within the WAC". To add requirements that have not gone through public rule-making process should not be considered "hydraulic project approval technical requirements." This would be the same as using adaptive management to make changes to rules and statutes without due process.	This is allowed to address project or site specific conditions not properly mitigated by the common technical provisions. See RCW 77.55.021(7)(a).
WAC 220-110-080	Mitigation requirements of WAC 220-110-080 are too broad and capture maintenance and repair activities, unlawfully. WAC 220-110-080 does not comply with RCW 77.55.021 reasonableness	Comment noted. We are proposing that maintenance, repair and upkeep not require compensatory mitigation unless there is a new impact not associated with construction of the original structure.

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	standards. The definitions of environmental baseline do not capture the correct reference point in time for all hydraulic projects, because hydraulic project is so broadly defined as to include maintenance of structures and facilities built long ago.	
WAC 220-110-080	A project cleaning out a watercourse clogged with grasses and silts in an agricultural system within a flood control district creates "unimpeded fish passage" as that term is now defined-and should not require mitigation. It is unreasonable to condition HPAs issued today for these various activities associated with the maintenance, repair, and upkeep of these dikes and drainage facilities when the maintenance activities themselves create and maintain unimpeded fish passage, as compared to the existing previously altered system.	Comment noted. We are proposing that WDFW would not require compensatory mitigation for maintenance, repair and upkeep unless the work causes a new impact not associated with construction of the original structure. In this case, WDFW may require compensatory mitigation only for the new impact.
WAC 220-110-080	It is not clear when compensatory mitigation is and is not required.	The language is amended to clarify the intent.
WAC 220-110-080	Grandfathering of existing impacts—we have provided comment to the Dept. on several occasions that the HPA permitting process, in essence allows for the continued persistence of illegal blocking culverts by permitting actions (e.g., installing or ensuring barriers are present for grass carp stocking in private ponds that have outlets in- or to streams, repair of culverts that do not provide fish passage, bank armoring repair, mitigation requirements that put the baseline at existing degraded conditions, etc...) that require an applicant to illegally block streams that would otherwise be occupied by anadromous fish stocks. A recent example, in King County where an applicant wanted to plant triploid grass carp in a small private pond was instructed by State staff to make sure the outlet of the pond was blocked to ensure that no carp escaped to downstream areas. It was evident that the pond was a dammed tributary to a productive anadromous stream. By allowing the proposal to move forward, the Dept. in essence ensured the continued illegal blocking of this	Comment noted.

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	tributary for an indefinite time period of time.	
WAC 220-110-080	<p>Will the mitigation efforts required under this new section be coordinated in any way with other resource agencies?</p> <p>Will there be separate studies and reports required by each agency, each focused on a separate aspect of streamside vegetation protection?</p> <p>In addition, we feel that it would be important, efficient, and prudent for the Department to find a way too clearly state that this process will not have to apply every time routine maintenance activities are conducted</p>	<p>The department does require mitigation now. The purpose of the chapter is to make these requirements more transparent. The department strives to coordinate compensatory mitigation with the other agencies. However, this can be challenging given we are often the first permit issued and we have a 45-day timeframe in which to issue the HPA.</p> <p>The department works with applicants to ensure studies and reports required by other agencies also address our concerns.</p> <p>We are proposing that maintenance and repair not require compensatory mitigation unless there is a new impact caused by this work not associated with construction of the original structure.</p>
WAC 220-110-080	There cannot be exceptions for adequate mitigation to compensate for lost habitat and function.	Comment noted.
WAC 220-110-080(1)	Under description, mitigation is more than "lessen" or "minimizing" impacts to fish life. We strongly recommend the following language changes, "Generally, mitigation is an action taken to compensate for the impact of another action. The department defines mitigation as sequentially avoiding impacts, minimizing and rectifying impacts, or fully compensating for remaining impacts."	The definition of mitigation is the same definition that is in RCW 90.74.010(5). Mitigation is more than just compensation. It includes all actions in the mitigation sequence.
WAC 220-110-080(3)	Mitigation requirements are too vague. List specifically what projects need or do not need compensatory mitigation.	We cannot anticipate exactly what compensatory mitigation is required for every project. A lot of this is driven by the applicant's proposed avoidance, minimization, and damage repair measures.
WAC 220-110-080(3)	Language should be added to this section to clarify that mitigation sequencing (i.e., avoid impacts to the extent practicable, minimize impacts to the extent practicable, and then providing compensatory mitigation for unavoidable impacts) must occur to the satisfaction of WDFW and its tribal co-managers. Once the applicant has demonstrated that opportunities for effective on-site mitigation have been exhausted, the WDFW and its co-managers will consider the use	Language is amended to include language from chapter 90.74 RCW. The language does require mitigation sequencing.

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	of an approved mitigation bank or other mitigation measures to compensate for unavoidable project impacts. For clarity, the stipulation from RCW 90.74.030(2)(b) that WDFW should not approve any mitigation "that does not provide equal or better habitat functions and values" should be included in the WAC.	
WAC 220-110-080(3)(a)	Determining impacts or project effects requires a monitoring plan (baseline, compliance and effectiveness.	The department does not require baseline monitoring unless we require a contingency plan. We rely on available science and the application information to determine the mitigation. All provisions for which a person must comply must be in the HPA so we cannot wait for monitoring results to determine the mitigation for impacts.
WAC 220-110-080(3)(a)	"... to achieve no net loss of fish habitat based..."	Language amended for clarity
WAC 220-110-080(3)(a)	Add As co-managers, the affected tribes need to be involved in any mitigation determination.	See General Comment at the top of this table.
WAC 220-110-080(3)(c)	Remove no-net-loss from the rules.	Language is amended.
WAC 220-110-080(3)(a)	Mitigation requirements are unpredictable, as "no net loss" is not well defined.	The term no-net-loss was removed from the proposed rules and replaced with no loss of habitat function, value or habitat quantity. Habitat function and value are defined. The term will be reinstated in the CR-102 rules.
WAC 220-110-080(3)(b)	Concerns that this language is too vague	This language has been in our mitigation policy for over a decade. The intent of the language is to be transparent. We do ask for aquatic vegetation surveys and so on. The intent is not to ask for new types of surveys that we don't request currently. The statute requires us to be reasonable. An applicant can always say no if they don't think what is requested is reasonable and appeal a denial, if issued, to the PCHB.
WAC 220-110-080(3)(c)	Please work to "hold the line" at no net loss of fish and fish habitat! We do not wish to see the HPA process weakened, as it is the only	Comment noted.

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	regulatory tool to protect fish and fish life.	
WAC 220-110-080(3)(c)	Amend the no-net-loss language and include an analysis is needed to ensure no-net-loss is achieved.	The term no-net-loss was removed from the proposed rules and replaced with no loss of habitat function, value or habitat quantity. Habitat function and value are defined. The term will be reinstated in the CR-102 rules.
WAC 220-110-080(3)(d)	Monitoring is not included as a mitigation standard in (d), but is included in the definition of the mitigation sequence (103). We recommend adding "Monitoring" as the 6th element of the mitigation sequence, and to be more consistent with other agency and SEPA definitions.	Provision is amended to include monitoring.
WAC 220-110-080(3)(d)	As earlier discussed under definitions, some of the listed mitigation actions do not adequately compensate for impacts to fish life. We strongly recommend the following changes to the language, "{a) Avoid the impacts altogether, {b) Minimize impacts by limiting the degree or magnitude of the action. Compensate for any unavoidable impacts, (c) Rectify and fully compensate for all remaining impacts."	The department will retain the standard mitigation sequencing to align with other state regulations.
WAC 220-110-080(3)(e)	Define and explain advanced mitigation.	Provision is amended.
WAC 220-110-080(3)(e)	Delete "require" and replace with "may use advanced mitigation." It implies that before a HPA project would be permitted and built that an advanced mitigation site would have to be constructed and achieved its functionality before a permit would be issued.	Language is amended to clarify how the department would consider advance mitigation.
WAC 220-110-080(4)	Require compensatory mitigation more broadly as even projects with salmon-friendly features such as grating still have habitat impacts.	Comment noted. New structures are evaluated differently than existing structures in the proposed rules.
WAC 220-110-080(4)(a)	A new forest road will result in a measurable loss of LOD recruitment. However, requiring compensatory mitigation for loss of LOD is overly burdensome for forest landowners.	Comment noted. A water crossing would require an HPA. But clearing timber for a forest road is not a hydraulic project and would not require an HPA.
WAC 220-110-080(4)(a)	Compensatory mitigation should not be necessary if other measures will protect fish life. However, other mitigation actions may not	The department will retain the standard mitigation sequencing to align with other state regulations. Provision (3)(d) has the suggested

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	<p>clearly demonstrate that impacts will be prevented or fully offset. We would recommend the language state, "Compensatory mitigation is not required for hydraulic projects if other actions in the mitigation sequence are taken that prevent or fully offset impacts to fish life."</p>	<p>language.</p>
<p>WAC 220-110-080(4)(a)</p>	<p>What are measurable adverse impacts? If they are measurable can we assume there are specific criteria to identify adverse impacts and associated measurement techniques?</p>	<p>Loss of area is the easiest to measure. Functions and values are more difficult. The Habitat Equivalency Analysis, Habitat Evaluation Procedure and Habitat Suitability Index are among the methodologies applicants use to measure impacts.</p>
<p>WAC 220-110-080(4)(c)</p>	<p>We concur with the decision to allow off-site mitigation where it is appropriate and where it can be shown there will be a clear net benefit to fish life. Several studies have shown that in many cases on-site mitigation is not effective. However, we are concerned about the implication from the wording "The department may not limit the scope of compensatory mitigation...." The inclusion of this provision is vague enough that we believe that many proponents will interpret this as being able to do off-site mitigation if they so choose as long as it provides similar benefits. The Tribe believes that in some cases, after all options have been investigated, that on-site mitigation is the only option that makes sense. In these cases WDFW has the obligation to make this decision to protect fish life.</p>	<p>The language is consistent with RCW 77.55.241 and RCW 90.74.030.</p>
<p>WAC 220-110-080(4)(c)</p>	<p>The department may not limit the scope of compensatory mitigation options to areas on or near the project site, or to habitat types of the same type as contained on the project site. The department must fully review and give due consideration to compensatory mitigation proposals that improve the overall biological functions and values of the watershed or bay and accommodate the mitigation needs of the infrastructure development or non-infrastructure development, including proposals or portions of proposals that are explored or developed in RCW 90. 74.040. Please clarify why this section is written this way.</p>	<p>This section incorporates language from RCW 77.55.241 and RCW 90.74.00. We must comply with the statutes.</p>

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WAC 220-110-080(4)(c)	<p>The new requirement would prevent the Department from pursuing effective on-site mitigation (as provided earlier in the same paragraph) even if such a solution is available, in situations where the applicant chooses otherwise. This section prevents the Department from doing exactly what it should be doing. It is a clear loophole for applicants that would prefer to purchase credits in a mitigation bank (a bank that may not adequately compensate for the lost habitat) rather than avoid, restore, or otherwise compensate onsite. Although the offending passage does appear in RCW 90.74, so does the stipulation that the Department should not approve any mitigation “that does not provide equal or better habitat functions and values” (RCW 90.74.030(2)(b)) which should be included in the WAC and given at least equal weight. The new requirement is in direct contradiction with the spirit and letter of the other mitigation provisions in WAC 220-110, as well as WDFW Policy M5002, and does not need to be explicitly repeated in the WAC.</p>	<p>We must comply with the statute. WACs and policies must be amended to comply with the statutes. The suggested language from chapter 90.74 RCW is added.</p>
WAC 220-110-080(4)(c)	<p>WDFW proposed mitigation requirements are confusing, inconsistent and outdated. The Environmental Protection Agency and Army Corps of Engineers revised their preferred Compensatory Mitigation for Losses of Aquatic Resources in 2008 to include a preference for mitigation banking and in-lieu fees over onsite and in-kind mitigation. Local jurisdictions, such as Pierce County and the City of Tacoma, have also joined with the Washington State Department of Ecology in their preference for more ecologically sound/watershed-wide mitigation. Part of improving HPAs is use of good science and an efficient and rational permitting process. Updating the mitigation elements of the HPA would significantly enhance overall goals and objectives of the HPA "updating" process described in the EIS.</p>	<p>Mitigation requirements must comply with the statutes. See RCW 77.55.241 and chapter 90.74 RCW.</p>
200-110-080(4)(c)	<p>In terms of the Strategic Lands Strategy structure, Snohomish County is looking for net gain benefits across an entire reach and in some cases possibly, across the entire county. That means one project</p>	<p>Restoring impacted functions on-site or immediately adjacent to the impact site is a preference. Reach scale mitigation may be more cost effective and provide more benefit. The language doesn't preclude</p>

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	<p>could provide mitigation for another but not necessarily be "on-site or immediately adjacent." It could be another mile down the river. This section could be read to negate reach scale mitigation opportunities and so a further explanation by WDFW would be necessary. Instead, we would like to see these new rules incorporate the Strategic Lands Strategy philosophy, perhaps throughout the rules or through the addition of a separate section for such projects.</p>	<p>reach based mitigation.</p>
<p>WAC 220-110-080(4)(c)</p>	<p>In the first sentence, delete "impacted function" and add "protection of fish life." Second sentence, delete "species of fish stock" and add "protection of."</p>	<p>The proposed rule language clarifies RCW77.55.241, RCW 77.55.251 and chapter 90.74 RCW.</p>
<p>WAC 220-110-080(4)(d)</p>	<p>New language indicates, in (4)(d) that "Mitigation must compensate for temporary losses, uncertainty of performance , and differences in habitat functions, types and value." It also indicates in (f) that "The department may require monitoring to determine the extent and severity of impacts and the effectiveness of the compensation projects. The department may require corrective measures needed to achieve performance goals and objectives specified in the HPA." City Light suggests the deletion of "uncertainty of performance" in (4)(d). Uncertainty would be difficult to forecast and monitoring, covered in (4)(d) would indicate whether corrective measures would be needed .</p>	<p>Project proponents include additional compensatory mitigation to mitigate for uncertainty of performance. However, it is more common for uncertainty of performance to be mitigated with a monitoring and contingency plan. That way the project proponent is responsible for additional compensatory mitigation only if the project fails.</p>
<p>WAC 220-110-080(4)(d)</p>	<p>What is the scientifically valid measure of fish habitat function, value and area and will it be available for the applicant? How will WDFW measure uncertainty of performance? How are temporal losses measured and can it be compensated for by future expected net gains due to a fish passable structure and opening up more habitat for fish?</p>	<p>Loss of area is the easiest to measure. Functions and values are more difficult. The Habitat Equivalency Analysis, Habitat Evaluation Procedure and Habitat Suitability Index are among the methodologies applicants use. Temporal losses are estimated based on the recovery time of habitat. They can and often are mitigated for by future expected net gains such as opening up more habitat for fish by replacing a culvert.</p>
<p>WAC 220-110-080(4)(d)</p>	<p>In the first sentence, delete "fish habitat function, value and area" and add "protection of fish life." Delete "mitigation must</p>	<p>The proposed rule language clarifies RCW77.55.241, RCW 77.55.251 and chapter 90.74 RCW. Loss of area is the easiest to measure.</p>

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	compensate for temporal loss, uncertainty of performance, and differences in habitat functions, type, and value." These areas are speculative and arbitrary, so mitigation becomes open-ended.	Functions and values are more difficult. The Habitat Equivalency Analysis, Habitat Evaluation Procedure and Habitat Suitability Index are among the methodologies applicants use. Temporal losses are estimated based on the recovery time of habitat. They can and often are mitigated for by future expected net gains such as opening up more habitat for fish by replacing a culvert.
WAC 220-110-080(4)(e)	Mitigation banking and in-lieu fee programs have been introduced without any connection to statute. This provides an unacceptable loophole where project applicants are simply allowed to pay a "fee" after a project results in habitat damage rather than perform actions that result in clear and measurable mitigation success.	There is a connection to RCW 77.55.241 because state or federal certified fish conservation bank, a joint 404/401 mitigation and fish conservation bank, or in-lieu fee program may be more cost effective and provide better benefit to fish life.  Please note that this is a form of mitigation considered after the standard mitigation sequencing has been applied.
WAC 220-110-080(4)(e)	There needs to be a lot more detail and clarification on the use of credit.	The credits for state or federal fish conservation bank, a joint 404/401 mitigation and fish conservation bank, or in-lieu fee programs are established in the bank certification process. The use is clarified in the banking instruments.
WAC 220-110-080(4)(e)	Delete the last sentence.	This sentence states WDFW preference. Please note the word "should" is used.
WAC 220-110-080(4)(f)	Should have a monitoring section to rules that addresses implementation, effectiveness, and validation monitoring. Refer to your own Stream Habitat Restoration Guidelines.	This is the responsibility of the department not the applicant.
WAC 220-110-080(4)(f)	Monitoring standards must be spelled out to address specific target goals.	Monitoring needs to be tailored for site or project-specific impacts.
WAC 220-110-080(4)(f)	Problem with this is in the inability to predict WDFW actions. There appears to be no limit on the years of monitoring that will be required, nor a limit on the ability of WDFW (when, where, what) to require additional work when they determine that all of the goals of the project are not met.	The length of the monitoring is driven by the length of the time it will take the mitigation action to become fully functioning.
WAC 220-110-	In the establishment of baseline conditions (WAC 220-110-080.4.g of	Language is amended. The statute of limitations for prosecuting a

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080(4)(g)	the draft revised rule), illegal activity should be taken into account. The draft revised rule includes "The environmental baseline for purposes of calculating compensatory mitigation requirements under this chapter is habitat conditions at the time the HPA application is submitted." This allows for an applicant to damage habitat (illegally) in advance of submitting an application and use the damaged area as baseline conditions. Requiring baseline to be established based only on site conditions reflecting legally permitted activities would remove this potentiality.	hydraulic code violation is two years.
WAC 220-110-080(4)(g)	Use of existing conditions as the baseline for assessing compensatory mitigation merely ensures perpetuation of degraded habitat conditions, where these may define the project site. The code language should be amended to assess a baseline established with respect to cumulative impacts, as required by SEPA.	This section complies with RCW 77.55.231(1)
WAC 220-110-080(4)(h)	Assessment of conditions "before project construction" should include an assessment of cumulative impacts occurring before that construction.	We cannot require compensation for cumulative impacts. We issue construction permits project by project. We do not regulate land use/development. This is outside our authority under chapter 77.55 RCW.
WAC 220-110-080(4)(h)	First sentence, after "condition of the" delete "habitat" and add "protection of fish life in two places" to be consistent with RCW 77.55.021.	The proposed rule language clarifies RCW77.55.241, RCW 77.55.251 and chapter 90.74 RCW.
WAC 220-110-080(4)(i)	This language will never get us necessary mitigation for activities that keep setting coho habitat back in time. For example, wood removal in front of bridges or culverts is often considered routine maintenance; however, it can cause a cumulative loss for fish habitat.	Please note rehabilitated and replacement structures must comply with the proposed rules or if an alternate design they have to provide equal or better protection to fish life than the proposed rules. Wood must be relocated in the stream unless there are engineering, safety or environmental constraints.
WAC 220-110-080(4)(i)	Maintenance and repair on an existing structure that does not meet current regulatory requirements must require mitigation. Replacing and/or maintaining a structure that currently diminishes habitat and/or perpetuates impacts further into the future is not acceptable.	We must comply with RCW 77.55.231(1).

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WAC 220-110-080(4)(i)	Delete "routine". SEPA HPA and other permits require maintaining a structure that is permitted After "maintenance" delete "and repair." They are both part of the definition of "maintenance."	Please note the definition in the proposed rules defines maintenance as it relates to these rules only.
WAC 220-110-080(4)(i)	The department should establish a time limit for repair work to be conducted before being considered a new project with a new environmental baseline. The proposed language suggests this for repair of bulkheads but the provision should be applied to all structures and development.	Language is added to bank and shoreline protection sections and the overwater structure section.
WAC 220-110-080(4)(i)	The rules for mitigation are expanded and mitigation must be addressed in every type of project. There should be a provision within this section which would exempt mitigation in cases of routine maintenance or minor repairs on the levee and within the rights of way, which are undertaken under USACE guidelines and regulation, and which by their nature, would not appear to adversely affect or damage habitat. Dike District performing these Routine maintenance or repairs to restore the levee back to the condition it was in prior to ordinary wear and tear or minor damage should be exempted.	Mitigation is currently required. Mitigation sequencing is in our rules. Please note mitigation includes avoidance and minimization measures. The technical provisions in the rules are mitigation. Maintenance and repair work that does not causes a loss of habitat function or area above that associated with the original construction would not require compensatory mitigation.
WAC 220-110-080(4)(j)	Compensatory mitigation should be required for the repair or replacement of structures even without an increase in footprint as this prolongs the habitat impact.	Comment noted
WAC 220-110-080(4)(j)	As with the previous comment, in many cases existing structures are causing harm that should require mitigation. Additionally, there needs to be an analysis at the time of replacement that takes into account if required mitigation for the existing structure ever occurred or was effective.	Comment noted
WAC 220-110-080(4)(j)	Rehabilitation or replacement of a structure that is structurally deficient or functionally obsolete needs to be treated as a new project entirely (including mitigation). Allowing such activity can result in significant resource damages. Many of these types of projects were not permitted or at the very least were never required	The proposed rules require rehabilitated components or replacement structures to comply with the provisions in the proposed rules. This will often result in an improvement to the existing habitat conditions.

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	to mitigate for the original impacts of the structure.	
WAC 220-110-080(j)	After "with the" delete "rehabilitation and replacement" and replace with "maintenance".	These may all be maintenance actions but compensatory mitigation is triggered by the type of maintenance actions.
WAC 220-110-080(4)(j)(iii)	Delete all of (iii). The wordage indicates that the intent is to use a definition within the WAC to develop a retrofit program that requires maintenance activities to retrofit complete structures instead of performing maintenance activities on currently serviceable structures. We believe this would be an improper use of the intent of the RCW 77.55 statute and outside of this WAC development.	The intent of the provision is to require the WDFW to consider whether or not compensatory mitigation is necessary if a new structure constructed to replace an existing structure does not comply with the proposed fish protection rules.
WAC 220-110-080(4)(l)	Monitoring plan and contingency plan goals, objectives and methods need to be defined (fish passage, plant survival, slope stability) prior to issuance of HPA	We agree that the monitoring or contingency plan must be cited in the plans provision of the HPA.
WAC 220-110-080(4)(l)	Use the word “shall” instead of “may in the following statement: “The department (may shall) require the project proponent to submit a monitoring and contingency plan to ensure the compensatory mitigation meets the performance goals and objectives. This plan may be part of a larger mitigation plan.”	If an applicant proposes to remove concrete debris from the beach or some other form of compensation that provides immediate benefits and requires no follow-up action a monitoring and contingency plan the department would not be needed.
WAC 220-110-080(4)(l)	Delete the last sentence.	The last sentence is needed for clarification.
WAC 220-110-080(5)	If compensatory mitigation, a mitigation plan and monitoring are required for a forest project it will increase the economic incentive to convert forest lands to developed lands.	Comment noted. There are not many, if any FPHPs that would require compensatory mitigation. Culvert replacement is usually self-mitigating.
WAC 220-110-080(5)	City Light suggests that the word "person" be changed to "applicant" in (5)(c), so that the sentence would read, "The applicant may use a mitigation plan to propose compensatory mitigation within a watershed".	Language is amended.
WAC 220-110-080(5)(a)	Use the word “shall” instead of “may in the following statement: “The department (may shall) require a mitigation plan for projects with unavoidable adverse impacts and those with ongoing, complex,	If an applicant proposes a form of compensation that provides immediate benefits and requires no follow-up action a mitigation plan would not be needed.

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	and experimental mitigation actions.”	
WAC 220-110-080(5)(b)	Vague. Seems unpredictable what the specific plan requirements will be.	It is described in (5)(c).
WAC 220-110-080(5)(c)(i)	Recommend that this paragraph be revised. It states that the mitigation plan must contain language that "guarantees" long-term viability of the impacted habitat. In some cases, it may be determined that long-term viability is not achievable; if this is the case, other strategies may need to be examined through adaptive management such as mitigation banking, in-lieu fees, etc. "Essential biological functions and values" needs definition from WDFW as well as prescribed tools for measuring functions and values. These are expensive phenomena to measure, therefore the assessment of the validity of such measurements should not be arbitrary.	This is the language in RCW 90.74.020. We'll add a definition for fish habitat functions and values. The Habitat Equivalency Analysis, Habitat Evaluation Procedure and Habitat Suitability Index are among the methodologies applicants use to calculate habitat value and function. The purchase of credits from an established bank or ILF program would not require a mitigation plan. This is more applicable to permittee-responsible mitigation.
WAC 220-110-080(5)(c)(i)	Delete "habitat" and add "mitigation." Delete "essential biological functions and values" and add "mitigation."	The language is from RCW 90.74.020
WAC 220-110-080(5)(c)(ii)	Add after "long term monitoring" the phrase "up to 5 years" to be consistent with RCW 77.55.	The language is consistent with RCW 90.74.020. A HPA cannot be issued for longer than five years. If mitigation actions extend beyond the five-year life of a HPA, WDFW will require a separate legal agreement to ensure the mitigation meets the agreed upon performance standards.
WAC 220-110-080(5)(c)(iii)	This language will be problematic for getting any mitigation associated with levee projects that are part of flood control plans which are approved via local comp land use plans.	This language is from RCW 90.74.020.
WAC 220-110-080(5)(d)	"...equal or greater fish habitat functions and values in the watershed or bay" is an extremely difficult idea to quantify. WDFW needs to provide a discrete list of habitat values and functions and approved tools for quantification so that applicants understand the financial burden upfront and can plan accordingly.	This language is from RCW 90.74.020. We'll add a definition for fish habitat functions and values. The Habitat Equivalency Analysis, Habitat Evaluation Procedure and Habitat Suitability Index are among the methodologies applicants use to calculate habitat value and function.
WAC 220-110-	After "equal or greater" delete "fish habitat functions and values"	This language complies with RCW 90.74.020.

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080(5)(d)	and add "protection of fish life."	
WAC 220-110-080(5)(e)	Please explain where co-management plans and agreements fit into mitigation considerations.	They are not mentioned in RCW 90.74.020. The mitigation plan referenced is to mitigate impacts from a project to fish life.
WAC 220-110-080(5)(e)	After "equal or greater" delete "fish habitat functions and values" and add "protection of fish life." After "existing conditions" delete "for the target fish species or fish stocks."	The proposed language complies with RCW 90.74.020.
WAC 220-110-080(5)(e)(i)	After "mitigation for the" delete "target fish species or fish stocks in terms of the quality and quantity of habitat functions and values provided" and add "protection of fish life."	The proposed language complies with RCW 90.74.020
WAC 220-110-080(5)(e)(iii)	After "mitigation to address" delete "scarce functions or values" and add "protection of fish life."	The proposed language complies with RCW 90.74.020
WAC 220-110-080(5)(e)(v)	Delete "after implementation of" delete "habitat."	This language is amended.
WAC 220-110-080(5)(f)	This paragraph says that a mitigation plan may be approved through an MOA. It would be useful to have more guidance on this and give an example of when this would be necessary or advantageous (outside what is outlined in subsection g.	We will post more information on our HPA website.
WAC 220-110-080(5)(f)	After "mitigation plan may be" delete "approved through a memorandum of agreement between the project proponent and" and add "conditioned in the HPA by the department." The memorandum of agreement would be a permit within a permit, and outside of RCW 77.55.021.	Actually it is a plan cited in the plan provision of the HPA. It is not a permit within a permit. The language also complies with RCW 90.74.020.
WAC 220-110-080(5)(g)	Monitoring often exceeds the life of the HPA so MOAs will be imminent for most restoration or repair projects. WDFW should provide a simple template for the MOA.	We will post more information on our HPA website.
WAC 220-110-080(5)(g)	After "the department will" delete "require a memorandum of agreement the project proponent and the department if mitigation actions include monitoring exceed the life of the HPA" and add "condition the HPA for the mitigation including monitoring for the life	Actually it is a plan cited in the plan provision of the HPA. The language also complies with RCW 90.74.020. There is no language in RCW 77.55.021 that restricts monitoring to the life of the HPA. See

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	of the HPA" to be consistent with RCW 77.55.021.	RCW 77.55.251 and chapter 90.74 RCW.
WAC 220-110-080(5)(g)	What is the process to obtain an MOA? How long is the MOA process? Can construction activity be started prior to the signing of the MOA?	We will post more information on our HPA website.
WAC 220-110-100	The section barely mentions protecting the existing vegetation. The protection of riparian vegetation and avoidance of its removal should be afforded substantial weight in staging and conducting construction projects in or near streams. The sizes and types of vegetation that can be cut, removed, or disturbed should be specified in advance, and trees approved for removal should be clearly marked in the field. Every effort should be made to work around woody vegetation more than 4" in diameter, and the vegetation that must be removed should be mitigated appropriately. Replacing mature trees with seedlings does not provide equivalent function, so a replacement formula that accounts for diminished functions over time should be devised. Riparian protection is one of the most overlooked aspects of current HPAs, and one that could be directly rectified with appropriate provisions in the common construction requirements.	The language is amended.
WAC 220-110-100(3)(a)	Similar to the performance standard WDFW has suggested for storage of materials on-site, materials should not enter waters of the state, however, this is inconsistent with subsections (8)(e) & (f). Also, further guidance may be appropriate to be consistent with forest practices (above the 100-year flood level).	We respectfully disagree that staging areas need to be the 100-year flood level in order to protect fish life, especially if a project is constructed during low flow months.
WAC 220-110-100(4)(c)	Specifying the "limits of work" rather than just "clearing limits" would better protect the referenced areas.	Language is amended.
WAC 220-110-100(5)	There are regulations under WAC 220-110-100(5), involving equipment use which conflicts with maintenance practices in federal guidelines under USACE for flood prevention activities. Under paragraph (5)(a) there is a provision to avoid and minimize damage or removal or riparian or wetland vegetation by confining the use of	Language is amended.

PROPOSED WAC	COMMENT	RESPONSE
	equipment to specific access and work corridors. Also, at (d) if wet or muddy conditions exist there must be the use of equipment that reduces ground pressure.	
WAC 220-110-100(5)(b)	Not enforceable or practical to use hand-held equipment. Every project will have an engineering or safety constraint that's nullifies the section. This section needs to be removed.	Some hydraulic projects are done primarily with hand tools. For example beaver dam removal, dock maintenance, and mineral prospecting.
WAC 220-110-100(5)(b)	What is scientific justification for this?	Our professional opinion is that hand held equipment and tools do less damage to bed and banks than heavy equipment.
WAC 220-110-100(5)(d)	Modify to read "If wet or muddy conditions exist, in or near a riparian or wetland area, use equipment that reduces ground pressure, unless there are geological, engineering or safety constraints."	Language is amended.
WAC 220-110-100(5)(e)	WDFW could require vegetable-based lubricants. They are used for King County projects.	Provision is added.
WAC 220-110-100(5)(f)	Replacement of culverts with stream simulation structures requires excavation that will be inundated with water if diversion fails. Not sure how this section protects fish life.	The purpose of this provision is to prevent fish stranding.
WAC 220-110-100(6)(a)	How is this assured? What performance standards does an application require to avoid and minimize propeller wash? Shouldn't this reference an appropriate buffer distance from eelgrass and macro algae beds based on the use of the vessel for the intended activity for which an HPA would apply.	Performance standards are site specific depending on the type of vessel, propeller size, speed and pitch.
WAC 220-110-100(7)(a)	Similar to the performance standard WDFW has suggested for storage of materials on-site, materials should not enter waters of the state, however, this is inconsistent with subsections (8)(e) & (f). Also, further guidance may be appropriate to be consistent with forest practices (above the 100-year flood level).	We respectfully disagree that staging areas need to be the 100-year flood level in order to protect fish life, especially if a project is constructed during low-flow months
WAC 220-110-100(7)(f)	Subsection (7)(f) discusses pole treatment options and adds CCA to the list of prohibited treatment options. We recommend that the	Language is amended.

PROPOSED WAC	COMMENT	RESPONSE
	Department finds a way to retain flexibility to the greatest extent possible so that stakeholders have options available that may fit particular operational and economic needs and are not overly restricted in their choices of materials	
WAC 220-110-100(7)(f)	We feel the department should leave open the possibility for further bans should it determines (or other governmental agency including DOE or EPA) find a non-listed preservative to be toxic to fish and shellfish, and their related habitat.	Comment noted. The rules could be amended if additional treated wood preservatives are banned from use in the aquatic environment.
WAC 220-110-100(7)(g)	We assume this requirement is only in areas where the material could fall into the waterbody, correct?	The requirement applies to wood used for hydraulic projects only. We are concerned about chemicals leaching into the waterbody.
WAC 220-110-100(7)(h)	We recommend that the language “unless there are engineering constraints” be revised to state “unless they are serving a legitimate engineering, structural or technical purpose.” This revised language would preserve the ability of the state to deny construction permits where tires would be used for an invalid purpose, but would allow tires to be used where they add value to the project. RMA asks that the language distinguish between whole tires and products intended for aquatic use that are made from scrap tires. Products made from scrap tires, such as dock bumpers and other devices serve important functions on docks and in harbors.	Language is amended.
WAC 220-110-100(8)(b)	We suggest replacing “repair” with “Demobilization and Cleanup”.	Language is amended.
WAC 220-110-100(8)(c)	The contractor should be allowed to perform activities that are not associated with the erosion or situation. As stated the entire project would need to shut down.	Added the word “Hydraulic” project activities to clarify that the hydraulic project activities that would need to cease.
WAC 220-110-100(8)(c)	High tide/high flow restrictions-would be problematic for salt water projects, such as the Nearshore Restoration Project. Would recommend language change or eliminate the requirement. There is no definition of "high flow" or "high tide": Existing language: WAC 220-110-100 (8)(c) If high flow or high tide conditions inundate the	Language is amended.

PROPOSED WAC	COMMENT	RESPONSE
	project area, stop all project activities except those needed to prevent erosion and siltation of waters of the state. Alternate language: If flow or tidal conditions arise that are likely to result in unanticipated and un-mitigatable erosion or siltation of waters of the state, all project activities must be stopped except those needed to prevent erosion and siltation of waters of the state.	
WAC 220-110-100(8)(e)	It is unlikely that construction will take place within "wastewater," as the term is normally used and understood. Maybe use "stormwater?" Or "runoff from disturbed areas?"	Language is amended to clarify the intent.
WAC 220-110-100(8)(f)	Clarification/exception should be included for river gravels/cobbles that are temporarily excavated and stockpiled adjacent to excavation and used to backfill excavation. i.e. placement of buried large wood.	Language is amended to clarify the intent.
WAC 220-110-100(8)(g)	Uncertain on what is an approved disposal site and who approves it. We suggest removing this language	Language is amended to clarify the intent.
WAC 220-110-100(9)(a)	Seems this section should be broken into two separate sections based on the two sentences. Also, the first sentence doesn't suggest reasonable alternatives for sites that don't have simple, relatively vegetation free sites. Suggest changing "Do not" to "avoid" with regard to installation of block nets in areas with heavy vegetation, cobble and boulders etc. There are sites where such a prohibition cannot be achieved within the project limits or land ownership.	Language is amended to give a performance based outcome. Nets that cannot be properly secured or maintained will not keep fish out of the work area.
WAC 220-110-100(9)(d)	Suggest changing to "the department shall determine the maximum size of block net openings". As currently stated, it appears one would have to use the exact size determined by WDFW, when smaller hole sizes are acceptable.	Language is amended.
WAC 220-110-100(9)(f)	Requiring use of gravel filled bags within waters will require an Army Corps permit that might otherwise not be required. Other non-fill materials can be used without this complication.	Language is amended.
WAC 220-110-	Will bags of clean gravel be required if the block net is weighted?	It depends on the composition of the gravel, the amount of gravel

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100(9)(f)	Will we be allowed to slice the bags when done with the work and distribute the clean gravel onto the bed?	and so on.
WAC 220-110-100(10)(b)	It is overly burdensome to require a small forest landowner to calculate the potential magnitude of a probable flow event for their project. Either remove this provision or work with USGS to develop a regression analysis that can quickly calculate expect high flow.	Added language to read "The department will not require modeling for short-term cofferdams installed in low flow streams."
WAC 220-110-100(10)(c)	Change "move" to "migrate" for better clarity.	Language is amended.
WAC 220-110-100(10)(g)	"Flows downstream of the project site must be maintained to ensure survival of all downstream fish, during all phases of bypass installation and decommissioning." In addition to flows, water quality standard should also be met.	Water quality is under the authority of the Department of Ecology.
WAC 220-110-100(10)(j)	How is "dissipate" measured? This should be defined in rule so that there is certainty in operations when water diversion is required.	This is a performance based provision. As long as water returned to the channel doesn't scour the bed or bank it is dissipated sufficiently.
WAC 220-110-100(10)(l)	The department should not require fish screens on pump intake structures	Unscreened pump intakes can harm fish.
WAC 220-110-100(10)(r)	This requirement is vague and open to considerable interpretation: how much material? How deep? What is considered stable? What if the undisturbed material already has fines? Etc.	The specific sediment size is site-specific. The size of the proposed type and size of the material as well as the depth should be shown in the approved plans.
WAC 220-110-100(11)(a)	This paragraph says that modeling should be used to determine the impact of cofferdams. Recommend that WDFW provide a reference outlining preferred modeling standards (e.g., fish passage manual).	Comment noted
WAC 220-110-100(11)(b)	This statement relates more to dewatering pump design than coffer dam design.	Language is amended
WAC 220-110-100(11)(d)	This statement doesn't really apply to section 11, and is more appropriate in section 10, and is already included in (10)(j).	Provision is removed.
WAC 220-110-100(12)(a)(iv)	The rule as written seems to require cofferdams as the default requirement. These are frequently inadequate even for suspended	These are common requirements for this type of work. An applicant can propose alternate methods and the department will authorize

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	sediment containment on rivers, and represent an entirely separate, much more intrusive and more impactful "project" than most construction along rivers to begin with. The list of allowed alternatives should specifically include floating turbidity control log booms with willow brush bundles. Not only have they been definitively shown to meet instream turbidity control requirements at several sites, but they also function as interim habitat for temporarily displaced fish and crustaceans, such as crayfish. Note that on streams, steel plates and eco blocks can work as coffer dams.	them provided they provide fish protection.
WAC 220-110-100(13)	All persons participating in fish capture must have training knowledge and skills in safe fish handling. A person with at least forty hours of electrofishing experience must be on site to conduct electrofishing activity. The whole section 13 a-e needs to be canned...section is totally unnecessary, and can be specified site specifically in an HPA.	Improper fish removal and handling can injure and kill fish. Language is amended.
WAC 220-110-100(13)	Who provides this training and do all AHB's have this training so they can perform these tasks (if they are available)?	Companies that sell electrofishing equipment provide this training as does the USFWS.
WAC 220-110-100(13)	Person(s) responsible for fish removal need to be identified in the permit. The Tribe's experience with construction projects authorized by an HPA is that too often no one is designated for fish removal. When crews are unprepared, ill-equipped, and unqualified, avoidable impacts to fish including mortality occur.	Often the contractor is not known when the HPA is issued so this isn't possible.
WAC 220-110-100(14)	We suggest replacing "repair" with "Demobilization and Cleanup".	Language is amended.
WAC 220-110-100(14)(a)	Suggest removing 'natural'. This assumes the work area was undisturbed or previously impacted by man, which is not correct in all situations.	Language is amended.
WAC 220-110-100(14)(b)	Language to "return project areas to their pre-project elevation and contours may be confusing in projects which have the objective of modifying elevations and contours.	Language is amended.
WAC 220-110-	The standard to properly dispose of waste materials is unclear.	Language is amended.

PROPOSED WAC	COMMENT	RESPONSE
100(14)(e)	Consider providing clarification.	
WAC 220-110-100(14)(h)	On rivers (as opposed to streams), this supposition that no instream work can occur without channel diversion due to potential "sediment delivery" overlooks the often significant delivery of sediments occasioned by stream diversion in the first place. Recommend against blanket requirement on rivers for cofferdams and stream diversion. (These remain appropriate to use on stream projects such as culvert replacements.)	This provision would only apply if a cofferdam or stream diversion was in place.
WAC 220-110-100(14)(k)	This seems a better fit to put this under Monitoring. Is this uniform standard for all projects? Perhaps less than two years, or more than 3 years is required, depending on site conditions, species, etc.	We don't have a separate monitoring section. Monitoring timelines can be adjusted by the bio for site and project-specific conditions.
WAC 220-110-100(14)(k)	Maintain plantings for a minimum of three years to ensure a minimum of 80 percent survival." Three years seems like a short monitoring period. When mitigation is required to compensate for unavoidable impacts to wetlands and other aquatic resources, in general monitoring is required for ten years. WAC 220-110-080 (5)(c)(ii) makes reference to long term monitoring; is three years considered long term?	Three years is the minimum. Please consider that HPAs can only be issued for up to 5 years. Long-term monitoring requires a separate legal agreement that extends beyond the life of a HPA.
WAC 220-110-100(14)(k)	Consider including desirable volunteer species as replacements plants in the plant count at the end of three years.	Typically the planting densities consider natural revegetation.
WAC 220-110-100(14)(o)	Suggest replacing 'repairs are completed' with 'is stabilized'.	Language is amended.
WAC 220-110-100(15)(a)	Why notify the WA Military Department of Emergency Management Division?	The EMD handles all emergency support and coordination for natural and technological hazards. If a chemical spill causes a fish kill they will dispatch Ecology to secure the scene to ensure WDFW staff is safe to respond.
WAC 220-110-110	There should be a statement within this section that the WDFW area habitat biologist has the discretion to modify/extend work windows depending on actual site conditions (hydrology, run timing and fish	The "department" includes the habitat biologists.

PROPOSED WAC	COMMENT	RESPONSE
	presence, etc.)	
WAC 220-110-110	Current WACs direct that work below the OHWL shall be prohibited during certain times of the year to protect fish life and/or spawning activity. While modification to these provisions is currently allowed, the overall directive of the rule is to apply the restriction unless the brief set of provision exemptions established in WAC 220-110-032 is met. The proposed rule language sets a very different baseline, outlining that these provisions may be removed under very ambiguous scenarios, such as what is described as the department interpretation of expected impact, weather conditions and, most troubling, what is listed as simply other circumstances and conditions.	There are currently no rules for authorized work times in freshwater areas with the exception of those work times authorized for mineral prospecting. Coho returning to spawn will move from the estuary into their natal streams after major rain storms. In this case, the department may consider weather conditions. The department added a stricter timing window closure as part of a new alternative in the Supplemental PEIS for the Fish and Wildlife Commission to consider.
WAC 220-110-110	This section appears to allow for flexibility regarding fish closure windows based on the anticipated impacts related to a specific project. State Parks supports an approach that allows for as much flexibility as possible while still protecting fish life rather than a rigid "one size fits all" approach to work times.	Comment noted.
WAC 220-110-110(1),,,	To aid this process use the following re-write of this section: "The department will require activity specific, design criteria as guidance to the applicant to achieve a complete application for HPA, and for HPA review processing, separate from the HPA activity construction provisions. The department will require certain technical provisions, which include common and activity-specific construction provisions, as well as site-specific construction provisions depending upon the individual proposal and site specific characteristics for each HPA."	The design criterion is not intended to be guidance.
WAC 220-110-110(3)(a) and (b)	Why isn't there a table, or web link?	Web addresses change frequently. We will have links to it from the HPA website.
WAC 220-110-110(3)(a)	After "projects in" delete "or adjacent to".	The sentence does specify "hydraulic projects".
WAC 220-110-	Delete "riparian, wetland and". Work landward of the ordinary high	See General Comments. For example, erosion from the removal of

PROPOSED WAC	COMMENT	RESPONSE
110(3)(a)(iii)(C)	water line would expand RCW 77.55.021.	riparian vegetation can affect the bed or flow.
WAC 220-110-120	"Freshwater habitats of special concern provide essential functions in the developmental life history of priority fish species. These include spawning and rearing habitats for state and federal listed species, and species of recreational, commercial or tribal importance." In the past, we have been required to release non-native predators back into these waters along with ESA listed native species when captured during HPA authorized activities. Please amend this section to require euthanasia of non-native predator species regardless of their recreational importance when encountered during HPA authorized activities in fresh water habitats of special concern.	What you are requesting is outside the hydraulic code authority.
WAC 220-110-120(1)	"Freshwater habitats of special concern include those ecosystem processes that provide essential functions in the development of priority fish species, but are also beneficial and inclusive to all fish species within those ecosystems."	Language is amended.
WAC 220-110-120(2)	What is there to be concerned about in enumerating the number of fish and population units in WA waters? Perhaps instead of a separate section, this text is imbedded as support to the overall section on habitats of special concern--the rationale for why these habitats are important...	"The presence of freshwater habitats of special concern or nearby areas in close proximity with characteristics may restrict project type, design, location, and timing"
WAC 220-110-120(2)	In addition to salmon species (including steelhead) and bull trout, there are other species in Washington State on federal Endangered Species Act lists including eulachon, Puget Sound rockfish (3 species), Puget Sound herring, southern resident killer whale, and green sturgeon in the Columbia River.	These are "Saltwater habitats of special concern".
WAC 220-110-120(3)	It is unclear why the only freshwater habitats of special concern are spawning habitats for chinook, coho, steelhead, chum, pinks, and sockeye; and sturgeon and chub and mudminnow and a list of other species. Similar protection should be provided for other habitats of special concern including salmon rearing habitats off-channel areas,	Language is amended.

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	and flood refuge. In some basins (such as the Nooksack River watershed) the primary habitat bottleneck is not necessarily in spawning habitat, but in certain types of rearing habitat. Recovery plans for chinook and other species could be used to identify which habitats are limiting in each basin.	
WAC 220-110-120(3)(b)(ix)	Since Bull Trout are included, with an extensive coverage, it could be a problem for Snohomish County, especially as there appears to not be any specific additional mitigation requirements. The concern is related to statements re sediment, and it could be that this is the "back door" into requiring an HPA of upland activities, if they eventually drain, through a drainage system, into one of these areas.	Only hydraulic projects as defined in the statute are covered by these proposed rules.
WAC 220-110-120(3)(c)	Recommend combining all these ecosystem attributes under one section "Ecosystem processes"	Language is amended.
WAC 220-110-120(3)(c)(v)	Any definition of what constitutes riparian vegetation and limits or width restrictions for removal and replacement (adaptive management and appropriate mitigation)?	A definition of riparian vegetation is added.
WAC 220-110-120(3)(d)	We recommend adding an additional ecosystem process: (iii) maintaining connectivity of off-channel habitat and flood storage capacity.	Language is amended but flood storage capacity is not included.
WAC 220-110-120(3)(d)	These are attributes of and a result from ecosystem processes.	Language is amended.
WAC 220-110-130	There is no allowance for, nor specifications provided for use of untreated timber pilings to anchor wood roughness elements, anchor log jams, stabilize slopes at the toe, or anchor and stabilize structures which employ wood as "soft" or natural "hard" engineering elements. This should be added to all relevant sections.	These are considered a biotechnical technique.
WAC 220-110-130	Expand WDFW HPA jurisdiction to include channel migration zones (CMZ)—we have witnessed a loophole in the Department’s jurisdictional area (i.e., within the bankfull width of	The department cannot expand our jurisdiction. This requires the legislature to amend the statute. However, the department does currently have the authority to regulate hydraulic projects in the

PROPOSED WAC	COMMENT	RESPONSE
	streams/lakes/river) that allows for activities that would otherwise require an HPA. As an example, we have seen WSDOT, Counties, and even some private landowners circumvent the rules by installing rock groins and other potential bank hardening structures just landward of the OHWM in a manner that allows the stream/river to “capture” the structure as the channel naturally migrates within its CMZ. Obviously this can have deleterious consequences to fish (and their productive habitat), as these structures permanently alter habitat, increase flow velocities, and go completely un-mitigated. Expanding the HPA regulatory jurisdiction to include CMZs.	CMZ. Projects such as buried groins and bank protection constructed landward of OWHL are hydraulic projects because their purpose is to affect the flow of state waters.
WAC 220-110-130	The department should firmly require an engineer's report that unequivocally determines shoreline stabilization is required before allowing any form of bulkhead or armoring. If stabilization is warranted, the department should firmly require soft stabilization be used unless an engineer clearly finds that a hard bulkhead is the only option.	Comment noted. Small projects like scour protection at the inlet/outlet of a culvert should not require an engineer’s report. The requirement should depend on the risk to fish life. The proposed language says “qualified professional” who may be someone other than an engineer.
WAC 220-110-130	The entire section 130 is too prescriptive. Need clarification on (3) (a). This proposal appears to arbitrarily define OHWL which is already defined in several rules. This may conflict with already established definitions and we suggest that the existing criteria for determining the OHWL be used.	Language is amended. The chapter defines a streambank protection or lake shoreline stabilization hydraulic project. These may occur landward of the OHWL. Buried groins, dikes and levees, for example, are designed to affect the flow of state water.
WAC 220-110-130(1)	The language used in the draft rule revision (WAC 220-110-130.1 and elsewhere) should be updated to include the new descriptions in the soon to be published WDFW soft shoreline techniques manual. For example, soft techniques include strategically placed rocks.	The new marine shoreline design guidelines are for projects in saltwater only.
WAC 220-110-130(3)	This section should more accurately be titled Bank Stabilization. The bank is not being protected. Due to impacts to naturally occurring function freshwater/marine stabilization should be avoided unless imminent danger is present.	Bank protection is the term commonly used by engineers who work on these types of projects. In addition, the title “bank protection...” ties to the department’s <i>Integrated Streambank Protection Guidelines</i> .
WAC 220-110-130(3)	Why general? These are all design criteria.	The criteria apply to both streambank protection and lake shoreline

PROPOSED WAC	COMMENT	RESPONSE
		stabilization.
WAC 220-110-130(3)(a)	It's unclear why the state should wait.	Language is amended to be more relevant to projects and moved to section 4.
WAC 220-110-130(3)(a)	Does the 'two work window' time line still come into play if the applicant has submitted for an HPA but actual work will not occur until the 'third work window'? The word 'must' does not appear to leave any leeway	Language is amended to be more relevant to streambank projects and moved to section 4.
WAC 220-110-130(3)(a)	This may be a problem for larger dike breaches, where a final repair may take longer than two work windows, if the temporary fix to plug the hole is not considered a "repair." What is a "work window?" Is he next two tides below a certain level? Or the next two summers? Possibly inconsistent with WAC 220-110-360(3)(a) which specifically says "two years."	Language is amended to be more relevant to streambank to lake shoreline projects and moved to sections 4 and 5.
WAC 220-110-130(3)(b)and (c)	Does this entire section,... including requiring full engineering analysis apply to small erosion repair projects such as culvert inlet and outlets and small channelized streams? If so, fiscal impact.	No it doesn't
WAC 220-110-130(3)(b) and (c)	We feel the professions of "engineering geologist" should be included in the list of qualified professionals, along with "civil, geotechnical, or structural engineer." Under the RCW (18.WAC 220), engineering geologists have the expertise to undertake this work. It is clearly important to have consistency between these proposed changes to the WAC and the existing RCW.	The language was amended to "qualified professional". This is defined in section 030.
WAC 220-110-130(3)(d)	Minimize adverse impacts - Recommend reversing (vi) and (vii) and place bioengineering methods prior to biotechnical methods as the biotechnical methods are more impacting according to the definitions.	Language amended to make this provision more relevant to streambank protection.
WAC 220-110-130(3)(d)	We feel that it is important that qualified professionals are able to make the decisions related to a specific situation based on technical feasibility and local, site-specific data and information.	Language is amended.

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	We would recommend that the document eliminate wording such as "Typically, soft approaches are less impacting than hard approaches.	
WAC 220-110-130(3)(d)	State preference for soft approaches over hard armor, where feasible.	Language is amended.
WAC 220-110-130(3)(d)	Although we understand that WDFW wants the least impacting method used, the phrase 'technically feasible' does not take into any consideration of cost. There needs to be a check and balance for this kind of requirement. Some of the alternatives listed are above the OHWL and thus would not require an HPA. This gives the impression that you should apply for an HPA for something above the OHWM.	A hydraulic project is defined in statute. A hydraulic project can occur landward of the OHWL. The language is amended to be more relevant to streambank protection. No HPA is required for the "no action" alternative. The mitigation section 080 which applies to all hydraulic projects does have some language about cost. This is from chapter 90.74 RCW.
WAC 220-110-130(3)(d)	Some clarification for "least impactful" would be helpful. Some solutions maybe less impactful to habitat during construction, but not provide as much long-term habitat benefit.	Language is amended. We agree short-term impacts may be necessary to get long-term benefits.
WAC 220-110-130(3)(d)(ii)	What does this mean? Define.	This language was removed.
WAC 220-110-130(3)(e)	"Bioengineering methods" are not defined and the he rules should not constrain the recommendations of qualified professionals.	This term was removed. It is defined in rule because the term does appear elsewhere.
WAC 220-110-130(3)(f)	Can we assume this requirement would be based on mitigation for impacts to fish life associated with the bank protection project, or is this above and beyond mitigation needs?	Language amended to make this clear.
WAC 220-110-130(3)(f)	This sound like WDF&W may dictate design of projects. I do not see what guidelines WDF&W will use to determine when they will require further analysis. Is it at the whim of the AHB? Will they also take on some of the responsibility for any design?	Language is amended to make this requirement for mitigation clear.
WAC 220-110-130(4)	Where is the requirement to demonstrate need (first) and avoidance in this section? Also, the concept of bank protection is antiquated and misleading to the actual purpose of protecting human created structures built within the flood plain or channel migration zone. Protecting the banks themselves is to leave them alone and allow	This requirement is in (3)(a) and (b).

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	natural habitat-forming processes to occur.	
WAC 220-110-130(4)	Because wood is incorporated into many traditional design elements, all items under the heading "Streambank Protection Design" require definition, i.e. when does a groin become an ELJ, etc.	The specific elements are replaced with performance criteria.
WAC 220-110-130(4)	Several of these structures are not defined under "Definitions" section, including groins, barbs, floodplain roughness and flow spreaders. Also, many of the sub-statements under each of these structures are too prescriptive, and don't allow professional judgment and latitude to design the most appropriate structure(s) for the particularities of a site.	The specific elements are replaced with performance criteria.
WAC 220-110-130(4)(a)(ii)	This could have the undesired effect of promoting "Band-Aid" projects. Some problems may need additional length for installation to prevent downstream effects.	The specific elements are replaced with performance criteria.
WAC 220-110-130(4)(a)(iii)	This statement should have "To the extent possible and practicable," at the beginning.	The specific elements are replaced with performance criteria.
WAC 220-110-130(4)(b)(ii)	"tight-radius bends" is subjective. Seems like this statement should have some sort of qualifier to the effective of "best professional engineering judgment" as to if/when groins are not appropriate. The intent should be clarified by adding "where a qualified professional determines that such placement could exacerbate bank erosion."	The specific elements are replaced with performance criteria.
WAC 220-110-130(4)(b)(iii)	The main purpose of groins is to deflect (not dissipate) flow energy away from the bank. Although groins may dissipate energy at the reach scale, flow energy is typically concentrated locally at the tip of the groin. The size and spacing should be determined by a qualified professional based on the reattachment length of turbulent eddies (i.e., the distance downstream of the groin before high-velocity flow comes back into the bank).	The specific elements are replaced with performance criteria.
WAC 220-110-130(4)(b)(iv) and (v),	Too prescriptive: don't allow professional judgment and latitude to design the most appropriate structure(s) for the particularities of a	The specific elements are replaced with performance criteria.

PROPOSED WAC	COMMENT	RESPONSE
(4)(c)(ii) and (iii)	site.	
WAC 220-110-130(4)(b)(iv) and (v), (4)(c)(ii) and (iii)	The 15% and 25% width definitions for groins and barbs do not necessarily reflect the necessary width for certain bank deflection and habitat restoration activities. In some cases substantial flow deflection is desired to re-engage opposite bank floodplains for both bank stabilization and habitat improvement.	The specific elements are replaced with performance criteria.
WAC 220-110-130(4)(b)(iv)	Percentage of bankfull channel for groins is unclear as to whether this is the total length of the groins (base to tip), or the distance to which they extend into the channel itself, normal to the bank.	The specific elements are replaced with performance criteria.
WAC 220-110-130(4)(b)(iv)	The code is too prescriptive and does not allow flexibility in the design of "soft" engineering approaches such as bank deflector engineered logjams that might be classified as groins. The language should be revised to convey the intent of limiting groin size and to allow flexibility and exceptions when appropriate.	The specific elements are replaced with performance criteria.
WAC 220-110-130(4)(b)(v)	If bank deflector engineered logjams are considered groins, then the code should allow exceptions when design criteria specify a groin height greater than the bank to prevent overtopping during the design flood event, which can corresponds to the 100-yr flow, whereas the bankfull flow is typically the 2-year flow.	The specific elements are replaced with performance criteria.
WAC 220-110-130(4)(b) and (c)	Streambank protection design Groins & Barbs - Consider requiring that barbs not exceed 20% [(c)(ii)], which would treat them the same as groins; otherwise the fallback position for proposal may be to call them barbs to gain the 25%.	The specific elements are replaced with performance criteria.
WAC 220-110-130(4)(c)	Design requirements listed are too specific and not applicable to all sites. Rather than list specific requirements (e.g., height of a barb shall be below OHWL), require that the feature be designed to the latest design guidance (e.g., WDFW's ISPG) and designed by a licensed professional engineer with experience in hydraulic design and bank protection. Listing specific requirements will unnecessarily restrict the designer and may not follow the most current design	The specific elements are replaced with performance criteria.

PROPOSED WAC	COMMENT	RESPONSE
	<p>guidance as it becomes available faster than the WAC is updated. The requirements should be general, such as the ones listed under Revetments, instead of specific like the ones for Groins, Barbs, and Floodplain Roughness.</p>	
WAC 220-110-130(4)(c)(ii)	Ditto for barbs (4)(b)(v) for barbs.	The specific elements are replaced with performance criteria.
WAC 220-110-130(4)(c)(ii)	<p>"Barbs must not exceed twenty-five percent of the bankfull channel width." This statement contradicts item (i) above, which states, "Design and install barbs so they do not confine the channel." A barb protruding 25% into the channel is confining it.</p>	The specific elements are replaced with performance criteria.
WAC 220-110-130(4)(d)(i)	Provide additional criteria (e.g., recurrence period flow rate, time frame, scour resistance) to define stability.	The specific elements are replaced with performance criteria.
WAC 220-110-130(4)(d)(i)	Implies that size and species alone will produce the desired stability; needs to address anchoring as well, with the same note as in (4)(e)(iii), below.	The specific elements are replaced with performance criteria.
WAC 220-110-130(4)(e)(i)	<p>Fish need suitable velocity for rearing, forage and migration at all flows. Restoring or maintaining fluvial process, channel complexity and riparian functions are all helpful. The requirements in this section appear to confine all but the highest flood flows to a channel and require wood to be anchored in unnatural configurations. These requirements would preclude sound ecological restoration actions.</p>	The specific elements are replaced with performance criteria.
WAC 220-110-130(4)(e)(i)	<p>The term "floodplain terrace" is contradictory. Replace with "floodplain" or "floodplain surface." The Dictionary of Geological Terms defines "floodplain" as the area adjacent to a river inundated by water when the river overflows its banks, and "terrace" as the remnants of an abandoned floodplain surface no longer inundated by the river. Additionally, the code is too prescriptive and does not allow flexibility in floodplain designs. Floodplain elevations and optimal conditions for fish utilization can correspond to a range of recurrence flows and are site-specific. The requirement that a</p>	The specific elements are replaced with performance criteria.

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	floodplain restoration project overtop at a ten-year recurrence interval peak flow is burdensome to levee setback projects that must contain all flows for purposes of preventing off-site impacts.	
WAC 220-110-130(4)(e)(i)	Provisions overlook roughening of floodplain gravel bars with log placements; certainly sediment bars are in the floodplain, but below the 10 year flow.	The specific elements are replaced with performance criteria.
WAC 220-110-130(4)(e)(ii)	This requirement is too prescriptive, does not allow flexibility to address site-specific processes and functions, and conflicts with the goals to restore natural processes. The natural orientation of logs may not necessarily correspond to a position perpendicular to the down-valley slope. Hydraulic forces acting on logs with rootwads can orient them parallel to flow (i.e., the down-valley direction).	The specific elements are replaced with performance criteria.
WAC 220-110-130(4)(e)(iii)	"Anchor" needs to be defined. Is passive anchoring via including "key piece" sized members acceptable?	The specific elements are replaced with performance criteria.
WAC 220-110-130(4)(e)(iii)	Add embedment and pinning (by embedded logs) as a means of anchoring large wood to promote natural alternatives to artificial or mechanical anchoring methods. Replace "high shear stresses" with the drag forces they exert to destabilize wood. A suggested rewording of the code would be "Stabilize large woody material against buoyant forces and hydraulic drag forces that may mobilize wood during flood flows by anchoring or burying woody material in the floodplain."	The specific elements are replaced with performance criteria.
WAC 220-110-130(4)(e)(iii)	Anchoring LWM to the floodplain should be an optional element, not a requirement, based upon location and desired outcomes.	The specific elements are replaced with performance criteria.
WAC 220-110-130(4)(f)	Flow spreaders should be located outside OHWA wherever possible with a strip of native vegetation between the outfall of the spreader and the receiving water.	The specific elements are replaced with performance criteria.
WAC 220-110-130(5)	I think that all banks on Moses Lake use the natural round rocks found in the area as I've witnessed bank loss due to wind driven	Comment noted. The rules would not preclude this activity.

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	waves and boat wake. I think 1' – 2' rocks properly placed is the best method it can be softened up using grasses. Even low banks can undercut stacking rocks against the bank creating a fat bank is a onetime fix.	
WAC 220-110-130(5)	Does WDFW have a definition for low to moderate and moderate-high wave action areas on lakes?	This language is removed.
WAC 220-110-130(5)(d)	The sense of the provision is opaque, and would seem to contradict basic geometry for toe installation, which is at the base of the structure, and therefore most waterward of any portion thereof; the OHWL is predictably landward from the toe location, thereby rendering the provision confusing.	This section is amended.
WAC 220-110-130(6)	Much of what is in this section is design criteria. It's not possible to have monitoring and compliance and effectiveness with open ended HPA provisions like many in this section.	Most of the section was moved to section (3)
WAC 220-110-130(6)(k)	This establishes performance standards, but no guidelines.	This is a performance based provision. It is removed because it is redundant to a provision in section 100.
WAC 220-110-130(6)(l)	Can we assume you are not referring retaining rocks 'that are 4" in diameter'?	Yes, this applies to boulders. This provision was moved to 100.
WAC 220-110-140	I would also say that docks and structures do not have adverse effects on fish and find it very hard to believe that shading modifies fish behavior at all. It seems to me to be very speculative on a scientist's part to assert this view. I have tried to imagine exactly how this hypothesis was proven. Perhaps someone can send me the report this idea is based on.	Comment noted. Please refer to the HPA References list on the HPA web page.
WAC 220-110-140	Based on the fact that no "non-residential" dock or pier standard is provided, confirmation is requested as to whether or not the residential dock and pier standards contained at WAC 220-110-140 and WAC 220-110-370 would apply to dock and pier structures constructed by State Parks. State Parks ' interpretation is that agency	Title changed to "residential and public recreational..."

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	constructed public docks and piers would be considered either "Marinas" or "Marine Terminals" pursuant to sections WAC 220-110-160 and WAC 220-110-390 and therefore subject to the standards contained in those sections. Please provide confirmation that this is the interpretation of your agency. In the event that the residential dock and pier standards do apply to State Park facilities, additional comment will be forthcoming.	
WAC 220-110-140	Good additions addressing recent science on overwater structures and new uses now commonly occurring (e.g. watercraft lifts).	Comment noted.
WAC 220-110-140	This section imposes restrictions on lake shore property owners' beneficial use and value of their lake shore property (for which they are already paying high property taxes), needlessly increases the cost of dock design and construction, and disadvantage those lake shore property owners who wish to replace their existing dock or construct a first time dock that is scaled to that of their adjacent neighbors' existing docks.	Comment noted. Please refer to the HPA References list on the HPA web page.
WAC 220-110-140	Under your proposed mandates even more small residential dock owners will find themselves subject to the rigorous and very expensive Substantial Development Permit process, applicable to marina construction, if they reach \$10,000 in value. Specifying the latest in expensive materials, and micromanaging dock construction techniques because of speculation it may improve or prevent a possible condition would seem to go beyond the scope of WDFW.	Comment noted. Please see the cost/benefit analysis prepared by the economist and the HPA References list on the HPA web page.
WAC 220-110-140(2)	Please be clearer as to which bodies of water these regulations will apply; i.e., list the affected water bodies by name.	The chapter applies to "water of the state". Please refer to 220-110-010 Purpose.
WAC 220-110-140(2)	Replace the third and fourth sentences, regarding light reduction, with text such as, "Intertidal and shallow subtidal vegetation provides high value fish habitat and is adversely affected by overwater structures. These structures also interfere with shore processes and riparian functions." Solar radiation is a problem for temperature and	This section refers to overwater structures on freshwater.

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	is the topic of WDOE total maximum daily load studies and water quality improvement plans. There have been studies by NMFS researchers that show high temperature to be a problem in Puget Sound shore zones. Eelgrass needs lots of light but there is more to this issue.	
WAC 220-110-140(3)(b)	Piers/dock skirting should be defined in the definition section if it is prohibited so there is no confusion for applicants/consultants.	Comment noted. The provision for dock skirting is the same as the current rules adopted in 1994.
WAC 220-110-140(3)(b)	Why no skirting? The most efficient, economical and long lasting flotation when properly enclosed is the Dow Styrofoam closed cell (extruded) flotation billet. The skirting is part of the enclosure and should be allowed.	The provision for dock skirting is the same as the current rules adopted in 1994. The department can authorize skirting when the biologist determines the skirting will not impact fish life.
WAC 220-110-140(3)(d)	An alternative treatment for wood is the use of ammoniated copper quat (ACQ). This is a readily available form of treated wood that is registered for fresh water immersion, saltwater immersion, utility poles, fencing, marine pilings, sea walls, decking, shingles and residential construction. It does not contain nor leach arsenic. City Light urges the department to replace ACZA with ACQ as the allowed treatment. This would eliminate the introduction of toxic zinc and arsenic to impacted water bodies.	The use of ACQ treated wood is authorized.
WAC 220-110-140(3)(f)	Regarding the statement: "All grating must have forty-two to sixty percent open areas depending on the percent of deck area covered by grating", I understand how this relates to the definition of functional grating, but this statement and the reference to 42-60% open area is confusing when compared to other similar statements specific to functional grating ((4)(c)(iv) on page 57 & (4)(a) on page 63 are both '30% functional grating'). It would be better if just one was referred to or used consistently throughout the document.	Language amended to clarify the intent.
WAC 220-110-140(3)(f)	The grating requirement is an ineffective and unnecessary expense. Please check out the research by Clark Alexander at the Skidaway Institute of Oceanography in Georgia. The study concluded the sun	Comment noted. Please refer to the HPA References list on the HPA web page. Please note grating is required only in waterbodies with juvenile salmonid mitigation, feeding and rearing areas where

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	<p>penetrated through the grating on average about 10% more than traditional planked decking. Due to the angle of the sun that percentage decreased even more the farther north (from Georgia) you traveled. These studies were done on a freestanding pier so the value of grated deck on a floating would be even less considering the flotation.</p>	<p>shading impacts are a concern.</p>
<p>WAC 220-110-140(3)(f)</p>	<p>DECKING MATERIAL- for private docks on Moses Lake it should be added that grating is not required and that composite or natural wood is okay.</p>	<p>Comment noted. Please refer to the HPA References list on the HPA web page. Please note grating is required only in waterbodies with juvenile salmonid mitigation, feeding and rearing areas where shading impacts are a concern.</p>
<p>WAC 220-110-140(3)(f)</p>	<p>While the inclusion of construction design elements may help inform project proponents of construction requirements prior to application, the provisions themselves appear to be arbitrary in nature and not supported by current study or best practices. For example, the proposed language directs replacement floats up to 6 feet have thirty percent grating with floats wider than 6 feet requiring a fifty percent grated surface. Similarly, a pier is noted to require a forty-two to sixty percent open area. These values have no apparent basis with study clearly showing this limited amount of grating provides no substantial mitigation of light impacts. Current USACE guidelines call for one hundred percent grating for dock and float permits. The department should adopt similar policy and language and should also incorporate provisions related to the height of structures as increased dock height has been found to have less impact on light reduction.</p>	<p>Comment noted. Please refer to the HPA References list on the HPA web page. The proposed rules do have a minimum height requirement.</p>
<p>WAC 220-110-140(4)</p>	<p>The word “native” is not used in the header but is included elsewhere in the section. Also, the word “juvenile” is not used consistently. The restrictions should only apply to portions of a waterbody where juvenile salmonids are likely to be present. Ex: Cutthroat spawning areas in Lake Chelan are only present in the Lucerne Basin tributaries of the Lake thus “juveniles” are not likely to be present in the more</p>	<p>The term “native” is removed.</p>

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	developed Wapato Basin.	
WAC 220-110-140(4)(a)	The following statement could be re-written for clarification - if allowing all three (pier, ramp and float) why mention any restrictions on the design ("float only"): "New dock structures in shallow freshwater areas with native salmonids should be a pier only; pier, ramp and float; or a float only."	Language amended.
WAC 220-110-140(4)(b)	The wording here is confusing. Will floating docks in a reservoir be allowed to ground or not? If used at all the provision should only require the 12" minimum separation at maximum pool and the floats should be allowed to ground as the water level recedes. No species of flora or fauna have been identified that survive in both the wetted and dried variable zone of Lake Chelan, thus no impact can be implied by the grounding of docks during pool regulation.	Language amended.
WAC 220-110-140(4)(c)(ii)	Consider adding a definition for "beach area". It is used in other sections of the document as well.	Comment noted. The common dictionary definition of beach is acceptable.
WAC 220-110-140(5)	The City of Lakewood has several lakes that are considered waters of the state subject to the Shoreline Management Act, but which offer no habitat opportunities for anadromous salmon species (i.e. they are groundwater supported "kettle lakes" with no surface water inflows or outflows). These include American Lake, Gravelly Lake, and Lake Louise. The proposed regulations indicate that DFW may require grated decking on lakes without juvenile salmon. It would be helpful to get some clear guidance what criteria will be used when considering the use of grated decking on non-salmonid waterbodies. The City of Lakewood respectfully requests that Department of Fish and Wildlife provide more definitive rationale and guidance on the requirements for the use of grated decking for overwater structures in waterbodies without juvenile anadromous salmonid species.	Please note grating is required only in waterbodies with juvenile salmonid mitigation, feeding and rearing areas where shading impacts are a concern.
WAC 220-110-140(6)(a)	PIER WIDTH- I build docks that stand on the lake bed using steel pipe and iron feet. 4' wide docks or piers are narrow enough so that 2	The department can authorize 6-foot wide piers.

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	people cannot comfortably walk past one another. It is also a safety issue in if someone or some child should fall off and land on large rocks in the lake. I find most folks prefer 6' wide to 4'.	
WAC 220-110-140(6)(a)	After "four feet wide" add "or meet ADA access standards."	The department will make exceptions for ADA access. See section 070.
WAC 220-110-140(6)(a)	Why? How was this determined?	Vessel prop wash can damage aquatic vegetation. This usually determined by water depth, vessel location, and prop size.
WAC 220-110-140(6)(f)	Bad idea, a pier or a dock that is 18" above the waterline to the bottom or said pier is too high. I usually build to 10" from waterline to bottom of frame, which puts the top of the dock 18" out of the water any higher and you would need a ladder to climb down into your boat. Also anything tied up to the pier or dock would go under it and cause significant damage to vessel and dock.	The provision applies to piers constructed in waterbodies where shading impacts to juvenile salmonid mitigation, feeding and rearing areas a concern. This does not apply to kettle lakes. In waterbodies where the pier height must be a minimum of 18 inches, a boarding float may be an option.
WAC 220-110-140(7)(a)	After "be more than four" add "or meet ADA access standards."	The department will make exceptions for ADA access. See section 070.
WAC 220-110-140(9)	ICE & ICE DAMAGE are not mentioned but are a reality here in Moses Lake. Docks that have been or will be permitted in the future should not have to apply for an HPA every year to move them out of harm's way. In addition, pull poles should be allowed to both hold and boatlift tipped up on its front legs and as an anchor to come-a-long rolling docks out of the lake.	The rules do not restrict the use of pull poles.
WAC 220-110-140(9)	Exempt free standing manufactured boat lifts. They keep the boat out of the water, eliminating trips back and forth across the lake and congestion at launches. They are actually a benefit. The translucent roofing requirement makes no sense. The boat is usually on the lift anyway blocking the translucent effect; another expensive requirement with no benefit.	Free-standing boat lifts are exempt from obtaining an HPA. See section 040.
WAC 220-110-140(10)(f)	After "driving operations," add "the preferred method would be to."	Language was amended.

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WAC 220-110-150	Some provision is needed with respect to boat ramps so that once permitted and constructed, they can be maintained for access by removals or relocations of entrained wood, as a normal and routine maintenance activity.	Language was added.
WAC 220-110-150(3)(e)	“Design and construct boarding floats to minimize grounding on and shading of the bed and interference with the sediment and wood movement” would benefit from including the riverine environment in this section.	Sediment and wood transport is related to the riverine environment.
WAC 220-110-150(4)(d)	By far the worst ramp design is the pre-cast design. Water action from waves and propellers constantly undermine and shift these pieces causing uplift and settling. I think all ramps should be poured in place.	Language is amended to allow flexibility to construct a pour in place ramp.
WAC 220-110-160	There is no section on Terminal Design (other than under General) for freshwater areas. There are a number of large terminals along the Columbia River. WDFW did develop a section on Marina Design - but not Terminal Design. Is this a simple oversight?	The provisions are in “marina and terminal design – general”. There are no other provisions specific to just terminal design.
WAC 220-110-160	Based on the fact that no "non-residential" dock or pier standard is provided, confirmation is requested as to whether or not the residential dock and pier standards contained at WAC 220-110-140 and WAC 220-110-370 would apply to dock and pier structures constructed by State Parks. State Parks ' interpretation is that agency constructed public docks and piers would be considered either "Marinas" or "Marine Terminals" pursuant to sections WAC 220-110-160 and WAC 220-110-390 and therefore subject to the standards contained in those sections. Please provide confirmation that this is the interpretation of your agency. In the event that the residential dock and pier standards do apply to State Park facilities, additional comment will be forthcoming.	Section 140 is amended to include public recreational docks.
WAC 220-110-160(3)(c)	Add wetlands to the following statement: “Locate new marinas and terminals away from areas with native aquatic vegetation and	Comment noted.

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	wetlands.”	
WAC 220-110-160(3)(d)	After "so dredging is" delete "not required" and replace with "reduced".	Language changed.
WAC 220-110-160(3)(e)	Curious. So vessel operation in marina's can be regulated, but not for residential docks? Is there a RCW(s) reference that allows regulatory oversight for marinas but not residential docks?	The reason for the buffer distance between residential docks is to prevent vessel related impacts.
WAC 220-110-160(4)(f)	Why 50 feet? Why 25-feet deep? Is this supposed to capture the photic zone? If so, this may vary on a sight specific basis. If intended to cover most shorelines and habitat characteristics, then this is better than not having lighting restrictions.	The intent is to protect the juvenile salmonid migration, feeding and rearing corridor.
WAC 220-110-160(6)(b)	An alternative treatment for wood is the use of ammoniated copper quat (ACQ). This is a readily available form of treated wood that is registered for fresh water immersion, saltwater immersion, utility poles, fencing, marine pilings, sea walls, decking, shingles and residential construction. It does not contain nor leach arsenic. City Light urges the department to replace ACZA with ACQ as the allowed treatment. This would eliminate the introduction of toxic zinc and arsenic to impacted water bodies.	The use of AQC is authorized.
WAC 220-110-160(6)(c)	Metal bands? Most likely see UHMW, or polyethylene strips	Comments noted.
WAC 220-110-160(6)(e)	This should be known before hand, design criteria.	Design criteria may not always be known before the HPA is issued or it may not be specified in the plans so it would be appropriate to put in as a provision.
WAC 220-110-160(6)(f)	Night time pile driving in freshwater is not allowed since it might attract fish to the lights. But night time dredging in freshwater is allowed even though it might attract fish, if there are engineering or safety concerns associated with daylight pile driving. The two conditions are inconsistent with each other.	The two provisions are consistent. See 180(4)(d).
WAC 220-110-	Put in definition section.	Comment noted.

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160(7)(b)		
WAC 220-110-160(7)(b)(v)	Many of these marinas are associated with large ports, on major river bodies. Can you say with certainty that less than 50-cy's are typical of marina dredging operation and maintenance? Is this a RCW restriction? It's likely some if not a fair amount of dredging associated with marinas falls under the next chapter -170.	This reflects the language in the statute. If the department authorizes dredging of more than 50 CY the project must go through SEPA. <50 CY is exempt from SEPA.
WAC 220-110-170	The technical sections covering freshwater dredging (WAC 220-110-170) and gravel removal (WAC 220-110-180) need to be further developed to add clarity. For example: it is unclear which (if either) of these sections applies to dredging in small streams to alleviate localized flooding. The sand and gravel removal section applies directly to commercial bar scalping, but has few provisions that apply to small streams.	We agree, a section for gravel and debris removal from small streams will be developed with Tribes and stakeholders during the 2015 – 2017 biennium..
WAC 220-110-170(1)	The text indicates that some of the elements here apply to ditching and culvert maintenance but the section does not specifically cover these activities. The text does not seem to indicate which of these elements might apply. This is confusing. Maintenance requirements should be consolidated and not spread out through the code where they could be overlooked. Better to have a note indicating that maintenance in altered waters of the state are covered elsewhere.	We agree, a section for gravel and debris removal from small streams will be developed with Tribes and stakeholders during the 2015 – 2017 biennium
WAC 220-110-170(1)	Dredging should be scientifically justified that it will resolve flooding problems before HPAs are issued.	The Supplemental PEIS will include an alternative that requires stricter dredging justification for the Fish and Wildlife Commission to consider.
WAC 220-110-170(1)	Text states that ditch or culvert maintenance may be included under this section. Please include a vegetation restoration requirement to ditch and/or culvert maintenance activities.	We agree, a section for gravel and debris removal from small streams will be developed with Tribes and stakeholders during the 2015 – 2017 biennium.
WAC 220-110-170(1)	WDFW should require that the applicant prove by analysis that stream dredging for flood abatement is necessary. In many cases localized flooding is caused by natural conditions such as the Puget Sound lowland topography or undersized culverts. Under the current	This is covered in (3)(c).

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	code dredging projects are routinely approved because “the landowner has been doing it for years”.	
WAC 220-110-170(1)	Loosely associated activity for marinas. Suggest including this within marinas or reference (hyperlink) conditions of dredging in marinas	The code reviser cannot insert hyperlinks in the rules.
WAC 220-110-170(2)	Fish life concerns need to include the concept of channel headcutting due to dredging that result in bed scour.	This concept is captured in the third sentence.
WAC 220-110-170(3)(a)	The department may not authorize dredging in fish spawning areas unless it creates or improves the access or quality of fish spawning areas as part of an approved restoration project. Please reference the RCW regulation that you're indicating for this statement.	This is in the current rule and we don't propose to change it because gravel is necessary in salmon spawning areas. There is no effective mitigation for the loss of a fish spawning area. This habitat cannot be recreated somewhere else.
WAC 220-110-170(3)(a)	Can WDFW not authorize dredging even when it is part of a USACE authorized project (i.e. Cedar R in Renton)?	If the Corps is dredging navigable waters (section 10) of the US, they do not request HPAs from the department.
WAC 220-110-170(3)(c)	If there are concerns regarding creating deeper water habitats in lakes from dredging, why are there no measures to protect shallow water habitats for juvenile fish?  The text states, "The department may require a pre-project geomorphic analysis to determine potential impacts from the dredging." It should read: "The department may require a pre-project geomorphic analysis to determine potential impacts from the dredging or resolution from flooding."	A search of our database indicates no record of HPAs being issued for lake dredging in the last two years so this doesn't appear to be a common activity that we need to address in rules.
WAC 220-110-170(4)(b)	Do not stockpile dredged material waterward of the OHWL or within wetlands.”	Language is amended but does not include “wetlands”. The definition of waterbody does include some wetlands though.
WAC 220-110-170(4)(b)	3rd sentence seems too restrictive and prescriptive. Depending on specific circumstances, it may be least impactful to temporarily stockpile material in dewatered area below ordinary high water line (OHWL) for secondary pick-up and haul by other equipment.	Language is amended.
WAC 220-110-170(4)(e)	After "disposal site or" delete "outside the floodplain" and replace with "above the OHWL." In the second sentence, after "placement in areas" add "below the OHWL".	Typically the dredged material would have to be disposed of outside the floodplain so it would not reenter waters of the state. If this wasn't done it could affect the bed or flow of water.

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WAC 220-110-170(4)(e)	“Dispose of dredged bed materials at a department-approved in-water disposal site or outside the floodplain and wetlands so they do not reenter state waters.”	We recognize the importance of non-emergent wetlands but we can provision HPAs only to protect fish life.
WAC 220-110-180	The technical sections covering freshwater dredging (WAC 220-110-170) and gravel removal (WAC 220-110-180) need to be further developed to add clarity. For example: it is unclear which (if either) of these sections applies to dredging in small streams to alleviate localized flooding. The sand and gravel removal section applies directly to commercial bar scalping, but has few provisions that apply to small streams.	Rules for gravel and debris removal from small streams will be developed with Tribes and stakeholders during the 2015 – 2017 biennium.
WAC 220-110-180	The text indicates that some of the elements here apply to ditching and culvert maintenance but the section does not specifically cover these activities. The text does not seem to indicate which of these elements might apply. This is confusing. Maintenance requirements should be consolidated and not spread out through the code where they could be overlooked. Better to have a note indicating that maintenance in altered waters of the state are covered elsewhere.	Rules for gravel and debris removal from small streams will be developed with Tribes and stakeholders during the 2015 – 2017 biennium.
WAC 220-110-180(3)	All the language in this section appears to be design criteria, not HPA provisions that are measurable, quantifiable for monitoring and compliance.	Measurable and quantifiable criteria are provided by the applicant in the plans submitted with the application and approved by the department. This is site-specific.
WAC 220-110-180(3)(b)	This new one-sentence subsection would be a good addition to the existing WAC. However, this subsection should be worded so that the department will require certain analyses, not may require, and should add detail on the required analyses. Here are recommended edits: "The department may requires an quantitative analysis of the proposed extraction rate compared to the ambient rate at which sediment is replenished by natural bedload transport processes, the effects of the proposed extraction on ambient sediment replenishment and the effects of the proposed extraction on	Language is amended.

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	hydraulic conditions along and upstream and downstream of the proposed project area."	
General WAC 220-110-190	The new design requirements mandate reports for low flow continuity, flood flow conveyance, floodplain continuity, large wood transport, sediment transport, hydraulic diversity, stream margin habitat, sediment gradation continuity, and natural evolution of the channel planform and longitudinal profiles are beyond the project proposal for an HPA permit. This type of modeling and methodology is beyond the current regulatory intent of RCW 77.55.021. We believe floodplain and river modeling development should be funded and managed through a process other than the HPA permitting process under current statutory authority.	These performance criteria have been deleted in the Version 5 draft.
WAC 220-110-190	We suggest Section WAC 220-110-190 be reorganized and rewritten to differentiate between fish and non-fish waters and to accommodate eventual integration into forest practices rules. RCW 77.55 does not distinguish between waters that support fish life and waters that do not. Under the site-specific authority inherent in the proposed HC rules, the Department is able to select individual common technical requirements and apply them as provisions to selected projects as deemed necessary to protect fish life. However, nothing in the law prevents the Department from developing regulations that are specific to different classifications of waters.	The proposed WAC applies to fish bearing waters only.
WAC 220-110-190	The designs proposed are not based on technically sound engineering practices and are not justified by significant research.	Comment noted. Please refer to the science appendix in the PEIS. The protection of fish life is one aspect of a complete water crossing design. The other studies required are the responsibility of the owner and designer and it is these studies in combination with fish

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		<p>protection which form a “technically sound engineering practice.” We do not pretend that compliance with these rules will result in a fully engineered structure. All that is required in these rules is to provide fish passage and protect their habitat. There has been on-going research into crossing design for fish protection by WDFW, USDA Forest Service, several universities and other researchers (Barnard 2003, Inter-Fluve 2008, Robertson, Bair et al. 2011, Barnard, Yokers et al. In preparation), among others. A study is in progress by D. Cenderelli and M. Weinhold, USDA Forest Service on the physical effectiveness monitoring of channels at road-stream crossings – a statistically-based approach. Others are keenly interested in the effectiveness of water crossings for fish passage and channel processes – names and studies can be supplied. It will take some time to develop a strong scientific foundation in this area. In the meantime we are required to protect fish and we are applying conservative criteria guide designers to achieve acceptable results.</p>
WAC 220-110-190	<p>Previous comments by FHWA indicated that any design standards that are not technically vetted or accepted at the current time would need to be approved by the WA Division Office for all transportation projects within the state of WA that would use federal-aid funds or that are on a federal-aid route.</p>	<p>Comment noted. Please refer to section 4.11 Social and Economic Issues. We encourage FHWA to try these methods for use in Washington State.</p>
WAC 220-110-190	<p>FHWA can decline to allow federal-aid funds to be spent for transportation projects using a non-approved design standard as per the 23 Code of Federal Regulations (CFR) 625. Federal cost participation may be limited to what is required by acceptable state and FHWA standards and adheres to federal regulation 23 CFR 650, Subpart A.</p>	<p>Comment noted. Please refer to section 4.11 Social and Economic Issues. We have looked at several FHWA and other guidelines (Hamill 1999, Richardson, Simons et al. 2001, Johnson, Hey et al. 2002, Lagasse, Spitz et al. 2004, Transportation Association of Canada 2004, Lagasse, Zevenbergen et al. 2012) for the design of bridges and find that many of the recommended steps result in designs that are very similar to the intent of our proposed rules. Unfortunately, local designers do not always take advantage of these guidelines and we get applications for projects that have significant impacts on fish habitat because of poor design. These rules seek to guide the</p>

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		designer to a properly designed crossing that avoids or minimizes the impacts to fish life.
WAC 220-110-190	The proposed changes to this rule will result in considerable cost increases with no demonstrated benefit. As stewards of the federal-aid funds it is our responsibility to ensure that we have a sound scientific and engineering reason for our federal expenditures.	Comment noted. Please refer to section 4.11 Social and Economic Issues. We agree that public and private dollars should be spent in a responsible way. Water crossing design should fulfill all requirements, one of which is the protection of fish life in Washington State. If this protection costs more money, then responsible design requires that it be spent, just as we must pay for guard rails, noise barriers, and stormwater facilities. But we also suggest that the fulfillment of this requirement is already part of a complete responsible design using FHWA own guidelines. The bridge designer shows that their concrete and steel design protects human life by following building codes. They show that their proposal avoids or minimizes impacts to fishlife by following these hydraulic codes.
WAC 220-110-190	Since our participation would be limited to the cost to meet federal design standards, additional design work may be required to prepare multiple designs so that the cost differential can be quantified, thus increasing the time and costs associated with all bridge projects.	Comment noted. Please refer to section 4.11 Social and Economic Issues. Alternatives analysis at the conceptual level results in a better, cheaper product, so it may be worthwhile to encourage applicants to pursue several options in the early stages of design, but those alternatives should meet both fish and FHWA objectives.
WAC 220-110-190	The new Water Crossing Design Guidelines should be utilized for several months, with the opportunity for flexibility during implementation, PRIOR to being referenced in the WAC. There are a number of facets of these guidelines that have a high likelihood of significantly increasing project costs for Local Agencies and, ultimately, hindering their ability to complete projects. In addition, some facets of the Water Crossing Design Guidelines will often result in significant additional impacts to the environment if implemented as written. I recommend that the Water Crossing Design Guidelines be put to use for some time prior to being incorporated into the WAC, again, with the ability for flexibility in their implementation.	Comment noted. Please refer to section 4.11 Social and Economic Issues.

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WAC 220-110-190	This chapter includes specific design requirements that are not applicable at all sites. Instead of providing specific numerical requirements, the chapter should provide general guidance then reference applicable design documents that are quicker to update than a WAC and will ensure the latest design procedures are used. The ending of the intro paragraph does a good job of referencing other documents, and should keep that text then delete much of the specific detailed requirements in the following sub-section.	Many water crossings projects are constructed by non-engineers. These applicants need a set of predictable rules to follow to ensure what they propose will protect fish life.
WAC 220-110-190	Please add language that clarifies an emphasis on avoiding water crossings.	Comment noted. Water crossings will comply with mitigation sequencing.
WAC 220-110-190	Given the controversy over blocking culverts (section WAC 220-110-190) and the difficulty of both properly permitting culverts and installing culverts that actually pass fish we would have expected the updated hydraulic code to place more emphasis on stream simulation culvert designs. Indeed, earlier versions of the rule update required that permittees “shall install stream simulation culverts unless the permittee can show that stream simulation is not feasible, or that another design will provide equal or better protection of fish life.”(draft for advisors 2011-10-11, page 85). We agreed with this approach at the time, and we are disappointed that the current proposed rules do not take a similar stance with regard to StreamSim designs.	The Supplemental DPEIS will include an alternative that requires stricter design justification if the proposed culvert is not a stream simulation design.
WAC 220-110-190	It is concerning that WDFW appears to be using this process to change agency guidelines into rules. For example, the current regulations for water crossing structures, WAC 220-110-070 are the existing regulations, while the 2013 Water Crossing Design Guidelines are intended to “clarify and set them into engineering practice”. The proposed revision to the water crossing structures section (WAC 220-110-190) appears to incorporate the 2013 guidelines into the WAC. Alternatively, please consider retaining flexibility in design and give	The proposed rules do retain flexibility in design and give the option to either incorporate agency guidelines or provide equal or better engineered solutions. The proposed rules allow alternate designs if the design protects fish habitat. The supporting science is cited in the appendices. The design of a civil engineering structure is the responsibility of owner and engineer. Never should compliance with these WACs jeopardize the health and safety of the public.

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	the option to either incorporate agency guidelines or provide equal or better engineered solutions. An unintended consequence of the proposed rule change requiring specific design requirements may shift legal and financial responsibility onto WDFW if the project fails.	
WAC 220-110-190(2)	The first paragraph states that "All water crossings, even those in streams with no fish, must retain upstream and downstream connection in order to maintain natural channel processes." Is there and scientific justification for these rule changes to apply to 'streams with no fish'? This requirement does not appear to be justified and would result in excessive unwarranted cost. The taxpayers need to be clearly informed about what they are investing in here. This requirement would result in significant expenses with no clearly defined benefit. (FHWA)	There is science that provides evidence on the importance of maintaining fluvial geomorphic processes in non-fish headwater streams. However, this section applies to water crossings in fish-bearing waters only.
WAC 220-110-190(2)	The WA Division understands that some 'streams with no fish' at the time of the project design may become streams with fish if fish passage barriers are removed downstream of the project, so we would need to take into consideration the likelihood that existing barriers will be removed during the design life of the project.	Comment noted. We recommend studies of this kind.
WAC 220-110-190(2)	This section needs more work including discussion about culvert velocities that can impact passage and the need to allow natural processes to create and maintain fish habitat as an end goal.	The intent of this section is to give a high level overview of fish life concerns. However, the language is amended to provide more detail.
WAC 220-110-190(2)	In the first sentence, after "through them" delete "at all flows." Fish are not expected to move during all flows.	Language is amended.
WAC 220-110-190(3)(a)	After "must provide" delete "unimpeded passage" and add "fish to move freely when fish are expected to move."	The proposed language reflects the fish protection standard.
WAC 220-110-190(3)(a)	In addition to the language in (a) we request retention of the WDFW priorities: bridges are preferred as water crossing structures by the department in order to ensure free and unimpeded fish passage for adult and juvenile fishes and preserve spawning and rearing habitat. Other structures which may be approved, in descending order of	WDFW has always advocated the use of the right type of crossing for the right situation. The specific type of crossing should be determined by the circumstances rather than mandating the use of one over the other.

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	<p>preference, include: temporary culverts, bottomless arch culverts, arch culverts, and round culverts. Corrugated metal culverts are generally preferred over smooth surfaced culverts. As the court stated in the culvert decision: Full-span bridges across streams, and stream simulation culverts, offer superior fish passage and habitat benefits compared to hydraulic design and no-slope culverts. Stream simulation culverts are less likely than hydraulic design or no-slope culverts to become fish passage barriers in the future.,,,,,,,.Declaration of Paul Wagner, Dh. # 746, n 9. United Statesv.l4'ashington, CASE NO. CI/ 70-9213, Subproceeding 0l-01, MEMORANDUM AND DECISION</p>	
<p>WAC 220-110-190(3)(b)</p>	<p>This paragraph states that " (ii) Similar cross section: The cross section must have the same channel bed width, a thalweg, and overbank areas, as necessary. (iii) Similar velocity distribution: The cross section must have a varied velocity distribution for passage of fish at all sizes and abilities; particularly, low velocity margins and a high velocity central zone." Does this statement apply only to typical flows at which fish passage occurs, or is assumed that this criteria applies for all flows? If only for fish passable flows that would seem reasonable, but if for all flows that would likely be cost prohibitive and unjustified. Sufficient research is not available to support such an approach for the entire range of flood flows.</p>	<p>Language is amended.</p>
<p>WAC 220-110-190(3)(b)</p>	<p>Remove word "natural". This has and will be interpreted differently by different parties and will lead to confusion. WSDOT and WDFW discussed concerns about "natural stream channel" language at our meeting on August 27th. To meet the intent of our discussion at that meeting, replace the first sentence of WAC 220-110-190(3)(b) to the following: The water crossing design must maintain similar physical characteristic of the stream channel.</p>	<p>See (3)(b)</p>

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WAC 220-110-190(3)(b)	Please define "prevailing conditions".	We use the dictionary definition of "common, predominant".
WAC 220-110-190(3)(b)(i)	"Similar slope: The slope should be that of an equilibrium channel and not over-steepened" The language should also consider under-steepened slope to not alter bedload movement and minimize risk for perched outlets.	We assume that the most hazardous condition for fish life is over-steepened. In our experience, lower slopes do not result in significant impacts.
WAC 220-110-190(3)(b)(iii)	The stream cross-section must include over-bank areas up to at least a 10-year flood in order to minimize velocity barriers during times when fish need access to upstream habitats such as floods.	Language amended.
WAC 220-110-190(3)(b)(iii)	Similar velocity distribution is almost impossible to measure except to do low and high flow survey of the velocity distribution. This puts a great burden on the applicant. It is also impossible for the agency to approve the channel formation design inside the culvert that is not readily to be designed and constructed. This requirement should be changed to state the channel formation inside the culvert should be similar to the channel formation up and downstream provided that they are not altered and are in natural state.	Language is amended.
WAC 220-110-190(3)(c)(iii)	Water velocities through the water crossing structure should be maintained similarly as in the adjacent natural channel to avoid creating velocity barriers to all fish at all life stages.	The department agrees.
WAC 220-110-190(3)(c)(iii)	Floodplain continuity. This is almost impossible to maintain for a very wide floodplain river reach if side channel is considered as part of the floodplain.	Language is amended.
WAC 220-110-190(3)(c)(iii)	Floodplain continuity-- Section states that "natural dynamics of a floodplain must be maintained..." This is not possible in most floodplains where development has taken place. This should be retained as guidance, but not included in the WAC revisions.	Language is amended.
WAC 220-110-190(3)(c)(iv) and (v)	The requirement to pass wood and sediment at all flows will result in an unreasonable economic impact. We prefer "...provide for all	Language is amended.

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	sediment and debris likely to be encountered during a 100 year flood event.	
WAC 220-110-190(3)(c)(vii)	This section should stipulate that margin habitat should be facilitated up to at least a 10-year flood (near the stream simulation design).	Language is amended.
WAC 220-110-190(3)(c)(viii)	Stream margin habitat may not be achievable in steeper, confined streams. This should be noted. We also suggest using the term 'margin habitat' which is defined in Section WAC 220-110-030.	Language is amended.
WAC 220-110-190(3)(c)(viii)	Sediment gradation continuity. This will require sediment gradation analysis for every culvert design. This will also eliminate the need to place streambed gravel if the stream up and downstream does not have gravel bed. Please clarify the requirement either to forbid the placement of anything different than what is in the existing up and down stream channel.	Language is amended.
WAC 220-110-190(3)(c)(ix)	Not familiar with the term planform.	Term is removed.
WAC 220-110-190(3)(c)(ix)	Regarding natural evolution of planform and longitudinal profile, it is highly unlikely that this can be achieved in developed floodplains and alluvial fans. This requirement imposes undue liability and increased costs to WSDOT and other project proponents. This should be retained as guidance, but not included in the WAC revisions.	Language is amended.
WAC 220-110-190(3)(d)	The use of baffles and upstream control weirs should be limited and temporary (i.e. no more than 5 years to permanent culvert fish passage fix).	Language is amended.
WAC 220-110-190(3)(d)	For consistency with section 20A-110-200 (l 1) please add the word "temporary" so that it reads: The department prohibits culvert baffles and downstream control weirs except for temporary correction of problems at existing structures.	Language is removed.
WAC 220-110-190(3)(e)	Guidance is needed for the measurement of bank full width. We suggest forest practices guidance.	Any guidance that meets the criteria in (3)(e) is acceptable. The guidance in the <i>Water Crossing Design Guidelines</i> is also acceptable.

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WAC 220-110-190(3)(e)	The requirement that a person must use a minimum of three typical bankfull widths for water crossing structure design will be cost prohibitive to agencies.	Comment noted. The time it takes to measure one versus three is not substantial.
WAC 220-110-190(4)	We agree and support the position taken by the Federal Highway Administration in its November 15, 2013, letter to Mr. Zeigler containing its SEPA comments that stated the bridge design requirements in the new rule package “are not based on technically sound engineering practices and are not justified by significant research” and “will result in considerable cost increases with no demonstrated benefit.”	Comment noted. Please refer to section 4.11 Social and Economic Issues and the cost/benefit analysis prepared by the economists.
WAC 220-110-190(4)	WSDOT concurred with the WDFW 2013 Water Crossing Design Guidelines, conditional to the WDFW allowing the department to utilize American Association of State Highway Transportation Officials (AASHTO) and Federal Highway Administration (FHWA design guidance in substitute for the water crossing guidance. The WSDOT requires the same allowance under the proposed WAC. American Association of State Highway and Transportation Officials and Federal Highway Administration standards have been well vetted by the engineering community. We have concerns that many of the proposed rule changes are not substantiated by best available scientific research and will therefore add unjustifiable cost to our projects.	WDFW engineers agree that the current American Association of State Highway and Transportation Officials and Federal Highway Administration guidelines when applied appropriately will protect fish habitat. However, these guidelines are national in scope and do not directly address the requirements for fish protection in Washington State. As a result, the designer must use WDFW rule and guidelines in combination with other highway design guidance to form technically sound engineering practice. We specifically cite guidelines that fulfill the requirement of these rules, and that we have control of, but recognize that other guidelines could also protect fish habitat.
WAC 220-110-190(4)(b)	In addition to 'passing' the 100-yr. flow, the crossing structure should not constrict, which may induce water velocity barriers to fish.	This provision has been removed, but this issue is now addressed in 4(c).
WAC 220-110-190(4)(b)	This sentence implies that we need to design bridges to fully span the 100-year peak flow. That is not a reasonable expectation, nor is it consistent with sub-section (4)(i), which allows mid-channel piers. Also the Water Crossing Structures Guidance Document states 'From an environmental point of view, ideally the entire floodplain width would be bridged, but this is seldom feasible for economic reasons.'	This provision has been removed, but this issue is now addressed in 4(c).

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	We would like to continue working with WDFW to develop the appropriate language to cover this issue.	
WAC 220-110-190(4)(c)	The statement “other design flood flow approved by the department is vague. The landowner doesn’t know if the department will approved a smaller or larger design flood flow. This will result in forest landowners paying more for designs.	From the definitions (030): “Design flood” means a stream discharge of a specific rate and probability that is best suited for the design of a project to create and shape habitat, or to protect property and structures to a given level of risk (e.g. the one hundred year design flood).
WAC 220-110-190(4)(c)	It is unclear what is meant by the words “of the design flow approved by the department”, and under what circumstances would an HPA writer use this discretion. Consider providing clarification.	From the definitions: “Design flood” means a stream discharge of a specific rate and probability that is best suited for the design of a project to create and shape habitat, or to protect property and structures to a given level of risk (e.g. the one hundred year design flood).
WAC 220-110-190(4)(d)	A shorter bridge design should be based on engineering constraints, not existing infrastructure and levee setback opportunities should be considered, too.	The department considers the presence of these structures to be an engineering constraint. We cannot require the owner to do something to another person’s property.
WAC 220-110-190(4)(e)	What is the "significant increase in velocity"? Should this requirement be redefined as no significant rise of water surface elevation. The definition of significant rise of water surface elevation should also be defined as how many feet of rise?	Backwater rise is a poor indicator for habitat impacts. Please read Water Crossing Design Guidelines Ch 4 for a more in depth discussion of “significant.”
WAC 220-110-190(4)(e)	It would be more appropriate to use a channel forming flow, such as the 2-year flood, instead of a rare flood like the 100-year to evaluate how changes in flow velocity will affect fish life. WDFW's focus should be on fish life and the channel below the OHWL. Over the course of a bridge's lifespan, the flow velocity during the 100-year flood will have less influence on the channel form than the 2-year flood.	Q100 is a flow that truly indicates the degree of encroachment. Q2 may not even be overbank, which would give us not indication of impacts at channel forming events.
WAC 220-110-190(4)(f)	This paragraph is inconsistent with the requirements of paragraph 3c(ix). The requirement in this paragraph is more practical because it references migration during the lifespan of the structure. Consider replacing (3)(c)(ix) with this language so they are consistent. Future	Language is removed.

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	channel planforms are quite difficult to predict, hence estimates tend to be very conservative. The requirement to account for future lateral migration to minimize the need for bank protection could result in extremely long and expensive bridges. As stated above, FHWA prefers a more Context Sensitive Solution.	
WAC 220-110-190(4)(g)	This issue is essentially addressed in paragraph 4 (c). What is the engineering basis for specifying three feet of clearance? What does this have to do with fish passage and why wouldn't the current state standard be sufficient?	Currently, there is no height requirement in rule. WDFW studied many standards for bridge clearance across the United States and found 3 feet to very common requirement. You must remember that these WACs apply to everyone that seeks a permit, not just WSDOT. Private land owners, timber companies, and others who may not do much heavy or highway work for their project need simple criteria, and our permit staff need simple criteria as well. We acknowledge that larger rivers need greater clearance and smaller streams less. The final sentence of this provision says that "The department may grant an exception based on engineering justification provided by the applicant," which allows you to submit an amount you think is appropriate.
WAC 220-110-190(4)(g)	Three feet of clearance is the FHWA recommendation, however FHWA recognizes that this cannot always be achieved, and therefore uses this standard as guidance rather than set-in-stone rule. WDFW should consider doing the same. This paragraph is unnecessary given the requirements of paragraph 4c. Language in 4c is better because it is adaptable to site specific conditions while accomplishing the same goal. The WAC should avoid specific dimensions for clearance because the necessity varies dramatically from site to site. (WSDOT)	The department also allows flexibility. The proposed language states "The department may grant an exception based on engineering justification provided by the applicant and show that such a change would have minimal impacts on fish life or habitat."
WAC 220-110-190(4)(h)	What is the flow range for this requirement? If a 100-yr flow is assumed, this requirement would likely require spanning the entire 100-year floodplain in many cases. Typically, any contraction of flow (i.e. roadway embankments) will result in some computed contraction scour. Furthermore, placement of piers within the flow will always result in some amount of computed scour. So the way this	This provision has been removed.

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	statement is currently worded would prohibit a multi-span bridge. If bank erosion were anticipated, could it be mitigated with erosion protection?	
WAC 220-110-190(4)(i)	Several statements in paragraph (h), (i),(j), and (k) seem to be contradictory. It states that the bridge must not cause bed and bank scour, that the bridge must avoid the need for scour protection, yet the design must specify the size and placement of scour protection to withstand peak flows. Which is it? No scour allowed or some scour is allowed with adequate protection for peak flows?	Language is amended to clarify the order of preference.
WAC 220-110-190(4)(i)	If scour protection or armoring is deemed unavoidable and necessary it must be mitigated.	The department agrees if it causes a loss of fish habitat function, value, or quantity.
WAC 220-110-190(4)(j)	This statement is extremely limiting and may not be feasible in several instances. One example is a confined channel (no floodplain) where the bridge abutments are located on either bank and cannot be set back. Abutment protection, placed at a stable slope, would be needed to provide adequate protection for the bridge abutments. It is important to protect the embankment down to the toe of the slope, which in most cases would be below the OHWM. Terminating the OHWM may compromise the safety of the bridge. This is another situation where the FHWA Context Sensitive Solutions would apply. The objective is to come up with a design that minimizes impacts from a balanced approach rather than create constraints that make a cost effective design unattainable.	Language is amended to clarify intent.
WAC 220-110-190(5)(c)	This is open ended. What does minimize mean? Plans and specifications, design criteria and approval through the HPA should condition work that minimizes damage to the bed.	Construction can also be done in a manner that minimizes impacts. Minimize impacts is defined as limiting the degree or magnitude of the action and its implementation by using appropriate technology or by taking steps to avoid or reduce impacts.
WAC 220-110-190(5)(d)	The use of riprap is a proven practical solution for protecting bridge abutments.	Comment noted. The rules do not prohibit toe protection.
WAC 220-110-	Requiring biotechnical slope protection outside the shadow of the	Comment noted. Please refer to section 4.11 Social and Economic

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190(5)(d)	bridge will result in less protection and increase costs.	Issues.
WAC 220-110-190(6)	In general, bank full width (BFW) is the basis for selection of the culvert size in the Stream Simulation Method. BFW can be a very subjective measurement and difficult to accurately assess. It is a tough criterion for the basis of culvert size selection. Furthermore, it also usually results in culvert sizes that are considerably larger than are needed to accommodate fish passage. The cost implications of applying these criteria to all culverts are substantial.	<p>We have been using BFW to design culverts for almost 20 years. BFW has become the channel dimension of choice for culvert design for many states (CA, OR, MA and others) and the USFS (Forest Service Stream-Simulation Working Group 2008). It is not subjective when properly measured and, with one dimension, tells the designer many things about a stream without sophisticated geomorphological study. We think that it is essential for the design of a culvert using the stream simulation method which is primarily concerned with creating stream-like conditions in the culvert. As far as we know there is no substitute for this design parameter.</p> <p>The cost implications can be evaluated only when all the objectives for the crossing are considered. In Washington State the applicant is required to pass fish and protect their habitat as part of their culvert design. We have taken the point of view that the natural adjacent channel provides the standard for this requirement. When the chief characteristics of that channel are reproduced in the culvert then it has been satisfied. By using BFW to determine the span, channel processes are relatively unimpeded and stream-like conditions can occur. No other method to accomplish this objective has been generally accepted so that the base cost for a culvert in Washington State is going to start with one whose span is determined by BFW. Economies can only be found in other areas of the crossing design.</p>
WAC 220-110-190(6)	WFPA and Weyerhaeuser engineers have repeatedly asked the Department to provided technical or scientific evidence supporting their decision to set stream simulation design as specified in the proposed Hydraulic Code rules as the standard culvert design method for protecting fish life in wider, steeper stream crossings. The Department has responded by saying only that stream simulation represents the best available science; is the preferred design method of the Department and the U.S. Department of Agriculture Forest	Please refer to the HPA References list on the HPA web page.

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	Service; and is the generally accepted design method in use by the Department for permitting hydraulic projects. We find this response to be wanting in technical support.	
WAC 220-110-190(6)	<p>Stream-simulation design</p> <p>Who is the Department? The AHB or the director of wdfw??? I need to know who to present my argument to for variances from pre accepted design standards.... Anybody above the level of area habitat biologist (field personnel) would be unacceptable)</p> <p>The 1.2 times channel bed width is fine the +2' should be up for negotiation, since that was a non-calculated figure to accommodate for debris passage that the original stream sim designers came up with. Some first and second order streams that meet the definition of "fish bearing " will never have enough flow to float a twig let alone move a piece of wood large enough to present a blockage.</p> <p>Set at the same gradient as the stream.... It is easier to keep material in these structures if they are slightly less than the "prevailing stream gradient" thus bullet "d" would be contradictory allowing 25% variance.</p>	<p>The department is defined in RCW 77.55.011(5) as the department of fish and wildlife.</p> <p>Amended language states "A person can design a water crossing using any design methodology approved by the department provided that the method specifically addresses fish passage, the protection of fish habitat, and the maintenance of expected channel processes defined by the site conditions."</p> <p>This would be an alternate design.</p>
WAC 220-110-190(6)(a)(i)(A)	Per our August 27th meeting, delete "must" and replace with "should". Why is stream simulation design limited to streams with a channel bed of 15 feet or less? WDFW engineers often recommend stream simulation design for channels with bankfull widths up to 30 feet.	Language is amended.
WAC 220-110-190(6)(a)(i)(B)	Sub-section 6 includes numerous references to the "channel bed width" which is used to determine the span of a "stream simulation" and a "no slope" design culvert. The use of the term "channel bed width" is confusing and may result in measurement of the channel toe width and not the bank full channel width. Further, "bed" is defined in on page 4, Section 30 (12) as "the land below the ordinary	"Channel-bed width" means the width of the bankfull channel, although bankfull may not be well defined in some channels. For those streams that are non-alluvial or do not have floodplains, the channel width must be determined using features that do not depend on a floodplain.

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	<p>high water lines of state waters". Therefore bed width could also be interpreted as the width at the OHWM. Since "channel bed width" is also defined on page 4, Section 030 (19) as the "bank full channel width" it would help avoid confusion if "bank full channel width" was used in the text throughout sub-section 6 rather than "channel bed width".</p>	
<p>WAC 220-110-190(6)(a)(i)(C)</p>	<p>This sub-section in the stream simulation design requirements requires that stream simulation culverts be set at the same grade as the stream. This may preclude the use of concrete box culverts in streams greater than 5% gradient because a concrete box culvert usually cannot be set at a slope greater than 5%. The next sub-section {6(d)} already requires that the stream gradient inside the culvert match that of the equilibrium stream gradient across the culvert site. Please consider deleting sub-section 6(c) or allowing deviation from the equal grade provision for box culverts, especially for shorter box culverts.</p>	<p>We have seen concrete box culverts installed at gradients well above 5%. Material selection should be governed by design: If one style of culvert is not appropriate for a given situation, another should be substituted.</p>
<p>WAC 220-110-190(6)(a)(i)(C)</p>	<p>This paragraph should be revised to allow the culvert to be set at a flatter slope provided the bed through the culvert is at an appropriate slope. Sometimes construction is simplified by placement on a flatter slope but this paragraph does not allow that. Placement on a flatter slope will not affect fish passage or life.</p>	<p>In principle, stream simulation culverts are set at the same gradient as the stream. In the rare instance that it is better not to, the individual permit can be written to allow that on a case by case basis.</p>
<p>WAC 220-110-190(6)(a)(i)(C)</p>	<p>This paragraph should be revised to set the slope based on the appropriate slope for the stream reach. The upstream channel slope may have been altered and provides a poor indicator of the correct slope to use, but this paragraph requires that slope to be used for design even if the designer knows it's not a true representation of the channel within the project.</p>	<p>In principle, stream simulation culverts are set at the same gradient as the stream. In the rare instance that it is better not to, the individual permit can be written to allow that on a case by case basis.</p>
<p>WAC 220-110-190(6)(a)(i)(E)</p>	<p>The minimum and maximum countersink depth should be stated as a minimum of 2' or 30% of culvert height whichever is greater and maximum depth should be dictated by the culvert length and should</p>	<p>We agree. Language is amended.</p>

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	not be greater than the 50% of the culvert provided it is a circular or squashed pipe. A box culvert should not be subjected to the maximum counter sunk depth.	
WAC 220-110-190(6)(a)(i)(E)	This paragraph should be revised to base the depth of countersinking on the calculated depth of the mobile bed. Culvert height is not correlated to the depth that the bed will be moving so it's an arbitrary measurement to use. Additionally, it is unclear why a larger stream simulation culvert must be countersunk further than a "no-slope" culvert design. Having too much sediment in a structure can lead to not meeting low flow fish passage criteria.	We agree. Language is amended.
WAC 220-110-190(6)(a)(i)(F)	Text should read: "median particle size of sediment placed inside the stream simulation culvert must be plus or minus 20% of the median particle size found in a representative reference reach of the same stream." Please add the first "median" in red bold italics above. As written if a reference stream had a median particle size of four inches then the distribution of installed sediment would be limited to clasts from 3.2 inches up to 4.8 inches. This would not yield an appropriate clasts size distribution and would result in subsurface flow. This restriction should also not apply to naturally occurring boulders or large erratics that maybe parent material derived (as opposed to water transported) and installed boulders and roughness rock placed as grade controls or roughness/habitat features.	"Median" has been added.
WAC 220-110-190(6)(a)(i)(F)	Currently reads only place material that is plus or minus 20% of the median of the reference reach. The result would be a sediment mixture with no fines to seal up the bed and no large material to provide stability with tree roots, logs, and large rocks.	"Median" has been added.
WAC 220-110-190(6)(a)(i)(F)	This paragraph should be revised to allow the sediment gradation to be based on sediment stability calculations performed by the design engineer. Design calculations should be the primary method used to determine sediment gradation in the culvert, not just as an exception	We are establishing a range over which the sediment can range and still be said to simulate. Larger than 20% moves into the realm of roughened channel and a different channel type.

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	<p>if the department approves it. Not allowing larger sediment as calculated by the design engineer may restrict a professional engineer's ability to stamp a design since that engineer may not determine the sediment in the stream provides adequate stability. Per our August 27th meeting, delete "must" and replace with "should".</p>	
<p>WAC 220-110-190(6)(b)</p>	<p>We appreciate use of the term "generally" in Water Crossing Structure section- WAC 220-110-190 when identifying numeric limits to application of specific water crossing structure designs. Flexibility in proposing designs and flexibility in Department approval of crossing designs allows for originality and engineering creativity in developing crossings design that meet the process and functional needs for fish life while addressing the practical need to keep project costs in line with the forestry enterprise. We do, however oppose the hard limit of five percent (5%) or less channel bed gradient in the use of the no-slope method. The forest industry has several examples of successful no-slope crossing installation for typically narrow forest roads on streams with channel bed gradients exceeding five percent (5%).</p>	<p>We respectfully disagree that no slope culverts installed in channels with gradients over 5% provide fish passage, protect fish habitat, and maintain expected channel processes defined by the site conditions.</p>
<p>WAC 220-110-190(6)(b)</p>	<p>"No-slope design". This design alternative is inconsistent with the recent federal court order regarding State culverts because no-slope designed culverts are often found to impede fish passage. This design approach should be placed into the section on alternative designs.</p>	<p>The culvert court order applies only to state-owned fish passage barriers in the case area. The science suggests that no-slope culverts provide fish passage, protect fish habitat, and maintain expected channel processes when they are appropriately design for the site conditions.</p>
<p>WAC 220-110-190(6)(b)(i)(A)</p>	<p>"However, in some site-specific situations the department may approve no-slope in channels with a gradient up to five percent (5%)." This appears to be a concession to some applicants and must be spelled out what these 'site-specific situations' are that allow for the 3% deviation. Without sideboards, exceeding the 3% slope requirement could become the standard.</p>	<p>The standard is that water crossing structures must provide fish passage, protect fish habitat, and maintain expected channel processes defined by the site conditions.</p>

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WAC 220-110-190(6)(b)(i)(E)	In smaller diameter pipes this could lead to counter sink of 1 foot or even less in streams that could support coho spawning. The minimum counter-sink requirement seems too shallow to accommodate potential salmon spawning and to reduce the probability that the culvert bed will be exposed over time. Unless a qualified/certified professional can show there is no energy for scour and no potential for fish spawning, the minimum and maximum counter-sink depth should be stated as a minimum of 2 feet or 30 percent of culvert height, whichever is greater, and maximum depth should be dictated by the culvert length and should not be greater than the 50 percent of the culvert provided it is a circular or squashed pipe. A box culvert should not be subjected to the maximum counter-sunk depth.	This may be the case, but no slopes can be small pipes where 2 ft. would exceed the 40% max. inlet countersink.
WAC 220-110-190(6)(b)(ii)	"No-slope design" Why are we going to twenty five percent countersinking at the outfall instead of 20 percent?	This may have been a typo, the current proposed version says 20%.
WAC 220-110-190(6)(c)	Weyerhaeuser urges the Department to remove the language in WAC 220-110-191(G)(c)- Requirements for Other Permanent Culvert Design- that requires alternative designs to "provide equal or greater protection for fish life as stream simulation and no-slope design methods." Again, we appreciate the Department's inclusion of an option for culvert designs other than stream simulation and no-slope. However, the language in this subsection virtually eliminates the practical possibility that alternatives would be approved. We accept the first requirement that an alternate design for crossing a fish stream need to provide the processes and functions listed in subsection (3). However, the requirement that the design also provide "equal or greater protection for fish life as the stream simulation and no-slope design methods" renders it unlikely that designs would to be approved. (Weyerhaeuser)	The language is amended (A) The width of the channel-bed inside a stream simulation culvert at the elevation of the streambed can be determined in one of two ways: <ol style="list-style-type: none"> <li>1. The bed width may be calculated by using any published stream simulation design methodology approved by the department.</li> <li>2. The bed width of an individual culvert may be made on a case-by-case basis with an approved alternative plan that includes project objectives, inspection, maintenance, and contingency components. Inspection must include compliance monitoring after construction, and effectiveness monitoring after 3 years. Maintenance and contingency are triggered when project fails to meet objectives.</li> </ol>
WAC 220-110-190(6)(c)	The hydraulic culvert design is inconsistent with the recent federal court order for State culverts, as hydraulic designed culverts are often	The hydraulic culvert design is moved to Section 200 Fish passage improvement structures.

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	found to impede fish passage. This design approach should be placed into the section on alternative designs. (Muckleshoot Tribe)	
WAC 220-110-190(6)(c)	The proposed revision to the water crossing structures section (WAC 220-110-190) appears to incorporate the 2013 guidelines into the WAC. Alternatively, please consider retaining flexibility in design and give the option to either incorporate agency guidelines or provide equal or better engineered solutions. An unintended consequence of the proposed rule change requiring specific design requirements may shift legal and financial responsibilities onto WDFW if the project fails.	Language is amended (A) The width of the channel-bed inside a stream simulation culvert at the elevation of the streambed can be determined in one of two ways: 1. The bed width may be calculated by using any published stream simulation design methodology approved by the department. 2. The bed width of an individual culvert may be made on a case-by-case basis with an approved alternative plan that includes project objectives, inspection, maintenance, and contingency components. Inspection must include compliance monitoring after construction, and effectiveness monitoring after 3 years. Maintenance and contingency are triggered when project fails to meet objectives.
WAC 220-110-190(6)(d)(iii)	Where correcting a fish passage barrier, this should not be applied especially if no fish passage is currently occurring, or if it is on fish passage barrier list. Fish passage should be applied/required only to the finished structure. "Proposal requires temporary culverts to provide unimpeded fish passage. This will be a fiscal impact for emergency culvert replacement projects that build temporary culverts until the permanent fish passage culvert is designed and constructed. We suggest including the following language: 1) Temporary culverts (d) Temporary Culvert Design Requirements (i) The department must determine allowable placement of temporary culvert and time limitations based on the specific fish resources of concern at the proposed water crossing location. (ii) The design of the temporary crossing must maintain structural integrity at the peak flow expected to occur while the crossing is in place. (iii) Where fish passage is a concern, the temporary culvert must	Temporary and Emergency culverts have now been separated and specific provisions are to each. chapter 55.75 RCW requires fish passage at all obstructions: a temporary culvert cannot block fish passage. An emergency culvert may be "...replaced with one that is the same size or larger than the existing one. If the emergency crossing did not have a culvert or the size is not known, then the emergency culvert should be large enough to safely pass the 100-year flood event with consideration for debris and sediment. In extreme circumstances, the Department may approve the use of any available culvert."

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	<p>provide unimpeded fish passage.</p> <p>(iv) A person must remove the temporary culvert and block all approaches to vehicular traffic prior to the expiration of the HPA. "(e ) Culvert Design Related to Emergency Culvert Replacement</p> <p>(i) Replacing a culvert during emergency situations is an immediate action to protect and restore the function of the highway structure. In these emergency situations time, resources, and funding may not be immediately available to fully design and install a culvert to provided unimpeded fish passage. WDFW may authorize a temporary culvert to be installed with the requirement for a permanent culvert that meets fish passage design standards as part of a longer term plan provisioned in the written HPA authorization.</p> <p>(ii) Given that the conditions in an HPA must provide proper protection of fish life and must be reasonable in proportion to the impacts of the proposed work, when a culvert or barrier is replaced under emergency circumstances, if providing for fish passage will produce minimal benefits to fish life relative to the cost of such work, WDFW and the applicant will carefully consider alternatives for compensatory mitigation that may be more beneficial to fish life. "</p>	
WAC 220-110-190(6)(i)(A)	What is the significance of 15 ft? It would seem that this requirement could be eliminated, leaving the design criteria to apply whenever a culvert is used.	Language is removed.
WAC 220-110-190(6)(i)(B)	The paragraph states that the culvert at the elevation of the streambed must be greater than one and two-tenths times the average channel bed width plus two feet, but the equation in parenthesis refers to Bank Full Width (BFW). (FHWA)	Language is removed.
WAC 220-110-190(7)(e)	Should the "prompt repair" be changed to "timely repair"? (King County)	If it is impeding passage "prompt" is the appropriate here.
WAC 220-110-190(8)(a)	We suggest eliminating the phrase "to the detriment of fish life". (ECY)	Language is removed.

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WAC 220-110-190(10)(d)	There should not be a total prohibition to the use of concrete (hardened) fords for public roads. There are areas within flashy steep high energy environments transporting large rocks and debris where a hardened ford is the only option available to preserve the roadway. Does this "should" provide the necessary flexibility to allow hardened fords in exceptional circumstances?	Language has been changed.
WAC 220-110-190(11)(a)(ii) and (iii)	Refer to a configuration approved by the department. Will this configuration be identified in the FPHPA? We need to know this configuration ahead of time so we can include it in contract work.	To hold an applicant to one standard does not provide flexibility to address site-specific issues. The department encourages pre-application consultation before the design stage.
WAC 220-110-190(11)(a)(ii)	We recommend deleting this entire paragraph. This paragraph is not needed as it is already covered in WAC 220-110-190(3)(f). Removing all existing bridge components is not always practicable, considering cost and technological constraints. Nor is it always a good thing to do to protect fish resources (i.e., if the component is buried well below the stream bed). We strongly oppose the addition of the language, "within the floodplain" as this language was NOT included in previous versions of the draft rule and is not a practicable requirement. We would like to work with you to come up with reasonable guidelines during the development of Version 5 of the WAC Revisions.	Language deleted.
WAC 220-110-200	These types of fish passage techniques should be considered temporary, as they have been found to fail passing upstream migrating fish, particularly as stream conditions change. A reasonable timeframe for temporary fish-passage facilities should be established by the Department so that a permanent solution for fish passage is provided.	This should be the goal although it may not be possible in some circumstances.
WAC 220-110-200	All fishways must require monitoring for the life of the structure as a permit requirement to avoid potential impacts to fish life due to passage limitations and higher potential for failure. Fishways should be considered temporary solutions due to their passage limitations (not passing all fish at all life stages). Permanent fishways (due to	Comment noted.

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	exceptional circumstances or site constraints) must be mitigated.	
WAC 220-110-200(3)(a)	Can naturally occurring barrier be removed as part of a mitigation plan?	No, not usually.
WAC 220-110-200(3)(c)	Delete all of"( c)". This would be mitigation on top of mitigation.	This would require compensation if a structure cannot pass all fish species present otherwise this impact would be unmitigated.
WAC 220-110-200(3)(c)	New proposed language states that "The department may require compensatory mitigation if a fish passage structure constructed as mitigation cannot pass all fish species present at all mobile life stages." City Light, under the renewed license for operation of the Boundary Dam, is obligated to install, operate, maintain and monitor an upstream trap-and-haul fishway in the Boundary project tailrace. The target fish species being evaluated will represent the size distribution of migrating native fish in the Project area, which include bull trout, cutthroat trout and mountain whitefish. Construction will be preceded by a 12-year research and development phase, and ongoing discussions will occur within the Fish and Aquatics Work Group, of which WDFW is a member. Given the nature of the FERC license requirement and agreement of the settling parties, City Light does not anticipate that WDFW would require that the fish passage structure would have to serve all fish species present at all mobile life stages. Accordingly, City Light endorses and urges the department to retain "may require" as opposed to changing it to "shall require".	We are retaining "may require".
WAC 220-110-200(3)(c)	"The department may require compensatory mitigation if a fish passage structure constructed as mitigation cannot pass all for all fish species present at all mobile life stages." Change to read, cannot pass all fish species present".	Language amended.
WAC 220-110-200(3)(f) and (g)	Delete all of "(f)" and "(g)". There are no definitions or thresholds to review.	The thresholds will be determined by the department based on the species affected.
WAC 220-110-	After "structure becomes a" delete "hindrance" and add	Hinder is the appropriate term here.

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200(4)(b)	"obstruction."	
WAC 220-110-200(5)(e)(i)	Please define the "excessive velocity or turbulence".	This would be site-specific.
WAC 220-110-200(5)(e)(ii)	Please define "minimized distraction".	Language is amended to read "To prevent fish from becoming trapped, injured, or stranded, must minimize distractions that lure fish away from the entrance."
WAC 220-110-200(5)(e)(iv)	"Uniform flow velocity" can be only achieved in the laminar flow in the laboratory. Please change it to "relative uniform flow velocity.	DFW engineers did not recommend this change.
WAC 220-110-200(5)(g)	"The department may require screening of the AWS may be to prevent harm to fish life." Change to read, "screening of the AWS to prevent harm.	Comment noted.
WAC 220-110-200(5)(l)(ii)	"Must hast the fish ladder exit located to ensure fish can safely exit the structure, without susceptibility to predators, without becoming disoriented, and with the ability to continue their upstream migration." Change to read, "Must have the fish ladder exit.	Comment noted.
WAC 220-110-200(7)	This proposed section imposes new maintenance standards [training, inspection, continuous flow] that will have a fiscal impact upon our maintenance of 100+ fishways in our inventory.	The person should be trained to recognize problems and know who to call or how to correct them.
WAC 220-110-WAC 220(7)(c)	Please define "sufficiently trained".	The person should be trained to recognize problems and know who to call or how to correct them.
WAC 220-110-200(8)	Fish weirs should be monitored and managed if fish passage issues determined through monitoring.	Comment noted. See (3)(h)
WAC 220-110-200(9)	It is unclear why roughened channels are included in the same category as structural fish ladders and log weirs. The WAC proposes to offer the latest in science and technology but then fails to acknowledge the benefits of an item that nearly all practitioners agree is currently the most effective method for providing fish passage. The WAC sets an arbitrary limit of 25% of channel slope upstream of the culvert as a "stream simulation design" and all other	Roughened channels are usually constructed to facilitate fish passage.

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	channel designs are considered a fishway, meanwhile the restoration community embraces roughened channels as the best way to provide maintenance free effective fish passage. There is no scientific basis (e.g., no peer reviewed scientific studies) to limit "stream simulation" to 25% increase of the slope immediately upstream and ignore all other reaches of the stream. Fish ladders and log weirs have demonstrated their limitations, but properly designed roughened channels have demonstrated their ability to provide unrestricted fish passage.	
WAC 220-110-200(9)	Roughened channels should be included under section 1I Hydraulic Design Culvert Fish Passage Design. As per the WDFW 2013 Stream Crossing Guidelines, "Hydraulic Design Fishways" encompasses several crossing methods that have limited application in specific instances; the design of culvert retrofits, baffle design for exceptionally long culverts or retrofits, and roughened channels for culverts that exceed the maximum stream simulation slope ratio".	See (9)(d) Roughened channels must create an average cross-section velocity within the limits of fish-passage design criteria and the hydraulic design option.
WAC 220-110-200(9)	Roughened channels should require monitoring and would require repair if fish passage barriers develop. This should be a temporary solution in only extreme circumstances with a valid reason why a more reliable fish passage method (e.g. stream simulation or bridge) cannot be used.	Comment noted. See (3)(h)
WAC 220-110-200(9)(b)	Who is the qualified professional?	See 030(118)
WAC 220-110-200(9)(d)	This requirement should be deleted. All current design methodologies that have proven to be successful focus on the roughened channel being designed to simulate reference reaches for the stream. The WAC should either not state a requirement or should include one that is the currently accepted best approach. A roughened channel is successful because it provides low velocity boundary conditions along the bed, just like a natural stream does.	Comment noted.

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	Using a maximum flow velocity criteria for roughened channels ignores the complex hydraulics through the channel that allows fish passage and is as erroneous as assuming a natural stream with an average velocity above 4 feet per second wouldn't allow fish passage.	
WAC 220-110-200(9)(f)	Roughened channel bed material should be similar to the native channel material gradation plus stabilizing boulders to resist scour and channel planform migration.	Comment noted.
WAC 220-110-200(11)	Please provide clarifying language and examples in this section as to when the department would "permit an existing hydraulic design culvert to remain until the end of its design life" that would not already be an "exceptional circumstance".	Language is amended to read "The department may authorize an existing hydraulic design culvert to remain in place until the end of its design life or until another more appropriate culvert design can be constructed. However, a hydraulic design culvert cannot remain in place to the end of its design life if it does not provide for passage of fish."
WAC 220-110-200(11)	If hydraulic culverts are allowed to remain, what will WDFW require for fish passage mitigation?	Language is amended to read "The department may authorize an existing hydraulic design culvert to remain in place until the end of its design life or until another more appropriate culvert design can be constructed. However, a hydraulic design culvert cannot remain in place to the end of its design life if it does not provide for passage of fish."
WAC 220-110-200(11)	Delete all of "(11).	Comment noted.
WAC 220-110-200(11)(a)	Please retain the hydraulic design option for replacement culverts. It can be very difficult to establish a natural bank full channel width when the stream has been ditched or armored. The stream simulation and the no slope design option both require measurement of the bank full channel width. If the hydraulic design option is not retained for replacement culverts, please provide explicit instructions on how to determine the BFCW in ditched and armored streams and for streams that flow through large wetlands. These are common design challenges.	Comment noted.

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WAC 220-110-200(11)(a)	We request that (a) be replaced with the following language as per the 2013 WDFW Stream Crossing Guidelines that states: Hydraulic design option culverts have limited application in exceptional circumstances where constraints prevent the use of bridges, no-slope and stream simulation culverts.	See (2) fish life concerns.
WAC 220-110-200(11)(a)	This paragraph states that WDFW "may" allow an existing hydraulic design culvert to remain in place. From this one can infer that WDFW will more commonly not allow a hydraulic design culvert to remain in place. This implies that culverts permitted by WDFW only a decade or two ago, and possibly designed by WDFW engineers, will now be required to be removed regardless of any evidence of the culvert impacting fish passage. It's likely that this paragraph is just poorly written, but if it is written as intended then WDFW needs to provide justification for requiring replacement of culverts they advocated for just a short time ago.	Language is amended.
WAC 220-110-200(11)(a)(ii)	Given that the conditions in an HPA must provide proper protection of fish life and must be reasonable in proportion to the impacts of the proposed work, when a culvert or barrier is replaced under emergency circumstances, if providing for fish passage will produce minimal benefits to fish life relative to the cost of such work, WDFW and the applicant will carefully consider alternatives for compensatory mitigation that may be more beneficial to fish life.	Replaced structures should comply with the current standards so the impact from a poor design is not perpetuated in the future.
WAC 220-110-200(11)(d)(i)	Minimum water depth of 0.8'. What is the 0.8 feet based on? Should this be a minimum counter sunk depth? For a very small basin that generates very small discharge, this water depth is not realistic except if it is backwatered.	It is based on the leaping ability of a six inch trout. It is the hydraulic drop not the counter sunk depth.
WAC 220-110-200(11)(d)(iii)	Table 1. These maximum velocities exceed the swimming abilities of juvenile salmonids, and therefore can create a passage barrier. These standards should be set to a max. of 2 fps. in a roughed culvert, or 1 fps in a smooth-walled culvert.	DFW engineers did not recommend this change.

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WAC 220-110-200(11)(e)	What is the 0.5ft hydraulic drop based on? Velocity?	It is based on the leaping ability of a six inch trout.
WAC 220-110-200(11)(e)	"The maximum hydraulic drop within the culvert or at the culvert inlet or outlet may not exceed one-half foot. When a drop has a submerged jet (the lowest part is below the downstream water surface) or is part of a natural or roughened channel design, this drop limit may be exceeded when approved by the department." Change to read "(the lowest part of which is below the downstream water surface)".	DFW engineers did not recommend this change.
WAC 220-110-210	The section on channel change and realignment emphasizes that channel change is discouraged, that it will only be approved when there is a benefit to fish, and that the new channel must be similar in length, width, depth, gradient, and plan configuration. This section should be revised to also recognize that many streams have been mis-aligned in the past, especially when deemed desirable to move channels aside for development or agriculture, which in some cases led to channel lengthening and consequent aggradation problems. Often the best solution to aggradation problems, and in the interests of avoiding the need for future dredging, is to re-align the channel into its pre-disturbance geometry. In cases where this results in a shorter, steeper channel, with other factors being equal, the channel is better at moving sediment. Thus, in such instances, channel realignment is in effect an act of restoration. Provisions should be added to this section to allow or encourage channel re-alignments when such a change is actually a benefit for fish.	Language is amended.
WAC 220-110-210(2)	Reference to bank regrading impacts does not appear to consider projects noted in (1), above, which seek to address historic channel confinement; rather than destroying bed and bank habitat, such projects will typically recover them, and help restore natural river processes. These include restored access to floodplain areas and	Language is amended.

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	<p>gravel recruitment to new bar formation, which is habitat creation and recovery, not destruction, and which is then described as the desirable preservation goal in this section. The text should allow for channel reconstruction to achieve these outcomes, where it has historically been compromised by channel confinement.</p>	
<p>WAC 220-110-210(3)(a)(i)</p>	<p>This paragraph should be revised because often the relocated channel is fixing a past problem. Instead of requiring the new channel to be the same length and shape as existing, it should encourage the new channel to mimic appropriate reach based characteristics.</p>	<p>Language is amended to include “or” to clarify this work does not preclude restoration.</p>
<p>WAC 220-110-210(4)</p>	<p>Restrictions on multiple channel flow carrying capacity are inappropriate for projects which seek to reverse historic channel confinement in a modified singly-thread regime with restoration of multi-threaded channel forms and processes typical of anastomosing systems of the type described for preservation in (1), above. This seems to be a consistent oversight.</p>	<p>Section (4) is not intended to prevent restoration of multi-threaded channel forms. Channel is changed to channel(s)</p>
<p>WAC 220-110-210(4)(b)</p>	<p>To protect water quality and downstream sedimentation, we recommend adding a provision that the new channel bed be stabilized prior to diverting water into the channel. Stabilization could occur through seeding of the channel bed with an erosion control mix a growing season prior to water diversion when the bed substrate is composed of coarse sand or finer material.</p>	<p>We are not aware of stream channel methods and designs that would use this stabilization method.</p>
<p>WAC 220-110-210(4)(d)</p>	<p>What's the angle? A template of this construction provision should have this project detail.</p>	<p>The angle will be site-specific. This is a performance or outcome based provision.</p>
<p>WAC 220-110-WAC 220</p>	<p>The proposed section on large woody material removal (WAC 220-110-WAC 220) actually has weaker habitat protection than the current code. Whereas the proposed code allows LWD removal for protection of “life, the public, property, or where necessary to construct or mitigate for a hydraulic project” the current code provides that LWD removal “...shall only be approved where</p>	<p>The language is amended.</p>

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	necessary to address safety considerations, or its removal would not diminish the fish habitat quality of the watercourse. The department may approve the repositioning of large woody material within the watercourse to protect life and property or as needed to conduct a hydraulic project” (emphasis added).	
WAC 220-110-WAC 220	This chapter appears to be focused on removal or repositioning of existing log jams. But due to the name of the chapter, it will also apply to construction of new ELJ's for habitat benefit and as such has multiple construction constraints that will limit effective construction of large ELJ's. Consider rewording the heading or in some way making a clear separation between moving existing log jams and construction of ELJ's for habitat features.	The chapter’s focus is on the removal or repositioning of large woody material from culverts and bridges not log jams as described in section (1).
WAC 220-110-WAC 220(3)	Add Design to the end of title.	It doesn’t seem to fit here.
WAC 220-110-WAC 220(3)(a)	Add “The department will require the placement of the repositioned or removed wood directly back in the channel or in the floodplain, side channels, or along banks.”) this wood should also be allowed in the downstream associated marine nearshore where there is a significant need for this material and it is functionally in the same ecological system.	Language is amended to allow this in limited circumstances.
WAC 220-110-WAC 220(3)(a)	The proposed section on large woody material removal should be revised to provide equal or better habitat protection than the current code. At a minimum, the following language from the existing code should be retained: “[LWD removal]...shall only be approved where necessary to address safety considerations, or its removal would not diminish the fish habitat quality of the watercourse. The department may approve the repositioning of large woody material within the watercourse to protect life and property or as needed to conduct a hydraulic project” (emphasis added).	Language is amended.
WAC 220-110-WAC	Wood within stream channel should be put back into stream	The language is amended.

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220(3)(a)	channel, not just floodplain. WDFW limit any wood removals to those absolutely necessary and most projects should result in relocation and provide similar or better habitat functions. If habitat functions are compromised by removal or repositioning, mitigation should be required.	
WAC 220-110-WAC 220(3)(a)	KC DOT is largely limited to work within the confines of the publically owned Road ROW with special consideration to safety, prevention to damage to public and private property as well as environmentally sensitive areas. King County projects have to be consistent with Public Rules and Regulations regarding recreational safety when placing large wood in rivers. Therefore, King County requires flexibility when making decisions regarding the placement or repositioning of large wood in streams and rivers. This flexibility is not afforded by a requirement that wood be replaced/ repositioned back within the stream, floodplain etc. This creates a situation where the County may not be able to comply due to property ownership issues or public safety concerns.	Language amended to provide flexibility.
WAC 220-110-WAC 220(3)(b)	"Stable" habitat is being interpreted differently by different Area Habitat Biologists and requires definition. Some AHBs require anchoring of repositioned LW or mitigation LW while others do not. Our preference would be for an across the board standard which allows LW to not be anchored if it is of "key piece" size or anchored by pieces of LW of key piece size as defined by Fox and Bolton 2003.	Language is amended to remove "stable" and add clarity "Large woody material may be stabilized against buoyant forces and hydraulic drag forces that may mobilize wood during flood flows by pinning, anchoring or burying woody material in the floodplain."
WAC 220-110-WAC 220(4)(b)	Easier to say "don't drag LWM"	Language is amended.
WAC 220-110-WAC 220(4)(b)	Requirements for full suspension of LWM during placement or positioning should include specific language acknowledging this capability for modern track-mounted hydraulic excavators, and authorizing same for this purpose. As written, it could appear to require aerial log-yarding towers for work readily and cleanly	Added "Full suspension can be achieved with equipment."

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	accessible to more reasonably configured equipment, much better suited to the task of precision placement and handling.	
WAC 220-110-WAC 220(4)(b)	Wood should not be cut especially if yarding equipment is used (it was made for this). WDFW should allow wood placement by hand too as some projects can be done this way in smaller streams with smaller wood.	(4)(b) doesn't preclude hand placement but wood may need to be cut to move it.
WAC 220-110-WAC 220(4)(g)	Wood that must be removed should remain intact (no bucking), and all limbs must be preserved unless absolutely necessary for repositioning.	Comment noted.
WAC 220-110-230	Another good section addition to the code.	Comment noted.
WAC 220-110-230	The proposed WAC language does not recognized and provides appropriate relief from the adverse impacts that beaver dam building activities can have highly human modified watershed environments.	Added "environmental concerns" to the list of reasons a dam might be removed.
WAC 220-110-230(3)	There are cases where the beavers abandon or don't work on an existing dam, then work on it years later. Let us assume an abandoned dam that the beavers work on again years later has now created an imminent threat to the integrity of water crossing structures, or to private and public land or infrastructure. Will the dam be considered an older dam because it was existing or would it be considered a new dam? Will this type of old/new dam require compensatory mitigation or not?	The intent of the language is to say if a dam has established a wetland complex used by fish, compensatory mitigation may be required for the loss of that habitat. This will be site-specific depending on the fish species present, the baseline condition of the habitat and so on. Even work done under an emergency still needs to compensate for loss of habitat if it occurs as a result of the work.
WAC 220-110-230(3)	Shouldn't this be "...Beaver Dam Design"?	Project proponents don't design beaver dams. The existing title seems to accurately represent the provisions in the section.
WAC 220-110-230 (3)(a)(i)	Wasn't this noted above under "Description"? What does this actually have to do with how a beaver dam is physically removed, or breached?	It is the criteria we consider when deciding whether or not to permit dam removal.
WAC 220-110-230 (3)(a)(i)	Those removing beaver dams must provide professional determination of imminent threat to property or the environment.	The department biologist will determine level of threat.
WAC 220-110-	Part of design criteria. Not part of a construction permit, which HPA	We agree. However, the type and amount compensatory mitigation

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230(3)(b)	provisions are.	would be specified in the HPA. It may or may not have been specified in the application.
WAC 220-110-230(3)(c)	Removal or breaching a beaver dam - The use of explosives should be removed because when used, explosives do not allow the ability to control flows during the action and other alternatives are less impacting.	In some rare cases the use of explosives is the least impacting method. These are usually small charges designed to loosen the structure so it can be removed with equipment.
WAC 220-110-230(3)(f)	Shouldn't the timing of work be defined in the HPA? Help the applicant know when it's time to work and not work.	These tie to the authorized work times in section 110.
WAC 220-110-230(3)(i)	The construction/destruction provisions will have these specifications.	Comment noted.
WAC 220-110-230(3)(j)	"Leave LWM embedded in the stream bed or banks undisturbed." Change to read, "leave LWM embedded in the stream" .	Language amended.
WAC 220-110-230(4)	Water leveling devices must be prohibited and used only in exceptional circumstances (large upstream wetland) and must allow fish passage without requiring engineering.	It is a contradiction to prohibit but also allow use.
WAC 220-110-230(4)(a) and (b)	Please separate design from construction.	Changed the header to clarify both types of provisions are in this subsection.
WAC 220-110-230(4)(c)	Is there a design or minimum bar spacing for the enclosure to protect the water intake of the water level control device?	This will depend on the fish species present in a waterbody. For example, the minimum bar spacing for resident cutthroat is different than it would be for salmon. It is also going to differ depending on the function of the habitat blocked by the dam.
WAC 220-110-230(4)(h)	Limits the width of a breach of a beaver dam to the width of the original stream channel. On a small forest stream (1-3 feet) this would not be effective. Recommend DFW include language to approve a larger breach on a case-by-case basis.	Language added.
WAC 220-110-230(5)	Please specify preferred beaver exclusion devices that have the least impacts, maintain fish passage and ensure the natural hydraulic regime of the area will not be altered.	The provisions are intended to do this.

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WAC 220-110-230(5)(a)	Is there a install and or maintenance HPA provisions section(s)?	Yes, there are sections for design and maintenance, as well as other common construction provisions.
WAC 220-110-230(5)(a)	This provision should not facilitate existing and/or new trash racks that interfere with habitat processes and potentially fish passage.	The proposed language doesn't imply a trash rack is authorized.
WAC 220-110-240 (1)	We recommend adding a note that excavation of ponds within wetlands will require additional local, state and federal approval and applicants should contact the local jurisdiction, Ecology and the Corps.	Language amended.
WAC 220-110-240 (2)	We recommend the following modification- Ponds can contribute to increased water temperatures and loss of instream flow in a watercourse, which may impact the survival of fish that need cold water for survival.	Language amended.
WAC 220-110-240	Applicants should be required to demonstrate they have a valid water right to apply for HPA for pond construction.	HPAs are issued only to protect fish life. The statute doesn't allow the department to deny an HPA if a water right is not obtained. Because we have no authority to enforce this provision it is removed.
WAC 220-110-240 (3)	Ponds should not be constructed in wetlands.	The definition of watercourse includes all surface water connected wetlands.
WAC 220-110-240 (3)	Obvious mixing of design and construction. Separate	This is a short section so design and construction provisions are combined. We don't think this affects a person's ability to understand the requirements.
WAC 220-110-240(3)(c)(v)	We recommend a modification to read- Native riparian vegetation, including shade trees and shrubs.	Mitigation for impacts to riparian vegetation is in an earlier section.
WAC 220-110-250(3)	This section seems more procedural than design or construction provision-wise. Perhaps fits better under "description". Reference any applicable RCW's restricting regulatory authority. See following WAC 220-110-260, Outfalls Limit of department authority as per RCW xx	RCWs are listed in section 2. We agree that section (3) is mainly procedures but we think that provisions would get lost in section (2)
WAC 220-110-	Applicants should be required to demonstrate they have a valid	HPAs are issued only to protect fish life. The statute doesn't allow the

PROPOSED WAC	COMMENT	RESPONSE
250(3)(b)	water right to apply for HPA for water diversions. Add language to 3g.	department to deny an HPA if a water right is not obtained. Because we have no authority to enforce this provision it is removed.
WAC 220-110-250(4)(g)	The introductory language acknowledges that diversions can be used for agricultural, hydropower, industrial, recreational, residential, municipal, and hatchery purposes. However, (4)(g) reads: "A person must first obtain a water right before they can construct a structure that diverts state waters." City Light recommends that the original language be retained, i.e. "The exercise of project activity associated with diversion of state waters shall be dependent upon first obtaining a water right."	HPAs are issued only to protect fish life. The statute doesn't allow the department to deny an HPA if a water right is not obtained. Because we have no authority to enforce this provision it is removed.
WAC 220-110-260(2)	Fish life concerns associated with outfall also include riprap fill used at outfall which eliminates fish habitat and riparian areas (see 3c in this section). Water discharging from outfalls can also adversely affect fish life by displacing fish from margin habitats as well as exposing them to pollutants that can injure or kill them.	Because the statute limits the department's ability to regulate water quality we intentionally omitted it from the fish life concerns. Language is amended for use of riprap.
WAC 220-110-260(3)	RCW reference??	RCW 77.55.161 and 77.55.281
WAC 220-110-260(3)(a)	Due to the fact many municipalities may not have proper flow control ordinances in place for a few years due to permit requirements; it would be beneficial to fish, shellfish and habitat for WDFW to still provide necessary conditions on the HPAs.	We must comply with RCW 77.55.161 that regulates stormwater discharges.
WAC 220-110-260(3)(b)(ii)	This section (-260) is not in the table of contents. In addition, the last sentence discusses marine shorelines ("The department may not require changes to the project design above the mean higher high water mark of marine waters...") when this section is specific to freshwater areas.	The sections have been moved for clarity, but are listed in the table of contents.
WAC 220-110-260(4)	Separate out design from construction. But there's very little detail to either category.	This is a short section so design and construction provisions are combined. We don't think this affects a person's ability to understand the requirements. Most of the construction detail is covered in WAC 220-110-100.

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WAC 220-110-260(4)(a)	What design prevents entry of adult and juvenile fish? At least reference applicable WAC, or specify design criteria.	Screening or placement landward of OHWL.
WAC 220-110-260(4)(b)	After "discharge using" delete "bioengineering methods" and add "soft or hard bank protection to withstand the hundred year flow" to meet NPDES permit requirements and RCW 77.55.	Language amended.
WAC 220-110-260(4)(b)(iv)	A tee diffusor is only a sufficient method in low flow situations. This should be noted.	Comment noted.
WAC 220-110-270	In general, the requirements in this section initially appear to be reasonable and pose no immediate concerns to PSE. As a constructive comment, the Department may wish to consider moving items (e), (f) and (g) under subsection (c) for clarity, since those activities are usually associated with trenched crossings.	Language amended.
WAC 220-110-270	This section is only for utility crossing that impact the bed or banks, not aerial crossings, correct?	There are no provisions in this section for aerial crossings. If this work triggers a HPA, the department can write custom provisions.
WAC 220-110-270(2)	Utilities that are not sufficiently located below scour depths usually require rock to protect them which reduces fish habitat, inhibits channel processes and can become fish passage barriers due to the rock or the pipeline.	Language amended.
WAC 220-110-270(4)(b)(ii)	Add associated wetlands to the following statement: "Route wastewater from project activities and dewatering to an area outside the OHWL and associated wetlands to allow removal of fine sediment and other contaminants prior to discharging the wastewater to state waters."	Language amended.

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WAC 220-110-270(4)(c)(i)	What is "that depth"? This is design criteria. Once the application is received and approved by WDFW, known trench width and associated side cuttings width, known (e.g., trench 2-ft wide, side cuttings, 2-ft either side, total 6-feet. What depth? The HPA should specify a depth. Suggest using template language, allows applicant to specify trench widths and other details.	Language amended.
WAC 220-110-270(4)(d)(ii)	Change minimal to minimize.	Language amended.
WAC 220-110-270(4)(g)	"Dispose of excess spoils upland, or on a barge so they..."	Language amended.
WAC 220-110-270(4)(g)	Conduit lines over water courses should not constrict the channel or preclude future opportunities for bridges or other less-impacting approaches to water crossings.	Comment noted.
WAC 220-110-280(3)(f)	The prevention and control of invasive and noxious weeds is a priority in freshwater and marine shoreline habitats. The reference to the use of loose straw to avoid the release of sediment downstream from felling or yarding activity replaces existing language that referred to straw bales. Because Washington State has a program for certification of noxious weed seed free straw, City Light urges the WDFW to refer to noxious weed seed free straw rather than "loose straw".	Language amended.
WAC 220-110-290	City Light implements measures to address the control and prevention of aquatic invasive species at its Boundary Hydroelectric Projects. These measures include the placement of bottom barriers and substrate sampling. The new language and changes to existing language provide specificity and clarity which will be helpful to us and other users of the Aquatic Plants and Fish pamphlet which can, under	Comment noted.

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	the provisions, serve as a HPA.	
WAC 220-110-290(4)(a)(i)...	After "not be given for raking" delete the rest of the sentence, which states "and if given, may require mitigation through a written agreement between the applicant and the department for impacts by raking to the spawning area." It is outside RCW 77.55.021. This would be a permit within a permit.	This agreement is a mitigation plan or agreement approved before issuing the standard HPA and cited in the plan provision of the HPA. So it is not a permit within a permit.
WAC 220-110-290(4)(d)(iii)	Removal or control of aquatic beneficial plants to maintain an access for boating or swimming is allowed along a maximum length of 10 linear feet of the applicant's shoreline. The department requires prior authorization for boating and swimming access projects which cover a larger." Change to read, " which cover a larger area."	Language amended.
WAC 220-110-290(9)(c)(i)	Recommend changing to "Minimize impact during removal of an aquatic noxious weed early infestation."	The provision accurately states the requirement.
WAC 220-110-300	Keep in mind that the federal government studied this issue many years ago with 8" and 10" dredges and concluded that they had only a de minimis / insignificant impact on fish and river habitat. WDFW would be wise to respect those studies and miners simple "right to work". Obviously it's far below the excesses of nature which fish have survived for 'billions of years...	Comment noted.
WAC 220-110-300	We are concerned that the proposed regulations do not provide adequate protection (in practice) to fish-bearing streams in at least two ways. First, restrictions on mineral extraction activities, in particular placer mining, do not appear to adequately protect fish habitat. The timing restrictions likely prevent destruction of active redds and fry (as intended), but they clearly do not prevent habitat degradation that ultimately can have population-level effects on sensitive trout and salmon species. This concern is informed by both a careful read of the proposed rule changes and our own direct observations in the Blewett Pass area in 2013. During the designated timing window this past August, we witnessed suction dredging	These rules were updated a few years ago. We are not proposing major changes.

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	<p>activities on Swauk Creek in Kittitas County that are clearly destructive to important steelhead trout spawning, rearing, and migration habitat (Figure 1). Whereas subsequent discussion with WDFW staff suggests that there may have been violations associated with some of this activity, we could find nothing in the Gold and Fish Pamphlet or the proposed Hydraulic Code Rules that explicitly supports that. At the very least, the rules, as they are written and enforced, do not seem to be having the intended consequence of protecting streams, fish, and habitat. We are especially concerned about this because these activities appear to be widespread throughout the Swauk Creek and Peshastin Creek watersheds, often times with multiple mineral prospectors engaging in sizable suction dredging operations within a single subwatershed (e.g., Scotty Creek). We strongly suggest that updates to the hydraulic code include more restrictive regulations for placer mining to ensure that important salmonid spawning habitat is not disturbed to such an alarming extent.</p>	
WAC 220-110-300(3)(d)	<p>We suggest adding the following: "Mineral prospecting applications for work outside Gold and Fish work windows and/or increased equipment size in shorelines of the state must be consistent with all applicable goals and policies of the Shoreline Management Act, its rules, and the local shoreline master program."</p>	See (8)(f)

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WAC 220-110-300(4) and (5)	<p>The protections for existing fish habitat improvement structures or stream channel improvements [WAC 110-110-300(4)(g)(xi) and 300(5)(k)] are currently ambiguous and subjective, providing only that such improvements may not be "disturbed ." In contrast , protections for fishways, dams and hatchery intakes are specific and objective, prohibiting excavation and processing within 400 feet of such improvements. The 400 feet buffer area is supported by the science on the water quality impacts associated with small-scale mineral prospecting (see Small-Scale Mineral Prospecting White Paper, prepared for WDFW, Dec. 2006, at 11-8). Because fish habitat improvement projects (see proposed change to definition of "Fish habitat improvement structures or stream channel improvements") are intended to improve habitat and attract fish life, Seattle City Light recommends that the same buffer area defined for fishways, dams, and hatchery intakes be applied to any habitat improvement project. Accordingly, regulations for fishways, dams, intakes, and habitat improvement structures [300(4)(g)(x) and (xi) and (5)(k)] should be combined into a single proviso in each of sections 300(4) and 300(5) as follows: "A person may not excavate, collect, remove, or process aggregate within 400feet of any fishways , dams, hatchery water intakes, fish habitat improvement structures, or stream channel improvements."</p>	<p>These rules were updated a few years ago. We are not proposing major changes.</p>
WAC 220-110-300(4)(g)	<p>The protections for fishways, dams, hatchery water intakes [WAC 220-110-300 (4)(g)(x)], and habitat improvement structures [WAC 200-110-300(4)(g)(xi)] currently apply only to aggregate processing activities in section 300(4)(g). In contrast, protections for fish life and</p>	<p>These rules were updated a few years ago. We are not proposing major changes.</p>

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	<p>redds [WAC 220-110-300(4)(e)] apply to all activities under section 300(4), i.e., they apply to both aggregate excavation [section 300(4)(f)] and to aggregate processing [section 300(4)(g)]. The regulatory protections for fishways, dams, hatchery intakes [300(4)(g)(x)] and habitat improvement structures [300(4)(g)(xi)] should likewise apply to both excavation and processing because both activities can damage these structures. Accordingly, City Light recommends that subsections 300(4)(g)(x) and 300(4)(g)(xi) be moved up in the regulation to become new subsections 300(4)(f) and 300(4)(g), similar to the existing protections for fish life and redds.</p>	
<p>WAC 220-110-300(4)(g)(ii)</p>	<p>"A person may not stand on or process directly on redds, or disturbs incubating fish life." Change to read, "or disturb incubating fish life."</p>	<p>These rules were updated a few years ago. We are not proposing major changes.</p>
<p>WAC 220-110-300(5)(a)</p>	<p>We suggest adding the following: "Mineral prospecting applications for work outside Gold and Fish work windows and/or increased equipment size shall meet local, state and federal permit requirements." Ecology recommends submittal of a standard JARPA to all permitting agencies for application.</p>	<p>These rules were updated a few years ago. We are not proposing major changes.</p>
<p>WAC 220-110-300(7)</p>	<p>(Table 2) Native salmonid recovery efforts in the Pend Oreille watershed have been the subject of intensive discussion and planning in recent years. Fish passage at Albeni Falls is currently under assessment, while planning for passage is underway at both Pend Oreille PUD's Box Canyon Darn and at Boundary Darn. These efforts are expected to increase the numbers of native salmonids (primarily bull trout) moving into Boundary Reservoir and its tributaries. The Boundary Darn License issued by FERC and the Boundary Settlement Agreement between City Light and federal and state agencies (including WDFW, the Kalispel Tribe, and non-governmental organizations) includes a comprehensive Tributary Management Plan for tributaries draining into the Boundary reservoir. Sullivan Creek is the largest of these tributaries and includes US Fish and Wildlife Service (USFWS) proposed "critical habitat" for bull trout. Biological</p>	<p>These rules were updated a few years ago. We are not proposing major changes.</p>

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	<p>surveys indicate that cutthroat trout and bull trout utilize the delta region and lower reaches of Sullivan Creek for rearing purposes, and mountain whitefish spawning is known to occur there (City Light, 65). Throughout the next 10 years City Light will be undertaking significant habitat and native salmonid species restoration efforts throughout the Sullivan Creek watershed. These efforts include the removal of Mill Pond Darn and restoration of the affected area; numerous large woody debris installations; culvert removals; channel and bank improvements; riparian plantings; restoration of dispersed recreation sites adjacent to creek banks, and other actions. In addition City Light will conduct extensive suppression and eradication of non-native fish throughout the Sullivan watershed, and will stock the watershed with native salmonids that will be propagated at a new conservation hatchery that is currently being planned by City Light. This program is both ambitious and expensive. City Light requests that the Sullivan Creek watershed (i.e. Sullivan Creek and its tributaries, including North Fork Sullivan Creek) be designated in Table 2 under "Pend Oreille County" (p. 140) as "submit application". Without being so listed and designated, prospecting with up to a 4'14" suction nozzle would be allowed between July 1 and August 31. Allowing prospecting in this area, without the individual assessment and mitigation of impacts that would otherwise occur through processing of a standard HPA, will almost certainly undermine the habitat and native salmonid restoration goals for Sullivan Creek as identified by the agencies, Tribe, and other parties to the Boundary Settlement Agreement and as required by the FERC Boundary license. The rules provide for interested parties to submit applications for mineral prospecting and placer mining projects in Illabot Creek, Skagit County. Illabot Creek has been proposed for designation as a Wild and Scenic River and provides high quality habitat utilized by chinook, coho, chum and pink, salmon,</p>	

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	<p>as well as steelhead. Coho are known to utilize the creek for rearing purposes throughout the year. City Light requests that mineral prospecting and placer mining projects not be allowed in Illabot Creek due to its high habitat value to priority fish species identified in 220-119-120 (3)(b).</p>	
<p>WAC 220-110-300(7)</p>	<p>(Table 2) Although we agree that recreational panning for gold during non-spawning periods will typically result in minimal disturbance of salmon habitat, we are opposed to the use of suction dredges in anadromous waters. Such operations carry a substantial potential to harm fish eggs, juvenile fish, and fish habitat. Two issues pertinent to suction dredges are particularly problematic. First are the work windows that allow suction dredging in anadromous reaches of our co-managed rivers and streams when juvenile salmonids are present and adult fish are migrating. Suction dredging in our watercourses should require an individual HPA with the associated tribal notification requirements and accurate location information. This requirement will facilitate opportunities for closely monitoring these activities.</p>	<p>Comment noted.</p>
<p>WAC 220-110-300(7)</p>	<p>The provisions for recreational mineral prospecting (220-110-300) are still controversial, despite years of legislative and administrative discussion. While we accept the minimal disturbance resulting from gold panning, SRSC and our member tribes are opposed to the use of suction dredges in anadromous waters, which carries a substantial potential to harm juvenile fish and fish habitat. Two issues on suction dredges are particularly problematic. First is the work windows, which allows suction dredging in anadromous reaches of the Suiattle River when juvenile salmonids are present and adult fish are migrating. Suction dredging in the Suiattle River should require an individual HPA (as it is in other anadromous reaches of the Skagit), so that activities can be monitored closely. To properly protect fish life the Suiattle work window should be changed to “submit application”</p>	<p>Comment noted.</p>

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	<p>and that application should require a JARPA, with full tribal notification as with any other individual HPA. Second is the use of “simplified” applications to issue suction dredging permits. The simplified application does not require landowner information, nor is the location information precise enough to allow these activities to be monitored.</p>	
WAC 220-110-300(7)	<p>The Tribe has observed significant numbers of returning Chinook from August through Sept in Gorst Creek (prior to the Sept 30 closing of the work window shown in the table). It is my understanding that 40% of the Chinook run occurs in August and 60% in September. The deadline for work in Gorst Creek should be August 15.</p> <p>Chinook salmon have routinely been observed in Dogfish Creek beginning in mid-late August.</p> <p>Therefore the work window as it is posted through Sept is too long. This has been an issue in the past with work being done upstream with spawning salmon. Our stream surveyor will later find massive amounts of sediment covering the redds. Ideally the deadline for in-stream work would be August 15.</p> <p>Grovers Creek is the home of the Tribe's Chinook broodstock. The bulk of Chinook spawning happens within the entire month of Sept. Any disturbance to the spawned eggs or disruption in water quality can result in significant impacts. Although some fish always show up earlier and later than others the Tribe recommends August 31 as a deadline.</p>	The timing windows are amended.
WAC 220-110-300(7)	<p>Table 2) "Amon Creek" is an unofficial name for the "Amon Wasteway", an irrigation drain that conveys operational spill and agricultural return flows from the Kennewick Irrigation District canal system and service area to the lower Yakima River. Amon Wasteway is the official name given to the water course in United States Bureau of Reclamation plans for the Kennewick Division of the Yakima</p>	The name is changed.

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	Project, as well as United States Geological Survey topographic maps of the area, and within the United States Board on Geographic Names , Geographic Names Information System database. The Kennewick Irrigation District requests that WDFW correct page 118 of the Draft Hydraulic Code Rules Chapter 220-110 WAC, Version 4, dated September 30, 2013 by changing the erroneous "Amon Creek" to the correct and officially recognized "Amon Wasteway."	
WAC 220-110-310	WDFW should have a map of these locations on line for reference by the applicant.	A map will be put on the HPA page on our web site.
WAC 220-110-320	Do not allow biologists to modify work windows based on site or project-specific consideration.	Timing restrictions should apply only when the habitat is present and the work poses a risk to that habitat. For example, test boring offshore would not impact intertidal forage fish spawning beds. Work in the intertidal when the tide is out would not impact the juvenile salmonid migration areas if the worksite was secured before the tide came in. Language was amended to clarify intent.
WAC 220-110-320	It would be nice to add a section for restoration projects, since these windows provided assuming that a project is being built that may negatively harm the marine/nearshore environment. A section could be added to say that when government agencies are working on restoration projects, agencies will consult with state biologists to determine if impacts to nearshore habitat warrant consideration such that work fit into authorized times.	Comment noted.
WAC 220-110-320	In addition to fish closure windows- the timeline for marine projects is driven by multiple factors including tides, seasonal low water, expiration of funding, or other permit requirements. This section appears to allow for flexibility regarding fish closure windows based on the anticipated impacts related to a specific project. State Parks supports an approach that allows for as much flexibility as possible while still protecting fish life rather than a rigid "one size fits all"	Comment noted.

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	approach to work times.	
WAC 220-110-320 (3)	Have juvenile rockfish and/or juvenile lingcod settlement areas been mapped? If not, how does an applicant determine if one is present on a site?	Some settlement areas are mapped. This can be better determined during a dive survey.
WAC 220-110-320(3)(a)	Rock sole spawning protections have been omitted from rule language. Larval rock sole are a food source for juvenile salmonids and spawning activity occurs in the marine nearshore areas most impacted from the project work subject to HPAs.	Forage fish studies conducted by WDFW after 1994 found that rock sole were not obligate beach spawning fish so rock sole spawning areas is removed.
WAC 220-110-320(3)(a)	The provision to protect habitat which would only be applied to a project if the habitat, species or spawning activity has been fully documented at the site, weakens protection of Puget Sound. Since many productive habitats in Puget Sound are undocumented, they would not be protected under the proposed rules. The rules requiring such 'documentation before protection' should be dropped.	RCW 77.55.231(1) states the department cannot optimize conditions for fish life that are out of proportion to the impact. Restricting project timing without evidence to show the restriction is necessary is optimizing. We agree, there needs to be a larger effort to document these areas.
WAC 220-110-320(3)(a)(i)	Just for consistency, recommend placing in table with surf smelt, plus there's a common activity overlap with this forage fish than there is with other marine fish species in this section.	Comment noted
WAC 220-110-320(3)(a)(iii)	Based on recommendations from NMFS, Dan Tonnes, extend work window closure to October 1 to January 14. The primary activity that would require this window are sound effects from impact pile driving on or adjacent to preferred substrate (kelp, eelgrass, vertical relief) within the intertidal and shallow sub-tidal areas of the nearshore.	Comment noted.
WAC 220-110-320(3)(a)(v)	Table 3. All times are more restrictive. Recommend keeping existing timelines but adding additional monitoring services for projects. This will allow work to continue as previous but will monitor where/when aquatic life is entering the project area.	Comment noted.
WAC 220-110-320(3)(a)(v)	Table 3 The Port strongly deems that the proposed August 1 through February 15 work window for Commencement Bay is too restrictive based on best available science. The assumption that the industrial	Comment noted.

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	waterways of the Port have fish presence proportional to other parts of Commencement Bay and Puget Sound does not constitute best available science. WDFW should anticipate considerable resistance to this change, which could lead to an increase in permit appeals, if these changes are not supported by best available science.	
WAC 220-110-320(3)(a)(iv)(C)	Amend the sentence to read..."within 48 hours after the work site is surveyed"...	Language amended.
WAC 220-110-320(3)(a)(vi)(D)	The timing windows in reference area 4 and others are such that if sand lance and surf smelt are both present, the applicant has no defined time window in which to schedule a project. The applicant must then wait for the surf smelt spawning window within which some flexibility is offered, but he/she must check for surf smelt eggs before and during the project. If eggs are found, the department MUST shut down the project for at least three weeks and then test again. It is possible that tests could show surf smelt eggs all through the window until it then closes because of the sand lance closure. Please provide the department some flexibility in cases where both surf smelt and sand lance spawning is documented on a site by using a phrase other than "the department must prohibit work".	If the work posed a risk to juvenile salmon migration, feeding and rearing areas and surf smelt and sand lance spawning beds the window would be August 1 – September 30 in reference area 4. Language amended.
WAC 220-110-330	PSP strongly supports the inclusion of feeder bluffs in the definition; emphasis on protection of such shorelines coincide with NTA B2.1.1 in the 2012 Action Agenda to permanently protect bluff backed beaches. The protection "of sediment supply and other shoreline processes" was included as an emerging issue/future opportunity in the Action Agenda (page 136). Moreover, protection of nearshore habitat using the Hydraulic Code was listed as Near-term Action D2.2.1(2a6) as a Tribal Habitat Priority (page 92 of the Action Agenda).	Comment noted.
WAC 220-110-330	Similar to how NMFS identifies critical habitat for listed species. NMFS recommends this approach, or outline for outlining Habitats of	Comment noted.

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	Special Concern. If habitat conditions fit these parameters, then review and condition the permit accordingly to avoid, protect and mitigated as required.	
WAC 220-110-330	Protect rock sole spawning.	Forage fish studies conducted by WDFW after 1994 found that rock sole were not obligate beach spawning fish so rock sole spawning areas is removed
WAC 220-110-330(1)	We oppose the current language found in proposed WAC 220-110-330 (1) that states "The presence of saltwater habitats of special concern or areas in close proximity with similar bed materials may restrict project type, design, location, and timing."	Comment noted, but the comment was not specific enough to respond to.
WAC 220-110-330(1)	Recommend modifying language: "Saltwater habitats of special concern include those ecosystem processes that provide essential functions in the development of priority fish species. These include but are not limited to: 1) spawning habitats for forage fish, 2) settlement and nursery...etc.,	Language amended
WAC 220-110-330(1)	Recommend replacing the word "ecosystem" with "geomorphic" or add "geomorphic" to be more accurate, and consistent with the term used on page 2-6 of the DEIS. In second paragraph, replace "biologist" with "qualified professional"; which will allow the department to utilize a geomorphologist as needed.	Language amended
WAC 220-110-330(2)	Hydraulic projects ranging from installing stairways across bluff faces, to building docks and bulkheads, to dredging contribute to a loss of habitat in the nearshore environment. Modify to read "...may contribute....." (	Language amended
WAC 220-110-330(2)	The edge between the upland and the aquatic should also include the riparian corridor, just as important to many life history needs as is sediment supply and transport. Allochthonous input and terrestrial prey is preferred by juvenile salmonids, and key to overlapping upper intertidal to the uplands.	Riparian vegetation is included as a saltwater habitat of special concern.

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WAC 220-110-330(3)(a)(v)	What performance standards are expected for maintaining riparian vegetation? Are there requirements to mitigate for lost native riparian vegetation? Buffer widths, minimum size tree size and retention, and or replacement, etc.?	Riparian buffers are established by local government critical areas ordinances. WDFW limits mitigation requirements to riparian functions impacted by the hydraulic project.
WAC 220-110-330(4)(b)	Suggest either replacing "ecosystem" with geomorphic" or adding "geomorphic in section title and subsection (b).	Language amended.
3WAC 220-110-330(4)(b)(iv)	"Tidal channel formation and maintenance; and". Change to read, "formation and maintenance." (or is there a missing paragraph (v)?	Language amended.
WAC 220-110-340	Does the Department offer training to conduct forage fish spawning surveys, or seagrass and macroalgae habitat surveys? If so, we would like to know how we can obtain this training. If not, how can the public comply with this proposed WAC?	WDFW does offer this training. See our website <a href="http://wdfw.wa.gov/conservation/research/projects/marine_beach_spawning/index.html">http://wdfw.wa.gov/conservation/research/projects/marine_beach_spawning/index.html</a>
WAC 220-110-340 (1)	What is considered " presence, absence"...is there a number other than (0) and (1)?	Two eggs are considered presence.
WAC 220-110-340(3)	These are important survey guidelines, but the actual HPA construction provisions should be fairly specific to the timing of work and any other special conditions to ensure construction avoids and minimizes effects to forage fish spawning beds. It will be known prior to issuing the HPA if the project is in documented forage fish spawning habitat, and those areas where extending spawning beyond 6 months.	Many single-family residence shoreline property owners don't always know this.
WAC 220-110-340(3)(b)	Provide specific web-link address.	URLs change frequently so we do not put web addresses in rule. We have these on our web site.
WAC 220-110-350	Does the Department offer training to conduct forage fish spawning surveys, or seagrass and macroalgae habitat surveys? If so, we would like to know how we can obtain this training. If not, how can the public comply with this proposed WAC	The department has a protocol that diver/biologists must follow. <a href="http://wdfw.wa.gov/publications/pub.php?id=00714">http://wdfw.wa.gov/publications/pub.php?id=00714</a>
WAC 220-110-350(1)	Consider whether "may" should be changed to "shall" in the following: "The department may require an applicant to hire a	Often habitat biologists can do a vegetation survey if the project is completely in the intertidal beach so "may" is appropriate here.

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	qualified professional diver/biologist to conduct one or more seagrass and macroalgae habitat surveys.”	
WAC 220-110-350(1)	This sounds more design criteria than 'description'. Description seems more appropriate for a type of activity, not so much collection of baseline data for a proposal.	Comment noted.
WAC 220-110-350(2)	Under what circumstances and potential risk or damage to macro algae and sea grass is boat propellers considered?	It is considered in the design criteria for overwater structures.
WAC 220-110-350(3)	Consider whether failing to require seagrass/macroalgae survey is consistent with ESA.	WDFW is charged with protecting all fish life, not just ESA-listed species. However, the Services can also require a survey.
WAC 220-110-350(3)	This is a mix of design criteria and compliance monitoring. How and the type of survey ('Advanced', or otherwise) and performance standards? If there were a monitoring section in the rules, any design elements should be a part of it.	Comment noted.
WAC 220-110-350(3)	Ensure construction does not adversely impact areas with potential, but not yet mapped, sensitive habitat.	These surveys are for seagrass and macroalgae which are saltwater habitats of special concern.
WAC 220-110-350(3)	What other types of surveys are required? Basic, intermediate? What site conditions (i.e., presence of eelgrass, herring spawn, etc.) require an Advanced survey?	Language amended to clarify.
WAC 220-110-360	Require scientific or technical studies of site resources including, where appropriate, forage fish spawning surveys, vegetation surveys, and professional risk and justification assessment for approval of a bulkhead waterward of the ordinary high water mark.	The requirement doesn't comply with RCW 77.55.141.
WAC 220-110-360	The department should firmly require an engineer's report that unequivocally determines shoreline stabilization is required before allowing any form of bulkhead or armoring. If stabilization is warranted, the department should firmly require soft stabilization be used unless an engineer clearly finds that a hard bulkhead is the only option.	The requirement doesn't comply with RCW 77.55.141.
WAC 220-110-360(3)	Bulkhead Design - It is unclear when and how the department directs	Currently, applicants don't know which RCW the department will

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and (4)	a single family bulkhead application to either the review process under RCW 77.55.141 or to the other process under RCW 77.55.021 because there are no references to these RCW's in the administrative section of the Hydraulic Code (WAC 220-110-050) and some type of review would be needed to determine if the proposal is eligible for process described in RCW 77.55.141. Recommend adding new code sections (in both section -050 and -360) which will provide the department with the time and responsibility to make the determination that the proposed bulkhead (or repair will not result in "permanent loss of critical food fish or shellfish habitat" before determining whether the single family residential HPA is processed under RCW 77.55.021 or 77.55.141.	process their application under. The biologist determines this when they receive the application. It is part of the normal review process. We cannot change the statutory time line of 45-days so the determination of which RCW applies and the permit decision have to be made within the 45-day timeframe.
WAC 220-110-360(3)(a)	This section is confusing. The department should clarify when "re-established" OHWL is utilized. Recommend adding "for permitting purposes" to the beginning or end of the first sentence, such as "If the OHWL re-establishes landward of a bulkhead protection structure, the department will consider this re-established OHWL to be the existing OHWL for permitting purposes."	Language amended.
WAC 220-110-360(3)(a)	It is unclear whether there is a statutory basis for the two year time frame in the following statement: "if the breach was a result of storm damage or other natural conditions, the bank protection structure may be repaired or replaced in the existing footprint provided the work occurs within two years from the date the damage occurred." Please clarify the basis.	This is a policy decision. However, comments indicate two years is too short so we are amending to allow three years.
WAC 220-110-360(3)(a)	When is this not the case? Most all erosion behind the bulkheads is the result of natural processes. Suggest re-write: "If repairs are completed within 2-yr of breach, then the bulkhead may be replaced in original footprint."	Language amended.
WAC 220-110-360(3)(a)	Can the 2 year requirement be waived if the application for the repair bank protection has been submitted to WDFW and the project is	We changed the timeline to three years to ensure applicants had adequate time to secure Corps permits if required.

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	going through the other regulatory agency reviews processes?	
WAC 220-110-360(3)(a)	The State of Washington will soon be releasing a guidance document for bulkheads that will provide engineering guideline for soft shore protection. This should be referenced in this section. Suggest that wording be changed to say that if a bulkhead is being replaced due to damage, soft shore protection will be considered as a first option to lessen environmental impact to the nearshore. If this is not technically feasible, the structure will be repaired or replaced in the existing footprint provided the work occurs within two years from the date the damage occurred. The guidance document is called Marine Shorelines Design Guidelines for Puget Sound, DRAFT June 28, 2013. Its information may be relevant to much of this HPA revision.	Language amended.
WAC 220-110-360(3)(b) and (c)	Why are the two different standards for bulkheads on this page?	Two different RCWs apply. Each has different standards.
WAC 220-110-360(3)(b)	There does not seem to be a case when a bulkhead WILL NOT result in the permanent loss of critical habitat...juvenile salmonid migration corridor, or "those habitats that serve an essential function in the developmental life history of fish or shellfish...". Many juvenile marine fish species are dependent on the nearshore, same area of the juv. salmonid migratory corridor, that would make approving any bulkhead under RCW 77.55.141. not possible. "Critical food fish and shellfish habitats" mean those habitats that serve an essential function in the developmental life history of fish and shellfish. These habitats include but are not limited to saltwater habitats of special concern listed in WAC 220-110-140 and 360.	The key here is whether or not the department can prove a loss of critical habitat. Would a bulkhead constructed at or landward of OHWL result in a loss? If so, what loss and how would you prove it? For example, since juvenile salmon migration corridors are ambiguous the department cannot prove that a bulkhead at a given site would result in a loss of habitat used by juvenile salmon at the specific location.
WAC 220-110-360(4)	Recommend adding the ability of the department to include a timing constraint condition in this section as allowed by RCW 77.55.141(2)(d). Recommend requirements that those SFR processed under .141 also be required to explore alternatives that are less impacting as is required under (5)(a).	Timing constraints are in section 320. The recommendation to require SFR bulkheads processed under 141 to explore less impacting alternatives doesn't comply with the statute.

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WAC 220-110-360(4)(a)	Eliminate all but first sentence. This is rare for a new bulkhead, but seems one of the few instances where effects to nearshore processes are minimize, but not avoided. Any waterward movement of the face of a new bulkhead will likely have effects on nearshore processes, therefore should not be processed under 77.55.141. What about displacement, loss of riparian vegetation. Riparian vegetation is considered part of the Saltwater Habitats of Special Concern and is very vital in maintaining healthy nearshore processes.	This language is from the statute. The standard is loss of critical food fish and shellfish habitat.
WAC 220-110-360(4)(c)	"may require"...design criteria, not HPA construction provisions.	This is related to mitigation which may or may not be proposed in the HPA application.
WAC 220-110-360(5)(a)	The 'least impacting, technically feasible alternative' needs to take the cost into consideration since technical feasible could involve an expensive solution to a minor problem.	The mitigation section requires the department to consider less expensive alternatives if they provide equal or better protection for fish life.
WAC 220-110-360(5)(a)	Recommend addition to this sentence: "...from the least impacting to most impacting and may require one of more of the following design alternatives to meet site specific conditions and minimize project effects to fish life.	Language amended.
WAC 220-110-360(5)(b)	What kind of "qualified professional's" rationale? Geotechnical/engineer?	Qualified professional is defined in section 030.
WAC 220-110-360(5)(c)	Isn't this already considered under 360(5)(a), above? Eliminate this provision.	Provision removed.
WAC 220-110-360(5)(d)	Lists possible incorporation of large woody material or native vegetation into the design, but no mention of beach nourishment or restoration (listed in WAC 220-110-360(6)(l)).	Beach nourishment added.
WAC 220-110-360(5)(d)	Recommend re-writing to read: "...may require the incorporation of any of the alternative designs noted in WAC 220-110-360(5)(a)" into the design of bank protection structures. Why limit to LWM or vegetation, after listing alternatives above? Certainly sediment supplements or other biotechnical methods may suite site specific	The intent of this provision is to list potential mitigation.

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	conditions better than only LWM and or vegetation.	
WAC 220-110-360(5)(e)	Recommend: "...minimum distance, but no greater than 6-feet, needed to..."	Language added.
WAC 220-110-360(5)(g)	Consider adding additional language that mitigation shall be required to compensate for unavoidable nearshore impacts in the following statement: "The bank protection must not result in a net loss of critical food fish or shellfish habitats."	This applies to all project types and is covered in section 100.
WAC 220-110-360(5)(g)	Is this really feasible?? This relates back to adequate monitoring and adaptive management program, which the rules currently do not have.	Monitoring and adaptive management are internal business practices and are not a requirement of chapter 77.55 RCW. However, the department is doing compliance and effectiveness monitoring.
WAC 220-110-360(6)	Many of the 'construction' provisions are 'design criteria', those by which an HPA application is reviewed.	Comment noted, but the comment was not specific enough to respond to.
WAC 220-110-360(6)(d)	"will occur" assumes it will, regardless of timing restrictions. Recommended re-write: "...if construction activities are proposed to occur in the upper beach..."	Language amended.
WAC 220-110-360(6)(h)	We recommend adding wetlands to the following: "No stockpiling of excavated materials containing silt, clay, or fine grained soil is allowed below the OHWL or within associated wetlands."	Comment noted.
WAC 220-110-370	Based on the fact that no "non-residential" dock or pier standard is provided, confirmation is requested as to whether or not the residential dock and pier standards contained at 220-110-140 and 220-110-370 would apply to dock and pier structures constructed by State Parks. State Parks' interpretation is that agency constructed public docks and piers would be considered either "Marinas" or "Marine Terminals" pursuant to sections 220-110-160 and 220-110-390 and therefore subject to the standards contained in those sections. Please provide confirmation that this is the interpretation of your agency. In the event that the residential dock and pier standards do apply to State Park facilities, additional comment will be	We added non-resident docks to this section.

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	forthcoming.	
WAC 220-110-370(3)(b)	We noted 220-110-140(4)(a) prohibits floating docks unless piers or pier/ramp/float dock designs are prohibited by local land use regulations. Clarify the basis for this provision applying to freshwater and not also to saltwater	Language amended; the local regulation clause should apply to both.
WAC 220-110-370(3)(b)	"New structures may be a pier only; pier, ramp, float; or a float only provided." Site locations may not always provide for these types of structures. You should allow for alternatives based on site needs.	We use performance standards rather than specify acceptable designs to allow flexibility.
WAC 220-110-370(3)(b)(i) and (ii)	Recommend deleting 25 feet. Is there scientific evidence that can justify this number? Recommend "minimizing impact to surrounding seagrass and kelp".	Language added to allow deviation from 25-foot buffer.
WAC 220-110-370(b)(ii)	The new provisions appear to make it easier for an applicant to site their pier over important spawning areas. Herring spawning surveys show that herring spawning areas vary year to year. Therefore the new provisions requiring merely that "Structures are located a minimum of twenty-five feet (measured horizontally from the edge of the structure) in all directions from seagrass and kelp" does not comport with the best available science and could result in detrimental impacts to the habitat and species of concern.	Current WACs allow construction of overwater structures in herring spawning beds. Available science indicates that a 25-foot buffer is adequate to protect vegetation on which herring spawn.
WAC 220-110-370(b)(iii)	After "designed and located" delete "to avoid adverse impacts to" add "for protection of fish life"	This is specific language that addresses impacts to a specific kind of fish life so it is appropriate.
WAC 220-110-370(3)(c)(i)	City Light urges the department to replace ACZA with ACQ as the allowed treatment. This would eliminate the introduction of toxic zinc and arsenic to impacted water bodies.	We added ACQ to the list of approved treated wood but we don't feel the science supports the ban of other copper-based treated wood. Currently the Western Wood Preservers approves ACQ and CA-B and C for Above Ground, Ground Contact and Fresh Water applications only.
WAC 220-110-370(3)(d)	"The design must not use treated wood for the decking of the structure. The design may use ammoniacal copper zinc arsenate (ACZA) treated wood for structural elements." Clarify what is meant	Treated wood is covered in section 220-110-100.

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	by "treated wood" in the 1'1 sentence since ACZA is also treated wood. Definition will also affect section (e).	
WAC 220-110-370(3)(f)	"All grating must have at least a forty-two to sixty percent open area areas depending on the percent of deck area covered." Change to read, "to sixty percent open area depending"	Language amended and moved under pier design and float design.
WAC 220-110-370(3)(h)	What is the justification for these standards? These should be based on structural and safety needs of a facility, not predefined. What is a "qualified professional"?	Qualified professional is defined in section 030. The justification for the design standards is provided in the citations. We agree structural and safety needs are important.
WAC 220-110-370(3)(k)	After "the department will "delete"only allow" add "approve" to be consistent with RCW 77.55.021.	Language amended.
WAC 220-110-370(4)(a)	We recommend removing "except noxious weeds from the following: "Piers must span intertidal and wetland plants (except noxious weeds), surf smelt, and Pacific sand lance spawning beds."	Language removed.
WAC 220-110-370(4)(b)	Add to all areas of the WAC changes that any walking surfaces must meet current ADA regulations.	Language added.
WAC 220-110-370(4)(c)	There does exist designs that are reliant on 100% grated decking, resulting in maximal functional grated decking exceeding 30%. Perhaps re-word to say "...must exceed thirty percent functional grating..."	Language amended.
WAC 220-110-370(4)(c)	Current USACE guidelines call for one hundred percent grating for dock and float permits. The department should adopt similar policy and language and should also incorporate provisions related to the height of structures as increased dock height has been found to have less impact on light reduction.	Language added. 100 percent grating in floats would not provide any increase in light transmission because of the flotation.
WAC 220-110-370(6)	Why is there not a restriction to location and distance from macro and eelgrass as there is under (8)(c)? "Locate the buoy to avoid shading impacts from vessels and/or damage from vessel propellers to submerged aquatic vegetation.	This distance is variable depending on the water depth and the scope of the rode. Moored vessels swing with the tide and current. They are not stationary so shading impacts are negligible.

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WAC 220-110-370(9)	These construction provisions (9)(c)(d) and (e), should be design elements, reviewed and discussed with the applicant/agent prior to issuing the HPA. All means to avoid and minimize sound effects from piles should be known before issuing the HPA	We respectfully disagree that an applicant will know before submitting their application what kind of pile driver will be used. In some cases they may not have secured a contractor yet.
WAC 220-110-370(9)(e)	After "the department may" delete "required" add "approve" to be consistent with RCW 77.55.021.	The provision language accurately reflects the requirement.
WAC 220-110-370(9)(g)	After "the department may" delete "required" add "approve" to be consistent with RCW 77.55.021.	The provision language accurately reflects the requirement.
WAC 220-110-370(9)(j)	When will the type of concrete anchor be known? IF a concrete anchor is used, then the HPA will specify. This isn't something difficult to determine during project review.	Provision moved.
WAC 220-110-380	Boat ramps replace habitat. Consider assessing cumulative impacts of more new structures as part of the decision-making process.	This would not comply with RCW 77.55.231.
WAC 220-110-380(2)	We recommend a modification to read- Ramp and launch placement and maintenance and associated vessel activity can cause disturbance or direct removal of aquatic vegetation and can displace or damage forage fish spawning habitat.	Language amended.
WAC 220-110-380 (3)	Delete all of B. and all of C.	These subsections reflect how to design ramps and launches to minimize impacts to fish life.
WAC 220-110-380 (3)	We recommend the regulations discourage or prohibit the siting of boat ramps in documented forage fish spawning areas.	Forage fish spawning beds are a saltwater habitat of special concern. The rules already discourage boat ramps or launches from being sited in saltwater habitats of special concern. "
WAC 220-110-380(3)(g)	This is too restrictive as written. This should consider site and project specifics.	Language amended.
WAC 220-110-380(3)(g)	Recommend deletion. An absolute in this situation is too preventative. Recommend leaving more open-ended based on a site specific project.	Language amended.
WAC 220-110-	Use pre-cast concrete slabs to construct a concrete boat ramp below	Language amended.

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380(4)(a)	the OHWL. Where this is not possible, isolate and or use quick curing cement, prior to inundation by tide.	
WAC 220-110-390	Based on the fact that no "non-residential" dock or pier standard is provided, confirmation is requested as to whether or not the residential dock and pier standards contained at 220-110-140 and 220-110-370 would apply to dock and pier structures constructed by State Parks. State Parks ' interpretation is that agency constructed public docks and piers would be considered either "Marinas" or "Marine Terminals" pursuant to sections 220-110-160 and 220-110-390 and therefore subject to the standards contained in those sections. Please provide confirmation that this is the interpretation of your agency. In the event that the residential dock and pier standards do apply to State Park facilities, additional comment will be forthcoming.	Non-residential docks are added to the residential dock section.
WAC 220-110-390(3)(d) – (f)	Modify to “Locate new marinas and terminals in areas that will minimize impacts to the surrounding habitats”. Requiring marinas and terminals to be designed and located according to these criteria is impractical when integrated with subsections a-c.	Language amended.
WAC 220-110-390(3)(d)	Recommend changing to "Locate new marinas and terminals in areas that would minimize impact to the surrounding habitat."	Language amended.
WAC 220-110-390(3)(e)	New and expanded docks, wharves, piers, marinas, rafts, shipyards and terminals must be at least a specified buffer distance from existing native aquatic vegetation attached to or rooted in substrate.	This is not always possible for this type of use. However, impacts to seagrass, kelp, and macroalgae used as herring spawning substrate would require compensation.
WAC 220-110-390(4)(d)	Clarify whether 'landward' should be 'waterward'. The same provision relating to freshwater [220-110-160 (4)(d)] suggests it should be waterward.	Language amended.
WAC 220-110-390(4)(d)	Both “landward” and “shoreward” are used in this section. You should use consistent terminology if describing the same situation, as it appears.	Language amended.

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WAC 220-110-390(4)(f)	Lighting needs to provide for safe human environment as well as minimizing environmental impacts.	Comment noted.
WAC 220-110-390(4)(g)	Delete all of "g". An HPA is not required for construction landward of the OHWL to be consistent with RCW 77.55.021. Shoreline below the ordinary high water line must conform with RCW 77.55.141.	This work would affect the natural flow of water so an HPA is required.
WAC 220-110-390(4)(h)(i)	After "comply with the bulkheading provisions in" add "RCW 77.55.141 and for boat ramps and launches in saltwater areas use".	Language amended.
WAC 220-110-390(4)(i)	The toe of the shore breakwaters (jetties) may extend seaward to 0.0 MLLW, but may not extend seaward more than two hundred and fifty feet from OHWL." Is this trying to say that the mean lower low water level will be identified on the plan as 0.0 feet? Or what? What is the geodetic datum being used? NAVD88?	Language is amended.
WAC 220-110-390(4)(i)(i)	It's unclear where 250 feet from OHWL would not extend to below 0.0 MLLW in the following statement: "The toe of the shore breakwaters (jetties) may extend seaward to 0.0 MLLW, but may not extend seaward more than two hundred and fifty feet from OHWL." Consider revising this statement for clarity (e.g. "shall not extend below 0.0 MLLW").	
WAC 220-110-390(6)(a)	Modify to read "Minimize use of continuous sheet piles."	Language amended.
WAC 220-110-390(6)(c)	Most likely UHMW strips	Comment noted
WAC 220-110-390(6)(e)	"...will require sound... When is it not in the department's favor to use sound attenuation when steel pile driving? Even residential dock contractors use bubble curtains on piles 10-12 inches in diameter.	Language amended.
WAC 220-110-400(2)	"Dredging may convert intertidal habitat to subtidal habitat...." and "Dredging may affect the plant and animal assemblages....."	Language amended
WAC 220-110-	If this language remains in rule, examples should be provided when	Language removed.

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400(3)(b)	additional dredge surveys are likely to be required to provide certainty to project proponents.	
WAC 220-110-400(3)(b)	Recommend deleting. DFW can use existing surveys taken during the project. Additional surveys to existing requirements are unnecessary.	Language removed.
WAC 220-110-400(4)(a)	Delete "and shellfish and their habitat" and replace with "life" to be consistent with RCW 77.55.021.	Language amended.
WAC 220-110-400(4)(g)	This is rather generic and open ended, sounds like design criteria...	Moved to design criteria.
WAC 220-110-410	It is unclear what exactly is intended in the section on Artificial Aquatic Habitat Structures (WAC 220-110-410). The term is not defined in WAC 220-110-030. The context and wording of the proposed code imply that these "structures" are piles of rocks deposited in marine waters to provide complexity for fish. However the description says "an artificial aquatic habitat structure is a human placed and designed structure that is intended to provide long-term alterations to fresh or saltwater bottom or mid-water habitat." That description would appear to apply to engineered logjams and LWD installations in rivers and streams, particularly those that are intended to create scour pools. To prevent confusion, and to avoid discouraging instream restoration projects by adding unnecessary requirements, this section should be clarified so that it does not apply to freshwater habitat restoration structures.	Language amended to clarify intent.
WAC 220-110-410(2)	'worsen' overfishing may not be a bad thing! How about just 'may result in overfishing'	Language amended
WAC 220-110-410(3)(d)(i)	"Post-construction quarterly monitoring must follow recognized and acceptable biological protocols ..." Change to read, "Pre-construction quarterly monitoring". (Post-construction monitoring is referenced in (3)(e).	Language amended.
WAC 220-110-420(3)	Not requiring fishways on tide gates in place prior to May 19, 2003, is	Comment noted. This language does comply with RCW 77.55.221.

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	unchanged from the current law. However, the possible requirement of a fishway on a newer culvert installation could prove to be burdensome and unfair to the agricultural community.	
WAC 220-110-420(3)	What RCW requires, or conditions limit of WDFW regulatory authority? Why is WDFW not including reference to these RCWs?	RCW 77.55.161
WAC 220-110-420(4)(a) through (4)(g)	Recommend using the same wording as on page 100, sections C. Comparatively, there are inconsistencies despite saying the same thing.	The provisions in section (C) are for mineral prospecting projects excavate, process, or classify aggregate using hand-held mineral prospecting tools and mineral prospecting equipment. The scale of the work is much smaller than most dredging projects.
WAC 220-110-420(4)(b)	After "any associated energy dissipaters" insert the phrase "withstand 100 year flow and".	This doesn't really apply here. The impact to the dissipater is often wave energy in saltwater areas.
WAC 220-110-420(4)(c)	Could you clarify the intent is that any outfall pipe will be buried the full length of the minus 30 feet MLLW requirement and that this requirement is mitigation for longshore sediment drift. No mitigation for the burying of the pipe should be required since this requirement is mitigation in itself.	Language amended to clarify. Agree, compensatory mitigation is unlikely unless the construction impacts a saltwater habitat of special concern such as seagrass.
WAC 220-110-420(4)(c)	Locating outfall piping past (-30 ft. MLLW) places the point of discharge above state-owned aquatic lands in many areas. This is another reason to include language about state-owned aquatic lands in section WAC 220-110-040.	See comment on WAC 220-110-040(1)(c).
WAC 220-110-430(3)	A frequent problem with utility crossings in saltwater areas is that many of the utility corridors are located along the shoreline rather than actually crossing the saltwater body. The resultant utility maintenance is a chronic disturbance that interrupts the establishment of riparian vegetation, and the utility pipes and cables frequently are protected with bank stabilization, whether they need it or not. This section of the code should be revised to add provisions that require utility companies to locate their infrastructure upland of the ordinary high water mark whenever feasible. Some of the language for marine bulkheads could be repeated here. The same	(3)(a) states: "A person must locate utility crossings to avoid impacts to saltwater habitats of special concern unless this is not practicable due to geological, engineering or safety constraints." This would include placement landward of the OHWL. Applicable bank protection provisions would apply to any utility crossings requiring bank protection. There is no need to repeat them here.

PROPOSED WAC	COMMENT	RESPONSE
	concept applies to utilities located along freshwater bodies	
WAC 220-110-430(3)	This rulemaking proposes to change the language to require that utility crossings avoid impacts to saltwater habitats of "special concern." Normally, utilities would attempt to avoid such areas, but in some cases- if there is system, topographical or other constraint - there may be no feasible alternative to impacting these areas. Consequently, we request that the Department please modify this section to allow for situations that involve no feasible alternative, and with appropriate mitigation required.	Language amended to clarify intent.
WAC 220-110-430(4)(b)	This is confusing and may contain a typographical error. Is the intent to require the applicant to ensure the facility is built in the proper location (where the preliminary studies occurred)? We recommend that the language in the proposed rulemaking be changed for better clarity, and acknowledge that there may be surveys other than for vegetation that should be considered.	Language amended to clarify intent.
WAC 220-110-430(4)(g)	This states that large features on the beach should be retained. We ask that the Department modify this proposal to acknowledge that some large objects may not be compatible with the facilities installed, and could cause safety or other operational concerns. This could be achieved by adding a "where feasible or not in conflict" clause.	Language amended to clarify intent.
WAC 220-110-440(1)	Subsection (1) (Description) provides only a partial description of what boring is used for on utility projects. In addition to being a method for studying subsurface conditions, it is also a construction method frequently used for installing utility facilities. Either the name of this section should be changed to "test boring," or subsections (1) and (3) should be expanded to included bored construction. Without clarification, this section could easily be applied inappropriately to projects	Section changed to test boring.
WAC 220-110-440(1)	The description of boring in (1) seems to limit the applicability of this section to the bed of water bodies. Yet the description in (3) would	The section would apply only to hydraulic projects

PROPOSED WAC	COMMENT	RESPONSE
	<p>seem to describe activities taking place outside the water column.  This section should clearly describe the areas within and adjacent to waters of the state which will be subject to its provisions.</p>	

## A.5 Comments on Draft Programmatic EIS

WDFW issued the Draft Programmatic Environmental Impact Statement (Draft PEIS) on the Hydraulic Code Rule Changes in October 2013. WDFW received numerous public comments on the DPEIS during the comment period which ended December 13, 2013. Table A-12 contains comments submitted to WDFW about the fall 2013 draft programmatic environmental impact statement. After reviewing the comments received on the draft (Table A-12), WDFW decided to prepare a supplemental PEIS (released in July 2014). Following are comments received about the original draft programmatic environmental impact statement released for public review in September 2013. The comments are organized by section/topic, and WDFW response appears in the column on the right.

**Table A-12 Comments on October 2013 Hydraulic Code Rule Change Draft Programmatic EIS**

DPEIS TOPIC	COMMENT	RESPONSE
General	[Chapter 4.1 Impacts of the Proposed Action] Not a single reference was used in this Chapter. Descriptions were very general and lacked depth of understanding. (EcoPerspectives - Wayne Wright)	Comment noted.
General	2.4.3 We were surprised and disappointed to see the General HPA provisions (proposed section 220-110-050(3)(b)(iii)) re-inserted from earlier versions of the draft rules. As you are well aware, SRSC has objected to several aspects of the General HPAs in the past, and we thought those concerns had been addressed and put to rest, but here it is again. By the same token, we have concerns with the simplified HPA section (proposed section 220-110-050(3)(b)(iii)). As with GHPAs, there is no mention of simplified HPAs in the RCW, and no authority to circumvent the application procedures (such as the requirement for plans and specifications). (Skagit River System Cooperative)	Currently about a third of the hydraulic projects in the state are done under General HPAs. Simplified HPAs have been replaced with the more descriptive "model HPAs," and are intended to provide a one-size-fits-all solution for the most benign HPA situations. Issuing standard HPAs for these projects would represent a significant increase in workload. This increased workload would reduce staff time for other habitat protection, salmon recovery, and high risk HPA project work, but would likely not increase fish protection beyond what is currently achieved through the GHPA process.
General	4.6.1 The document consistently states the No Action creates an inconsistency with current science and design technology. THIS has not been demonstrated in the document. For years, WDFW has implemented the current code with the guidelines and white papers to develop less impacting projects. (EcoPerspectives - Wayne Wright)	Please refer to language revisions in the Supplemental Draft PEIS.
General	After evaluating the rulemaking documents, we have concern that, with some exception where protection language may have been strengthened, much of the proposed language creates exemptions and regulatory loopholes and utilizes language that appears to diminish both department responsibility and the ability to ensure the mandated protection of vital habitats. We have outlined a basis for these concerns in the comment	Your concerns are noted; we have reached out to your organization to provide more detailed information and dialogue around the proposed rules and the rulemaking process. Hopefully the supplemental DPEIS and new rules version better address your concerns.

DPEIS TOPIC	COMMENT	RESPONSE
	<p>section of this correspondence and would be happy to discuss them further with staff. We are also concerned about the process that has led to the PEIS and public presentation of rule language as well as the pathway outlined by the department to adopt new rules by mid-2014. We are aware that, as part of the proposed rulemaking process, WDFW put together a stakeholder group that worked to develop the current version of proposed rule language. However, representatives from regulated parties made up the majority of this stakeholder group and both the environmental community and general public were under represented. Similarly, while the PEIS suggests previous draft versions of the currently proposed language were posted on the WDFW website and available for public comment, there was virtually no public outreach or public notice by the department. Thus, to date, there has been a lack of opportunity for the greater environmental community and general public to be substantively involved in the development of rule language. We are concerned not only about this past lack of participation opportunity, but also that the current department plan to release a CR102 in April of 2014 and subsequently adopt rules shortly thereafter will not provide adequate opportunity for future input. As these proposed rule changes are extensive and their implications significant, public input should be sought via wider public outreach and informational meetings prior to the filing of a CR102 as should conference with additional stakeholder groups in the environmental community. Additionally, while we appreciate the department's work on this EIS, the development and request for comments on a PEIS before an official draft of proposed rule language has been completed, is confusing and premature. It is our understanding from department communications that the draft language released with the PEIS is informal only and, while input on the current version of language is welcome, the comment period is for the PEIS only. (Washington State Environmental Coalition)</p>	
General	<p>Cover letter states the DPEIS meets the requirement of SEPA. The document is woefully lacking in sufficient detail to allow SEPA to be met. The lack of alternatives alone create a problem stating SEPA requirements are met. (EcoPerspectives - Wayne Wright)</p>	<p>Comment noted, and we have implemented a number of improvements in the Supplemental DPEIS.</p>
General	<p>The department should request a new review related to the applicability of the hydraulic code on the in-water development and construction work</p>	<p>Comment noted. Specific examination of aquaculture provisions is inappropriate given prevailing statutory interpretation.</p>

DPEIS TOPIC	COMMENT	RESPONSE
	related to aquaculture. We recognize that a 2007 AGO opinion reported any practice related to aquaculture was exempt from a HPA due to the provisions in RCW 77.115.010(2). However, that RCW is specific to disease prevention only and the application to the opinion is highly questionable. (Washington State Environmental Coalition)	
General	The DPEIS does not properly address the great discretion that is in the rules. While the DPEIS makes statements that a provision will serve a specific purpose or provide a specific protection, the word “may” instead of “shall” or “will” is prevalent in the rule text. We believe that the DPEIS should address all instances in the draft text that provide such discretion and explore the possible impacts of not requiring the actions. (Seattle Audubon Society)	The use of “may” instead of “shall” signals that WDFW is able to implement certain provisions or processes, but is not required to implement them unless the situation warrants, pursuant to RCW 77.55.231(1).
General	The DPEIS in itself is problematic. This document is generalized, does not include supporting documentation, and is redundant, rambling, and was not prepared with the required cost – benefit analysis. It does not meet the requirements of SEPA or NEPA and does not address the real impacts such as increased threats to human life, property, and livestock. There is no financial analysis addressing the impacts to business, farmers, foresters, property owners, or impacts to citizens’ constitutional rights. This document fails to address the impacts to municipalities including increased costs and impacts to utility districts. Therefore, the DPEIS is incomplete. (Cindy Alia)	This Supplemental Draft PEIS evaluates alternatives and the potential negative or beneficial impacts of adopting the updated rules. It does not evaluate the site-specific impacts of activities requiring an HPA. Generally, projects that require an HPA undergo site-specific SEPA review by the lead agency before WDFW issues an HPA. Please see the economic analyses within “ <i>Hydraulic Code Rulemaking-Cost/Benefit Analysis &amp; Small Business Economic Impact Statement,</i> ” associated with Version 5 of the proposed rule changes and supplemental draft PEIS.
General	This Agency action fails to comply with SEPA Rules (Chapter 197-11 WAC). (Bill Thomas)	Comment noted, however you have not provided sufficient detail for us to formulate a response.
General	We recommend that Washington Department of Fish & Wildlife (WDFW) prepare a revised DEIS that: Includes analysis of the impacts of a rule change; Increases the range and number of alternatives evaluated; Clearly articulates the basis for the science relied on and the competing science excluded from consideration; Is released concurrently with the economic analysis to provide an opportunity for public comment; Reviews the cumulative effects of the proposed rule changes; and Clarifies the procedural process of rulemaking to ensure adequate public participation. (Weyerhaeuser)	WDFW received many suggestions for improving interaction with interested parties and we have been able to improve our outreach and dialogue on the draft rules. Your suggestions for improving the environmental evaluation are appreciated.

DPEIS TOPIC	COMMENT	RESPONSE
Process	2.4.3 Procedural changes - The opening paragraph fails to demonstrate how the proposal provides for a predictable application process and how it reduces permit processing. From the document, it appears that permit processing across the board will become more restrictive and cumbersome. Lower risk project types are not defined. (EcoPerspectives - Wayne Wright)	Comment noted.
Process	4.1 Did WDFW run any mock scenarios to vet how the proposed rule changes would truly impact projects? The use of mock scenarios with multiple individuals is a common (and expected) tool when evaluating permitting process changes and rule changes. This DPEIS makes no statement as to the "testing" that was (or was not" done to vet impacts. This too may be a fatal flaw in the document. (EcoPerspectives - Wayne Wright)	Mock scenarios were used extensively both in the rule change development process as well as during development of WDFW's new HPA application system.
Process	4.2.4 The DEIS states that "Individual hydraulic projects may still require mitigation." When the new code section 220-110-080 is reviewed, section 3(a) jumps out. It states that "The department must determine the project impacts, severity of impact, and amount of mitigation required to achieve no net loss based on the best available information." In interpreting this, it appears that the State 'determines' all those elements independent of the applicant or their consultant. This is not how it is done today. Interpreting this strictly puts all the responsibility on the WDFW biologist and is subject to their opinions. (EcoPerspectives - Wayne Wright)	Language amended.
Process	The PEIS describes that "WDFW anticipates releasing the Final Programmatic EIS on the Hydraulic Code Rules in mid-2014. The Fish and Wildlife Commission is anticipated to adopt the new rules in mid-2014 as well." This seems like an overly ambitious timeline. NMTA requests that an appropriate amount of time (90 days) is provided for review and comment on the Final PEIS, especially in light of the fact that the first detailed draft of the Small Business EIS is to be included in this document. Draft HC Rules are being incorporated into the EIS review process and a two-step public review/comment process should be provided for the draft HC Rules, including response/necessary revisions by WDFW prior to incorporation into the release of Final EIS and HC Rules. Sufficient time should be provided during each phase of the rulemaking process for all	Comment periods for the rulemaking proposal and the EIS are driven by two sets of administrative procedures - the state environmental policy act and the administrative procedures act. WDFW also must accommodate the schedule set by the Fish and Wildlife Commission. WDFW agrees that alignment between rule review and SEPA document review has been challenging, and hope that our increased outreach has improved the overall process.

DPEIS TOPIC	COMMENT	RESPONSE
	interested and potentially affected parties to review and comment on information/draft documents due the abundance of proposed new and revised HC Rules. (NW Marine Trades Association)	
Process	We also ask that a public outreach plan be developed and implemented to provide opportunity for more meaningful participation by the environmental community and the public prior to moving forward with any rulemaking plans. (Washington State Environmental Coalition)	Thank you for the suggestion; our outreach has improved the overall process.
Authority	1.2 Yet despite these [statutory] obligations and the sorry condition of salmon habitat, WDFW proposes to "streamline" the environmental review process for hydraulic projects for the convenience of those seeking to take actions known to be damaging to fish habitat. This is inconsistent with WDFW's fishery co-management obligations. (NWIFC)	WDFW proposes to streamline application processing, not cut corners on protection of fish life.
Authority	1.5 The DPEIS inadequately address the potential impact from overlapping environmental regulation and the potential for streamlining review of hydraulic projects at the local, state, and federal level. At the heart of this issue is the definition of Ordinary High Water Line (OHWL). The definition, and, in particular, the interpretation of the definition has changed significantly over time. WDFW, the Department of Ecology, local governments, Department of Natural Resources all rely on differing regulations and interpretations of the location of the OHWL. State and county regulators rely on an accurate location of the OHWL when reviewing projects under the Shoreline Management Act. The Department of Natural Resources asserts ownership to beds of state waters based on this determination, as well. WSAC recommends that the OHWL determination process be reviewed by local, state, and federal agencies to develop a common interpretation and that further analysis on the relationship between regulations be made. (Washington State Association of Counties)	RCW 77.55.011(11) defined "hydraulic project" as " <i>the construction or performance of work that will use, divert, obstruct, or change the natural flow or bed of any of the salt or freshwater of the state.</i> " Although both "bed" (RCW 77.55.011(1)) and "waters of the state" (RCW 77.55.011(25)) are defined as land or waters waterward of the "ordinary high water line" (RCW 77.55.011(16)), the definition of a hydraulic project includes construction or performance of work landward of the ordinary high water line if it will use, divert, obstruct, or change the natural flow or bed waterward of the ordinary high water line.
Authority	1.5.4 Under the revised code (220-110-060), the requirements of the hydraulic code rules would no longer apply to any forest practices hydraulic project. This would take effect as soon as fish protection standards have been integrated into the forest practices rules, and technical guidance has been developed and approved for inclusion in the Forest Practices Board Manual. The DPEIS is silent on how this would affect fish and fish habitat protection. WDFW would retain	Comment noted. No changes are proposed to the forest practices sections of Hydraulic Code rules because this section recently underwent rulemaking to implement the legislated change to which you refer. SEPA and rulemaking are not the proper forums in which to evaluate legislative actions.

DPEIS TOPIC	COMMENT	RESPONSE
	<p>review/approval over HPAs like culverts and work in the streams, although ultimate decisions would apparently come from DNR. WDFW would still make recommendations to DNR but there seems to be no mention of DNR's obligation to act on those recommendations. The DPEIS should clearly address the consequences of this change in authority while clarifying the steps taken if WDFW and DNR disagree on management practices. (Seattle Audubon Society)</p>	
Authority	<p>4.2.3 Table 4-1 Rather than disclosing how the proposed rules remedy the defects of the existing rules that prevent proper protection of fish life, the PEIS claims that the proposed rules are an improvement over the existing rules and therefore fish life will be adequately protected. While it may be true that some aspects of the proposed rules are an improvement over the current rules, that does not necessarily mean that fish life will be adequately protected. Instead, it could mean that ESA-listed salmon habitat and populations may continue to decline as a result of hydraulic projects, but at a slower rate. Because the PEIS only purports to assess the environmental impacts of the proposed rules relative to the impacts of the current rules, one cannot determine whether implementation of the proposed rules will protect fish life. (NWIFC)</p>	<p>Please refer to discussion in Appendix A section A.1.6.</p>
Authority	<p>4.7 WDFW's analysis of potential risk of take indicates that alteration of marine riparian vegetation can lead to shoreline and bluff instability. In turn, this adversely affects shoreline habitat conditions and suitability and a moderate to high risk of take for species dependent upon the nearshore environment at some point in their lifecycle. HPA program cannot protect fish life without requiring protection of riparian areas and mitigation of impacts related to HPAs (NWIFC)</p>	<p>The analysis provided pursuant to SEPA is not a "potential risk of take" analysis. Please refer to discussion in Appendix A section A.1.6.</p>
Authority	<p>Evaluate the impacts of changes to the statute that are reflected in the updated rules. (NWIFC)</p>	<p>The supplemental Draft and Final PEIS provide an evaluation of the impacts of Alternatives 2, 3, and 4 in comparison with no-action (Alternative 1).</p>
Authority	<p>Exemptions from HPA Requirements Must have Project Specific Evaluations. (Point No Point Treaty Council)</p>	<p>Project types exempt from HPA permitting are specified in statute; WDFW does not have authority to evaluate these project types.</p>
Authority	<p>In 2002 the legislature passed ESHB 2866, codified in RCW 77.55.231. In passing ESHB 2866, the legislature found that hydraulic project approvals should ensure that fish life is properly protected, but conditions attached to the approval of these permits must reasonably relate to the potential</p>	<p>Please refer to changes made in rules and to the final PEIS.</p>

DPEIS TOPIC	COMMENT	RESPONSE
	<p>harm that the projects may produce. The law also states that WDFW may not impose conditions that attempt to optimize conditions for fish life that are out of proportion to the impact of the proposed project. The proposed hydraulic code together with the design requirements go beyond what is necessary to protect fish life and attempt to optimize conditions for fish life. The proposed hydraulic code identifies preferred design requirements that are given priority over other design options that may equally protect fish life. This will lead to an onerous permit process with additional unnecessary costs to counties. We urge WDFW to provide more flexible options for project design and implementation. (Washington State Association of Counties)</p>	
Authority	<p>There is no discussion of the impacts resulting from the Legislature’s decision to exempt marina maintenance and tidegates and floodgates from HPA requirements. (Point No Point Treaty Council)</p>	<p>Legislative actions are not subject to SEPA.</p>
Authorities	<p>Has the WDFW made sure that its actions will comport with what is required of them under the Clean Water Act, GMA, SMA, and Ecology’s Storm Water Management? How has the WDFW with this document of Proposed Rule Changes shown that it has complied with the law in HB 1112? (Cindy Alia)</p>	<p>Compliance with GMA, SMA, CWA and etc. is determined at the project level and would be inappropriate for a programmatic EIS. The mandate of the HPA program is to protect fish life during the course of a construction project. “Recovery” is beyond WDFW’s statutory authority for this program, as noted in RCW 77.55.231(1).</p>
Authorities	<p>The DPEIS fails to discuss how the HPA rules will align with the PSP goals for recovery of Puget Sound. (Seattle Audubon Society)</p>	
Authority	<p>It appears the WDFW is attempting to broaden its mission from issuing HPA permits based exclusively on impacts to fish, to include in its mission shoreline and near shore habitats and mitigation requirements that are already addressed by an excess of federal, state, and municipal codes. Furthermore, WDFW is attempting a change to the use a one size fits all method of applying so called science from a site specific HPA analysis. (Cindy Alia)</p>	<p>RCW 77.55.021 (1) states “In the event any person or government agency desires to undertake a hydraulic project. The person or government agency shall, before commencing work thereon, secure the approval from the department in the form of a permit ... RWC 77.55.011(11) states a “hydraulic project” means construction or performance of work that will use, divert, obstruct, or change the natural flow or bed of any of the salt or freshwater of the state.  Although both “bed” (RCW 77.55.011(1) and “waters of the state” (RCW 77.55.011(25) are defined as land or waters waterward of the “ordinary high water line” (RCW 77.55.011(16), the definition of a hydraulic project includes construction or performance of work landward of the ordinary high water line if it will use, divert, obstruct, or change the flow or bed waterward of the ordinary high water line.</p>

DPEIS TOPIC	COMMENT	RESPONSE
Streamlining	Given the stated importance of "streamlining" HPA application requirements, it is unacceptable that the environmental impacts of these various HPAs are not discussed at all. As with WDFW's failure to discuss it's no net loss policy, WDFW's failure to address these key issues deprives the tribes and the public of the opportunity to provide guidance and comment on WDFW's "analysis." The next step is to go to the final PEIS. Consequently, there is no opportunity for tribes or the public to provide course correction on these key issues. This undermines the integrity of the environmental analysis and commenting process. Rather than going straight to a final PEIS, the Department should supplement its draft to fill in the huge gaps left by the failure to discuss the environmental benefits and impacts of its various "streamlined" HPAs and its no net loss policy. (NWIFC)	Please refer to the Supplemental DPEIS for upgraded discussion of these points.
Streamlining	The PEIS fails to disclose the impacts of reduced WDFW review and oversight of simplified, emergency, expedited, and general HPAs WDFW's proposed rule provides a broad array of "shortcuts". (Point No Point Treaty Council)	Please review the final PEIS, in which we have addressed this concern.
Streamlining	The PEIS fails to disclose the impacts of reduced WDFW review and oversight of simplified, emergency, expedited, and general HPAs. (NWIFC)	See response above.
Streamlining	WDFW has created categories of HPA's which seek to reduce the required amount of review of a traditional HPA. There is no authority to eliminate the requirement for specific plans and specifications of traditional HPA's. These categories are not compliant with the requirement to fully review those consequences of the impacts a proposed project has on fish life, and further review here of the consequences is therefore warranted. There is no way, for example, to ensure that the impacts to fish life are "fully mitigated" in a general HPA without engaging in a project specific analysis. General HPA's are only rejected if there is a "high risk" that "cannot be fully mitigated." (Point No Point Treaty Council)	Comment noted.
Recovery	A glaring weakness of the PEIS is that it fails to state how the current HPA process should be modified to adequately restore the degraded habitat conditions. Rather, it merely seeks some unquantified level of improvement over the current rules. (Upper Skagit Tribe)	Please refer to the discussion in Appendix section A.1.6.
Recovery	The Code and PEIS fall woefully short in scope such that there is no	The rule complies with RCW 77.55.231(1). Please refer to the discussion in

DPEIS TOPIC	COMMENT	RESPONSE
	mandate to improve/restore current habitat conditions; rather, the rules as written focus solely on protecting those conditions currently in place (and for numerous types of projects there may even be a failure to require compensating mitigation, resulting in a net loss over current conditions) (Upper Skagit Tribe)	Appendix section A.1.6.
Recovery	1.5.2 There is no discussion regarding the benefits or impacts that the proposed rules would have on ESA-listed populations. There is no discussion in the PEIS regarding the extent to which the proposed rules will contribute to salmon recovery or even prevent further declines. In contrast, there is ample information in the administrative record indicating that many of the activities permitted by the Hydraulic Code pose moderate to high risk of take of salmon. While the proposed rules may be intended to reduce the impacts associated with HPAs, there is no discussion or analysis of the extent to which these impacts are actually reduced. As a consequence, it is impossible to determine what benefits, if any, the proposed rules provide for ESA-listed salmon. Similarly, without an assessment of the extent to which impacts are permitted and/or mitigated, it is impossible to determine how well they protect fish life. (NWIFC)	<p>The Hydraulic Project Approval is a construction permit. The hydraulic code does not address habitat restoration or salmon recovery. The proposed rule changes cannot address topics or standards that are beyond the authorities provided in statute.</p> <p>Because the proposed action relates only to a state authority, there is no nexus to conduct a federal ESA analysis. Ensuring compliance with ESA is the responsibility of the project proponent.</p> <p>Effects on fish and wildlife species are discussed in Chapter 4.</p> <p>SEPA is a tool used to disclose potential significant negative environmental impacts, but is not designed to make determinations with respect to ESA.</p> <p>This Supplemental Draft PEIS evaluates alternatives and the potential negative or beneficial impacts of adopting the updated rules. It does not evaluate the site-specific impacts of activities requiring an HPA.</p> <p>Generally, projects that require an HPA undergo site-specific SEPA review by the lead agency before WDFW issues an HPA.</p>
Recovery	2.4.1 Table 2-1 WAC 220-110-080 A "no net loss" requirement would simply perpetuate ESA listings without implementing required recovery of listed species to VSP levels, which would also presumably require restoration of degraded critical habitat as permit conditions. (King County)	Please refer to the discussion in Appendix section A.1.6.
Recovery	2.4.4 It seems the focus of these additional white papers is also to avoid or minimize impacts; this begs the question of how species recovery will be accomplished at the level of critical habitat restoration. (King County)	
Recovery	2.4.4 The discussion of White Papers emphasizes analysis of development impacts and mitigation strategies, but appears to encode the same limitations here as noted in the "no-net-loss approach. A full commitment to recovery, as articulated in the 1999 Statewide Recovery Strategy. The summary does not specify how the rule changes will implement recovery,	

DPEIS TOPIC	COMMENT	RESPONSE
	over and above no-net-loss of listed species. (King County)	
Recovery	The PEIS does nothing more than provide a list of ESA- listed species likely to be present and then defers to National Marine Fisheries Service (NMFS) for any potential project oversight with regard to ESA listed species. There is no analysis on how the rule changes will affect these species or aid in species recovery. (Suquamish Tribe)	
Rule and EIS misaligned	4.2.3 Table 4-1 The last line in this table mentions increased noise / vibration for Boring in saltwater areas but there is no indication for this item in the table that the rules would affect impacts, only turbidity. Suggest deleting 'increased noise / vibration' or including a bullet on how rules would affect impacts of increased noise / vibration for clarity. (WSDOT)	Please see changes in the supplemental PEIS.
Rule and EIS misaligned	The PEIS reports 220-110-360 would result in improved protections due to the requirement that a professional risk and justification assessment for approval of a bulkhead waterward of the OHWL. This is not a required action under the proposed language and should be reflected in PEIS considerations. (Washington State Environmental Coalition)	Please see changes in the supplemental PEIS.
Rule and EIS misaligned	4.3.2 Table 4-1 The PEIS reports 220-110-340 would result in improved protections due to a new rule requiring project applicants to conduct forage fish spawning surveys prior to work. This is not a required action under the proposed language and should be reflected in the PEIS considerations. (Washington State Environmental Coalition)	Please see changes in the supplemental PEIS.
Rule and EIS misaligned	The PEIS reports 220-110-350 would result in improved protections due to a new rule requiring vegetation surveys at project sites. This is not a required action under the proposed language and should be reflected in PEIS considerations. (Washington State Environmental Coalition)	Please see changes in the supplemental PEIS.
Rule and EIS misaligned	The PEIS reports that 220-110-370 through 440 would result improved conditions due to new construction requirements. However, the provisions noted are with few exceptions, already required by the department under the current rules when conditioning permits. (Washington State Environmental Coalition)	Please see changes in the supplemental PEIS.
Baseline	2.4.1 Table 2-1 WAC 220-110-080 It is inappropriate and insufficient to establish existing conditions as the baseline for measuring project impacts; ESA listings and Salmon Recovery Plans would appear to require	Please refer to the discussion in Appendix section A.1.6.

DPEIS TOPIC	COMMENT	RESPONSE
	use of the Necessary Future Conditions (NFCs) for recovery and re-establishment of Viable Sustainable Populations (VSPs) of listed species impacted by the project as the baseline for assessing impacts. (King County)	
Baseline	2.4.4 The discussion of the 1999 Statewide Strategy to Recover Salmon and related AHGs properly emphasizes salmon recovery goals and regulatory consistency; this discussion, while well-founded, is at odds with statements in Table 2-1 that existing conditions will be used as the baseline for evaluating impacts and mitigation requirements. The approach outlined for implementation in Table 2-1 is merely a no-net-loss strategy, not a recovery strategy. It should be modified for consistency with the "comprehensive and integrated guidelines for carrying out aquatic habitat restoration" described here. (King County)	Please see changes in the supplemental PEIS.
Baseline	3.2.1 In noting that "some populations of resident salmonids in Washington State are declining," due in part to "loss of suitable rearing habitat, water quality degradation, and loss of clean spawning gravels," the document is essentially describing the existing condition that it proposes to establish as the baseline for evaluating impacts; clearly existing conditions are contributing to the declines, and a baseline for environmental permitting that merely seeks to replicate existing conditions is inappropriate to achieving recovery of VSPs. (King County)	Please refer to the discussion in Appendix section A.1.6.
Baseline	3.2.2 This section reiterates the finding that "Salmon populations have declined significantly over the past several decades;" Again, this is a description of existing conditions, which if taken as the baseline for evaluating habitat impacts will codify further declines, not recovery. (King County)	Please refer to the discussion in Appendix section A.1.6.
Baseline	4.2.4 While the proposed action improves upon existing practices, it still appears to be predicated on establishing mitigation at a level merely sufficient to address impacts assessed with respect to a baseline established on existing conditions. This would be fine where existing conditions were not themselves contributing to the decline of listed species, but the ongoing declines themselves indicates that existing conditions, even if maintained through impact mitigation, will not guarantee that such mitigation will not further perpetuate degraded habitat. This in itself would constitute an adverse impact which the rule	Please see changes in the supplemental PEIS.

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	changes do not appear to address. (King County)	
Baseline	4.3.2 Again, it is clear that the proposed action would improve the overall condition of water resources when compared with the no-action alternative; what is not clear, however, is the manner in which the proposed action will improve conditions over existing, baseline conditions, which have been found contributory to declines of listed species. (King County)	Please refer to the discussion in Appendix section A.1.6.
Baseline	4.3.3 Provisions for mitigation should recognize the need to ensure that Necessary Future Conditions for recover of Viable Sustainable Populations are met, not merely re-establish conditions at the existing baseline. (King County)	Please refer to the discussion in Appendix section A.1.6.
Science	<p>[In section 3] WDFW is ignoring the fact that no nexus between the activity and peer reviewed science exists. (Cindy Alia)</p> <p>1.2 States one purpose of the proposal is to make rules consistent with current fish science. Section 2.4.4 references the a list of science supporting the alternative. These documents including the water crossing guidelines and ISPG which have not been fully vetted. (WSDOT)</p> <p>2.4.1 Table 2.1 Best available science references - It is quite concerning that WDFW cites largely their own work in the lion's share of this PEIS. Even though the White papers had many references, the conclusions and findings may still be biased since all the work was commissioned by the agency proposing this rule change. (EcoPerspectives - Wayne Wright)</p> <p>2.4.1 Table 2-1 WAC 220-110-130 This subsection provides design details that are restrictive, incomplete, and don't match the latest science. The section in the WAC should be altered to provide a general requirement for selection and design process, and then reference detailed design documents. The language in the DPEIS is misleading and implies the language in the WAC is comprehensive and demonstrates the latest science. (WSDOT)</p> <p>2.4.1 Table 2-1 WAC 220-110-190 None of the citations for this item support the changes made to the WAC language from previous version. There is no basis in the referenced citations that changes to bridge design and elimination of the hydraulic culvert design will improve fish survival from the current WAC language. Additionally, the references do not</p>	Language amended to improve our discussion about how the scientific literature was used to develop rule proposals.

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	<p>include a critical research document that identified the failure of many "no-slope" culverts, a design method that is allowed by the new WAC even though it has been shown to fail. This indicates the new WAC does not use the latest science for a basis of it's requirements. We request that these references be removed from the EIS and the relevant section of the proposed rule be modified accordingly. (WSDOT)</p> <p>2.4.1 Table 2-1 WAC 220-110-200 None of the citations for this item support the revision that classifies roughened channels as a fish passage improvement structure. This indicates current science has not been used to develop requirements in the WAC. We request that these references be removed from the EIS and the relevant section of the proposed rule be modified accordingly. (WSDOT)</p>	
Science	<p>2.4.1 The white papers referenced in Chapter 2 all appear in draft form and cannot be referenced. Please explain. For example, the white paper on Flow control structures (Draft), December 2007, by Herrera Environmental Consultants, Inc. indicates that it is in draft working form, and cannot be cited. Accordingly, it is difficult if not impossible to meaningfully review this report, let alone rely upon it in forming a draft PEIS. In chapter 7 and 8 in the discussion on "impacts" from dikes and levees, the report focuses on impacts of levees and many flood control facilities. It should be noted that it would be unreasonable to condition HPAs (if needed) for the maintenance and repair of these flood control facilities, for impacts that were theoretically invoked at the time of new construction. But in many parts of Washington, these flow control structures already exist, and so the baseline already exists. HPAs cannot be conditioned to try to undo or mitigate for impacts that have theoretically occurred in the past. The no-net-loss standard is effectively a net gain standard under the rules as drafted, at the expense of farm land. An examination of the existing system needs to be studied. (Peter Ojala, Carson Law Group)</p>	<p>A document listing references used by WDFW during the rule revision process is available on the WDFW web site.</p> <p>The 2006 and 2007 white papers were prepared with funding obtained to complete a HCP. However, the recommendations still had to comply with chapter 77.55 RCW. In addition, we have several documents on our website not associated with the HCP.</p> <p><a href="http://wdfw.wa.gov/publications/search.php?Cat=Habitat">http://wdfw.wa.gov/publications/search.php?Cat=Habitat</a></p>
Science	<p>2.4.4 "The scientific documents referenced in the EIS do not support the proposed changes to the hydraulic code. Section 2.4.4 of the EIS references ISPG and lost opportunity/life of the project concepts as best science, however, these concepts were never fully vetted within the scientific community or by impacted stakeholders and should therefore</p>	<p>Please see changes in the supplemental PEIS.</p>

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	NOT be referenced in EIS or used to justify the proposed rule change. – We request that these references be removed from the EIS and the relevant section of the proposed rule be modified accordingly. (WSDOT)	
Science	2.4.4 All but one White Paper cited is dated 2001 (one is dated 2002) which is 12 years prior to this PEIS document. It is impossible to believe that more recent and relevant data are not available. This EIS relies on OLD information and not the current research and practice related to fish habitat. Even with the 2006 and 2007 updates - a long time period has elapsed since that data were evaluated and this PEIS should have provided the most current and available science to be meaningful. (EcoPerspectives - Wayne Wright)	Language amended to improve our discussion about how the scientific literature was used to develop rule proposals.
Science	2.4.4 Last paragraph states the documents prepared by and for the Department make the code changes "consistent with current science and design technology". This is not correct since the fish passage options limit and restrict design options in favor of a simplified method- stream simulation. This limitation alone makes the statement false. Current design technology is much more than stream simulation. (EcoPerspectives - Wayne Wright)	Please refer to the science appendix in the PEIS. The protection of fish life is one aspect of a complete water crossing design. The other studies required are the responsibility of the owner and designer and it is these studies in combination with fish protection which form a "technically sound engineering practice." We do not pretend that compliance with these rules will result in a fully engineered structure. All that is required in these rules is to provide fish passage and protect their habitat. There has been on-going research into crossing design for fish protection by WDFW, USDA Forest Service, several universities and other researchers (Barnard 2003, Inter-Fluve 2008, Robertson, Bair et al. 2011, Barnard, Yokers et al. In preparation), among others. A study is in progress by D. Cenderelli and M. Weinhold, USDA Forest Service on the physical effectiveness monitoring of channels at road-stream crossings – a statistically-based approach. Others are keenly interested in the effectiveness of water crossings for fish passage and channel processes – names and studies can be supplied. It will take some time to develop a strong scientific foundation in this area. In the meantime we are required to protect fish and we are applying conservative criteria guide designers to achieve acceptable results.
Science	3.3.1.1 There is a strong lack of scientific references in this chapter. Not until 3.3.1.1 do some added scientific references come in that support the statements provided in the DPEIS. This is woefully lacking scientific credibility and WDFW is simply asking the public to "trust us" we are the one and only experts. (EcoPerspectives - Wayne Wright)	Please see changes in the supplemental PEIS.

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Science	<p>4.3.1 It is difficult to understand how the current code cannot and does not reflect current science. In no location within this document does it clearly show how the current rules and proposed rules would: integrate current science where it is not done now, reduce direct effects over current code implementation, improve functions (the codes never has and will not like ever actually achieve function control), and how implementation of new codes versus better implementation of current codes compares. It may be just that the current process of implementation is ineffective - not the code itself. Over time, new and best science has been incorporated. How do the proposed codes impact or interfere with associated local codes such as shorelines, critical areas, etc. What are the impacts/effects of that interaction? (EcoPerspectives - Wayne Wright)</p>	<p>Please see changes in the supplemental PEIS.</p>
Science	<p>The final programmatic environmental impact statement (FPEIS) should be withheld until such time as the science documents relied on for the development of the draft rules be vetted by independent authorities. The FPEIS contain an analysis of the potential for environmental harm from regulatory design requirements that prevent facility owners from being able to maintain and preserve existing facilities. The FPEIS contain evaluations on the effectiveness of other design criteria that would allow cost effective options for maintenance and preservation of infrastructure. (Washington State Association of Counties)</p>	<p>Please refer to Appendix A section A.1.8 for further discussion of this topic.</p>
Science	<p>The PEIS as well as WDFW state that the rule changes are needed to "incorporate up-to-date fish science and technology" rather than reference a series of "White Papers" developed in 2006 and 2007. Eight of the Eleven 2006 and 2007 white papers are DRAFTS; The use of members of other state agencies and NOAA puts suspicion upon the independence of the reviewers; The review of these "white papers" and their science indicates: There were numerous literature citation problems. Many citations went to a secondary rather than the primary sources—which apparently were not consulted by the authors; reviewers were unable to locate and consult many documents—some because the citation was not accurately provided; gray literature was cited when refereed citations were available; gray literature generally seemed to be considered of the same quality as refereed literature; important information sources were not cited; and information in some references was erroneously</p>	<p>Please refer to Appendix A section A.1.8 for further discussion of this topic.</p>

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	characterized." (Dwight Keene)	
Science	<p>The PEIS states the documents prepared by and for the Department make the code changes "consistent with current science and design technology". This is not correct because the majority of citations in the PEIS are White Papers already cited and used by WDFW. This collection of White Papers produced for WDFW in 2001 and 2002, may cite peer reviewed literature, but the conclusions were made by and for WDFW, making the papers arguably biased. The PEIS even points out the White Papers do not represent an exhausted search of the known literature. Why have the White Papers not been revised in the last twelve years to include more recent and relevant research? Why was the best available science not used to make critical changes to the Hydraulic Code? Therefore, the Port strongly recommends that a literature update take place prior to any modifications to the existing rules. (Port of Tacoma)</p>	Please refer to Appendix A section A.1.8 for further discussion of this topic.
Science	<p>The science it is based upon is not current, is not multidisciplinary, does not meet Best Available Science (BAS) requirements and does not meet the requirements of RCW 34.05.271. It is apparent that whoever prepared this document is unfamiliar with SEPA and the preparation of EIS documents as evidenced below. This assessment reflects poorly on WDFW as "The lead agency shall assure that the EIS is prepared in a professional manner and with appropriate interdisciplinary methodology. The responsible official shall direct the areas of research and examination to be undertaken as a result of the scoping process, as well as the organization of the resulting document." The 11 papers developed during 2006 and 2007 are claimed to have been peer reviewed and are being used to "support the proposed changes to the hydraulic code rules that will make them consistent with current science and design technology." The use of any of these white papers for anything other than toilet paper is unconscionable, unethical and should be considered Malfeasance. (Bill Thomas)</p>	Please refer to Appendix A section A.1.8 for further discussion of this topic.
Science	<p>The science listed in the references is from internal publications, not independently peer reviewed third party scientific publications, and the so called science used is not multidisciplinary. Much of what is used as science does not meet BAS requirements and does not meet the requirements of HB 1112. (Cindy Alia)</p>	Please refer to Appendix A section A.1.8 for further discussion of this topic.

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Science	The Washington Department of Fish & Wildlife is not in compliance with RCW 34.05.271, which expressly requires the agency to “identify the sources of information reviewed and relied upon by the agency in the course of preparing to take significant agency action. Peer-reviewed literature, if applicable, must be identified, as well as any scientific literature or other sources of information used.” The agency must also make available on the agency's web site the index of records required under RCW 42.56.070(6) that are relied upon, or invoked, in support of a proposal for significant agency action. As you know, this applies to both the development of a significant legislative rule and the technical guidance, technical assessments or technical documents used to directly support implementation of a state rule. (Washington Farm Bureau)	WDFW has complied with the statute cited, and reference citations are available from the WDFW HPA program web page.
Science	Throughout the PEIS document and throughout the proposed rule language, reference is made to the use of best available science with multiple supporting documents cited. However, the White Papers commonly cited were developed for the department by professionals who commonly work with regulated parties during permitting projects. There also appears to have been very little analysis or inclusion of outside science-based information. In order to incorporate the best available science, the department must look beyond its own border and utilize information from a wide range of ecosystem and impact study and study sources. (Washington State Environmental Coalition)	Please refer to Appendix A section A.1.8 for further discussion of this topic.
Science	We are concerned with the utilization of best practices and the incorporation of up-to-date science and technology. We ask that an extensive literature search and review be conducted and peer reviewed. The results of this search should be included in the PEIS as a supplemental document or appendix. (Seattle Audubon Society)	Please refer to Appendix A section A.1.8 for further discussion of this topic.
Alternatives	2 This DPEIS evaluates two alternatives for changes to the Hydraulic Code Rules—the No Action Alternative, which consists of the Current Rule and the Preferred Alternative, comprising the Proposed Rule Changes. It is time for the WFWD to choose the stated alternative of the No Action Alternative to change its Hydraulic Code Rules until and unless it can prove its Preferred Alternative is one it is capable to implement. (Cindy Alia)	Please see changes in the supplemental PEIS.
Alternatives	2.1 Only 2 alternatives do not make a robust analysis. Action and no	Please see changes in the supplemental PEIS.

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	<p>action. Not much to go on with true options. Sets the tone as a foregone conclusion and defeats the purpose of an EIS analysis. Especially with the statements made in 2.3.1 on page 2.2 The HCP should have been an alternative considered - regardless of "stakeholder" objections. (EcoPerspectives - Wayne Wright)</p>	
Alternatives	<p>2.2.1.2 As with the HCP alternative, the "Prescriptions Only" approach was scoped to be part of the EIS and summarily dropped from consideration due to cost of implementation. More explanation as to why this became infeasible and costly is mandatory to justify dropping the alternative and not calling the "prescribed motive" of this EIS into question. (EcoPerspectives - Wayne Wright)</p>	Please see changes in the supplemental PEIS.
Alternatives	<p>2.2.1.3 It is difficult to understand how this alternative would not incorporate BAS, improve protection of fish habitat. Frankly, the intent of the code is to do just that and science change is anticipated/expected. Guidance documents over time have adjusted and amended the code and embraced by practitioners across Washington. This dismissal of the alternative further questions the motive and preconceived agenda of this document. (EcoPerspectives - Wayne Wright)</p>	Please see changes in the supplemental PEIS.
Alternatives	<p>2.5 Alternatives (and Proposed Rule Changes Eliminated from Detailed Study):            Although a "No-Action" alternative is provided in this rule-making process, the no-action alternative included is dismissed from consideration for the reason that it "would not meet the purpose of the project" (Section 2.1.2 PEIS).            By providing only one alternative (the preferred alternative) that effectively meets the rulemaking needs, WDFW has not allowed for additional options to be considered during the public process for the draft PEIS. It appears that the elimination of additional alternatives that were considered occurred after the scoping process for the PEIS which did not effectively allow for public consideration.            Additional functional alternatives that meet the purpose of this rulemaking process should be provided for public consideration and comment prior to developing the Final PEIS. (NW Marine Trade Association)</p>	Please see changes in the supplemental PEIS.
Alternatives	2.5.1 The discussion on eliminating an alternative contained in the SEPA	Please see changes in the supplemental PEIS.

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	scoping notice basically states that optimizing protection of fish life on a case by case basis is just too complicated and costly. Yet it would appear that is exactly the mandate of implementing ESA recovery. It may be helpful to describe how any of the advantages resulting from such an approach may have been "salvaged" and incorporated into the preferred alternative. (King County)	
Alternatives	2.5.1.1 Abandonment of the HCP option after so much investment MUST be more fully described to the public. Lost support by agencies and tribes is insufficient and calls into question the motive of this proposal. (EcoPerspectives - Wayne Wright)	Please see changes in the supplemental PEIS.
Alternatives	2.5.1.4 and 2.5.1.5 Both of these alternatives state they would meet the purpose of the selected activities but were dismissed due to a lack of improving the "application process". This dismissal is frankly comical since any "process" can be improved at any time and still meet the RCW and WAC. This dismissal (along with all the others) calls the biased nature of this document fully into question. (EcoPerspectives - Wayne Wright)	Please see changes in the supplemental PEIS.
Alternatives	4.1 Fish - Statement in this paragraph contradict many of the reasons why some alternatives were summarily dismissed. Under the existing code rules - many improvements and significant gains have been achieved. (EcoPerspectives - Wayne Wright)	Please see changes in the supplemental PEIS.
Alternatives	Dismissing the HCP option after so much time and money was invested must be more fully described to the public. Internal funding problems and assumed loss of support by other agencies and tribes is insufficient. As with the HCP alternative, the "Prescriptions Only" approach was scoped to be part of the EIS and summarily dropped from consideration due to cost of implementation. More explanation as to why this became infeasible and costly is needed to justify eliminating this alternative. (Port of Tacoma)	Please see changes in the supplemental PEIS.
Alternatives	The PEIS only provides two alternatives, not allowing for a robust analysis. Early in the process, WDFW included a No Action Alternative plus six Action Alternatives. A selected group of "stakeholders" were allowed to eliminate Action Alternatives and determine WDFW's Preferred Alternative. Being that not all interested and regulated parties were included in this review, all the Action Alternatives, or at least a more representative set of alternatives, should be included in the PEIS process	Please see changes in the supplemental PEIS.

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	to truly provide a robust and unbiased analysis. Alternatives should include No Action, plus a range of Actions Alternatives. These Action Alternatives should include different combinations of proposed rules and the Habitat Conservation Plan (HCP) process. Providing only one Alternative gives the appearance that a selected alternative was first chosen and then the process worked backwards from that selection. (Port of Tacoma)	
Alternatives	Under this analysis, it concludes that it has achieved a net benefit by making some change to the rules. PEIS 2.1.2. However, there are other versions of the proposed rules that should be considered in terms of reasonable alternatives. Thus, the conclusion that there are only two options here is incorrect. WDFW should consider in its alternatives, alternative changes to the rules and their respective benefits. (Port of Tacoma)	Please see changes in the supplemental PEIS.
Mitigation/No Net Loss	The compensatory mitigation requirement does not apply to all hydraulic projects. There appear to be many exceptions to WDFW's full mitigation/no net loss policy. The impacts of these exceptions are not disclosed in the PEIS. (NWIFC)	Please see changes in the supplemental PEIS.
Mitigation/No Net Loss	The PEIS does not discuss how it has adjusted its mitigation requirements to avoid the pitfalls that have prevented local and regional mitigation efforts from achieving no net loss. Mitigation sequencing has been a standard component of mitigation for some time. We note that there is no clear line demarcating the points where an applicant's obligation to avoid impacts changes to "minimize" impacts. Nor is there a clear line indicating when impact minimization and rectification are inadequate and compensatory mitigation is required. This is important in the context of implementing no net loss because multiple projects that "minimize" impacts cumulatively add up to additional uncompensated declines in habitat productivity- a result that is not supposed to occur as a part of no net loss. (NWIFC)	Mitigation is site- and project-specific. We cannot anticipate what compensatory mitigation is required for every project. A lot of this is driven by the applicant's proposed avoidance, minimization, and damage repair measures.
Mitigation/No Net Loss	WDFW refuses to require mitigation for repairs or replacements of in-place hydraulic projects. That is, WDFW promotes protection of currently degraded habitat conditions over the improvements that are necessary to return fish populations to sustainably harvestable levels. The consequences of this inaction are diverse and far-reaching. One such	WDFW proposes that compensatory mitigation would not be required for maintenance, repair, and upkeep unless the work causes a new impact not associated with construction of the original structure. In this case, WDFW may require compensatory mitigation only for the new impact.

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	<p>consequence is stated in the draft Marine Shoreline Design Guidelines for Puget Sound; over the last several decades huge lengths of marine shoreline have been armored, often to unnecessary degrees. (Upper Skagit Tribe)</p>	
Mitigation/No Net Loss	<p>WDFW's lack of a clear method for determining when compensatory mitigation is required and how to quantify it is particularly problematic in the context of off-site, out-of-kind mitigation. The Department's mitigation should be no less protective of fish life than the federal rules. Moreover, the federal rules can easily be reconciled with state law by according a preference for replacing lost functions and services as close as possible to the site of the loss. State law clearly provides that the Department not approve any mitigation "that does not provide equal or better habitat functions and values" (RCW 90.74.030(2)(b)). Both state and federal law agree that mitigation of impacts must not be subordinated to the convenience of the developer. (NWIFC)</p>	Please see changes in the proposed rules and supplemental PEIS.
Impacts	<p>4.3.2 Again, the DPEIS states that the proposed rules would improve or maintain conditions compared to the no action alternative. This has not been demonstrated in the document. (EcoPerspectives - Wayne Wright)</p>	Please see changes in the supplemental PEIS.
Impacts	<p>4.7.2 A failure to treat the use of the dock and its associated impacts under both provisions could lead to a loophole in the program resulting in detrimental impacts to associated species and habitats. One such example of a lack of analysis of any impacts on the marine environment from the rule changes including the above change regarding structures being allowed within 25 feet from seagrass is the conclusive statement found on p.4-31 of the PEIS: <i>The Hydraulic Code Rules do not directly affect land and shoreline use because the construction of hydraulic projects must be consistent with existing land use regulations, including zoning code restrictions, critical areas regulations, and Shoreline Management Programs and that will not change under the proposed rules.</i> Ironically, the Counties often take the opposite position with respect to piers, docks, and floats, i.e., that it is WDFW's role to analyze the impacts on fish and fish life. Therefore, the decision of the WDFW staff on the HPA permit is often a critical factor in the granting for or denying of the Shoreline permit. The above conclusion on p. 4-31 of the PEIS is therefore completely without merit. The impacts of the new rules</p>	Please see changes in the supplemental PEIS.

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	must therefore absolutely be considered. The idea that there are no impacts because existing rules remain in effect is erroneous. (Point No Point Treaty Council)	
Impacts Fish	4.2.3 Table 4-1 For Residential piers, ramps, floats, etc. under "How Rules Affect Impacts", second bullet. Suggest that the language within the parentheses be modified. As it reads now it sounds like both treated wood and bubble curtains will not be allowed. Also in all areas where pile driving is used as an example for injury / mortality (see same page) suggest that you insert impact in front of pile driving as vibratory driving has not been shown to cause injury or mortality. (WSDOT)	Please see changes in the supplemental PEIS.
Impacts Fish	4.2.3 The conclusion that "none of the proposed rules are expected to degrade conditions for fish" should be accurately stated as "...are expected to further degrade conditions..." as they will apparently seek to maintain existing conditions as the baseline for evaluating impacts, even where these existing conditions may already be degraded. In this way the rules may in fact perpetuate degraded conditions for fish. (WSDOT)	Please see changes in the supplemental PEIS.
Impacts Earth	4.2.2.2 The example given, that streambank stabilization may require disturbance of the riparian zone during construction, does not adequately note that such disturbance may result in a permanent disruption and degradation of habitat, such as that recently constructed at River Miles 16.8 and 17.2, on the left bank of the Green River in Tukwila. (King County)	Please see changes in the supplemental PEIS.
Impacts Earth	4.2.3 Table 4-1 The PEIS fails to adequately disclose the impacts of shoreline armoring. (NWIFC)	Please see changes in the supplemental PEIS.
Impacts Climate	3.5.1 Woefully lacking analysis/description of the importance of this topic. How do the proposed changes take climate change into account? How are they resilient to change? Hydrograph predicted shifts are published and the impact on species reported. Ocean and Puget Sound shifts due to climate change are also ignored. This may be a fatal flaw in the document. (EcoPerspectives - Wayne Wright)	Please see changes in the supplemental PEIS.
Impacts Climate	4.5.3 It is striking that the proposed rule contains no provisions to actually reduce greenhouse gas emissions, but will merely perpetuate them at the same rate as at present. This is certainly no recipe for environmental mitigation. (King County)	Please see changes in the supplemental PEIS.

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Impacts Water	4.3.2 The bulleted list of actions which could affect stream hydraulics and sediment mobilization and transport should certainly include freshwater bank protection structures and flood containment structures such as levees and floodwalls. These can confine flows, locally increase velocities, re-distribute flows and momentum downstream, increase flow depths for any given flow rate, increase bed shear stress and modify its distribution, and can result in channel downcutting and incision. (King County)	Please see changes in the supplemental PEIS.
Impacts Vegetation	4.7 Merely reducing impacts to vegetation is insufficient to demonstrate adequate mitigation, especially with respect to the currently degraded baseline condition for many riparian systems. (King County)	Please see changes in the supplemental PEIS.
Impacts Noise	4.2.2.3 Under "Noise and vibration" - to my knowledge there has never been any indication that vibratory pile driving results in direct mortality as the second sentence in this paragraph implies. I would suggest deleting vibratory driving from this sentence. (WSDOT)	Please see changes in the supplemental PEIS.
Impacts Recreation	4.9 Application of the rules to recreational trails and fishing access ramps, including wheelchair access ramps should be specifically stated in enumerating the recreational impacts to be addressed by the rule change. Otherwise it could be presumed they have no impact, and are exempt. (King County)	Please see changes in the supplemental PEIS.
Impacts Ag	The draft EIS does not adequately address the impacts of these rules and changes to these rules on agricultural lands under 43.21C.011 (2). WDFW needs to seek technical papers from agricultural and farm land associations, so the decision makers can be fully informed. The draft EIS should consider impacts on RCW 85 and RCW 86 special purpose districts. The proposed rule changes should or could consider alternatives to streamline any required permitting in these types of districts (i.e. pamphlet?), and clarify those drainage infrastructure items requiring permitting and those that plainly do not. For example, the rules could provide a mechanism for defining HPA jurisdiction based upon the definitions being applied to different water courses areas within a district. WDFW should, or at a minimum should address in the EIS, and spell out clearly in the rules, that maintenance of agricultural drainage facilities, including ditches, do not require mitigation nor compensatory mitigation nor a drainage maintenance plan. A drainage maintenance plan can be utilized as a tool, but is not required. The rule should spell out a	Please see changes in the supplemental PEIS.

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	<p>mechanism to implement these and elements thereof, if used. Further, the definition of environmental baseline does not make sense in all maintenance, cleaning, and/or dredging projects. (Peter Ojala, Carson Law Group)</p>	
Impacts Socio-Econ	<p>4.2.3 Table 4-1 The lack of alternatives makes this table rather meaningless and the selection of the proposed alternative as a foregone conclusion. An analysis of cost in terms of time and applicant restrictions (delays, denials, monitoring, etc.) would be helpful to assess the social impact of the proposed rule changes. In addition, the scale of the "improvement" is not quantified. Will the improvement be significant? Double over what protections we have in place currently? Dimensions being reduced as a rule for any structure omit the physical need for the structure. Vessel size, water body depth, structure and seismic force balance and more all must be accounted for in design. Simply reducing or limiting the design parameters does not make sense. Additional comments... Some of the Regulated Hydraulic Project Activities, Residential Docks etc. (220-110-140 and 370) and Bulkheads (220-110-360) and Ramps and Launches (220-110-380) describe more robust design requirements, additional restrictions etc. This will cost the homeowner more money and time. Yet the Cover Letter states that "these actions will deliver cost and time savings..." (pg 2). These two statements appear contradictory. Prescriptive cookbook measures are not always the most useful or cost effective methods to achieve project success. Nature is too variable. Suggest an increase, rather than a decrease in adaptive management opportunities. (EcoPerspectives - Wayne Wright)</p>	<p>Please see the economic analyses within <i>"Hydraulic Code Rulemaking-Cost/Benefit Analysis &amp; Small Business Economic Impact Statement,"</i> associated with Version 5 of the proposed rule changes and supplemental draft PEIS.</p>
Impacts Socio-Econ	<p>3.9 This section states "Recreation that is related to the presence of healthy fish life is a major economic engine in Washington, particularly in more rural areas. USFWS estimates in its 2011 report that expenditures for recreational fishing in Washington tops \$974,615,000. It is vital to the ecological health and community sustainability of Washington State that fish resources be protected." Much of this recreational fishing is conducted by recreational boaters in Washington State. As the mission of the NMTA is to promote the growth of recreational boating in Washington State, it is imperative that the recreational fishing community have access to waters containing healthy fish life. Access and facilities that provide access to these fisheries should be considered when</p>	<p>Please see the economic analyses within <i>"Hydraulic Code Rulemaking-Cost/Benefit Analysis &amp; Small Business Economic Impact Statement,"</i> associated with Version 5 of the proposed rule changes and supplemental draft PEIS.</p>

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	determining impacts from this rulemaking process especially as it relates to restriction(s) on construction of new facilities and maintenance and repair of existing facilities. These comments should also be considered under Section 4.9 "Recreation". (NW Marine Trade Association)	
Impacts Socio-Econ	4.11 5. NMTA understands that WDFW has hired an economist to draft a Small Business Economic Impact Statement (SBEIS). As described in Section 4.11, this is a requirement under RCW 19.85.030. The SBEIS should be completed and released for public review and comment prior to any additional revisions to and solicitation for review/comment on the draft rules. (NW Marine Trade Association)	Please see the economic analyses within "Hydraulic Code Rulemaking-Cost/Benefit Analysis & Small Business Economic Impact Statement," associated with Version 5 of the proposed rule changes and supplemental draft PEIS.
Impacts Socio-Econ	4.11 How can this element be omitted from the DPEIS? This is where the true impact of the proposed action will occur. Shuffling it off to a separate analysis removes its importance to the proposed action. This goes back to the omission of the mock scenario testing and application process that appears to have never been attempted to actually view the process and results of the proposed rule changes. (EcoPerspectives - Wayne Wright)	Please see the economic analyses within "Hydraulic Code Rulemaking-Cost/Benefit Analysis & Small Business Economic Impact Statement," associated with Version 5 of the proposed rule changes and supplemental draft PEIS.
Impacts Socio-Econ	4.11.2 How much will costs are elevated? It seems there may be a better interim step with improving implementation by WDFW as opposed to rule changes. I wonder how the rule changes affect mitigation costs. (EcoPerspectives - Wayne Wright)	Please see the economic analyses within "Hydraulic Code Rulemaking-Cost/Benefit Analysis & Small Business Economic Impact Statement," associated with Version 5 of the proposed rule changes and supplemental draft PEIS.
Impacts Socio-Econ	4.11.2 The EIS does not adequately analyze or disclose the economic impacts of the proposed rule change. We believe that the following sections of the proposed rule result in new fiscal impacts to WSDOT's maintenance and operating budget: [080 (4) (i) (ii) & (iii)] [170 (3)] [190 (7) (e) & (11) (iii)] [200 (7)]. Additional sections of the proposed rule will have significant fiscal impacts to WSDOT's capital construction program. WDFW should prepare an addendum to the EIS regarding the economic impacts of the proposed rule change and should circulate the addendum for public comment. The economic impact addendum should provide a complete analysis on the increased funding and resources needed to comply with the proposed rule. (King County)	Please see the economic analyses within "Hydraulic Code Rulemaking-Cost/Benefit Analysis & Small Business Economic Impact Statement," associated with Version 5 of the proposed rule changes and supplemental draft PEIS.
Impacts Socio-Econ	4.11.2 This document is generalized, does not include supporting documentation, and is redundant, rambling, and was not prepared with the required cost – benefit analysis. It does not meet the requirements of	Please see the economic analyses within "Hydraulic Code Rulemaking-Cost/Benefit Analysis & Small Business Economic Impact Statement," associated with Version 5 of the proposed rule changes and supplemental

DPEIS TOPIC	COMMENT	RESPONSE
	SEPA or NEPA and does not address the real impacts such as increased threats to human life, property, and livestock. There is no financial analysis addressing the impacts to business, farmers, foresters, property owners, or impacts to citizens' constitutional rights. This document fails to address the impacts to municipalities including increased costs and impacts to utility districts. (Cindy Alia)	draft PEIS.
Impacts Socio-Econ	4.11.3 This is a weak and unsupported statement about mitigation. Site-by site evaluation allows reality of the site conditions to drive the impact and solutions. Prescribed "rules" rarely allow site specific issues to be properly evaluated. A "worst case" assumption will prevail creating increased cost of appeals, creative solutions, and legal claims. This will stall the "process" greatly and add cost. . (EcoPerspectives - Wayne Wright)	Please see the economic analyses within <i>"Hydraulic Code Rulemaking-Cost/Benefit Analysis &amp; Small Business Economic Impact Statement,"</i> associated with Version 5 of the proposed rule changes and supplemental draft PEIS.
Impacts Socio-Econ	The DEIS is incomplete. It does not meet the requirements of SEPA because it does not address the proposed rules real impacts such as increased threats to human life, property, livestock and business. It does not address the real financial impacts to property owners, municipalities, businesses, farming, and utility districts. These impacts, while not directly environmental, need to be addressed in the EIS as provided for in SEPA. (Bill Thomas)	Please see the economic analyses within <i>"Hydraulic Code Rulemaking-Cost/Benefit Analysis &amp; Small Business Economic Impact Statement,"</i> associated with Version 5 of the proposed rule changes and supplemental draft PEIS.
Impacts Tribal rights	There is no discussion or mention of tribal treaty-reserved issues and the potential impacts this action may have on treaty tribes. (Suquamish Tribe)	Comment noted.
Cumulative Effects	4.12 Cumulative effects are the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertake such other actions. Cumulative impacts can result from individually minor, but collectively significant, actions taking place over a period of time. There is no summary of changes from the current rules to the proposed rules, making it difficult to determine if the proposed changes will have either a positive or negative impact on fish species, or to determine if the proposed rule changes will have any impact regarding cumulative effects. (Cindy Alia)	Please refer to the updated section on Cumulative Effects in the Supplemental draft PEIS.
Cumulative Effects	4.12 Death by a Thousand Cuts. The SEPA factsheet states that "While the structure of the hydraulic code prevents consideration of issues beyond the project proposal under review," we believe that a project	Please refer to the updated section on Cumulative Effects in the Supplemental draft PEIS.

DPEIS TOPIC	COMMENT	RESPONSE
	<p>should be held to a very high standard if it is contributing to any level degradation. That is, if the project is just one small cut among a thousand, it should be held responsible for that one cut. In addition, if a project could be responsible for the failure or the reduction of natural processes, even if there are other contributing factors, that potential damage should be included in the review. For example, if a drift cell, transporting sediments to enrich adjacent beaches, could be degraded or disrupted, even if there may be other existing contributing factors, that potential damage should be considered in the application. Additionally, the DPEIS should address the impacts of not viewing an application in relationship to the greater ecosystem. (Seattle Audubon Society)</p>	
Cumulative Effects	<p>4.12 Evaluation of cumulative effects and impacts should be incorporated into permit review in order to meet the no net loss standard. Although the department has argued that they do not hold this authority, review of the RCW finds no language that would prevent this consideration. And, the agency's own policy, "Requiring or Recommending Mitigation," which specifies that "Cumulative impacts of projects shall be considered and appropriate measures taken to avoid or minimize those impacts," appears to require this evaluation when issuing an HPA. (Washington State Environmental Coalition)</p>	<p>WDFW reviews every application for impacts on fish life. Specific mitigation activities or projects are required when impacts are not addressed using the mitigating provisions designed for each HPA. We cannot require compensation for cumulative impacts.</p>
Cumulative Effects	<p>4.12 Paragraph three here also concedes that cumulative impacts of past actions will not be addressed, then goes on to contradict the statements of paragraph two with respect to reasonably foreseeable future actions. While paragraph two merely says individual project impacts will be lessened, hopefully with the help of other regulatory agencies, it concedes cumulative impacts will occur over time. Paragraph three somehow finds this will improve habitat conditions. This finding is not supported in logic and experience. (King County)</p>	<p>Please refer to the updated section on Cumulative Effects in the Supplemental draft PEIS.</p>
Cumulative Effects	<p>4.12 Paragraph two of this section clearly stipulates and concedes that the proposed action will result in "impacts, especially to habitat," which are presumably negative and cumulative. Moreover, it is clear from this discussion that such impacts will not be addressed. It then places inappropriate reliance on the possible actions of other regulatory agencies to address this deficiency, hoping without substantiation that this will somehow reduce cumulative impacts over time. In stating this</p>	<p>Please refer to the updated section on Cumulative Effects in the Supplemental draft PEIS. WDFW must comply with current statutes.</p>

DPEIS TOPIC	COMMENT	RESPONSE
	<p>obvious result, the Proposed Action does not even achieve its stated purpose of fully mitigating impacts assessed only with respect to a baseline determined by existing conditions. This baseline is therefore acknowledged as systematically codifying the continuing, cumulative degradation of habitat and the decline of listed species. This alone should render the preferred alternative unacceptable. (King County)</p>	
Cumulative Effects	<p>4.12 The definition of cumulative impacts stated here clearly notes these include "effects which may result from the incremental impacts of an action added to other past, present and reasonably foreseeable future actions." In assessing impacts and assigning mitigation with respect to the baseline, defined as the existing conditions, the Proposed Action does not adequately consider past impacts. These are treated as irrelevant to the present action, which is clearly not the case under currently degraded habitat conditions present in many aquatic and riparian systems. In addition, the proposed action does not adequately address reasonably foreseeable future actions, in not addressing the impacts of future wholesale removals of vegetation on bank stabilization structures associated with flood containment levees. While these plantings may be established as mitigation within the 5-year monitoring period, they are reasonably likely to be repeatedly eradicated thereafter. The Proposed Action should be appropriately modified to address both these elements of cumulative impacts. (King County)</p>	Please refer to the updated section on Cumulative Effects in the Supplemental draft PEIS.
Cumulative Effects	<p>4.12 The discussion of cumulative impacts provided in DEIS section 4.12 on page 4-35 seems inadequate and should be more robust in assessing how the new code might impact the environment over the longer term. In the cumulative impact discussion, the DEIS states that "Overall, the cumulative impacts of adopting the Preferred Alternative are expected to be less than the cumulative impacts of the No-Action Alternative." The paragraph concludes that "...over time it is expected that the improved requirements for hydraulic projects will result in improved habitat conditions." How is this statement supported? It may not be the case, particularly for the proposed single family bulkhead provisions under 220-110-360 (3) and (4), if no mitigation is required for new impacts from these projects and there is a continued ability to replace hard armoring along saltwater shorelines. Cumulative impacts from this regulation could result in adverse impacts to Puget Sound over time. At a minimum the</p>	Please refer to the updated section on Cumulative Effects in the Supplemental draft PEIS.

DPEIS TOPIC	COMMENT	RESPONSE
	<p>cumulative impact discussion in the DEIS should include an analysis that assesses whether the rule changes might result in an increase or decrease in project permit approvals by activity, and whether permit approvals could result in long-term adverse impacts over time. In addition, WDFW should include programmatic monitoring to assess the potential cumulative impacts of the revised rules. For shoreline armoring, this could include assessing the length of “new” or “newly replaced” bulkheads and the cumulative impacts that have resulted from these over a 5 year period. (Puget Sound Partnership)</p>	
Cumulative Effects	<p>4.12 The PEIS concedes that it does not address cumulative impacts. WDFW asserts that assessing cumulative impacts is beyond the scope of the Hydraulic Code, which, it asserts, calls for project-scale review of impacts. The PEIS does not disclose how the cumulative impacts, that it admits are caused by its HPA program, affect its obligations to protect fish life and support salmon recovery. WDFW's position that it is precluded from considering cumulative impacts is not supported by either law or logic. The Department's failure to address this issue is a critical flaw in both its PEIS and its proposed rules. Contrary to WDFW's assertions, its HPA rules do not result in No Net Loss of fish habitat. (NWIFC)</p>	<p>Please refer to the updated section on Cumulative Effects in the Supplemental draft PEIS.</p>
Cumulative Effects	<p>4.12 The PEIS states that addressing cumulative impacts is beyond the scope of the Code. The Tribe does not agree with this interpretation and WDFW provides no basis or justification for this interpretation. While the quantification and assessment of cumulative impacts will undoubtedly require clever problem solving and analyses, this is no reason to sideline the issue. The Tribe urges WDFW to reassess its interpretation and engage in discussions regarding this issue before the rule revisions are finalized. (Upper Skagit Tribe)</p>	<p>Please refer to the updated section on Cumulative Effects in the Supplemental draft PEIS. WDFW must comply with RCW 77.55.231(1).</p>
Cumulative Effects	<p>4.12 The Tribe requests WDFW include an evaluation/assessment of the anticipated impacts from existing and future development activities (including but not limited to docks, piers, shoreline and riparian /marine stabilization, etc.) permitted under the revised hydraulic code in the PEIS. Cumulative impacts are a key issue of concern as recognized under the Puget Sound Salmon Recovery Program and other Puget Sound initiatives. (Suquamish Tribe)</p>	<p>Please refer to the updated section on Cumulative Effects in the Supplemental draft PEIS.</p>
Cumulative	<p>4.12 We do not believe that aquatic systems and habitats can be</p>	<p>Please refer to the updated section on Cumulative Effects in the</p>

DPEIS TOPIC	COMMENT	RESPONSE
Effects	adequately protected in the absence of some mechanism by which to evaluate cumulative impacts, and we appreciate that WDFW acknowledges this concern in the PEIS document. However, given that there appears to be some level of agreement that this is a critical shortcoming, we are disappointed that it is not addressed within the proposed rule changes. We believe it is imperative that updated regulations include consideration of cumulative impacts with regard to administration of Hydraulic Project Approvals, as acute impacts to aquatic habitats in any given stream or watershed often are exacerbated by the compounding effects of many individual projects within a relatively small area. (Trout Unlimited)	Supplemental draft PEIS.
Adaptive Management	For example, the impact of the concept of 'life of the project' on maintenance would occur when WSDOT replaces an end of a culvert located on a culvert that has frequent maintenance [e.g. sediment removal]. In this example, if WSDOT were to follow the proposed rule, we would likely be required to replace the entire culvert as a provision for the maintenance action. This would significantly increase the cost of the needed repair and may potentially prevent us from taking the maintenance action which could jeopardize the safety of the travelling public. (WSDOT)	<p>WDFW proposes that compensatory mitigation would not be required for maintenance, repair and upkeep unless there is a new impact not associated with construction of the original structure.</p> <p>The proposed rules require that rehabilitated components or replacement structures comply with the provisions in the proposed rules. This will often result in an improvement to the existing habitat conditions.</p>
Adaptive Management	2.4.2 WAC 220-110-320 The rules and the DPEIS are mostly silent about monitoring, particularly monitoring prior to implementation of a project to provide baseline information. For example, there are special rules if an intertidal area is known to be an area of Pacific Sand lance spawning. However, many areas have not been surveyed, or recently surveyed, for the presence of Sand lance eggs. The rules should require that if a beach has not been surveyed in the last three years it should be surveyed prior to the issuance on a permit. This, of course, applies to other biota and physical processes of the freshwater, riparian, intertidal, and nearshore areas. (Seattle Audubon Society)	The department does not require baseline monitoring unless we require a contingency plan. We rely on available science and the application information to determine the mitigation. All provisions with which a person must comply must be documented in the HPA permit, so we cannot wait for monitoring results to determine the mitigation for impacts
Adaptive Management	2.5.3 In the discussion on Adaptive Management, WDFW does not explain how they will monitor HPA compliance with the new rules. This needs to be included so that HPA users can understand the new process. (King County)	Development of an adaptive management program for the HPA program will begin once a decision is finalized in fall 2014 regarding proposed rule changes.
Adaptive	2.5.3 Monitoring has been woefully lacking in funding and activity over	Development of an adaptive management program for the HPA program

DPEIS TOPIC	COMMENT	RESPONSE
Management	the life of the Hydraulic Code. How will monitoring be implemented on a case by case basis and at what cost? Who established the hypotheses regarding each application of science/decision and how are changes to be made over time? This section leaves the reader to wonder what it really is and how it fits into the proposed rule changes. (EcoPerspectives - Wayne Wright)	will begin once a decision is finalized in fall 2014 regarding proposed rule changes.
Adaptive Management	4.7.2 While direct construction impacts to vegetation are addressed with required mitigation under the preferred alternative, there is no indication that subsequent removal of the resulting mitigation plantings will not occur. Without a mechanism to ensure that mitigation is functioning over the longer term, it is conceivable that streambank stabilization structures associated with levees, for example, would at best only produce 5-year old vegetation, coinciding with the establishment monitoring period. Such projects could then be mowed to the ground. This needs to be addressed if the rule changes are to effectively mitigate permanent alteration of the vegetative community in such settings. (King County)	Development of an adaptive management program for the HPA program will begin once a decision is finalized in fall 2014 regarding proposed rule changes.
Adaptive Management	For example the impact of the concept of 'lost opportunity' on maintenance would occur when the maintenance repair of erosion damage to the highway that occurs on a frequent basis may require the retrofit of the highway section. This would significantly increase the cost of the needed repair and may potentially prevent us from performing the maintenance action which could jeopardize the safety of the travelling public. For example, the impact of the concept of 'life of the project' on maintenance would occur when WSDOT replaces an end of a culvert located on a culvert that has frequent maintenance [e.g. sediment removal]. In this example, if WSDOT were to follow the proposed rule, we would likely be required to replace the entire culvert as a provision for the maintenance action. This would significantly increase the cost of the needed repair and may potentially prevent us from taking the maintenance action which could jeopardize the safety of the travelling public. (WSDOT)	WDFW proposes that compensatory mitigation would not be required for maintenance, repair, and upkeep unless there is a new impact not associated with construction of the original structure.
Adaptive Management	Much effort has been made by counties to work with state, local, and federal regulators to develop road infrastructure maintenance best management practices. A regional road maintenance forum was established several years ago in response to the listing of endangered	Discussion of these points has been ongoing. Please see changes in the proposed rules and supplemental PEIS.

DPEIS TOPIC	COMMENT	RESPONSE
	salmon. Federal and local agencies have recognized and endorsed the road maintenance best management practices as being protective of fish. We recommend that WDFW recognize these practices as well and provide options within the hydraulic code for equivalent protection measures in lieu of individual hydraulic project approvals. (Washington State Association of Counties)	
Adaptive Management	WDFW has failed to assess the effectiveness of the measures it uses to implement HPAs. (NWIFC)	The department does not require baseline monitoring unless we require a contingency plan. We rely on available science and the application information to determine the mitigation. All provisions with which a person must comply must be in the HPA so we cannot wait for monitoring results to determine the mitigation for impacts.
Editorial	1.5.2 "designed" should read "designated". (WSDOT)	Language amended.
Editorial	1.5.3 In the first paragraph, forests or forest practices are left out of the list of things regulated under the Clean Water Act. (ECY)	Language amended.
Editorial	1.5.4 In the second paragraph, the Forests and Fish Law also negotiated to assure compliance under the Clean Water Act, particularly in light of the many impaired listings (303(d)) on forest lands. In addition, in the same paragraph, the Forests and Fish Law included requirements for state lands. In the 5th paragraph, Forest Practices Policy Committee should be changed to Timber/Fish/Wildlife Policy Committee. (ECY)	Language amended.
Editorial	1.6 "inferred" should read "deduced" (WSDOT)	Language amended.
Editorial	2.1 Please include a list of participants in the Stakeholder Advisory Group discussed in Section NMTA requests involvement in future stakeholder or other groups for public processes that affect water dependent recreation, business and industry. (NW Marine Trade Association)	Language amended.
Editorial	2.4.1 Table 2.1 Summary of changes - This table is extremely difficult to understand relative to the ACTUAL changes made to the code. Normally, code changes involve a strike-through and replacement format so an evaluator can easily see what changes are made and how they are worded to understand intent/meaning. This PEIS and the manner in which it has been prepared do not allow a meaningful evaluation of the proposal. (EcoPerspectives - Wayne Wright)	Language amended.
Editorial	2.4.1 Table 2-1 WAC 220-110-060 "below bankfull width" should read	Language amended.

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	"below bankfull elevation" (King County)	
Editorial	2.4.1 Table 2-1 WAC 220-110-060 "flood level 100 year" should read "100-year floodplain." (King County)	Language amended.
Editorial	2.4.1 Table 2-1 WAC 220-110-110 "Eggs and try" should read "eggs and fry." "Standards dates should read "standard dates." (King County)	Language amended.
Editorial	2.4.1 Table 2-1 WAC 220-110-160 "Marinas and terminal" should read "marinas and terminals." (King County)	Language amended.
Editorial	2.4.2 WAC 220-110-130 "Hard approaches are intended to resist shear forces experienced at the work area that would prevent erosion of the bank" should read "that would otherwise erode the bank." (King County)	Language amended.
Editorial	2.4.2 WAC 220-110-130 Paragraph referring to WAC 220-110-130 is quite biased and leads the reader into thinking that hard structures are BAD and soft structures are GOOD. This should be a description of the methods and example illustrations would be good. The writing is highly subjective and biased. (EcoPerspectives - Wayne Wright)	Language amended.
Editorial	2.4.2 WAC 220-110-160 Are terminals actually used to "store" passengers? (King County)	Language amended for clarity.
Editorial	2.4.2 WAC 220-110-180 "Directly from riverbed" should read "directly from the riverbed." (King County)	Language amended.
Editorial	2.4.2 WAC 220-110-210 Wording that "channel relocation can be used to foster the development of a new, static channel with healthy riparian buffers" should be modified to indicate that channel relocation can also be used to foster restoration of dynamic channel processes and riparian patch habitat development and turnover in previously confined reaches, and to restore active processes leading to re-establishment of multi-threaded (anastomosing) channel forms where these would naturally develop. (King County)	Language amended.
Editorial	2.4.2 WAC 220-110-220 Interesting, LWD is used for many more reasons than the few cited. Also, the removal (and impact to habitat) is noted when considering loss/threat top life, the public or property. Why not offer the same understanding for bank stabilization? Demonstrates the biased nature of this work. (EcoPerspectives - Wayne Wright)	Language amended.
Editorial	2.4.2 WAC 220-110-360 "Shear forces... that would prevent erosion of the	Language amended.

DPEIS TOPIC	COMMENT	RESPONSE
	bank" should be re-worded to "shear forces that would otherwise cause erosion of the bank." (King County)	
Editorial	2.4.2 WAC 220-110-360 Same comments as above for streambank protection. (EcoPerspectives - Wayne Wright)	Language amended.
Editorial	2.4.2 WAC 22-110-230 "Ponds" should read "pond's." (King County)	Language amended.
Editorial	2.4.2 WAC 22-110-230 It is impossible for beaver dams to damage land per se; the wording should be amended to say "breach or modify a beaver dam to prevent damage to private or public land use or infrastructure." (King County)	Language amended.
Editorial	2.4.2 WAC 22-110-230 The word "mouth" should be replaced by the word "inlet." (King County)	Language amended.
Editorial	2.4.3 Procedural changes - Table should be hyperlinked as was Table 1 to allow comparison of the proposed changes. (EcoPerspectives - Wayne Wright)	Language amended.
Editorial	2.4.3 Table 2-2 WAC 220-110-460 "About the time period for requesting a formal appeal is suspended" should be amended to say "...that is suspended." (King County)	Language amended.
Editorial	2.4.4 "Culvers" should be spelled "culverts." (King County)	Language amended.
Editorial	2.4.4 While the referenced science documents are noted to recommend "habitat protection, conservation, and mitigation strategies," they should also be noted as including recommendations for habitat restoration, particularly for critical habitat essential for the recovery of ESA listed species. (King County)	Language amended.
Editorial	3.2.5 Table 3-1 needs to be updated, particularly in relation to rockfish. The DPEIS does not address the critical habitat designation within Puget Sound for endangered and threatened rockfish. (Seattle Audubon Society)	Language amended.
Editorial	3.3 The estimate of streams appears low, compared to the number of estimated streams regulated by the Forest Practices Act (approximately 60,000). Perhaps this number considered only what is within the jurisdiction of WDFW. Please clarify this statement. (ECY)	Language amended.
Editorial	3.3.1 This section includes this statement: "A watercourse includes all	Language amended.

DPEIS TOPIC	COMMENT	RESPONSE
	associated wetlands." Associated wetland is not defined in version 4 of the draft rule. (ECY)	
Editorial	3.3.1.1 It is unclear whether the lotic to lentic reference is about the geomorphic change that can occur with less water. Consider clarifying this statement. Under the Stream Temperature and Water Quality section, we suggest you replace the word "regulation" with "can". (ECY)	Language amended.
Editorial	3.3.1.1. The listing of major rivers west of the Cascades does not include the Cedar River; this should be included. (King County)	Language amended.
Editorial	3.3.1.3 On page 3-12 of the PEIS, the reference regarding the length of marine shorelines dated 2001 is out-of-date. The marine shoreline of Puget Sound and Straits, for example, is now determined to be greater than 2500 miles. We recommend that references from recent Puget Sound Partnership documents be used for this section. (Futurewise)	Language amended.
Editorial	3.3.1.3 This section includes the statement: "The major marine water features of Washington State are comprised of the Pacific Ocean, the Strait of Juan de Fuca, and Puget Sound, including Hood Canal (Figure 3-1)." The Strait of Juan de Fuca and the Puget Sound were officially recognized as the Salish Sea in 2009. (ECY)	Language amended.
Editorial	3.3.2 We suggest inserting the word "generally" before "requires". There are instances where pursuing implementation of Best Management Practices immediately may provide quicker results than waiting for the Total Maximum Daily Load process (i.e. forests and fish). (ECY)	Language amended.
Editorial	3.3.3 This section doesn't provide a clear view of the various jurisdictions that regulate wetlands. (ECY)	Language amended.
Editorial	3.6.2 Wording stating "several species of sea turtle freshwater turtle are present" should be amended to state "several species of sea turtles and freshwater turtles are present" (King County)	Language amended.
Editorial	3.6.4 Loons are noted to "utilize their diving ability to expert divers, able to dive to depths..." This sentence should be edited for sense and clarity. (King County)	Language amended.
Editorial	3.8 Text should indicate that SMPs are required by cities as well as counties. (Futurewise)	Language amended.
Editorial	3.9 The "swimming hole" example is silly. Winter flows typically move	Language amended.

DPEIS TOPIC	COMMENT	RESPONSE
	sediment around sufficiently to remove any evidence of human "play". To suggest such activity is so widespread to cause significant impact demonstrates lack of understanding and a penchant to seek impact over analysis. Statements such as these reflect the biased nature of the document. (EcoPerspectives - Wayne Wright)	
Editorial	4.2.2.1 On page 4-2 of the PEIS, the list of types of impacts associated with various hydraulic projects should also include "Alteration of water quality (temperature)" because many shoreline modification and overwater coverage projects can cause a change in water temperature. (Futurewise)	Language amended.
Editorial	4.2.2.4 The separation of Shoreline Disturbances from Direct Loss of Habitat in the discussion seems to focus on construction impacts associated with the former, without a clear acknowledgement that such construction can result in ongoing, direct and permanent loss of habitat; except for humans. (King County)	Comment noted.
Editorial	4.3.2 "Local scour depositional patterns" should read "local scour and depositional patterns." (King County)	The language is amended.
Editorial	4.3.2 "Primarily to localized" should read "primarily localized." (King County)	The language is amended.
Editorial	4.5.2 Include a statement about how the rules may improve the health of the species (by assuring that habitat is protected or restored). (Futurewise)	The language is amended.
Editorial	4.6 Second bullet at top of page. Please delete reference to diving birds for this bullet as they should not be included as part of marine mammals. (WSDOT)	The language is amended.
Tribal Review	The Tribe concurs with the technical and policy critique of the revised rules package and DPEIS submitted by the Northwest Indian Fisheries Commission (NWIFC) on December 13, 2013. (Stillaguamish Tribe)	Comment noted.
Tribal review	The Tribe reiterates its support for the well-developed arguments provided in the NWIFC comment letter. (Upper Skagit Tribe)	Comment noted.

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Appendix B

**SPECIES LISTED UNDER THE STATE AND FEDERAL  
ENDANGERED SPECIES ACTS**

## Appendix B SPECIES LISTED UNDER STATE OR FEDERAL ESA

Table B-1 lists the federally threatened or endangered wildlife species and those that are considered “species of concern” by WDFW, which includes those species listed as State Endangered, State Threatened, State Sensitive, or State Candidate. This table does not include those species designated as State Monitor that have no federal status.

**Table B-1 Listed Wildlife Species and Species of Concern**

COMMON NAME	SCIENTIFIC NAME	STATE STATUS	FEDERAL STATUS
<b>Marine Mammals</b>			
Fin whale	<i>Baleoptera physalus</i>	SE	FE
Gray whale	<i>Eschrichtius robustus</i>	SS	none
Humpback whale	<i>Megaptera novaeangliae</i>	SE	FE
Killer whale	<i>Orcinus orca</i>	SE	FE
North Pacific Right Whale	<i>Eubalaena japonica</i>	SE	FE
Pacific harbor porpoise	<i>Phocoena phocoena</i>	SC	none
Sea otter	<i>Enhydra lutris</i>	SE	FCo
Sei whale	<i>Baleoptera borealis</i>	SE	FE
Sperm whale	<i>Physeter macrocephalus</i>	SE	FE
Steller sea lion	<i>Eumetopias jubatus</i>	ST	FT
<b>Land Mammals</b>			
Black-tailed jackrabbit	<i>Lepus californicus</i>	SC	none
Blue whale	<i>Baleoptera musculus</i>	SE	FE
Cascade red fox	<i>Vulpes vulpes cascadenis</i>	SC	none
Columbian white-tailed deer	<i>Odocoileus virginianus leucurus</i>	SE	FE
Annual Report			
Fisher	<i>Martes pennanti</i>	SE	FC
Gray wolf	<i>Canis lupus</i>	SE	FE
Gray-tailed vole	<i>Microtus canicaudus</i>	SC	none
Grizzly bear	<i>Ursus arctos</i>	SE	FT
Keen's myotis	<i>Myotis keenii</i>	SC	none
Lynx	<i>Lynx canadensis</i>	ST	FT
Mazama (Western) pocket gopher	<i>Thomomys mazama</i>	ST	FC
Olympic marmot	<i>Marmota olympus</i>	SC	none
Preble's shrew	<i>Sorex preblei</i>	SC	FCo
Pygmy rabbit	<i>Brachylagus idahoensis</i>	SE	FE
Tacoma pocket gopher - Mazama	<i>Thomomys mazama tacomensis</i>	ST	FC
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	SC	FCo
Townsend's ground squirrel	<i>Urocitellus townsendii townsendii</i>	SC	FCo
Washington ground squirrel	<i>Urocitellus washingtoni</i>	SC	FC
Western gray squirrel	<i>Sciurus griseus</i>	ST	FCo
White-tailed jackrabbit	<i>Lepus townsendii</i>	SC	none
Wolverine	<i>Gulo gulo</i>	SC	FC
Woodland caribou	<i>Rangifer tarandus</i>	SE	FE
<b>Amphibian</b>			
Cascade torrent salamander	<i>Rhyacotriton cascadae</i>	SC	none
Columbia spotted frog	<i>Rana luteiventris</i>	SC	none
Dunn's salamander	<i>Plethodon dunni</i>	SC	none
Larch Mountain salamander	<i>Plethodon larselli</i>	SS	FCo
Northern leopard frog	<i>Rana pipiens</i>	SE	FCo

COMMON NAME	SCIENTIFIC NAME	STATE STATUS	FEDERAL STATUS
Oregon spotted frog	<i>Rana pretiosa</i>	SE	FC
Rocky Mountain Tailed Frog	<i>Ascaphus montanus</i>	SC	FCo
Van Dyke's salamander	<i>Plethodon vandykei</i>	SC	FCo
Western toad	<i>Anaxyrus boreas</i>	SC	FCo
<b>Reptile</b>			
California mountain kingsnake	<i>Lampropeltis zonata</i>	SC	none
Green sea turtle	<i>Chelonia mydas</i>	ST	FT
Leatherback sea turtle	<i>Dermochelys coriacea</i>	SE	FE
Loggerhead sea turtle	<i>Caretta caretta</i>	ST	FE
Sagebrush lizard	<i>Sceloporus graciosus</i>	SC	FCo
Sharptail snake	<i>Contia tenuis</i>	SC	FCo
Striped whipsnake	<i>Masticophis taeniatus</i>	SC	none
Western pond turtle	<i>Actinemys marmorata</i>	SE	FCo
<b>Birds</b>			
American white pelican	<i>Pelecanus erythrorhynchos</i>	SE	none
Bald eagle	<i>Haliaeetus leucocephalus</i>	SS	FCo
Black swift	<i>Cypseloides niger</i>	SM	FCo
Black-backed woodpecker	<i>Picoides arcticus</i>	SC	none
Brandt's cormorant	<i>Phalacrocorax penicillatus</i>	SC	none
Brown pelican	<i>Pelecanus occidentalis</i>	SE	FCo
Burrowing owl	<i>Athene cunicularia</i>	SC	FCo
Cassin's auklet	<i>Ptychoramphus aleuticus</i>	SC	FCo
Clark's grebe	<i>Aechmophorus clarkii</i>	SC	none
Columbian Sharp-tailed Grouse	<i>Tympanuchus phasianellus</i>	ST	FCo
Common loon	<i>Gavia immer</i>	SS	none
Common murre	<i>Uria aalge</i>	SC	none
Ferruginous hawk	<i>Buteo regalis</i>	ST	FCo
Flammulated owl	<i>Otus flammeolus</i>	SC	none
Golden eagle	<i>Aquila chrysaetos</i>	SC	none
Greater Sage-grouse	<i>Centrocercus urophasianus</i>	ST	FC
Lewis' woodpecker	<i>Melanerpes lewis</i>	SC	none
Loggerhead shrike	<i>Lanius ludovicianus</i>	SC	FCo
Marbled murrelet	<i>Brachyramphus marmoratus</i>	ST	FT
Northern goshawk	<i>Accipiter gentilis</i>	SC	FCo
Northern Spotted Owl	<i>Strix occidentalis</i>	SE	FT
Oregon vesper sparrow	<i>Poocetes gramineus affinis</i>	SC	FCo
Peregrine falcon	<i>Falco peregrinus</i>	SS	FCo
Pileated woodpecker	<i>Dryocopus pileatus</i>	SC	none
Purple martin	<i>Progne subis</i>	SC	none
Sage sparrow	<i>Amphispiza belli</i>	SC	none
Sage thrasher	<i>Oreoscoptes montanus</i>	SC	none
Sandhill crane	<i>Grus canadensis</i>	SE	none
Short-tailed albatross	<i>Diomedea albatrus</i>	SC	FE
Slender-billed white-breasted nuthatch	<i>Sitta carolinensis aculeata</i>	SC	FCo
Snowy plover	<i>Charadrius nivosus</i>	SE	FT
Streaked horned lark	<i>Eremophila alpestris strigata</i>	SE	FC
Tufted puffin	<i>Fratercula cirrhata</i>	SC	FCo
Upland sandpiper	<i>Bartramia longicauda</i>	SE	none
Vaux's swift	<i>Chaetura vauxi</i>	SC	none
Western grebe	<i>Aechmophorus occidentalis</i>	SC	none
White-headed woodpecker	<i>Picoides albolarvatus</i>	SC	none
Yellow-billed cuckoo	<i>Coccyzus americanus</i>	SC	FC

COMMON NAME	SCIENTIFIC NAME	STATE STATUS	FEDERAL STATUS
<b>Mollusk</b>			
Bluegray Taildropper	<i>Prophysaon coeruleum</i>	SC	none
California floater	<i>Anodonta californiensis</i>	SC	FCo
Columbia oregonian	<i>Cryptomastix hendersoni</i>	SC	none
Columbia pebblesnail	<i>Fluminicola columbiana</i>	SC	FCo
Dalle's Sideband	<i>Monadenia fidelis minor</i>	SC	none
Giant Columbia River limpet	<i>Fisherola nuttalli</i>	SC	none
Northern abalone	<i>Haliotis kamtschatkana</i>	SC	FCo
Olympia oyster	<i>Ostrea lurida</i>	SC	none
Poplar oregonian	<i>Cryptomastix populi</i>	SC	none
<b>Butterfly or Moth</b>			
Chinquapin hairstreak	<i>Habrodais grunus herri</i>	SC	none
Great arctic	<i>Oeneis nevadensis gigas</i>	SC	FCo
Johnson's hairstreak	<i>Mitoura johnsoni</i>	SC	none
Juniper hairstreak	<i>Mitoura grynea barryi</i>	SC	none
Makah copper	<i>Lycaena mariposa charlottensis</i>	SC	FCo
Mardon skipper	<i>Polites mardon</i>	SE	FC
Oregon silverspot butterfly	<i>Speyeria zerene hippolyta</i>	SE	FT
Puget blue	<i>Plebejus icarioides blackmorei</i>	SC	none
Sand-verbena moth	<i>Copablepharon fuscum</i>	SC	none
Shepard's parnassian	<i>Parnassius clodius shepardi</i>	SC	none
Taylor's checkerspot	<i>Euphydryas editha taylori</i>	SE	FC
Valley silverspot	<i>Speyeria zerene bremnerii</i>	SC	FCo
Yuma skipper	<i>Ochlodes yuma</i>	SC	none
<b>Other Insect</b>			
Beller's ground beetle	<i>Agonum belleri</i>	SC	FCo
Bog idol leaf beetle	<i>Donacia idola</i>	SC	none
Columbia clubtail (dragonfly)	<i>Gomphus lynnae</i>	SC	FCo
Columbia River tiger beetle	<i>Cicindela columbica</i>	SC	none
Hatch's click beetle	<i>Eanus hatchi</i>	SC	FCo
Island Marble	<i>Euchloe ausonides</i>	SC	FCo
Mann's Mollusk-eating Ground Beetle	<i>Scaphinotus mannii</i>	SC	none
Pacific clubtail	<i>Gomphus kurilis</i>	SC	none
Silver-bordered fritillary	<i>Boloria selene atrocostalis</i>	SC	none

State Endangered (SE), State Threatened (ST), State Candidate (SC), State Sensitive (SS), State Monitor (SM)  
 Federal Endangered (FE), Proposed Endangered (FPE), Threatened (FT), Proposed Threatened (FPT), Candidate (FC), or Species of Concern (FSC).

Table B-2 lists the federally threatened or endangered fish species, and those that are considered “species of concern” by WDFW, which includes those species listed as State Endangered, State Threatened, State Sensitive, or State Candidate. This table also includes some species designated as State Monitor that have no federal status.

**Table B-2 Listed Fish Species and Species of Concern with Status of Critical Habitat Designation**

COMMON NAME (ESU/DPS)	SCIENTIFIC NAME	STATE STATUS	FEDERAL STATUS	DESIGNATED CRITICAL HABITAT
Bull trout	<i>Salvelinus confluentus</i>	SC	FT	Designated
Chinook salmon (Lower Columbia)	<i>Oncorhynchus tshawytscha</i>	SC	FT	Designated
Chinook salmon (Puget Sound)	<i>Oncorhynchus tshawytscha</i>	SC	FT	Designated
Chinook salmon (Snake R. Fall)	<i>Oncorhynchus tshawytscha</i>	SC	FT	Designated
Chinook salmon (Snake R. Sp/Su)	<i>Oncorhynchus tshawytscha</i>	SC	FT	Designated
Chinook salmon (Upper Columbia Sp)	<i>Oncorhynchus tshawytscha</i>	SC	FE	Designated
Chinook salmon (Upper Willamette)	<i>Oncorhynchus tshawytscha</i>	SC	FT	Designated
Chum salmon (Hood Canal Su)	<i>Oncorhynchus keta</i>	SC	FT	Designated
Chum salmon (Lower Columbia)	<i>Oncorhynchus keta</i>	SC	FT	Designated
Coho salmon (Lower Columbia)	<i>Oncorhynchus kisutch</i>	none	FT	Proposed
Coastal cutthroat trout (SW WA)	<i>Oncorhynchus clarki clarki</i>	none	Fco	none
Sockeye salmon (Ozette Lake)	<i>Oncorhynchus nerka</i>	SC	FT	Designated
Sockeye salmon (Snake R.)	<i>Oncorhynchus nerka</i>	SC	FE	Designated
Steelhead (Lower Columbia)	<i>Oncorhynchus mykiss</i>	SC	FT	Designated
Steelhead (Middle Columbia)	<i>Oncorhynchus mykiss</i>	SC	FT	Designated
Steelhead (Puget Sound)	<i>Oncorhynchus mykiss</i>	none	FT	Proposed
Steelhead (Snake River)	<i>Oncorhynchus mykiss</i>	SC	FT	Designated
Steelhead (Upper Columbia)	<i>Oncorhynchus mykiss</i>	SC	FT	Designated
Steelhead (Upper Willamette)	<i>Oncorhynchus mykiss</i>	SC	FT	Designated
Black rockfish	<i>Sebastes melanops</i>	SC	none	none
Bocaccio rockfish	<i>Sebastes paucispinis</i>	SC	FE	none
Brown rockfish	<i>Sebastes auriculatus</i>	SC	Fco	none
Boraccio rockfish	<i>Sebastes paucispinis</i>		FE	Proposed
Canary rockfish	<i>Sebastes pinniger</i>	SC	FT	Proposed
China rockfish	<i>Sebastes nebulosus</i>	SC	none	none
Copper rockfish	<i>Sebastes caurinus</i>	SC	Fco	none
Eulachon	<i>Thaleichthys pacificus</i>	SC	FT	Designated
Green sturgeon	<i>Acipenser medirostris</i>	none	FT	Designated
Greenstriped rockfish	<i>Sebastes elongatus</i>	SC	none	none
Kokanee (Lk Sammamish)	<i>Oncorhynchus nerka</i>	none	FC	none
Lake chub	<i>Couesius plumbeus</i>	SC	none	none
Leopard dace	<i>Rhinichthys falcatus</i>	SC	none	none
Margined sculpin	<i>Cottus marginatus</i>	SS	Fco	none
Mountain sucker	<i>Catostomus platyrhynchus</i>	SC	none	none
Olympic mudminnow	<i>Novumbra hubbsi</i>	SS	none	none
Pacific cod (S&C Puget Sound)	<i>Gadus macrocephalus</i>	SC	Fco	none
Pacific hake (Pacific-Georgia Basin DPS)	<i>Merluccius productus</i>	SC	Fco	none
Pacific herring	<i>Clupea pallasii</i>	SC	Fco	none
Pacific Lamprey	<i>Entosphenus tridentatus</i>	SM	Fco	none
Paiute sculpin	<i>Cottus beldingi</i>	SM	none	none
Pygmy whitefish	<i>Prosopium coulteri</i>	SS	Fco	none
Quillback rockfish	<i>Sebastes maliger</i>	SC	Fco	none
Redstripe rockfish	<i>Sebastes proriger</i>	SC	none	none

COMMON NAME (ESU/DPS)	SCIENTIFIC NAME	STATE STATUS	FEDERAL STATUS	DESIGNATED CRITICAL HABITAT
Reticulate sculpin	<i>Cottus perplexus</i>	SM	none	none
River lamprey	<i>Lampetra ayresi</i>	SC	FCo	none
Salish sucker	<i>Catostomus catostomas</i>	SM	none	none
Sand roller	<i>Percopsis transmontana</i>	SM	none	none
Slimy sculpin	<i>Cottus cognatus</i>	SM	none	none
Tiger rockfish	<i>Sebastes nigrocinctus</i>	SC	none	none
Umatilla dace	<i>Rhinichthys umatilla</i>	SC	none	none
Walleye pollock (So. Puget Sound)	<i>Theragra chalcogramma</i>	SC	FCo	none
Widow rockfish	<i>Sebastes entomelas</i>	SC	none	none
Yelloweye rockfish	<i>Sebastes ruberrimus</i>	SC	FT	Proposed
Yellowtail rockfish	<i>Sebastes flavidus</i>	SC	none	none

State Endangered (SE), State Threatened (ST), State Candidate (SC), State Sensitive (SS), State Monitor (SM)  
 Federal Endangered (FE), Proposed Endangered (FPE), Threatened (FT), Proposed Threatened (FPT), Candidate (FC), or Species of Concern (FSC).

## Appendix C

### **PARTICIPANTS IN HYDRAULIC CODE RULE CHANGE WORKGROUP**

## Appendix C HYDRAULIC CODE RULE UPDATE WORKGROUP PARTICIPANTS

The Stakeholder Advisory Group met eight times between October 31 and the end of December, 2011. The group engaged in policy discussions about the proposed changes and the impacts to their interests, and commented on version one and two of the revised rule proposal prepared by WDFW.

**Table C-1 Hydraulic Code Rule Change Workgroup Meeting Participants**

REPRESENTING	NAME	31 Oct 2011	4 Nov 2011	9 Nov 2011
Assoc. of General Contractors	Van Collins	X	X	X
Ecology	Stephan Bernath	X	X	X
MCPN	Jeremy Graham	X		
NWIFC	Jim Weber	X		X
Northwest Treasure Supply; RC Gold Prospecting Supply	Robert Cunningham	X	X	X
Pacific Coast Salmon Coalition	[could not read handwriting]	X		
People for Puget Sound	Bruce Wishart	X	X	X
Pierce County SWM	Rob Wenman/Annette R	X	X	X
Port of Tacoma	Robert Brenner	X	X	X
Rayonier	Robert Meier		X	X
Regional Fisheries Enhancement Groups	Lance Winecka	X	X	X
Skagit River Systems Cooperative	Tim Hyatt	X	X	X
Snohomish County Public Works	Clarissa Stenstrom/Irene Sato/Ted Parker	X		
Washington DNR	Michael Rechner /Bridget Moran	X	X	X
Washington Farm Bureau	John Stuhlmiller	X	X	X
Washington Forest Protection Association	Doug Hooks	X	X	X
Washington Prospectors Mining Association	Bill Thomas	X	X	X
Washington Public Ports Association	Johan Hellman		X	X
Washington State Association of Counties	Josh Weiss/Gary Rowe/Annette Pearson	X	X	X
WSDOT Environmental Services	Ken Schlatter Eric Wount Christina Martinez	X	X	X
WSDOT	Gregor Myhre	X		X
Washington State Parks and Recreation Commission	Randy Kline		X	X
NOAA Fisheries	Gayle Kreitman Dave Molenaar	X	X	X