

Final Habitat Conservation Plan Review

Washington Department of Fish and Wildlife



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Parametrix

Final Habitat Conservation Plan Review

Prepared for

Washington Department of Fish and Wildlife
600 Capitol Way North
Olympia, WA 98501

Prepared by

Parametrix
411 108th Avenue NE, Suite 1800
Bellevue, WA 98004-5571
425-458-6200
www.parametrix.com

CITATION

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A HCP Summaries from Coarse-Level Screening	
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ACRONYMS

AFLWD	available functional large woody debris
BLM	Bureau of Land Management
BMPs	best management practices
BO	Biological Opinion
BRMPs	Biological Resource Management Plans
CAMPs	Core Adaptive Management Projects
CDFG	California Department of Fish and Game
CLS	Conservation Land System
CMER	Cooperative Monitoring, Evaluation, and Research
CVCC	Coachella Valley Conservation Committee
DNR	Washington Department of Natural Resources
EA	environmental assessment
EIS	environmental impact statement
ESA	Endangered Species Act
FMA	Funding and Management Agreement
HCP	habitat conservation plan
HPA	Hydraulic Project Approval
IA	Implementation Agreement
IMC	Implementation and Monitoring Committee
ITP	Incidental Take Permit
LWD	large woody debris
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
PUD	Public Utilities District
RMZ	Riparian Management Zone
SCC	Science Conservation Commission
SPU	Seattle Public Utilities
TFW/FFR	Timber, Fish, and Wildlife/Forests and Fish Report
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
WDFW	Washington State Department of Fish and Wildlife

1. INTRODUCTION

1.1 PROJECT BACKGROUND

The Washington State Department of Fish and Wildlife (WDFW) is in the initial stages of developing two Habitat Conservation Plans (HCPs) for federally listed and other sensitive species. One HCP would cover activities conducted under the Hydraulic Project Approval (HPA) program for aquatic species protection, and the other would cover the 840,000 acres of wildlife areas WDFW owns and/or manages. Activities covered by these HCPs would range from in-stream structures and construction to weed management and recreational activities (e.g., hiking, biking, equestrian).

To help in establishing the foundation for this effort, Parametrix has been contracted by WDFW to research and review HCPs nationwide that have been completed and/or are near completion that address both terrestrial and aquatic species and may be similar in scope to one or both of the potential WDFW HCPs.

1.2 PURPOSE AND OBJECTIVES

The purpose of this report is to provide WDFW with information on large-scale, recently completed multi-species HCPs, so that WDFW will have further knowledge of the effort needed and potential approaches for their HPA and Wildlife Areas HCP projects. Report objectives include providing basic information on the reviewed HCPs, such as geographic size of the coverage area and number of species covered, as well as more detailed information on approaches to “take” assessment, implementation, adaptive management, and other HCP components.

2. COARSE-LEVEL SCREENING

2.1 METHODOLOGY

The coarse-level screening methodology included locating recent HCPs and providing a general overview of these plans. Sources for locating potential HCPs to review included the U.S. Fish and Wildlife Service (USFWS) Conservation Plans and Agreements database (available at http://ecos.fws.gov/conserv_plans/public.jsp), communications with USFWS and National Marine Fisheries Service (NMFS) representatives (jointly referred to as the Services), and communications with other individuals knowledgeable about HCPs. Potential HCPs were included for review if they met the following five criteria:

1. Programmatic (i.e., not project specific)
2. Completed or draft near completion
3. Recent (year 2000 or later)
4. Multiple species covered
5. Large size (over 5,000 acres)

For HCPs that met these criteria, we conducted a coarse-level analysis in which we recorded the following key parameters for each HCP:

- Year completed
- Size and location
- Length of permit
- Species covered (number of fish species; number of wildlife species)
- Primary objectives
- Key issues
- Covered activities
- Habitats covered
- Primary conservation measures
- Adaptive management included (yes or no)
- Land contiguity (contiguous or scattered)
- Number of Permittees/Landowners
- Primary agency contacts

2.2 RESULTS

Seventeen HCPs meet all five of the coarse-level screening criteria. Appendix A provides an overview of each of these HCPs. Most of the plans evaluated address urban development (eight HCPs) or forest management (four HCPs) topics. Other HCPs address hydroelectric operations and/or water withdrawal (three HCPs) and electric and gas transmission and distribution (one HCP). The Cedar River Watershed HCP addresses a combination of topics, including land management, hydroelectric operations, and water withdrawal. Each HCP does include an adaptive management component. For some of the HCPs, land ownership patterns are complex, with the HCP characterized by scattered parcels and multiple permittees. For other projects, the HCP addresses a contiguous land area owned by one entity.

3. DETAILED HCP REVIEW

3.1 METHODOLOGY

The detailed HCP review includes an evaluation of the following seven HCP components:

1. Approaches to “Take” and “Take” Assessment
2. Approaches to Conservation and Mitigation
3. Approaches to Implementation
4. Approaches to Monitoring
5. Approaches to Adaptive Management
6. Costs and Funding
7. Evaluation of the HCP Process

For each of these seven components, seven of the 17 HCPs from the coarse-level screening were selected for detailed review (Table 3-1). The HCPs were selected to provide a range of potential approaches to addressing the given component. In addition, relevance to WDFW in their HPA and Wildlife Areas HCP processes was also considered.

Table 3-1. HCP Components and Selected HCPs for Detailed Review

HCP Component	HCPs Selected for Detailed Review
“Take”	Cedar River Watershed Washington Department of Natural Resources (DNR) Forest Practices Plum Creek Native Fish Wells Hydroelectric Project Coachella Valley Lower Colorado River Tacoma Water
Conservation and Mitigation	Washington DNR Forest Practices Plum Creek Native Fish Clark County Coachella Valley PG&E San Joaquin Valley Pima County Family Forest
Implementation	Plum Creek Native Fish Wells Hydroelectric Project Clark County Coachella Valley Lower Colorado River Pima County Family Forest

Table 3-1. HCP Components and Selected HCPs for Detailed Review (continued)

HCP Component	HCPs Selected for Detailed Review
Monitoring	Washington DNR Forest Practices HCP Plum Creek Native Fish PG&E San Joaquin Valley Western Riverside Pima County Family Forest Tacoma Water
Adaptive Management	Same HCPs as those selected for Monitoring
Costs and Funding	Cedar River Watershed Washington DNR Forest Practices Plum Creek Native Fish Clark County San Joaquin County Coachella Valley Tacoma Water
HCP Process	Same HCPs as those selected for the Costs and Funding

Evaluation of the HCP components was conducted by reviewing relevant sections of each HCP and associated documents (e.g., Implementation Agreement, background studies). In addition, for the Costs and Funding component and the HCP Process component, interviews with permittees and USFWS and NMFS representatives were conducted (see Appendix B).

3.2 APPROACHES TO TAKE AND TAKE ASSESSMENT

This section reviews the approaches that each HCP utilizes to evaluate “take,” which, as defined under the Endangered Species Act (ESA), is to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct” (16 U.S.C. 1532(19)). The review of take in this report includes the manner and extent to which take levels are quantified and whether models are used to evaluate take. For each HCP project reviewed, both the HCP document and the environmental impact statement (EIS) document were checked for information on take analysis. Apart from Plum Creek, take analysis was provided in the HCP document for all projects reviewed. For the Plum Creek Native Fish HCP project, the take analysis was provided in the EIS.

3.2.1 Cedar River Watershed HCP

The HCP for the Cedar River Watershed evaluates take through a habitat-based approach. For covered species associated with late-successional and old-growth forests, the document quantifies (through modeling efforts) changes in acreages of these habitats under the HCP, compared to existing conditions, with the implicit assumption that take of given species would be reduced or minimized by increasing acreage of habitat for that species. In addition, the HCP includes species-specific mitigation measures (e.g., buffers around nest sites), but a specific assessment of how these types of species-specific mitigation measures would minimize take is not included.

For aquatic and riparian-associated covered species, the HCP evaluates the key processes and habitat factors (e.g., sediment loading, large woody debris [LWD] recruitment, riparian cover, stream temperatures, fish passage, instream flows) important to maintaining and/or restoring

aquatic and riparian habitat quality, and provides commitments (e.g., no commercial timber harvest, road management plan, upgrade stream crossing structures, minimum stream flows) to allow these processes to function in a manner consistent with the habitat requirements of fish and wildlife species covered in the HCP. As relates to stream flows and effect of flow regime on covered fish species, the document provides: (1) quantification of existing stream flows and flow regimes as affected by the Landsburg dam, (2) flow regime commitments under the HCP, and (3) qualitative analysis on how the stream flow requirement will improve conditions for covered fish species. The document provides information on miles of road that would be decommissioned and stream miles that would be made accessible through improvements in fish passage. However, quantification of the degree of improvement in functions other than stream flow (e.g., stream temperatures, LWD recruitment) under the HCP (compared to existing conditions) is not included.

3.2.2 Washington DNR Forest Practices HCP

The Washington DNR Forest Practices HCP provides a quantitative estimate of take based on the number of habitat acres affected by the plan, as well as qualitative assessments of changes in habitat conditions based on changes in watershed processes. The HCP describes a hypothetical management regime, termed the “minimal effects regime,” that is expected to result in little to no effect on covered species, and uses this regime as a baseline from which to compare the effects of the HCP strategy. Differences between the minimal effects regime and the HCP strategy are compared quantitatively in terms of habitat acres affected. This quantitative analysis is based on protection of “critical areas,” defined as riparian zones and unstable slopes. Models were used to quantify the acres of critical areas affected by the minimal effects regime and the HCP strategy, and the results of the models (acreage values) are provided for each management regime (minimal effects and HCP strategy). Acreage of critical areas affected is considered an indicator of the number of habitat acres affected.

The HCP qualitatively discusses the effects of HCP implementation on three key watershed processes: LWD recruitment, water temperature, and erosion. The assumption is that changes in these three processes have the greatest potential to affect habitats of covered species. While the quantitative analysis of acres of critical areas affected compares the HCP strategy to the minimal effects strategy, the qualitative analysis sometimes compares the HCP strategy to the minimal effects strategy, and at other times compares the HCP strategy to existing conditions. For example, the qualitative discussion includes assessments that: (1) over the long-term (> 40 years), HCP implementation will result in slightly lower levels (relative to the minimal effects strategy) of LWD recruitment in certain water types; and (2) over both the short-term (< 10 years) and long-term (> 40 years), implementation of the HCP strategy will result in substantially reduced road-related erosion and sedimentation, relative to current conditions.

The HCP also includes a brief overview of the effects of the changes in watershed processes on fish and amphibians. In this analysis, the HCP compares effects of the HCP strategy to existing conditions. For example, the document states that under the HCP strategy, increased wood in small streams (relative to existing conditions) will result in greater stream complexity and sediment storage, and therefore, improved spawning and rearing habitat for bull trout and other resident trout. Similarly, the document states that reductions in sediment input (relative to existing conditions) to small streams will improve spawning and rearing habitat.

3.2.3 Plum Creek Native Fish HCP

The EIS for the Plum Creek Native Fish HCP evaluates take through a habitat-based approach. The document describes ecosystem processes and conditions (e.g., LWD recruitment, sediment delivery) that affect stream habitat quality (i.e., the “4 C’s”: clean, cold, complex, connected streams), and models were used to quantify the expected improvement in these ecosystem processes and conditions as a result of implementation of the HCP conservation measures. The document states that, under the HCP, average sediment delivery from roads will be reduced by 50 percent (increased “clean” habitat); shade will increase by a range of 0 to 44 percent (increased “cold” habitat); and in-stream LWD will increase to a range of LWD (36 to 166 pieces per 1,000 ft of stream) that spans the natural average observed for the project area (increased “complex” habitat). For habitat connectivity, fish passage will be restored in essentially 100 percent of all areas that had been impacted by past forest management activity (e.g., impassable road culverts; increased “connected” habitat). The document also provides a qualitative assessment of how changes in grazing policy will affect habitat. Compared to existing conditions, grazing under the HCP will result in a “large” reduction in sediment delivery (increased “clean” habitat) and a “large” increase in streambank integrity and overhanging banks (increased “complex” habitat).

3.2.4 Wells Hydroelectric Project Anadromous Fish Agreement and HCP

The Wells HCP take evaluation includes an assessment of current adult and juvenile survival for fish species passing through the Wells Hydroelectric project dam and reservoir. Numerous studies were conducted on components of fish passage (e.g., fish travel times through the reservoir, fish mortality rates from passage through the dam turbines, total dissolved gas studies) and a quantitative study on survival rates for downstream juvenile fish passage was conducted. Based on the studies and similar hydroelectric studies conducted for other hydroelectric facilities, the Incidental Take Permit (ITP) applicant (Douglas County Public Utilities District [PUD]) determined that under existing management, the Wells project results in a net combined adult/juvenile fish mortality of approximately nine percent. The HCP commits to “No Net Impact” on covered species, by mitigating for the existing approximately nine percent fish mortality through compensatory survival or productivity increases of seven percent hatchery contribution and two percent from tributary habitat contributions. The HCP does not quantify the amount of hatchery production or amount and type of habitat improvements necessary to provide the nine percent compensation and thereby achieve No Net Impact. However, hatchery production would remain at current levels (unless future monitoring and studies indicated a need for a change in production levels), which are intended to compensate for 14 percent juvenile fish mortality.

3.2.5 Coachella Valley Multi-Species HCP and Natural Communities Conservation Plan (draft)

The take assessment for the draft Coachella Valley HCP and Natural Communities Conservation Plan uses a habitat-based approach. The Plan includes habitat modeling for each species, and take is assessed by quantitatively comparing the amount of habitat conserved relative to the amount of habitat where development will be allowed. Summary take tables include, for each species: (1) total acres of habitat in the plan area; (2) acres authorized for impact outside of designated conservation areas; (3) acres authorized for impact within the designated conservation areas; (4) acres to be conserved; (5) percent of “core” (as identified in species’ models) habitat to be conserved; and (6) percent of potential habitat to be conserved.

3.2.6 Lower Colorado River Multi-Species HCP

The Lower Colorado River take analysis includes both quantitative and qualitative information on the anticipated impacts under the HCP. The plan includes habitat modeling for each species, and a summary impacts and estimated level of take table is provided, which includes, for each species: (1) acres of habitat loss; (2) acres of habitat degradation; (3) acres of habitat disturbance; and (4) qualitative statements regarding the potential for harassment or direct mortality to species, and the potential for changes in abundance of prey. For the southern willow flycatcher, habitat loss is categorized for each habitat type (i.e., occupied nesting habitat, non-occupied nesting habitat). Other sections of the HCP quantify the acres of habitat to be created or maintained for each species.

3.2.7 Tacoma Water HCP

The Tacoma Water HCP take analysis includes quantitative assessments of various fish habitat parameters, such as flow regimes, sediment delivery, and stream temperatures. Existing flow regimes and flow regimes under the HCP were modeled. Where existing flow levels are inadequate, the document specifies the percent reduction in fish survival and spawning habitat acreage due to flow reductions and describes the percent improvement in fish survival and spawning and rearing habitat acreage availability under the HCP. For sediment delivery, the document specifies the percent change under the HCP, due to changes (relative to existing conditions) in road and forest management. For stream temperatures, the document indicates river miles with excessive stream temperatures and models stream temperatures predicted under the HCP. The HCP quantifies the amount of salmonid habitat that will be made available due to installation of fish collection and transport facilities, but does not quantify the amount of habitat that will be made available through improvement in road crossing structures. The document provides a qualitative assessment of LWD recruitment, stating that the forest and road management policies under the HCP will increase LWD recruitment.

For the covered wildlife species, the HCP provides information on changes in predicted acreages (based on modeling) of forest seral stages (e.g., young, mature, old-growth) due to implementation of the HCP conservation measures. The implicit assumption is that take of species will be reduced or minimized by increasing acreage of suitable habitat for a given species. In addition, the HCP uses species-specific mitigation measures, such as buffers around nest sites, but a specific assessment of how these types of species-specific mitigation measures will minimize take is not included. For spotted owls, the document provides quantitative information on acreage of existing suitable spotted owl habitat and the amount of this habitat that will be protected under the HCP.

3.3 APPROACHES TO CONSERVATION AND MITIGATION

This section reviews the types of conservation and mitigation measures used by each HCP. The section describes whether a given HCP relies primarily on avoidance and mitigation measures; or whether other approaches, such as compensatory measures, are utilized.

3.3.1 Washington DNR Forest Practices HCP

The Washington DNR Forest Practices HCP relies on avoidance and minimization measures as its primary type of HCP commitment. The HCP includes a riparian conservation strategy and an upland conservation strategy. Riparian commitments include such measures as restrictions on forest practices activities in riparian areas (e.g., prohibitions on timber harvest and road construction; restrictions on equipment use, and requirements for leaving a certain number of riparian trees per acre). The riparian strategy includes flexibility in management

for some of its commitments. For example, if compliance with tree harvest restrictions in a given riparian management zone requires a landowner to retain basal area beyond the HCP's desired future condition target, the excess or "surplus" basal area may be used as a credit toward harvest in the outer portion of the riparian management zone.

The upland strategy uses an avoidance and minimization approach that is prescriptive for most measures (e.g., restrictions on the timing of road construction) but includes an outcome-based decision making process for unstable slopes. Specifically, if field review by DNR indicates that timber harvest or construction activities are proposed on unstable slopes, a geotechnical assessment by a qualified expert must be conducted. The assessment must include measures to mitigate identified risks and hazards. Additional review is required by DNR at this time, and an EIS could be required. If DNR determines that adverse impacts identified in the EIS are significant and reasonable measures are insufficient to minimize the impacts, the forest practices application is denied.

The HCP includes two incentive-based conservation programs: the Forestry Riparian Easement Program and the Riparian Open Space Program. The Forestry Riparian Easement Program includes acquiring easements from small forest landowners in riparian areas and other ecologically important areas. The Riparian Open Space Program includes acquiring fee interest in, or easement on, lands and timber within a specific type of channel migration zone that has high ecological value as salmon spawning and rearing habitat. Both of these programs are voluntary and are intended to complement the mandatory HCP conservation measures.

3.3.2 Plum Creek Native Fish HCP

The Plum Creek Native Fish HCP includes avoidance and minimization measures, as well as other strategies such as incentive-based approaches, training, and cooperative agreements. HCP conservation and mitigation commitments are grouped into five categories: (1) road and upland management; (2) riparian management; (3) range management; (4) land use planning; and (5) legacy and restoration. Road and upland management commitments and riparian commitments include a variety of avoidance and minimization measures, such as enhanced construction standards for new logging roads; timeframe commitments for upgrading old roads; identification and abandonment of roads no longer needed by Plum Creek; riparian management zones where timber harvest is prohibited or where a certain density of trees per acre must be retained; and deferred timber harvest for some watersheds. Range management commitments include a variety of approaches. Grazing leaseholders must complete a range management plan and must meet, or show an improving trend for, riparian health criteria (e.g., standards for streambank stability, riparian compaction, and tree and shrub regeneration). For vacated leases, riparian health criteria must be met before the lease may be re-leased. Training is provided for ranchers and Plum Creek personnel involved in grazing and grazing management. In cooperation with grazing leaseholders, Plum Creek will provide grazing exclosures along selected stream reaches.

Land use planning commitments include several incentive-based strategies. For lands that may be sold, incentives are provided for finding conservation buyers or for keeping lands in commercial forestry and selling away the rights to develop the lands. The HCP includes a "proportionality ratio" that considers whether land sales have a positive, neutral, or negative effect on achieving the HCP objectives. Individual land sales are ranked by level of conservation benefit. Those that enhance the overall conservation benefits or improve conservation certainty of the HCP are assigned positive proportionality factors, for purposes of measuring proportionality. Those that are determined to be "neutral" do not change the proportionality ratio. Those that reduce certainty of achieving the HCP conservation objectives are assigned negative proportionality factors. Under the HCP, Plum Creek must

manage its land sales so that the cumulative total of land sales stays within a predetermined range of proportionality. For land exchanges, the net change of acreage to the HCP coverage area is evaluated and subject to the “proportionality range” requirements.

Legacy and restoration conservation and mitigation commitments include a variety of approaches. Riparian restoration will be implemented along severely impacted key migratory rivers, and opportunities for cooperative habitat improvement projects will be provided. Agreements with fish management agencies will be sought to cooperate on enforcement activities that compliment native fish conservation efforts, and Plum Creek will participate in watershed groups and share information with neighboring land owners. Other miscellaneous legacy and restoration commitments include developing a plan to manage impacts caused by irrigation diversions and conducting a project to remove brook trout, a non-native species.

3.3.3 Clark County Multiple Species HCP

The Clark County HCP utilizes a compensatory conservation approach to offset development impacts. The Plan provides for the establishment of reserves that are intensively managed for protection and restoration of habitat for covered species, as well as less intensively managed areas that also provide benefit to covered species, but less so than the reserve lands. While many of the lands are already protected or partially-protected as wilderness, natural research areas, state parks, or other designations, the HCP includes additional methods to obtain and/or protect these lands. These methods include: (1) avoidance and minimization commitments, such as prohibiting livestock grazing, motorized vehicle use, and target shooting in some areas; (2) purchase of land, development rights, and conservation easements; (3) exchange of grazing allotments (e.g., remove grazing from a given allotment and initiate grazing in a less environmentally-sensitive area); (4) funding of restoration and enhancement projects; (5) public information and education programs; and (6) improved coordination of conservation efforts by developing conservation agreements amongst agencies. For items “(2)” through “(4)” above, details on locations and amounts of conservation are not provided, but instead will be developed during project implementation.

3.3.4 Coachella Valley Multi-Species HCP and Natural Communities Conservation Plan (draft)

The draft Coachella Valley Multi-Species HCP and Natural Communities Conservation includes the establishment of conservation areas to compensate for development in other areas. While much of the land within the conservation areas already exists as some type of conserved land (e.g., wilderness, state, or county park), the HCP requires additional lands to be managed and protected as conservation lands and provides specific objectives and measures within each conservation area. The lands may be purchased outright by the permittees, or may be protected through other means such as deed restriction, conservation easements, memorandums of understanding, or land use regulations. Conservation acreage required is based on covered species’ habitat associations and patch size requirements, habitat quality and availability of habitat linkages, and other factors. Ratios for land mitigation are not provided.

Objectives for the conservation areas address protection and maintenance of core habitat (as defined by species’ modeling) for covered species, essential ecological processes (e.g., fluvial sand transport, hydrological regimes), biological corridors and linkages, and conserved natural communities. To obtain the objectives identified for each conservation area, various measures are prescribed, such as: (1) conserving specified acres of core habitat; (2) prohibiting development within 1/4 mile of known water sources; (3) providing buffers around nest sites of covered species; (4) protecting linkage areas between core habitats; (5) controlling human access; (6) installing wildlife underpasses; and (7) habitat enhancement and restoration.

3.3.5 PG&E San Joaquin Valley Operations and Maintenance HCP (draft)

The PG&E San Joaquin Valley Operations and Maintenance HCP (Draft) conservation and mitigation measures include avoidance and minimization measures and compensation measures. The avoidance and mitigation measures vary according to the size of disturbance area anticipated from each operation and maintenance activity and the wildlife habitat and species expected or known to occur in the area. Examples of measures include: (1) prohibiting vehicle refueling within 100 feet of waterways; (2) minimizing the development of new access and right-of-way roads; and (3) for sites with covered annual plant species, restricting operation and maintenance activities to the period between plant senescence and the first significant rain.

Compensation measures under the PG&E San Joaquin Valley Operations and Maintenance HCP (Draft) include funding the acquisition, enhancement, and maintenance of habitat to conserve and promote the recovery of sensitive species within the HCP area. Compensation amounts are based on both documented and estimated habitat losses. All permanent suitable habitat losses will be compensated for at a 3:1 ratio and temporary losses of suitable habitat will be compensated at a 0.5:1 ratio. Loss of wetland habitats will be compensated for at a 3:1 ratio. Compensation will occur through a variety of mechanisms, such as conservation easements, purchase of high-quality natural lands, and purchase of credits from existing mitigation banks. Enhancement of covered plant habitat is another compensation tool that may be utilized by PG&E.

3.3.6 Pima County Multi-Species Conservation Plan (draft)

The draft Pima County Multi-Species Conservation Plan includes compensatory measures, specifically the creation of a Conservation Land System (CLS), to offset the impacts of development. Within the CLS, development impacts and mitigation ratio requirements are classified based on land type as follows: (1) “biological core,” with a mitigation ratio of 4:1 (i.e., 4 acres conserved for every one acres developed); (2) “important riparian areas,” with a mitigation ratio of 4:1; and (3) “multiple use,” with a mitigation ratio of 2:1. These ratios are based on the conservation value of each land type, as determined by a science technical advisory team. For individual development projects within the CLS, the HCP requires avoidance and minimization measures, such as siting development in the least sensitive habitat areas, maximizing habitat connectivity, and minimizing indirect effects to adjacent conserved areas (e.g., by limiting human access, lighting, and noise; controlling invasive species). Some species-specific mitigation, such as gating areas to avoid disturbance to bat roost sites, is also provided in the HCP. For some covered species, mitigation banking is an option for developers to mitigate habitat impacts. In addition, depending on existing habitat quality, restoration or enhancement may be required to meet mitigation ratio requirements.

Impacts to lands outside the CLS will be mitigated by Pima County in their acquisition of lands and conservation easements, by leasing state lands, and by the county’s commitments to protect and manage such lands in accordance with the biological goals of the HCP. In abiding by this commitment, the county will place special emphasis on protecting riparian areas and will also participate in restoration and enhancement projects. Management of the lands will be consistent with the Pima County Invasive Species Management Program, which is currently under development. The HCP provides total acreage of lands that will be protected through acquisition and conservation easement over the first 10 years of the HCP, but does not provide specific mitigation ratios for lands outside the CLS.

Stormwater management under the HCP includes a proposed stormwater ordinance that outlines performance standards for water quality protection, stream channel protection, and flood protection. In addition, the ordinance includes a performance standard that limits the

volume of runoff in watersheds that are most critical to the survival of covered fish species. The draft HCP includes suggested techniques for developers to reduce runoff, and an engineering manual and a training program will be available to developers. The HCP contains a model conservation subdivision ordinance, which includes protecting green space and clustering homes. Local governments involved in the HCP may adopt this subdivision ordinance with or without modifications, or may choose not to use such an ordinance at all.

The erosion and sediment control program under the HCP includes establishing six operating procedures for enforcement of existing erosion and sediment regulations and a proposed grading ordinance that limits construction disturbance to a certain percentage of a given site. The HCP includes stream buffers, where construction is prohibited. The HCP stream crossing policy incorporates restrictions on the type of utility and road stream crossings allowed and on the timing of utility construction. Water supply planning under the HCP includes a protocol to assist local governments in identifying reservoir locations with the least impact on permit fish species.

3.3.7 Family Forest HCP (draft)

The Family Forest HCP relies on avoidance and minimization measures for its HCP commitments. Riparian and wetland commitments include restrictions on forest practices activities in these areas, such as no-harvest and partial-harvest buffers and equipment limitation zones. Upland commitments consist of minimization measures such as restrictions on unit size and stand age minimums for regeneration harvests, and leave requirements for snags and residual live trees. Species-specific avoidance and minimization measures, such as seasonal activity-restriction buffers around active nest and den sites, are provided for covered species.

3.4 APPROACHES TO IMPLEMENTATION

This section describes the implementation of each HCP, including whether a formal Implementation Agreement (IA) is included and the contents of the IA, the entities (e.g., committees, agencies) responsible for implementing the HCP, and the funding structure for implementation. Note that Section 3.7, Review of Costs and Funding, includes discussion of costs and funding for all aspects of the HCP (planning, permitting, and implementation).

3.4.1 Plum Creek Native Fish HCP

The Plum Creek Native Fish HCP includes a formal IA. The purpose of the IA is to: (1) ensure implementation of each of the terms of the HCP; (2) describe remedies and recourse if any of the parties (Plum Creek, USFWS, or NMFS) fail to perform its obligations as set forth in the agreement; and (3) provide assurances to Plum Creek, consistent with No Surprises regulations adopted by USFWS and NMFS, that as long as the terms of the HCP, the ITPs, and IA are performed, no additional mitigation will be required of Plum Creek with respect to covered species, except as expressly provided for in the IA. The document describes the obligations of the parties regarding funding, monitoring, reporting, adaptive management, and responses to changed circumstances. Procedures are described for: (1) suspension, revocation, re-instatement, relinquishment, or extension of the ITPs; (2) modification or amendment of the HCP or IA; and (3) dispute resolution regarding conflict over HCP implementation and compliance.

Implementation of the HCP will be conducted by the Plum Creek Implementation Plan team members and staff foresters trained in HCP implementation. The HCP states that within three months of ITP issuance, Plum Creek will prepare a field implementation manual (for use by staff foresters) that will include working definitions and prescription keys to ensure

consistent implementation of the HCP commitments. Training in the HCP prescriptions will also be provided for staff foresters and contractors every other year. Regarding funding, neither the HCP nor IA includes detailed information on funding levels. Instead, the IA simply states that Plum Creek warrants that it has, and will expend, such funds as may be necessary to fulfill its obligations under the HCP.

3.4.2 Wells Hydroelectric Project Anadromous Fish Agreement and HCP

The Wells Hydroelectric Project Anadromous Fish Agreement and HCP document is effectively an IA and HCP combined into one document. Regarding implementation, the document describes procedures for suspension, revocation, re-instatement, or termination of the ITP, and for conflict resolution. In addition, assurances regarding No Surprises are also described. The document describes the establishment and role of committees for HCP implementation. The Coordination Committee, comprised of one representative from each party (the parties include the Douglas PUD, USFWS, NMFS, and five other agencies and organizations that entered into the agreement), will oversee all aspects of HCP implementation. The Tributary Committee (comprised of one representative from each party) will be responsible for implementation of the tributary conservation plan, which is a component of the HCP. Likewise, the Hatchery Committee (comprised of one representative from each party) will be responsible for implementing the hatchery compensation plan. The document also includes commitments of Douglas PUD to provide funding for HCP implementation. Dollar amounts are provided for initial contribution and for annual payments.

3.4.3 Clark County Multiple Species HCP

The Clark County HCP includes a formal IA. The purpose of the IA is to: (1) ensure implementation of each of the terms of the HCP; (2) contractually bind each of the parties to the terms of the HCP; (3) describe remedies and recourse if any of the parties fail to perform its obligations as set forth in the agreement; and (4) provide assurances to the permittees that as long as the terms of the HCP are performed, no additional land restrictions or financial compensation for covered species will be required, without their written consent, in the event of unforeseen or extraordinary circumstances.

The document describes the obligations of the parties regarding funding, monitoring, reporting, adaptive management, and responses to changed and unforeseen circumstances. Procedures are described for: (1) suspension, revocation, or termination of the ITP; (2) amendments to the HCP or IA; and (3) dispute resolution regarding conflict over HCP implementation and compliance. The document describes specific funding levels to be expended annually for implementing conservation measures. The HCP is funded by a local mitigation fee that is paid by private landowners when applying for a grading permit.

The HCP will be implemented by an Implementation and Monitoring Committee (IMC). The primary tasks of the committee (which will be comprised of representatives with interests in the HCP) will be to review and comment on the progress of implementation of the HCP conservation measures, to recommend expenditures for the next biennium, and to ensure that all interested parties will have notice of, and ability to comment on, habitat management decisions and implementation measures prior to their being funded.

3.4.4 Coachella Valley Multi-Species HCP and Natural Communities Conservation Plan

The Coachella Valley HCP and Natural Communities Conservation Plan includes a formal IA. The purpose of the IA is to: (1) ensure implementation of terms of the HCP; (2) describe remedies and recourse if any of the parties (the 19 permittees, USFWS, or California

Department of Fish and Game [CDFG]) fail to perform its obligations, responsibilities, and tasks as set forth in the HCP, ITPs, and IA; (3) provide assurances to the permittees, consistent with No Surprises regulations, that no additional mitigation will be required of the permittees with respect to covered species, except as expressly provided for in the IA or as required by law. The document describes the obligations of the parties regarding implementation, funding, monitoring, reporting, adaptive management, and responses to changed circumstances. Procedures are described for: (1) modification or amendment to the HCP; (2) revocation, suspension, or termination of permit; (3) permittees' withdrawal; and (4) dispute resolution regarding conflict over HCP implementation and compliance.

Regarding funding, permittees ultimately will be responsible for all costs associated with implementation of the HCP, but may obtain loans from the Land Acquisition and Improvement Fund and Endowment Fund established for the HCP. On an annual basis, the permittees, USFWS, and CDFG will evaluate the performance of the funding mechanisms and develop modifications, as necessary. The evaluation will also include an assessment of the funding plan and anticipated funding needs over the ensuing 18 months for the purpose of identifying any potential deficiencies in cash flow. In the event of deficiencies, the permittees, USFWS, and CDFG will develop strategies to address additional funding needs.

Implementation of the HCP will be organized around various committees. The Coachella Valley Conservation Committee (CVCC) will oversee and administer implementation of the HCP. The committee will be comprised of representatives of the permittee agencies. The CVCC will provide the primary policy direction for implementation of the HCP. Other committees will provide implementation direction for particular components of the HCP, as follows: (1) the Acquisitions and Funding Committee (comprised of permittee representatives) will provide input on local funding priorities and acquisition of additional conservation lands; (2) the Reserve Management Oversight Committee (comprised of permittee, USFWS, and CDFG representatives) will provide interagency coordination of HCP implementation; and (3) the Reserve Management Unit Committee will coordinate management of lands owned by different entities in the HCP Reserve System. Implementation of the HCP will also entail a legal component for city and county permittees. Specifically, cities will develop ordinances and resolutions, and the county will modify its General Plan, to encompass HCP commitment measures.

3.4.5 Lower Colorado River HCP

The Lower Colorado River HCP includes a formal IA. The purpose of the IA is to: (1) ensure implementation of each of the terms of the HCP; (2) describe remedies and recourse if any of the parties fail to perform its obligations as set forth in the agreement; and (3) provide assurances to the permittees. The document describes the obligations of the parties regarding implementation, funding, monitoring, reporting, adaptive management, and responses to changed and unforeseen circumstances. Procedures are described for extension, suspension, or revocation of the permit.

In addition to the IA, the permittees involved in the HCP have established a Funding and Management Agreement (FMA), which provides guidelines and roles and responsibilities for each of the permittees for management, implementation, and funding of the HCP. Management and implementation will be overseen by the Bureau of Reclamation. The Bureau will cooperate and coordinate its management and implementation activities with a Steering Committee, which will be comprised of representatives from USFWS, permittee agencies, conservation groups, Native American groups, and other interested parties. The agreement specifies the anticipated costs for implementation of the HCP, 50 percent of which is the responsibility of the federal parties and 50 percent of which is the responsibility of the state permittees.

3.4.6 Pima County Multi-Species Conservation Plan (draft)

The Pima Conservation Multi-Species Conservation Plan (draft) includes information on plan implementation, and an IA is currently under development. A Science Conservation Commission (SCC), staffed and funded by Pima County, will be established and will oversee implementation of the plan. A land acquisitions program will evaluate and pursue acquisition of property (the primary conservation measure for this conservation plan). Land will be secured primarily through acquisition of fee title and conservation easements. Funding for land acquisition will include both public entities and affected private landowners, and public funding will comprise at least 50 percent of the total funds. A variety of potential sources of public funding are described.

The county will review and revise, as necessary, existing zoning ordinances and regulatory requirements to maintain the conservation value of conserved lands. In addition, the county will develop coordination agreements with local, state, and federal entities to coordinate land conservation efforts and clarify intent and responsibilities relative to land management, species protection, monitoring efforts, and other actions to be taken in support of the plan. Monitoring and reporting costs will be covered by an endowment fund.

3.4.7 Family Forest HCP (draft)

The draft Family Forest HCP contains information on implementation of the HCP, and an IA will be completed in the future. Lewis County will be the master ITP holder and will issue subsequent Certificates of Inclusion to eligible landowners who satisfy the requirements of the HCP. Eligible landowners are owners of eligible timberland who: (1) meet the state Forest Practices Rules definition of small forest landowner; (2) demonstrate adequate funding to implement the HCP on their family forest lands; and (3) contractually agree to implement and comply with all pertinent terms and conditions of the HCP, IA, ITP, and site-specific implementation plans. The site-specific implementation plans are developed by individual landowners and address the needs of covered species that currently inhabit, or have the potential to inhabit, their forests.

The county will be responsible for reviewing individual landowner implementation plans, enforcing landowner contract provisions, and implementing adaptive management and monitoring requirements. Primary enforcement of the HCP commitments related to timber harvesting, road construction and use, and other forest practices will be done by Washington DNR through administration of the state's Forest Practices Rules and issuance of Forest Practices Approvals.

The HCP provides information on anticipated costs for each component of HCP implementation. The responsible party (Lewis County or covered landowner) is indicated for each component, and potential sources of funding (e.g., landowner application fees, subsequent timber harvest) are provided.

3.5 APPROACHES TO MONITORING

This section reviews the types of monitoring, monitoring intervals, and reporting requirements for each HCP reviewed. Information collected through monitoring programs plays a key role in adaptive management programs (see next section). Details of monitoring and adaptive management programs are typically included in the HCP and incorporated by reference into the implementing agreement.

3.5.1 Washington DNR Forest Practices HCP

The Washington DNR Forest Practices HCP identifies procedures for compliance monitoring, effectiveness monitoring, and validation monitoring. Compliance monitoring looks at whether forest practices are being conducted in compliance with the HCP prescriptions, which in this case are the Forest Practices Rules. Effectiveness monitoring is designed to evaluate the degree to which forest practices prescriptions and guidance meet performance targets and resource objectives. Validation monitoring will determine if the performance targets are appropriate for meeting the stated resource objectives.

Compliance monitoring of the Forest Practices program takes place through the DNR-administered forest practices permitting process. Forest landowners are required to obtain approval from DNR prior to conducting forest practices activities. The permitting process involves reviewing and approving forest practices applications and notifications, conducting compliance checks of ongoing forest practices activities, and taking enforcement actions where necessary. Many forest practices review staff at DNR regional offices focus their reviews on those activities that pose the greatest risk to public resources or public safety. Neither the HCP nor the Washington State Forest Practices Rules specify criteria by which DNR staff can prioritize their reviews. Under the Forest Practices Act, all forest practices proposals are assigned a classification based on their potential to adversely affect public resources. Class III and Class IV-Special forest practices are generally associated with a higher risk and receive the closest scrutiny. A staff of 47 Forest Practices foresters reviews and approves 5,000 to 6,000 forest practice applications and notifications every year.

In addition to the ongoing compliance review process, a formal compliance monitoring program is currently being developed to measure landowner and operator compliance with Forest Practices Rules and to inform DNR's routine compliance checks and enforcement actions. A preliminary assessment of compliance with riparian management zone (RMZ) rules for fish-bearing streams was conducted in 2004. Planned subsequent phases of the monitoring project include surveys of the rules covering forest road construction, maintenance, and abandonment (scheduled to begin in 2007), non-fish-bearing streams (2008), perennial initiation points (2008), sensitive sites (2008), unstable slopes (2008), exempt 20-acre parcels (2009), alternative plans (2009), and wetland management zones (2010).

Monitoring and research related to the HCP program goals, objectives, and performance targets (i.e., effectiveness and validation monitoring) is conducted by the Cooperative Monitoring, Evaluation, and Research (CMER) Committee. The CMER Committee's 2006 Work Plan identifies 15 effectiveness and validation monitoring programs. Each program has several associated projects, some of which are underway and some of which are under development. The HCP does not specify the monitoring intervals for these projects.

Independent peer review of monitoring results is carried out by the Scientific Review Committee. The Scientific Review Committee generally reviews final reports of CMER Committee studies, study proposals, final study plans, certain CMER Committee recommendations, and pertinent studies not published in a CMER Committee-approved, peer-reviewed journal.

3.5.2 Plum Creek Native Fish HCP

The Plum Creek Native Fish HCP includes both implementation monitoring and effectiveness monitoring. Implementation monitoring involves tracking HCP commitments that occur or recur throughout the permit period and determining whether or not these activities were properly done. HCP commitments tracked using implementation monitoring generally involve measures where benefits are fairly certain and do not require elaborate or complex

study designs. Effectiveness monitoring involves experimental research to determine if the commitments are in fact achieving the biological goals and specific habitat objectives of the HCP. It also involves work to validate models that were used to increase confidence that expected results will indeed be achieved.

Implementation monitoring includes internal and external audits to gauge compliance with individual conservation measures (e.g., riparian prescriptions) and implementation targets (e.g., road upgrading schedules). The HCP commits to internal audits conducted by Plum Creek annually for the first three years of the Plan implementation, followed by audits conducted by a qualified environmental auditing firm every five years throughout the remaining life of the Plan. Results of these audits are reported to Plum Creek and the Services to gauge the success of plan implementation and to identify opportunities for improvement. Plum Creek reports implementation monitoring results to USFWS and NMFS every five years.

Intervals for effectiveness monitoring vary according to experimental design. Some data are collected at regular intervals (e.g., annual weighing and emptying of sediment tanks); in other cases data collection occurs before, during, and/or after individual timber harvest activities. Every five years, Plum Creek produces a major report, which combines five-year effectiveness monitoring results with a summary documenting successes and opportunities for improvement. The five-year reports, in addition to Plum Creek effectiveness monitoring data, include a list of other monitoring data and reports that pertain to watersheds containing Plum Creek ownership. The HCP establishes no review process for monitoring reports. Monitoring results are reviewed and addressed through the implementation feedback loop (see Figure 8-1 of the Plum Creek Native Fish HCP).

3.5.3 PG&E San Joaquin Valley Operations and Maintenance HCP (draft)

The monitoring, reporting, and adaptive management program of the PG&E San Joaquin Valley Operations and Maintenance HCP (draft) addresses both compliance and effectiveness monitoring. Compliance monitoring is intended to: (1) document the implementation of avoidance and minimization measures; (2) estimate temporary and permanent habitat effects that require compensation; and (3) document the amount and location of habitat preserved to mitigate impacts. Effectiveness monitoring will include: (1) monitoring of proposed acquisition parcels to ensure the habitat is suitable for covered species; and (2) ongoing, long-term habitat monitoring to ensure the habitat remains suitable for covered species. PG&E's monitoring program focuses on maintaining suitable habitat within the appropriate range of covered species; it does not propose to monitor for species occupancy.

Biological goals and objectives will be monitored annually as part of overall compliance for the HCP. Monitoring of plant compensation parcels (i.e., evaluation monitoring) will also be conducted annually, although habitat mapping for invasive plants and target plant species will occur every fifth year. Information about specific activities (e.g., implementation of avoidance and minimization measures, effects requiring compensation, amount of habitat preserved) will be collected in a database. The HCP administrator will summarize monitoring results and their relevance to the biological goals and objectives in an annual report to USFWS. The exception to annual reporting requirements is a description of compensation area monitoring, which is to be provided every fifth year. The report is submitted to USFWS and CDFG, but the HCP does not describe a review process for monitoring reports.

3.5.4 Western Riverside County Multi-Species HCP

The Western Riverside Multi-Species HCP includes a biological monitoring program that describes the framework monitoring approach, as opposed to a detailed monitoring plan. The

first five years of the monitoring program are devoted to gathering objective data on species distribution and relative abundances that will be used to determine the long-term monitoring strategy. The long-term strategy (Year 6 and after) will monitor changes in vegetation communities and habitats to assess whether the vegetation and wildlife habitat goals and objectives specified in the HCP are being met.

In addition to the baseline inventory field surveys and the long-term monitoring strategy for covered species, Riverside County will conduct monitoring of the 146 covered species. Information to be collected includes distribution, reproduction, and abundance (Western Riverside HCP Table 5-8). Distribution data will be collected at least once every eight years for most species and more frequently for the rest. For 21 select species, reproduction will be monitored every 1, 3, 5, or 8 years. Abundance of four small mammal species will be monitored every one to eight years, depending on the types of information needed and on the survey requirements stated in the species objectives.

The results of each year's monitoring efforts are summarized in an annual report and submitted by the program administrator to the Reserve Managers Oversight Committee. The Biological Monitoring Report includes, at a minimum, the following information:

- objectives for the biological monitoring program;
- effects on covered species and vegetation communities/habitats;
- location of sampling sites;
- methods for data collection and variables measured;
- frequency, timing, and duration of sampling for the variables;
- description of the data analysis and who conducted the analyses;
- evaluation of progress toward achieving measurable biological goals and objectives;
- suggested changes/feedback for adaptive management; and
- cause-and-effect relationships.

3.5.5 Pima County Multi-Species Conservation Plan

The monitoring program for the draft Pima County Multi-Species Conservation Plan is intended to provide information to: (1) evaluate compliance with the terms and conditions of the conservation plan (compliance monitoring); and (2) assess the achievement of the biological goals and objectives of the plan (effectiveness monitoring). The monitoring program is also designed to provide information that will guide the adaptive management program, as well as measures to identify the occurrence of changed or unforeseen circumstances.

When the draft plan was published (August 2006), Pima County was in the process of developing the assured programs and mechanisms to fund the development and implementation of a detailed monitoring plan. Such a plan would likely identify monitoring intervals, evaluation criteria, and defined thresholds. Pima County will provide monitoring results to USFWS in an annual report. Annual reporting may include, but is not limited to, the following types of information: permit area changes, habitat impacts/losses, mitigation acquisitions and conservation easements, habitat restoration, level of on-site mitigation within the conservation lands system, and habitat connectivity. The results of effectiveness monitoring will be reported every five years. In addition to annual reports, Pima County will submit a report to USFWS at the end of every 10-year phase, containing an accounting of habitat acreage lost and conserved during that decennial phase. The intent of the decennial

report is to evaluate progress, identify potential need for change, and set the goals and direction for subsequent phases of the permit.

3.5.6 Family Forest HCP (draft)

The draft Family Forest HCP presents one compliance monitoring measure and one effectiveness monitoring measure. The compliance monitoring measure requires covered landowners to submit a report to Lewis County by March 1 of each year describing all covered activities conducted during the previous calendar year. Landowner reports will include the identification numbers of all Forest Practices Approvals in effect for covered lands in the previous year, along with any enforcement actions (Stop Work Orders and Notices to Comply) taken by the Washington DNR relative to those forest practices. According to the HCP, the Washington DNR process of reviewing, issuing, and monitoring compliance with Forest Practices Approvals will also serve to monitor compliance with the HCP.

The effectiveness monitoring measure is designed to assess forest habitat conditions in riparian buffers. A sample of riparian buffers that are at least 50 years old and that have been subjected to partial harvest under the HCP will be surveyed to determine the age, species, height, diameter, condition (live or dead), and distance to stream for every tree in the no-harvest and partial-harvest portions of the buffer.

Lewis County will compile all landowner compliance monitoring reports and submit a summary to USFWS and NMFS by June 1. The reporting interval to the Services is annually for the first five years of HCP implementation, and every 10 years thereafter. Effectiveness monitoring is scheduled to begin in Year 11 of HCP implementation and occur every 20 years thereafter, with Lewis County compiling the collected information and submitting a report to the Services. The HCP does not describe a review process for monitoring reports.

3.5.7 Tacoma Water HCP

The Tacoma Water HCP includes three types of monitoring: (1) compliance, (2) effectiveness, and (3) research. Fifteen compliance monitoring measures address various aspects of instream flow management, water storage, habitat rehabilitation, fish passage and bypass facilities, anadromous fish movement and behavior, woody debris management and gravel nourishment, timber harvest, riparian buffers, road construction and maintenance, and species-specific habitat management (Tacoma Water HCP Table 6-1). Three effectiveness monitoring measures assess snag and green tree recruitment, covered species response to species-specific habitat management, and uneven-aged harvest (HCP Table 6-2). Three research monitoring measures are designed to evaluate a fish passage facility, flow management strategies, and mainstem sediment and woody debris distribution (HCP Table 6-3).

Monitoring intervals vary widely by measure. For compliance monitoring, intervals include hourly (during well field pumping); daily (e.g., river discharge, well withdrawals, turbidity, snowpack, and precipitation); post-construction only (e.g., LWD, rootwad, and boulder placement for rehabilitated sites); annually (e.g., gravel nourishment after high flows, harvest units, species-specific habitat status); and selected years during the ITP term (e.g., stability of rehabilitated areas).

For effectiveness monitoring measures, snag and green tree recruitment will be evaluated immediately after harvest and then at 10-year intervals. Species-specific habitat management evaluation will depend on species presence and implementation of specific management plans. Uneven-aged harvest will be assessed five years after operations. Research monitoring will occur at varying levels of frequency, including daily, every two weeks, every seven to

ten days, and annually. Many of these intervals apply during certain times of the year, and several measures will not have intervals specified until the pre-construction engineering and design is completed for the additional water storage project.

Tacoma Water will document evidence of compliance with project completion reports, annual reports, and internet web page postings or a similar form of public access (e.g., for daily streamflow, snowpack, and precipitation measurements). The web page is to be implemented within one year of ITP issuance and then updated daily with new measurements. Results of monitoring measures will be summarized and presented to the Services during each five-year review. Tacoma Water also expects to invite participation in the five-year reviews from the U.S. Army Corps of Engineers (USACE), WDFW, Washington Department of Ecology, Washington DNR, the Muckleshoot Indian Tribe, King County, and the Green River Flow Management Committee. Detailed reporting and/or review for individual measures vary, with many specifying annual review, while others specify data that will be available upon request of the Services. For rehabilitation projects, completion reports are due to the Services within six months of project completion, while the data from periodic follow-up will be available to the Services on request.

3.6 APPROACHES TO ADAPTIVE MANAGEMENT

This section describes the adaptive management approach for each HCP, including such aspects as the adaptive management framework, types of performance measures, how decision-making is to proceed, and the inclusion of any safeguards built into the adaptive management framework should objectives not be achieved. Adaptive management allows for continuous improvement of an HCP based upon new information, improved modeling, new technology, and changed circumstances. As such, information collected through monitoring programs (discussed above) plays a key role in all of the adaptive management programs described below.

3.6.1 Washington DNR Forest Practices HCP

The Washington DNR Forest Practices HCP includes a formal, structured adaptive management program that is described in the Washington State Forest Practices Rules (WAC 222-12-045). The adaptive management program was established to produce science-based recommendations and technical information to assist the Forest Practices Board in determining if and when it is necessary or advisable to adjust the Forest Practices Rules and guidance to achieve the performance goal and resource objectives. Forest practices rules are designed to meet broad performance goals, general resource objectives, and specific performance targets for the protection of public resources, including species covered by the HCP. The degree to which Forest Practices Rules meet these goals, objectives, and targets is the focus of the adaptive management process. The HCP states that a successful adaptive management program is essential to ensuring the ongoing development and implementation of measures that effectively conserve the habitats of species covered under the plan.

The performance goal for the adaptive management program is to ensure that forest practices, either singularly or cumulatively, will not significantly impair the capacity of aquatic habitat to: (1) support harvestable levels of salmonids; (2) support the long-term viability of other covered species; and (3) meet or exceed water quality standards, including protection of beneficial uses, narrative and numeric criteria, and anti-degradation.

Resource objectives consist of functional objectives and performance targets designed to ensure achievement of the performance goals. Functional objectives are broad statements regarding major watershed functions potentially affected by forest practices. Performance targets are measurable criteria defining specific target forest conditions and processes.

Functional objectives and performance targets have been established for water temperature, large woody debris/litterfall, sediment, hydrology, and forest chemical inputs, and are listed in Schedule L-1 of the Forests and Fish Report.

Schedule L-1 serves as the foundation for the adaptive management program, and more specifically, guides the development of research and monitoring projects described in the CMER Workplan. Key questions, and therefore research and monitoring priorities, are likely to change over time as adaptive management proceeds and new information becomes available. Any substantive changes to resource objectives, performance targets, and research and monitoring priorities will require concurrence by the Services.

WAC 222-12-045(2)(d) describes the process that will be used to affect change when it is necessary or advisable to adjust rules and guidance for aquatic resources to achieve the goals of the Forest Practices Act or other goals identified by the Board. The adaptive management program employs a six-stage process for managing potential changes. Forest Practices Board Manual Section 22 constitutes a detailed process guide for implementing the program and defines the roles and responsibilities of the various program components. The primary components of the adaptive management program include the Forest Practices Board, the Timber, Fish, and Wildlife/Forests and Fish Report (TFW/FFR) Policy Group, or similar collaborative forum; the CMER Committee; the Adaptive Management Program Administrator; and the Scientific Review Committee.

The adaptive management process addresses proposals, which are defined as any form of request, question, task, project, sub-program, etc., whose end product may affect changes in forest practices or otherwise meet one of the program's goals and objectives. The six stages of the adaptive management process are: (1) proposal initiation and screening; (2) proposal review and planning; (3) CMER implementation of proposal; (4) TFW Policy Group recommendations; (5) Forest Practices Board consideration of action; and (6) management implementation. The adaptive management program (WAC 222-12-045(2)(c)) also "establishes an independent scientific peer review process to determine if the scientific studies that address program issues are scientifically sound and technically reliable; and provide advice on the scientific basis or reliability of CMER's reports."

3.6.2 Plum Creek Native Fish HCP

The Plum Creek Native Fish HCP describes adaptive management as a feedback loop, whereby goals for the conservation plan are set, information is collected to evaluate whether the goals are being met, and management is adjusted if necessary to ensure success in achieving the goals. The HCP also emphasizes Plum Creek's business goals and need for financial predictability, through the development of evaluation criteria and economic "sideboards" on monitoring strategies and possible management responses. HCP adaptive management is described as a balance between strong conservation commitments at the outset and a procedure for improving them in the future, if that becomes necessary.

Plum Creek developed the HCP Implementation Framework (Plum Creek Native Fish HCP Table 8-1) as a tool to evaluate monitoring data and to guide operational adaptive management. At the base of the implementation framework are 15 habitat objectives that are designed to meet the four biological goals of the plan. For each habitat objective, the HCP identifies management actions (commitments) designed to contribute to that objective. The implementation framework identifies one or more units of measurement (performance metrics) to evaluate the success of the management actions. Examples of implementation monitoring metrics include the compliance rate with Best Management Practices (BMPs) and riparian rules, miles of severely impacted stream that are fenced within grazing allotments, length of road upgraded or abandoned, and number of fish passage barriers that have been

removed. Examples of metrics for effectiveness monitoring include stream temperatures, riparian vegetation condition, and sediment delivery rates.

For each performance metric, the HCP establishes a threshold that serves as the indicator, or “trigger,” at which point the adaptive management process starts. The HCP includes a provision that allows a given trigger to be changed if it is found to be insufficiently or excessively sensitive to serve as a meaningful indicator. Triggers derived from implementation monitoring result in automatic management responses. In contrast, when a science-based trigger (i.e., one derived from effectiveness monitoring) is tripped, the decision on a management response requires a more elaborate and cooperative decision process.

The Adaptive Management Pathway (HCP Figure 8-1) is the process by which management responses are developed in response to science-based triggers. The first step in this process is to determine whether the observation has any biological relevance in order to determine if the departure in expected results is affecting the biological goals of the plan. Next, the source of the departure is reviewed to determine whether the difference is related to HCP management measures. If the trigger is found to be biologically relevant and causally linked, then one of three kinds of management response is implemented, as follows:

1. Pre-defined mandatory management responses typically consist of correcting management procedures. Such responses will most commonly be triggered by implementation monitoring.
2. Mandatory collaborative management responses require collaboration and agreement between Plum Creek and the Services. The HCP provides procedures and standards to be applied in developing the response. Mandatory collaborative management responses must be based upon data collected under adaptive management experiments or newly available data and must maintain or improve the ability to meet the business and biological goals of the HCP.
3. Cooperative management responses are not dependent on a trigger, but respond instead to opportunities to alter management activity in a fashion that better achieves HCP goals.

A key element of the adaptive management program is four Core Adaptive Management Projects (CAMPs), which form the basis of the effectiveness monitoring program (see Section 3.5.2 of this document). The CAMPs provide key information required by the HCP implementation framework and will be used in the decision process to help inform management responses proposed in the HCP.

3.6.3 PG&E San Joaquin Valley Operations and Maintenance HCP (draft)

The draft PG&E San Joaquin Valley Operations and Maintenance HCP includes adaptive management through the compliance monitoring program and effectiveness monitoring program. The HCP administrator will periodically review data on the implementation of avoidance and minimization measures for evidence of problems with compliance or implementation. If any implementation problems are identified, the administrator, with concurrence and approval by USFWS and CDFG, will develop modifications to the HCP implementation process.

The HCP administrator will also review monitoring data to confirm whether: (1) actual disturbance areas from given activities are consistent with estimated levels; (2) suitable habitat disturbed is consistent with estimated levels in the HCP; and (3) management (i.e., restoration) of compensation lands is providing desired levels of suitable habitat. Based on the review, the administrator, with concurrence and approval by USFWS and CDFG, will develop modifications to the amount of land to be protected as compensation lands and the

management (i.e., restoration methods and types) of these lands. In addition, the HCP states that avoidance measures may be modified if monitoring indicates that alternative measures could be implemented and a biologist is able to identify additional species-specific protection measures that are practicable. Any modifications would require concurrence by USFWS and CDFG.

The adaptive management program allows for, but does not require, revisions of goals and avoidance, minimization, and compensation measures to incorporate recovery strategies identified in new or revised recovery plans for federally listed species. PG&E will incorporate additional conservation measures identified in future or revised recovery plans if the measures: (1) are expected to improve the effectiveness of the HCP compensation strategy in achieving its goals; (2) can be achieved in the HCP plan area; and (3) are compatible with the HCP compensatory goals and do not significantly increase the costs incurred in accomplishing these goals.

3.6.4 Western Riverside County Multi-Species HCP

The adaptive management program for the Western Riverside County Multi-Species HCP relies on monitoring efforts to detect changes in species, habitats, and/or threats. When change is detected, reserve managers will evaluate the information and respond by initiating, modifying, or even ending a particular management strategy if necessary.

The information collected during the initial inventory and long-term monitoring phases will be used to determine whether covered species goals and objectives are being met. The HCP states that the presence and continued use of most covered species will be maintained at 75 percent of the locations identified in the individual species accounts. Species declines below this threshold, or other thresholds as noted in the species-specific conservation objectives, trigger management actions that will be based on site-specific information and recommendations. The Plan also identifies specific adaptive management measures for three covered species (purple martin, Quino checkerspot, and arroyo chub). The Plan does not describe a process by which management actions will be modified.

Data collected through the long-term biological monitoring program may also influence management changes. If a substantial decline is documented in upland or wetland habitat conditions or native species compared to baseline conditions, or if other apparent threats to habitat conditions are observed, remedial action will be recommended. The Plan does not specify what remedial actions may be considered.

The HCP includes some flexibility in the implementation of the adaptive management program. For example, the 75 percent threshold for covered species distribution may be modified as new data are collected over time. The Reserve Managers Oversight Committee will meet five years after initial permit issuance and every year thereafter to evaluate new data and review species-specific trigger points. Sampling intervals can also be modified. If, during the initial years of the HCP, indications suggest that time intervals between sampling periods for species distribution and abundance may be too long, then a more frequent sampling interval will be considered for the entire area, or for the particular vegetation/habitat types undergoing rapid change. Indicators for this modification would include a greater than 10 percent change in species distribution and/or abundance. Similarly, if indications suggest that time intervals between sampling periods for species distribution and abundance are too short, then a less frequent sampling interval will be considered. In addition, the Plan describes a process by which monitoring surveys for individual species may be discontinued altogether.

3.6.5 Pima County Multi-Species Conservation Plan (draft)

The draft Pima County Multi-Species Conservation Plan includes a commitment to develop Biological Resource Management Plans (BRMPs) to guide the conservation of habitat-based resources on lands that Pima County manages for biological resources or acquires for the conservation of target species. The BRMPs will establish goals, objectives, and management strategies for aquatic and riparian resources, upland resources, and bat resources. Adaptive management is incorporated as an evaluation tool when monitoring results are compared against the stated desired resource condition and analyzed for resource improvement, degradation, or maintenance of status quo.

The Plan identifies the desired future conditions of the permit area, providing an overall set of goals upon which the implementation and management elements of the Plan can be developed, and ultimately, be measured. Specific percentage standards are provided for conserved land within Important Riparian Areas, Biological Core and Special Species Management Areas, and Multiple Use Management Areas. In addition, the Science Technical Advisory Team adopted ecosystem function goals for the management and conservation of riparian areas. The Plan, however, does not specify how or whether management practices will change if these goals are not met.

Pima County has acquired conservation lands to mitigate for projected development during the first decade of the permit. USFWS will require the County to revisit growth projections for subsequent decades and adjust up-front mitigation requirements. For example, at Year 10, projections for Year 20 buildout will be updated. If the new projection exceeds the previous estimate, the amount of lands acquired for conservation will need to be increased.

3.6.6 Family Forest HCP (draft)

Lewis County is responsible for implementation of the adaptive management provisions of the Family Forest HCP. The draft HCP identifies adjustments that will be made to the riparian habitat conservation measures if effectiveness monitoring data indicate that buffers are not providing the intended level of habitat function. No provision is made for instances in which target conditions are not met even after implementation of management modifications.

The HCP can also be subjected to adaptive management at any time if scientific peer review demonstrates the Forest Inventory and Analysis Integrated Database reference condition or the Available Functional Large Woody Debris (AFLWD) metric are incorrectly or inaccurately evaluating the adequacy of the riparian habitat conservation measures. The HCP does not establish a schedule or a process for peer review or data and model validation, however. The riparian management strategy is based on the premise that natural (unmanaged) riparian forest conditions are optimal for covered aquatic species (i.e., unmanaged forests support properly functioning aquatic ecosystems). The HCP notes that this premise is widely accepted and is the basis for riparian forest management of federal, state, and other private forestlands in the region. This premise will not be subject to validation or adaptive management under the HCP. The specific method by which natural forest conditions are described, however (i.e., the Forest Inventory and Analysis Integrated Database), may be evaluated through adaptive management.

3.6.7 Tacoma Water HCP

Under the Tacoma Water HCP, adaptive management occurs through the compliance monitoring, effectiveness monitoring, and research programs. The compliance monitoring program identifies specific qualitative and quantitative criteria to ensure habitat conservation measures are implemented according to specified standards. Examples of qualitative criteria include confirming fish use of the fish passage facility and assessing the soundness of large

woody debris (the HCP defines sound large woody debris as that which shows little rot, decay, or fragmentation). Examples of quantitative criteria include mortality rates of rehabilitation plantings and retention rates of snags in upland forest areas. If these criteria are not met, the HCP specifies corrective actions (“contingencies” in Tacoma Water HCP Table 6-1) that will be taken. The HCP does not describe any specific process by which such changes will be made, although the text for one compliance measure contingency (snag retention) indicates that Tacoma Water will coordinate with the Services in making any necessary changes.

The effectiveness monitoring program evaluates whether conservation measures have achieved the specified resource objective. The adaptive management component of the Tacoma Water HCP allows for alterations to flow and habitat structures to improve their fish habitat functions. The results of effectiveness monitoring activities will be reviewed in coordination with the Services at five-year intervals and, if necessary, conservation measures that are judged to be ineffective will be modified (HCP Table 6-2). Effectiveness monitoring for the Tacoma Water HCP includes only those management activities for which uncertainty exists regarding the outcome, and for which Tacoma Water has complete responsibility.

The adaptive management pathways for the effectiveness monitoring program are summarized as follows:

Snag and Green Recruitment Tree Monitoring – If, after the first 10 years of HCP implementation, it is determined that the rate or method of snag creation needs to be adjusted, Tacoma Water and the Services will develop mutually acceptable adjustments to the specified rate and selection process.

Species-specific Habitat Management Validation – If it is determined that continued management activities conducted in accordance with species-specific management measures are preventing use of the HCP area by a covered species, Tacoma Water will adjust the measure in coordination with the Services.

Uneven-aged Harvest Monitoring – If windthrow has resulted in individual forest stands containing an average of fewer than 25 healthy dominant or codominant conifers per acre five years after uneven-aged harvesting, Tacoma will consider that cause to adjust the rate and/or method of harvesting in comparable areas.

The research program addresses conservation measures associated with facilities operated by parties other than Tacoma Water (e.g., USACE operation of the Howard Hanson Dam), or for which resource agencies and the Muckleshoot Indian Tribe have the opportunity to identify and recommend adaptive management options (HCP Table 6-3). Data from eight separate fish passage studies, for example, will be provided to the Green River Flow Management Committee, as needed, to make decisions regarding minor annual modifications to the storage and release schedule. Tacoma Water may modify implementation of the HCP based on research results, if requested by the Services. The research program represents the majority of Tacoma Water’s funding commitment. The extent to which the success of the HCP depends upon adaptive management research questions, however, is not clear.

The HCP includes limits on Tacoma Water’s financial liability for modifying management practices. For example, Tacoma Water will repair or replace any in-stream habitat rehabilitation structures that fail to meet the stability criteria during the first five years. After that period, Tacoma Water will provide funding for one additional replacement of the structures, should they decay or fail following large floods.

The HCP does not address safeguards or other measures that will be implemented if objectives are not achieved, even in response to modified management practices.

3.7 REVIEW OF COSTS AND FUNDING

This section describes: (1) the known or estimated costs of HCP planning, production, permitting, and implementation; and (2) funding structures. The information was gathered from interviews with HCP permittees (Appendix B) and from the HCP documents. Note that while Section 3.4, Approaches to Implementation, of this report discusses the funding structure for implementation, this report section (Section 3.7) describes funding structures for all aspects of the HCP process (planning, document production, permitting, and implementation), to the extent that the information is available.

3.7.1 Costs

3.7.1.1 Cedar River Watershed HCP

Seattle Public Utilities (SPU) reported that over \$1 million was spent on HCP planning, production, and permitting. For HCP implementation, SPU has made a \$78.9 million total funding commitment over the 50 years of the permit.

3.7.1.2 Washington DNR Forest Practices HCP

Charlene Rogers of Washington DNR reported that they have “no idea” of the total cost of HCP planning, production, and permitting; and do not think a total figure has ever been compiled. In a further conversation with Darin Cramer, he estimated that the cost of HCP preparation and the associated environmental review was about \$3 million. Regarding implementation costs, DNR’s administrative and implementation budget and costs are included in the budget for the entire Forest Practices program, which is approximately \$20 million per year, and DNR is not able to separate out costs specific to HCP implementation. They are currently spending between \$2 million and \$2.5 million per year on adaptive management research and monitoring. They expect some increase in this amount over the next ten years as DNR implements high-priority experimental research projects. However, the cost should decrease in later years of the plan if DNR is successful in front-loading the adaptive management program with these projects.

3.7.1.3 Plum Creek Native Fish HCP

Plum Creek reported that approximately \$1 million was spent on HCP planning and production, and approximately \$1 million was spent on permitting, including the NEPA process. Administrative costs, including staff time and expenses, for the monitoring and adaptive management process has been about \$300,000 for each of the first five years. The costs for actual on-the-ground implementation, such as improving roads, streams buffers, and other measures, has been significantly above and beyond that, but Plum Creek could not provide an exact figure.

3.7.1.4 Clark County Multi-Species HCP

Clark County reported that HCP planning, production, and permitting costs were not tracked, and they do not know how much was spent on this effort. For HCP implementation, administrative costs, including staffing and expenses, are about \$1 million per year. Their biennial budget for 2005-2007 is \$38 million for implementation of HCP mitigation and conservation actions.

3.7.1.5 San Joaquin County Multi-Species HCP and Open Space Plan

The San Joaquin Council of Governments reported that an estimated \$700,000 to \$800,000 was spent on direct costs for HCP planning and production. Indirect costs were not captured. Permitting costs were not tracked separately. Administrative costs for HCP implementation,

which include two and a half full-time equivalents and the day-to-day administration of the plan, are about \$560,000 per year.

3.7.1.6 Coachella Valley Multi-Species HCP and Natural Communities Conservation Plan

Planning and preparation costs for the Coachella Valley Plan are estimated at \$7 million.

Implementation costs for the plan are estimated as follows: (1) administrative costs for the land acquisition program at \$411,000 per year, with 3% allotted for annual inflation; (2) operating fund (general administration) costs at \$42,000 per year, with 3% allotted for annual inflation; (3) land acquisition costs at \$491 million over 30 years; (4) land improvement costs at \$8.6 million over 30 years; (5) total cost of the monitoring program at \$190 million over 75 years; and (6) total cost of the management program is estimated at \$202 million over 75 years.

3.7.1.7 Tacoma Water HCP

Tacoma Water reported that HCP planning, production, and permitting costs totaled approximately \$1.5 million. For the first five years of HCP implementation, administrative costs have been about \$3 million; however approximately 85 to 90 percent of those costs have been toward the commitments made by Tacoma Water as part of agreements reached for the Second Supply Project, the 1995 Muckleshoot Indian Tribe/Tacoma Public Utilities Settlement Agreement, and as local sponsor for the USACE's Additional Water Storage project at Howard Hanson Dam. The total estimated cost of habitat conservation measures identified in the HCP is \$57 million over the 50-year lifetime of the ITP.

3.7.2 Funding

3.7.2.1 Cedar River Watershed HCP

Funding for the Cedar River Watershed HCP comes from water rate-payers. The HCP contains a provision for cost commitments, or cost caps, meaning there is a minimum and maximum that SPU is required to spend. For funding purposes, eight different cost categories were established. SPU may not transfer funds among these categories without a plan amendment. SPU reported that funding has been adequate.

3.7.2.2 Washington DNR Forest Practices HCP

Funding for the Washington DNR Forest Practices HCP comes from grants, in-kind services from stakeholders, and the Washington State Legislature. The Legislature has created a dedicated account for long-term funding of Forests and Fish implementation from a surcharge on the business and occupation tax paid by the forest products industry. This is expected to generate \$4 to \$8 million dollars per year, and funds will be used primarily for adaptive management and participation grants to ensure that interested parties are able to fully participate in the adaptive management program.

DNR reported that funding has been adequate to date. However, with each budget cycle, DNR must go before the legislature for renewal of funding.

3.7.2.3 Plum Creek Native Fish HCP

Funding for the Plum Creek HCP comes from Plum Creek land management activities (i.e., timber sales). This funding has been adequate.

3.7.2.4 Clark County Multi-Species HCP

Clark County has a unique funding situation in which the HCP is funded by a local mitigation fee that is paid by private landowners when applying for a grading permit. Clark County administers these funds and aggressively invests them to accrue more funds for plan management. Clark County is also among the recipients of funds resulting from the Southern Nevada Public Lands Management Act of 2001, which designated some Bureau of Land Management (BLM) lands for sale, with the proceeds administered by BLM and designated for a handful of expenses, including HCP development and implementation. Clark County suggested that their plan was possibly over-funded at first, due to the land rush and building boom in southern Nevada.

3.7.2.5 San Joaquin County Multi-Species HCP and Open Space Plan

Funding for the San Joaquin Multi-Species HCP comes from grants, local funds, local sales tax, and local mitigation funds. Funding has been adequate, although administrative costs were much higher than expected in the early stages of HCP implementation.

3.7.2.6 Coachella Valley Multi-Species HCP and Natural Communities Conservation Plan

Implementation of the Coachella Valley Plan is funded by an endowment fund, which receives contributions from local development mitigation fees, regional transportation and infrastructure mitigation fees, fees on importation of waste into landfills in Riverside County, the Conservation Trust Fund, Eagle Mountain Landfill Environmental Mitigation Trust Fund, and interest on investments. Other funding sources may also be pursued in the future.

3.7.2.7 Tacoma Water HCP

Funding for the Tacoma Water HCP comes from water rate-payers. This funding has been adequate.

3.8 EVALUATION OF THE HCP PROCESS

This section provides summaries of the phone interviews with permittees and representatives of the Services on the ease and success of, and lessons learned from, the HCP process (Appendix B). For each HCP, a subsection on the permittee's perspective and the Services perspective is provided. For the Services, the perspective is either from USFWS, NMFS, or both, depending on which agency/agencies granted the ITP for a given HCP.

3.8.1 Cedar River Watershed HCP

3.8.1.1 Perspective of the Permittee

Cyndy Holtz, the major watersheds business area manager and HCP program manager at SPU, stated that the Cedar River HCP implementation process has been fine. The HCP process took about six years, which was longer than they had anticipated. She said that negotiating the provisions with all the parties added delays. SPU was also attempting to resolve some issues with other agencies, which took additional time.

In reviewing the ease and success of the HCP implementation process, Ms. Holtz recommended having good business systems in place before implementation to track expenditures and assist in reporting. She also recommended allocating adequate staff to properly administer the project. In considering aspects SPU might do differently if they were to do it over again, Ms. Holtz said that SPU would exclude "cost commitments" (see Section 3.7.2.1 of this document for further explanation of cost commitments), as administering the HCP would be easier without them. She said they would also prefer to have more flexibility

in moving money around between different areas of the Plan. She would have preferred that the Plan be more clear on the adaptive management requirements. Ms. Holtz stated that, overall, they would undertake the HCP process again.

3.8.1.2 Perspective of the Services

Tim Romanski, the USFWS representative for the Cedar River Watershed HCP, commented that the decision was made on this HCP to do a NEPA Environmental Assessment (EA), rather than an EIS, which might have been more appropriate.

Matt Longenbaugh, the NMFS representative for the Cedar River Watershed HCP, said that this was a very complex HCP. His comments echoed those of Mr. Romanski, that the decision to produce a NEPA EA instead of an EIS has made the process difficult. They did enough work to have prepared an EIS, but in process it was a SEPA EIS and a NEPA EA. He suggested always doing a NEPA EIS; while a NEPA EA can work in certain circumstances, it invites challenges even if there are no other grounds for challenging the work that was done. He recommended that the applicant be aware of and follow clear process steps, so that both the document and the process are defensible in the future. He also suggested that, when starting the process, the applicant and the Services should trade letters listing the technical lead, policy lead, and legal lead with name and contact information. This letter should also include some intent language, stating when and how communications will generally occur.

Mr. Longenbaugh explained that SPU wanted to cover other longstanding issues with this HCP, and consequently, significant complexity was added to the HCP process. Questions that arose on this HCP about how to comply with the National Historic Preservation Act (NHPA) have affected how subsequent HCPs comply with the NHPA. The challenge they encountered was that the federal agencies have no control over whether/how the applicant complies with the NHPA after the permit is issued, so there is no trigger for Section 106 NHPA consultation.

Mr. Longenbaugh stated that SPU's website, which includes all relevant HCP documents and information, has been particularly helpful in the continuing implementation of the HCP. The website makes it easy for the Services to obtain information and to direct others to that information. He suggested including the annual reports on the website for easy access. He also said that SPU did a good job of scoping and public involvement and of documenting that process, which helped the Services. As a general HCP process comment, coming from his experience working on several HCPs, Mr. Longenbaugh suggested describing ahead of time what exactly would be covered by plan amendments vs. minor modifications; this is a "gray area" and clarification of differences would be helpful.

3.8.2 Washington DNR Forest Practices HCP

3.8.2.1 Perspective of the Permittee

Charlene Rogers of Washington DNR reported that the Forest Practices HCP process took about four years, while they had planned for a three-year process. She could not identify any specific sources of delays. She felt it took time at the beginning of the process to figure out exactly what they were doing. It was not necessarily difficult, but was a matter of walking through the process. She said they have not encountered any specific challenges in implementation.

When asked if they encountered any unique challenges in applying for an ITP as a public agency, Ms. Rogers reported no difficulties in this regard. Ms. Rogers reported that their interactions with the Services went well overall. Looking back on the process, she said DNR would undertake the HCP process again.

3.8.2.2 Perspective of the Services

Sally Butts, the USFWS representative for this HCP, said that there was some struggle early on about who was in control of the NEPA process, DNR or USFWS. She also noted that there were many stakeholders that had been involved in the process for a long time, and DNR and USFWS needed to answer to all of these stakeholders at every stage of the process. This process of getting consensus at every level took time. Ms. Butts thought that this HCP may have been easier than some other HCPs, since the Forest Practices regulations were already in effect, and the applicant just had to fit them to federal NEPA requirements.

The NMFS representative for the HCP, Laura Hamilton, wrote the Biological Opinion (BO) for NMFS, and described that her job was to “get the process across the finish line.” She recommended that the applicant always be thinking about the resource first. It is a conservation plan; it is not intended to just maintain the species, but actually help it to recover.

3.8.3 Plum Creek Native Fish HCP

3.8.3.1 Perspective of the Permittee

Brian Sugden, of Plum Creek Timber, stated that the Native Fish HCP process took about three years, which was about what they had anticipated. He said that NEPA permitting took about half of that time. This was one of the first combined HCP EIS documents to be produced, and Plum Creek staff thought this was a good step in expediting the process.

In looking at the ease and success of the overall project, Mr. Sugden said that it is very important to have all the parties desire to make the HCP process happen and be committed to making it happen successfully. He noted that it is important to collaborate with all parties from the beginning in a “creative partnership.” In the first couple of years they had to make a few adjustments to the Plan, so he suggested it was important in the adaptive management process to create a framework for minor changes and modifications over time. Part of making the adaptive management plan work well for this particular project has included a well-defined framework for studies to be performed, information produced, and evaluation of the results. Plum Creek has just undertaken their first five-year review, and the plan appears to be on track. Looking back on the process, he said they would undertake an HCP again.

In regards to their interactions with the Services, Mr. Sugden reported that having to negotiate two permits from two different agencies (USFWS and NMFS) that had different approaches was difficult. He said that USFWS and NMFS had to negotiate “behind the scenes” at some points. He also noted that working across state lines was difficult.

3.8.3.2 Perspective of the Services

Ted Koch, the USFWS representative for the Plum Creek Native Fish HCP during planning and negotiations, provided his perspective on the negotiations process. He stated that both parties engaged in “interest-based negotiations,” meaning that both parties had the goal of increasing the amount and value of the resources and assets available for all. He contrasted this to “positional-based negotiation,” where the amount available is perceived as static and therefore one side’s gain is the other’s loss. Plum Creek and USFWS diligently applied themselves to this interest-based negotiating, which led to both sides feeling as though they were gaining from the negotiations.

Mr. Koch also stated that USFWS and Plum Creek designated specific project leads for the planning process and gave them the resources (i.e., time) to commit to getting the job done. His impression was that NMFS did not provide this kind of dedicated staff and as a result were less satisfied with the outcome of the project. He said that having an experienced

applicant who knew the process (Plum Creek has produced a previous HCP) made the process easier. As a result, Plum Creek embraced the regulatory process, including NEPA, and did not view it as something to fear.

Finally, Mr. Koch noted that Plum Creek, as a private corporation, had two key ingredients that led them to negotiate in good faith. The first was a genuine interest in species conservation, rather than viewing the species on their land as a liability. Plum Creek also had a genuine regulatory concern. Plum Creek manages more bull trout lands in the nation than any entity other than the federal government, so they were very interested in negotiating with the Services for regulatory requirements that would be beneficial to both sides.

Tim Bodurtha is the current USFWS contact for overseeing the HCP implementation. He said that overall this HCP is going very well. The HCP implementation process includes a five-year check-in and review evaluation. He said that five years is enough time to have a sense of how things are going, and to plan for the next five years. He also said that Plum Creek and USFWS hold an annual meeting every winter after the field season. This gives the parties a chance to report on that year's HCP activities, and also a chance to bring up any concerns or requests they each may have for the upcoming year. He said the first annual review is very important. Mr. Bodurtha recommended that both groups share information early on, and that the Services should be clear about exactly what they expect in the first annual report. The key elements of a successful plan include addressing concerns early and having a free flow of information sharing.

Mr. Bodurtha said that Plum Creek has been very good at cultivating a mutual partnership with USFWS. This relationship has encouraged the sharing of information and ideas in both directions. Plum Creek and USFWS are able to communicate any issues that arise right away. For example, Plum Creek invites USFWS staff to their internal inspections, and requests feedback from USFWS. In another instance, Plum Creek invited USFWS to their staff training (foresters), and asked for USFWS critique afterward. He also said that having people available on both sides to address changed circumstances has been very good. Plum Creek set up a web-based system for staff reporting and documenting, to share HCP information internally and reduce paperwork. He recommended that the USFWS be involved in the development of the plan, which makes the permitting much easier. USFWS has provided two full-time staff to work on monitoring of the HCP. This has gone very well, and has led to USFWS being satisfied with the implementation and compliance monitoring. They have had the time and resources to conduct the field inspections and effectiveness monitoring that they want.

The adaptive management portion of the Plan includes a provision for "cooperative management response," which Mr. Bodurtha said has been very effective. This allows USFWS or Plum Creek to address concerns of practicality on the ground. Either side can write a proposal to address the problem, suggest a solution, and ask if the other side approves. This allowance for improving the prescriptions in light of practical applications has been great, flexible, and practical.

One thing that Mr. Bodurtha said is lacking in the Plan is clear direction on how to handle HCP lands being sold off in the future, specifically how to ensure that HCP requirements are fulfilled after the sale. The one unresolved problem they have encountered in this HCP is the question of enforcement of HCP requirements on lands that have been sold. Plum Creek enacted restrictive covenants on some of the lands sold to developers, but no one is sure who is responsible for ensuring that those covenants are upheld. The beneficiary is supposed to uphold the covenants, but they cannot reach agreement on who is the beneficiary. USFWS believes the beneficiary is Plum Creek, because they receive the mitigation credit. Plum Creek believes the beneficiary is the public. The county believes it is not obligated to uphold

restrictive covenants. Mr. Bodurtha recommends making this clear from the outset, or making it clear in the restrictive covenant. This remains the one major unresolved issue. Overall this Plan has been very successful and Plum Creek and USFWS are both very satisfied.

3.8.4 Clark County Multi-Species HCP

3.8.4.1 Perspective of the Permittee

Marci Henson at Clark County said that the HCP process took about six years, which was about what they had anticipated. She said that keeping the contractor “on track” was one of the biggest challenges in keeping to the timeline. They had a very aggressive public involvement plan that began during the development process, which was useful but added time to the overall process. In looking at ways to expedite the process, she recommended adopting clear criteria for which species to consider. Along with that, she recommended that the permittee have a clear understanding of the applicable laws and regulations.

One aspect unique to the Clark County Plan is the inclusion of private property in the plan coverage, which Ms. Henson said was a lot of work for a local government agency to undertake. One of the most successful aspects of the project was maintaining the involvement of all interested parties. The HCP has never been challenged, and the county has expended considerable effort to provide an outlet for interested parties to make their views and needs known in ways other than lawsuits.

When asked if they encountered any unique challenges in applying for an ITP as a public agency, Ms. Henson said that Clark County has a history of being very involved in local government, which has made the public involvement process easier. They have a Citizen’s Advisory Committee that has been very involved in the process all along.

In regards to their interactions with the Services, Ms. Henson said that it is very helpful if the Services are willing to work on the process from the beginning. She said there were some points where it felt like extortion in dealing with USFWS in their region, with the Service threatening to revoke a permit if a certain task was not accomplished. She said that the process is easier when the Services are as flexible as possible.

Looking back on the overall process, she said they would undertake the HCP process again.

3.8.4.2 Perspective of the Services

Bob Williams, the USFWS representative for the Clark County Multi-Species HCP, recommended that the applicants, when negotiating with the Services, know exactly what activities they are seeking coverage for, and why. He said that much of the negotiation is focused on the species to be covered, so being prepared with the activities for which coverage is being sought can help in the negotiations. He also recommended focusing on listed and candidate species only.

Mr. Williams said that the applicant should demand that the Services engage in discussions and tell the applicant specifically what the Services need in terms of information, mitigation, etc. to satisfy them and move the process along. He also said the applicant should push the Services to participate in the analysis early in the process. He said that the “bottom line” is being clear in the negotiations between what the applicant proposes and what the Services think is a high priority.

Specific to the Clark County Plan, Mr. Williams commented that the Services deferred too much to adaptive management. Ninety-three percent of the land in Nevada is public, so while Clark County had plenty of funding due to their local mitigation fee and fund, coming up with enough mitigation land was difficult.

3.8.5 San Joaquin County Multi-Species HCP and Open Space Plan

3.8.5.1 Perspective of the Permittee

Steve Mayo of the San Joaquin Council of Governments reported that the San Joaquin Multi-Species HCP process took about seven years. He estimated that the first three years of development were subsumed by determining jurisdictional issues and gathering local consensus among the 14 agencies that were part of the application. The actual production and permitting of the plan took four years. Negotiating the provisions of the Plan with all the involved parties was the most time consuming part of the process. He suggested expediting the process by pulling concepts from other plans and programs as applicable, rather than starting from scratch. Establishing a clear consensus on goals among all stakeholders ahead of time was also recommended.

Mr. Mayo said that the process as a whole involved a fair amount of bureaucracy and political maneuvering. He felt that finding a way to streamline the USACE permitting process (404) would make the overall implementation process easier. He noted that figuring out what is best for all the stakeholders beforehand would also make implementation easier. He also noted that this Plan allows the choice between paying a fee and providing land in lieu of a fee. He suggested that requiring land in lieu is much easier for the plan administrators.

Mr. Mayo also explained that the Plan was required by the Services to have a “jump-start” program, meaning providing for set-aside lands prior to implementing the Plan, but there has been some confusion about these lands. They are now in discussion with the Services regarding whether or not the jump-start land can count toward later mitigation. He suggested being very clear from the beginning why lands are being set aside and for what purpose they can be used.

San Joaquin Council of Governments is a non-profit entity within the public agencies. When asked if they encountered any unique challenges in applying for an ITP as a public agency, Mr. Mayo said that the public involvement process did not present any unique challenges. They already had a joint powers authorization with representatives of the local governments, so local contacts and representation were already established. Looking back on the process, he said they would undertake the HCP process again.

In regards to their interactions with the Services, Mr. Mayo noted that there were a lot of negotiations, and he said that San Joaquin Council of Governments felt that they had very little control over the final result. The BO controls everything, and the Council had no say in the BO. He also said that they were “bullied” into having mitigation lands set aside at the beginning of the program, and now they are in discussion with the Services over whether or not that land can be used toward later mitigation, with the Services saying it cannot.

3.8.5.2 Perspective of the Services

Jana Milliken, the USFWS representative for the San Joaquin Multi-Species HCP, said that as a habitat-based plan, measuring the possible impacts or benefits to the species has been difficult. Regarding implementation, at one point, USFWS had to inform the San Joaquin Council of Governments that they were out of compliance, but in the past couple of years, compliance has not been an issue.

Ms. Milliken also said that the Plan is somewhat vague. This vagueness is both good and bad from her perspective; the challenge is in balancing that flexibility with figuring out how to actually implement the Plan requirements.

Ms. Milliken recommended that the applicant try to get the Services to be very clear on which species the Services are most interested in, meaning which species they think are being most

impacted. The applicant should be sure the Services' interests are addressed, and should work to cooperate on solutions and get the Services involved in developing those solutions. Overall, she felt that the San Joaquin Plan is working well: species and habitats are benefiting, and that is the goal.

3.8.6 Coachella Valley Multi-Species HCP and Natural Communities Conservation Plan

3.8.6.1 Perspective of the Permittee

Katie Barrows of the Coachella Valley Mountains Conservancy reported that the HCP process has taken them ten years, which is longer than they expected. She said that getting approval has contributed to the delays. She also said that this is a hard line plan, which is better from the conservation side, and they felt it was the only way to make it work. Also, the habitat is primarily complex sand dune ecosystem, and dealing with that has led to challenges with the jurisdictions.

In looking back on the process, Ms. Barrows said that communication and building relationships are very important in the process. She said that all parties need to really communicate and listen to each other. She also mentioned, in looking at ways to expedite the process, that her understanding is that the HCP handbook says the biological opinion should be developed parallel with the plan, to expedite the permitting process. She did not feel that this happened with this plan, and so getting through the BO has been like another HCP process all over again.

Ms. Barrows said that this is a very good plan. There has been good feedback on it from various parties, so it has been frustrating to have it held up by one jurisdiction. They expect to be permitted by August or September 2007. However, the Coachella Valley Association of Governments has been doing pre-evaluation/implementation monitoring since 2003, which has provided some helpful insight into the development of the plan and in planning for implementation.

In regards to working with the Services, Ms. Barrows said that it has been challenging reaching agreement with USFWS. Her opinion is that the HCP process involves working in a different regulatory environment and regulatory process than other ESA work, which led to difficulty with USFWS.

3.8.6.2 Perspective of the Services

The USFWS representative for the Coachella Valley HCP was unavailable for an interview.

3.8.7 Tacoma Water HCP

3.8.7.1 Perspective of the Permittee

Paul Hickey, project manager for the Tacoma Water HCP, said that the HCP process took about three years, which was about what they were expecting. Tacoma Water was also trying to resolve issues with other agencies at the same time, which added to the length of time spent on HCP development. Mr. Hickey thought that they had an easier time with this HCP than subsequent applicants may have had, specifically because they had more of the Services' time, as the Services were not very busy with other applicants during this period.

When asked if they encountered any unique challenges in applying for an ITP as a public agency, Mr. Hickey reported that they took this process very seriously, as they have to be responsible to their ratepayers. They have a trust relationship with the public regarding

management of lands and water, and a responsibility to be as transparent as possible. Looking back on the process, he said they would undertake the HCP process again.

With regards to their interactions with the Services, Mr. Hickey reported that interactions went well overall. He said that since the ITPs were issued, USFWS has been much more involved than NMFS. The USFWS representative makes contact periodically, has visited the site, and has cultivated a generally positive relationship with Tacoma Water.

3.8.7.2 Perspective of the Services

The Tacoma Water HCP USFWS representative, Tim Romanski, suggested developing a HCP timeline by identifying an end point for the process and working backward from that date, while assuming the maximum length for the comment period. He also recommended having informal comment periods with key groups before the general public comment period. He said this may help in addressing certain questions or concerns in the draft document, as well as in knowing how to plan for other possible comments and responses.

Matt Grady, the NMFS representative for this HCP, said that the most important part of the HCP process is having a willing, motivated applicant and capable consultants. A successful HCP requires having the right people involved in the process. He recommended making a concerted effort to involve the Tribes and other interested parties throughout the process. To keep costs down and minimize time required, he suggested that the applicant start drafting a sample HCP with whatever resources they have at their disposal. He also recommended identifying early on who the NEPA responsible official will be. He felt that overall, the Tacoma Water HCP was a very successful process.

APPENDIX A

HCP Summaries from Coarse-Level Screening

APPENDIX A.
Table A-1. HCP Summaries from Coarse-Level Screening

HCP Parameters	HCP/Permittee	
	Cedar River Watershed HCP	Washington DNR Forest Practices HCP
Completed? (year)	yes, 2000	yes, 2005
Size and Location	90,546 acres King County, WA	9,300,300 acres Throughout WA
Length of Permit	50 years	50 years
Species Covered (# of fish sp; # of wildlife sp)	10 fish species 54 wildlife species 19 invertebrate species	53 fish species 7 wildlife species (all amphibians)
Primary Objectives	Provide certainty for Seattle's drinking water supply and provide electricity at a reasonable cost (by obtaining ITP) Protect and restore habitats of 83 fish and wildlife species that may be affected by the city's water supply and hydroelectric operations on the Cedar River	Support economically viable timber industry and harvestable levels of salmon Provide long-term conservation for covered species Meet or exceed water quality standards (thereby meeting CWA) Create regulatory stability for landowners (by obtaining ITP)
Key Issues	River flow and fish passage as relates to declining populations of salmon, steelhead, and other fish and wildlife species in the Cedar River basin	Timber harvest and protection of aquatic resources
Covered Activities	City operations in the watershed as relates to water supply, hydroelectric operations, and land management (forestry, roads, restoration, research, public education and recreation)	Forest management
Habitats Covered	Forests and riparian/aquatic	Forestlands and aquatic/riparian
Primary Conservation Measures	Fish passage: provide for fish passage at dam Instream flow: abide by stream-flow regime to provide habitat for salmon and steelhead Watershed management: establish ecological reserve (no commercial timber harvest); protect and restore habitats; provide species conservation strategies; and provide management guidelines (for roads, access, etc.)	Administrative framework (supports development, implementation, and refinement of State's Forest Practices program) Riparian protection measures (buffers, etc.) Upland protection measures (avoid harvest on unstable slopes; specifications for road construction and maintenance, etc.)
Adaptive Management Included? (yes or no)	yes	yes
Land Contiguity (Contiguous vs. Scattered) and # of Permittees/Land Owners	Contiguous lands One land owner	Scattered lands Multiple landowners
Primary Contacts	Seattle Public Utilities: Cyndy Holtz, 206-386-1990, cyndy.holtz@seattle.gov USFWS: Tim Romanski, 360-753-5823, tim_romanski@fws.gov NMFS: Matt Longenbaugh, 360-753-7761, matthew.longenbaugh@noaa.gov	WDNR: Charlene Rogers, 360-902-1409, charlene.rogers@wadnr.gov USFWS: Sally Butts, 360-753-5832, sally_butts@fws.gov NMFS: Laura Hamilton, 360-753-5820, laura.hamilton@noaa.gov

Table A-1. HCPs Evaluated for Coarse-Level HCP Screening (continued)

HCP Parameters	HCP/Permittee	
	Wells Hydroelectric Project Anadromous Fish Agreement and HCP	Plum Creek Native Fish HCP
Completed? (year)	yes, 2002	yes, 2000
Size and Location	One of 3 related HCPs (Wells, Rocky Reach, and Rock Island dams, WA) that total over 100 river miles on mid-Columbia River	Originally 1.6 million acres, has since reduced; Washington, Idaho, Montana
Length of Permit	50 years	30 years
Species Covered (# of fish sp; # of wildlife sp)	4 fish species	11 fish species
Primary Objectives	Provide certainty for the PUDs hydroelectric dam operations and provide electricity at a reasonable cost (by obtaining ITP) Provide "No Net Impact" of project operations on salmonids	Provide conservation for native salmonids in the area Provide certainty for Plum Creek's activities by obtaining an ITP
Key Issues	Impacts of hydroelectric dam operations on salmonids	Impacts of forest management on bull trout and other salmonid habitat (the 4 C's: cold, clear, clean, connected streams)
Covered Activities	Hydroelectric dam operations	Forest management, grazing, special forest use permits, fire suppression, and forest products manufacturing
Habitats Covered	Riverine	Forests and riparian/aquatic
Primary Conservation Measures	Improved operations (fish passage and survival) at the hydroelectric dam Hatchery compensation program Tributary habitat enhancements	Road, upland forestry, and grazing commitments (design roads and skid trails to minimize erosion, address fish passage, provide grazing enclosures, etc.) Riparian harvest restrictions (buffers, restoration, etc.) Land use planning commitments (addresses transfer of lands, easements, etc.) Conservation measures vary geographically: bull trout spawning and rearing watersheds, other watersheds, key migratory rivers, areas with high priority for road upgrades, and areas with native fish assemblages
Adaptive Management Included? (yes or no)	yes	yes
Land Contiguity (Contiguous vs. Scattered) and # of Permittees/Land Owners	Contiguous river section One permittee (Douglas County PUD)	Scattered lands One permittee (Plum Creek)
Primary Contacts	Douglas County PUD: Shane Bickford, 509-881-2208, sbickford@dcpud.org USFWS: Brian Cates, 509-548-7573, brian_cates@fws.gov NMFS: Bryan Nordlund, 360-534-9338, bryan.nordlund@noaa.gov	Plum Creek: Brian Sugden, 406-892-6368, brian.sugden@plumcreek.com USFWS: Ted Koch, 208-378-5293, ted_koch@fws.gov (development, lead negotiator); Tim Bodurtha, 406-758-6882, tim_bodurtha@fws.gov (implementation) NMFS: No longer involved in plan.

Table A-1. HCPs Evaluated for Coarse-Level HCP Screening (continued)

HCP Parameters	HCP/Permittee	
	Clark County Multi-Species HCP and EIS	San Joaquin County Multi-Species Habitat Conservation and Open Space Plan ¹
Completed? (year)	yes, 2001	yes, 2001
Size and Location	All of non-federal lands (553,600 acres) in Clark County, Nevada; plus, some DOT rights-of-way in other counties.	896,000 acres All non-federal lands (over 900,000 acres) in San Joaquin County, California
Length of Permit	30 years	50 years
Species Covered (# of fish sp; # of wildlife sp)	28 wildlife species 10 invertebrate species 41 plant species	4 fish species 56 wildlife species 10 invertebrate species 27 plant species
Primary Objectives	Maintain viability of “natural” habitats for approximately 232 species (including Permit and other species) residing in those habitats Provide streamlined permitting process for ESA-listed and state-protected species Minimize economic disruption by listing of additional species Allow land use that promotes economy, health, well-being, and custom and culture of the growing population of Clark County	Provide a strategy for balancing the need to conserve open space and habitat vs. convert it to other land uses
Key Issues	Growing human population vs. needs to protect and restore habitats Cumbersome land use permitting process that would benefit from streamlining	Growing human population and land use needs (agriculture, private property rights, etc.) vs. conservation of open space and protection of fish, wildlife, and plants
Covered Activities	Agriculture, flood control, livestock grazing, mineral extraction, off-highway vehicle activities, parks and recreation, residential and commercial development, solid waste facilities, transportation, utilities, and water and sewage facilities	Conversion of open space to “non open space uses”
Habitats Covered	All habitats in the county	All habitats in the county
Primary Conservation Measures	Habitat restoration and enhancement Habitat protection (primarily regulatory prescriptions, land use restrictions, and changes to management policies) Public information and education	Habitat and open space acquisition (conservation easement, fee title, some mitigation banking), restoration, and enhancement
Adaptive Management Included? (yes or no)	yes, 2000	yes, 2001
Land Contiguity (Contiguous vs. Scattered) and # of Permittees/Land Owners	Contiguous land 7 agencies (Clark County, 5 cities, and Nevada Dept of Transportation)	Contiguous land 14 agencies (San Joaquin County, 7 cities, water district, etc.)
Primary Contacts	Clark County: Marci Henson, 702-455-3118, mhenson@co.clark.nv.us USFWS: Bob Williams, 775-861-6311, bob_d_williams@fws.gov	San Joaquin County: Steve Mayo, 209-468-3913, smayo@sjcog.gov USFWS: Jana Milliken, 916-414-6600, jana_milliken@fws.gov

¹ The plan is part of regional conservation planning effort.

Table A-1. HCPs Evaluated for Coarse-Level HCP Screening (continued)

HCP Parameters	HCP/Permittee	
	Coachella Valley Multi-Species HCP and Natural Communities Conservation Plan ²	Lower Colorado River Multi-Species HCP
Completed? (year)	draft, 2004	yes, 2005
Size and Location	1.1 million acres Coachella Valley within Riverside County, California	717,814 acres Lower Colorado River in Arizona, California, and Nevada
Length of Permit	75 years	50 years
Species Covered (# of fish sp; # of wildlife sp)	1 fish species 19 wildlife species 2 invertebrate species 5 plant species	4 fish species 19 wildlife species 1 invertebrate species 2 plant species
Primary Objectives	Balance environmental protection (species, ecosystems, linkage/corridors, and ecosystem processes) and economic development. Simplify compliance with endangered species related laws, by obtaining ITP	Continue legal water use and allow future water and power production of the Colorado River, while protecting wildlife and habitat Simplify compliance with endangered species related laws, by obtaining ITP.
Key Issues	Growing human population and development vs. protection of species, habitats, and ecological processes	Water resources needs vs. wildlife habitat needs
Covered Activities	Land development Public facilities operations and maintenance Emergency response activities Herbicide and pesticide use on non-covered species and effects on vegetation (but not any toxicological effects on covered species) Specified transportation projects Mining Construction and maintenance of trails and other public access facilities	Water diversions and their associated facilities (including operation, maintenance, and replacement; also, future diversions) Power production and associated transmission facilities (including operation, maintenance, and replacement) Arizona Game and Fish Dept and Nevada Dept of Wildlife activities (i.e., vegetation and habitat management, maintenance of aids to navigation and boating access, and law enforcement)
Habitats Covered	All in area (generally desert habitats)	Aquatic and riparian
Primary Conservation Measures	Establish reserves (through land acquisition, disposition, conservation easements, and deed restrictions); also, restrictions on land use activities	Habitat maintenance, protection, and creation Augmentation of some fish populations Some species-specific measures (e.g., controlling piscivorous birds and non-native amphibians; placing bird nest boxes in key areas) Contribute funding to on-going conservation programs
Adaptive Management Included? (yes or no)	yes	yes
Land Contiguity (Contiguous vs. Scattered) and # of Permittees/Land Owners	Contiguous land (mostly) 15 agencies and one non-profit (Riverside County, 9 cities, water district, etc.)	Contiguous area 22 agencies (city, county, state, and federal)
Primary Contacts	CVAG: Jim Sullivan, 760-346-1127, jsullivan@cvag.org USFWS: Therese O'Rourke, 760-431-9440, therese_o'rourke@fws.gov	Bureau of Reclamation: Lorri Gray, 702-293-8555, lgray@lc.usbr.gov USFWS: Steve Spangle, 602-242-0210, steve_spangle@fws.gov

² One of 5 plan amendments to the 1980 California Desert Conservation Area Plan.

Table A-1. HCPs Evaluated for Coarse-Level HCP Screening (continued)

HCP Parameters	HCP/Permittee	
	East Contra Costa County HCP/ Natural Communities Conservation Plan (NCCP) ¹	PG&E Company San Joaquin Valley Operation and Maintenance (O&M) HCP
Completed? (year)	draft, 2003	draft, 2006
Size and Location	185,000 acres East Contra Costa County, California	276,350 acres Portions of 9 counties in CA
Length of Permit	30 years	30 years
Species Covered (# of fish sp; # of wildlife sp)	12 wildlife species 4 invertebrate species 10 plant species	23 wildlife species 42 plant species
Primary Objectives	Protect natural resources while improving and streamlining the permitting process (by obtaining an ITP, and by take avoidance for some species)	Streamline permitting process and allow more efficient PG&E operations (through obtaining ITP), while protecting species
Key Issues	Open space and habitat and ecological function protection vs. agriculture and urban development (in an urbanizing area)	Effects (mostly small-scale and temporary) of PG&E's operations and wildlife and plants
Covered Activities	Urban development in designated areas Some specified rural infrastructure projects All activities in designated reserves (i.e., recreation and habitat management)	33 routine operation and maintenance activities (includes some minor construction) for PG&E's electric and gas transmission and distribution systems
Habitats Covered	Grasslands, shrublands, oak woodlands, riparian/wetlands/streams, and irrigated agriculture	Grasslands (mostly); also shrublands, woodlands, forests, riparian/wetlands/open water, and agriculture
Primary Conservation Measures	Define areas acceptable for urban growth and provide specific development guidelines/restrictions (similar to BMPs) Establish reserves (through fee title and conservation easements) and include habitat creation, habitat restoration, and habitat and population enhancement in these areas; specify land use and activity restrictions to protect habitat and species	Mostly avoidance and minimization measures (AMMs) (e.g., buffer zones, activity restrictions) Also: species surveys to trigger additional AMMs As compensation when avoidance and minimization is not possible, habitat enhancement and acquisition
Adaptive Management Included? (yes or no)	yes	yes
Land Contiguity (Contiguous vs. Scattered) and # of Permittees/Land Owners	Contiguous (mostly) 6 permittees (Contra Costa County, regional park district, and 4 cities)	Scattered lands. 1 permittee (PG&E)
Primary Contacts	Contra Costa County: John Kopchik, 925-335-1227, jkopc@cd.cccounty.us USFWS: Sheila Larsen, 916-414-6600, sheila_larsen@fws.gov	PG&E: Mary Boland, 415-973-7744, mxba@pge.com USFWS: Lori Rienk, 916-414-6600, lori_rienk@fws.gov

¹ The plan is part of regional conservation planning effort.

Table A-1. HCPs Evaluated for Coarse-Level HCP Screening (continued)

HCP Parameters	HCP/Permittee	
	Simpson Timber NW Operations (Green Diamond Resource Co) HCP	Western Riverside Multi-Species HCP ¹
Completed? (year)	yes, 2000	yes, 2004
Size and Location	261,575 acres Grays Harbor, Mason, and Thurston counties, Washington	1,300,000 acres Western Riverside County, California
Length of Permit	50 years	75 years
Species Covered (# of fish sp; # of wildlife sp)	21 fish species 30 wildlife species	2 fish species 76 wildlife species 5 invertebrate species 63 plant species
Primary Objectives	Provide conservation for fish and wildlife in the area Provide certainty for Simpson (now Green Diamond) timber harvest operations by obtaining an ITP	Maintain biodiversity and ecosystem processes while allowing for future economic growth
Key Issues	Impacts of forest management on fish and wildlife	Growing human population and economic growth needs vs. wildlife and ecosystem function needs
Covered Activities	Forest management	Development (construction of buildings, roads, infrastructure, etc.), and existing agricultural uses, existing infrastructure (e.g., road maintenance, flood control activities, wastewater facilities, etc.) outside of reserve/conservation areas Recreation/public access within reserve/conservation areas
Habitats Covered	Forests and riparian/aquatic	All habitats in area (forests, woodlands, shrublands, grasslands, aquatic/riparian, agricultural fields)
Primary Conservation Measures	Riparian and wetland reserves Tree retention requirements in harvest units Road maintenance and use requirements and restrictions Species-species measures (e.g., activity restriction buffers, install artificial nest boxes)	Establishment of reserves and conservation areas
Adaptive Management Included? (yes or no)	yes	yes
Land Contiguity (Contiguous vs. Scattered) and # of Permittees/Land Owners	Contiguous lands (mostly) One permittee (Simpson, now Green Diamond)	Contiguous land (mostly) 22 permittees (city, county, regional, and state agencies)
Primary Contacts	Simpson/Green Diamond: Eric Beach, 360-427-4790, ebeach@greendiamond.com USFWS: Bill Vogel, 360-753-4367, bill_vogel@fws.gov NMFS: Dan Guy, 360-534-9342, dan.guy@noaa.gov	Riverside County: Carolyn Syms-Luna, 951-955-6892, cluna@rctlma.org USFWS: Karen Evans, 760-431-9440, karen_evans@fws.gov

¹ The plan is part of regional conservation planning effort.

Table A-1. HCPs Evaluated for Coarse-Level HCP Screening (continued)

HCP Parameters	HCP/Permittee	
	Etowah HCP	Pima County Multi-Species Conservation Plan
Completed? (year)	Not published , but draft is supposed to be available January 2007	draft, 2006
Size and Location	Etowah region, Georgia	607,700 acres Pima County, Arizona
Length of Permit	Not available.	30 years
Species Covered (# of fish sp; # of wildlife sp)	9 fish species	6 fish species 25 wildlife species 1 invertebrate species 4 plant species
Primary Objectives	Protect Etowah fish species and their habitat, while allowing for development (construction, etc.) Streamline permitting process for developers (by obtaining ITP)	Maintain biodiversity and ecosystem processes while allowing for future economic growth Streamline permitting process (by obtaining ITP)
Key Issues	Development activities and water quality degradation of the Etowah River, and related impacts on native fish	Growing human population and economic growth needs vs. wildlife and ecosystem function needs
Covered Activities	Residential, commercial, and light industrial development activities	The county's issuance of land use permits, capital improvements projects, and maintenance and operation works
Habitats Covered	Aquatic/riparian	All in area (mostly desert habitats, also aquatic/riparian)
Primary Conservation Measures	Specific regulations for stormwater, stream buffers, sedimentation and erosion control, utility stream crossings, road stream crossings, and water supply planning	Habitat reserves and conservation areas Habitat restoration and enhancement Species-specific measures (e.g., buffers, etc)
Adaptive Management Included? (yes or no)	yes	yes
Land Contiguity (Contiguous vs. Scattered) and # of Permittees/Land Owners	Contiguous lands # of permittees not yet determined	Scattered lands One permittee (Pima County)
Primary Contacts	Etowah HCP Steering Committee: Tim Carter, 706-542-6821, tim@etowahhcp.org; Laurie Fowler, 706-542-6821, lfowler@uga.edu USFWS: Sandy Tucker, 706-613-9493, sandy_tucker@fws.gov	Pima County: Maeveen Behan, 520-877-6000, maeveen.behan@pima.gov USFWS: Sherry Barrett, 520-670-6150 x223, sherry_barrett@fws.gov

Table A-1. HCPs Evaluated for Coarse-Level HCP Screening (continued)

HCP Parameters	HCP/Permittee	
	Family Forest HCP	West Mojave HCP ²
Completed? (year)	draft, 2006	Not published , but draft is supposed to be available January 2007
Size and Location	Up to 200,000 acres Lewis County, Washington	9,359,070 acres North of Los Angeles, California
Length of Permit	100 years	30 years
Species Covered (# of fish sp; # of wildlife sp)	30 fish species 35 wildlife species	23 wildlife species approximately 100 plant species
Primary Objectives	Protect fish and wildlife species and their habitat Provide incentive for family forest landowners to keep their lands in forestry (as opposed to develop the land), and thereby provide fish and wildlife habitat and contribute to the public good Provide regulatory certainty for family forest landowners (by obtaining ITP)	Protect wildlife species and their habitats Streamline permitting process (by obtaining ITP)
Key Issues	Changing forest management regulations and associated economic hardship for family forest landowners Risk of forested habitat being converted to residential and other development	Increasing demand for development, recreation, and resource utilization vs. species and habitat protection
Covered Activities	Forest management and associated activities (e.g., road construction, gravel quarrying)	Private activities subject to city or county permitting (e.g. building permits, subdivisions) Public activities by participating cities and counties (e.g., road improvement projects, construction of public buildings) Specific CalTrans projects Utility maintenance activities
Habitats Covered	Aquatic, riparian, upland forests	All in area
Primary Conservation Measures	Stream buffers Equipment restrictions Tree retention requirements Size limits on clearcuts Species-specific measures (e.g., nest buffers, provide for alternate nest sites)	Habitat reserves and conservation areas Habitat restoration and enhancement Specific habitat mitigation measures for construction and related projects Species-specific measures (e.g., nest buffers, timing restrictions)
Adaptive Management Included? (yes or no)	draft, 2006	yes, 2005
Land Contiguity (Contiguous vs. Scattered) and # of Permittees/Land Owners	Scattered lands One permittee (Lewis County)	Contiguous lands Multiple permittees (city, counties, etc.) – number not specified
Primary Contacts	Family Forest Foundation: Steve Stinson, 360-345-1023, stevestinson@familyforestfoundation.org USFWS: Bill Vogel, 360-753-4367, bill_vogel@fws.gov NMFS: Bob Turner, 360-753-5825, bob.turner@noaa.gov	BLM: Dr. Larry LaPre, 951-697-5218, llapre@ca.blm.gov USFWS: Ray Bransfield, 805-644-1766, ray_bransfield@fws.gov

² One of 5 plan amendments to the 1980 California Desert Conservation Area Plan.

Table A-1. HCPs Evaluated for Coarse-Level HCP Screening (continued)

HCP Parameters	HCP/Permittee
	Tacoma Water HCP
Completed? (year)	yes, 2001
Size and Location	14,888 acres Upper watershed and Green River, Washington
Length of Permit	50 years
Species Covered (# of fish sp; # of wildlife sp)	11 fish species 21 wildlife species
Primary Objectives	Provide reliable water supply (by obtaining ITP), while protecting fish and wildlife and their habitats
Key Issues	Increasing public water supply demands vs. effects of water supply operations on salmonids (i.e., flow and fish passage issues, habitat quality concerns), and other fish and wildlife
Covered Activities	Water withdrawal Forest management
Habitats Covered	Aquatic, riparian, and upland forests
Primary Conservation Measures	Trap and haul fish at dam Install structures to improve downstream fish passage at dam Improve aquatic habitat by adding LWD Adjust stream flows Habitat restoration and enhancement Establish habitat reserve for upland and riparian habitat Restrictions on timber harvest and road building
Adaptive Management Included? (yes or no)	yes
Land Contiguity (Contiguous vs. Scattered) and # of Permittees/Land Owners	Contiguous land (and river) One permittee
Primary Contacts	Tacoma Water: Paul Hickey, 253-502-8692, phickey@cityoftacoma.org USFWS: Tim Romanski, 360-753-5823, tim_romanski@fws.gov NMFS: Mike Grady, 206-526-4645, michael.grady@noaa.gov

APPENDIX B

Completed HCP Interviews

**WASHINGTON DEPARTMENT OF FISH AND WILDLIFE,
HCP EVALUATION PROJECT**

Interview Form for Permittees

Name of HCP: Cedar River Watershed HCP

Interviewee: Cyndy Holtz

Interviewee's Affiliation and Role on the Project:

Major watersheds business area manager, HCP program manager

INTERVIEWEE'S CONTACT INFORMATION

Phone: 206-386-1990

E-mail: cyndy.holtz@seattle.gov

Mailing Address: Seattle Public Utilities, 700 5th Avenue Ste 4900, PO Box 34018, Seattle, WA
98124-4018

PMX Staff Member Who Conducted Interview: Tavia White

Date of Interview: 11/13/06

QUESTIONS FOR PERMITTEES

LENGTH OF TIME FOR HCP PROCESS

How many years did it take you to complete the HCP process? 6 years

Did the process take longer (or shorter) than you anticipated? longer

If longer, what were the sources of delays? Negotiating provisions with all parties. They were attempting to resolve other issues with other agencies at the same time, which took longer.

If you were to do the process again, how do you think you could expedite the process?

Felt that they would probably not be successful in negotiating it if they had to do it again in today's climate.

COSTS AND FUNDING FOR THE HCP PLANNING AND PERMITTING

What were the total costs for planning and producing (from project initiation to finalization of the HCP document) the HCP?

~\$1 million

**WASHINGTON DEPARTMENT OF FISH AND WILDLIFE,
HCP EVALUATION PROJECT**

Interview Form for Permittees (continued)

QUESTIONS FOR PERMITTEES (CONTINUED)

What were your total costs associated with permitting (i.e., NEPA/SEPA, Section 7, and Implementation Agreement negotiations)?

Not tracked separately

What were your funding sources? Water rates.

If you were to do it again, would you do anything differently in terms of your budget, ways to streamline costs, etc.?

They are unique in that they negotiated “cost commitments” (i.e., caps), where the Services bind them to a minimum expenditure. They usually end up spending more than this amount. These caps are difficult, in making recommendations for budget process would recommend not having them.

COSTS AND FUNDING FOR HCP IMPLEMENTATION

Implementation costs and funding: Emailed file.

Has funding been adequate? Yes, within the reasonable budget constraints

Interactions with USFWS/NMFS

How did your process with USFWS/NMFS work – what went well, what didn’t, and what would you do differently in the future?

Not smooth.

Miscellaneous HCP Process Questions

Do you have any other comments related to how easy or successful the HCP planning process was?

Do you have any other comments regarding the ease and success of the implementation process?

Fine. Recommends having a good business system up and running to track expenditures, reporting, etc. Also have adequate staff.

Would you do it again? Why or why not?

Yes.

Do you have any other comments on what aspects of the process worked well or poorly, or what you would do differently if you were to do it again?

**WASHINGTON DEPARTMENT OF FISH AND WILDLIFE,
HCP EVALUATION PROJECT**

Interview Form for Permittees (continued)

Not have cost commitments – would make it easier to administrate.

Try to have flexibility in ability to move money around in different aspects of the project (if Services will allow)

Have more clear information on adaptive management requirements.

QUESTIONS FOR PERMITTEES (CONTINUED)

For interviewees who are representatives of public agencies, did you encounter any challenges that you feel were unique to your position as a public agency applying for an Incidental Take Permit?

**WASHINGTON DEPARTMENT OF FISH AND WILDLIFE
HCP EVALUATION PROJECT**

Interview Form for USFWS Representatives

Name of HCP: Cedar River Watershed HCP

Interviewee: Tim Romanski

Interviewee's Affiliation and Role on the Project:

INTERVIEWEE'S CONTACT INFORMATION

Phone: 360-753-5823

E-mail: tim_romanski@fws.gov

Mailing Address: 510 Desmond Dr SE, Lacey, WA 98503

PMX Staff Member Who Conducted Interview: Tavia White

Date of Interview: 11/13/06, follow up on 11/15/06.

QUESTIONS FOR USFWS/NMFS REPRESENTATIVES

How did your process with the permittee work – what went well, what didn't, and what would you do differently in the future?

His general comments on the HCP process are recorded in the Tacoma Water Interview questionnaire.

Specific to Cedar River, he said that the biggest issues he sees it that they chose to do an EA, but an EIS may have been more appropriate.

**WASHINGTON DEPARTMENT OF FISH AND WILDLIFE
HCP EVALUATION PROJECT**

Interview Form for NMFS Representatives

Name of HCP: Cedar River Watershed HCP

Interviewee: Matt Longenbaugh

Interviewee's Affiliation and Role on the Project:

Branch chief for Central Puget Sound

INTERVIEWEE'S CONTACT INFORMATION

Phone: 360-753-7761

E-mail: matthew.longenbaugh@noaa.gov

Mailing Address: 510 Desmond Dr SE, Ste 103, Lacey, WA 98503

PMX Staff Member Who Conducted Interview: Tavia White

Date of Interview: 11/13/06

QUESTIONS FOR USFWS/NMFS REPRESENTATIVES

How did your process with the permittee work – what went well, what didn't, and what would you do differently in the future?

This was a very complex HCP.

One thing that hasn't gone well – a policy call was made not to use a NEPA EIS. They prepared an EIS in terms of the work done, but in process it was a SEPA EIS and NEPA EA. He suggests always doing a NEPA EIS. A NEPA EA can work, but invites challenges even if there are no other grounds for challenging the work that was done. The federal agencies cannot defend it.

The city of Seattle wanted to cover other longstanding issues with this HCP, which worked but added a whole lot of complexity to the process.

Questions arose on this HCP about how to comply with the National Historic Preservation Act. If the federal agencies have no control over whether/how the applicant complies with the NHPA after the permit is issued, then there is no trigger for Section 106 NFPA consultation.

Be aware of and follow clear process steps, so the document and process are defensible in the future.

At the time, the biological opinion did not have to quantify take. But now it does have to, so have the document have quantifiable effects of take.

The city did a good job of scoping and public involvement and documenting that process, which helped

the Services. Since approval, they have maintained a good website of all the relevant documents and information. This makes it easy for the Services to point to that to answer questions, explain things etc. He also suggested including the annual reports on the website for easy access.

When starting the process have the applicant and the Services trade letters listing the technical lead, policy lead, and legal lead with name and contact information. Also include some intent language, stating that conversation will occur on the technical level, will progress to policy level, and may sometimes include the legal level as needed. Spell this information out ahead of time.

As a general HCP process comment, coming from several that he has worked on, he suggests describing ahead of time what exactly would be covered by plan amendments vs. minor modifications. It's a gray area and it would help to have those described up front.

Also spell out how to go about changing the land base: how to do it, what to analyze, etc.

He also worked on the Simpson Timber HCP and offered three pieces of info on that HCP:

- 1) It was a joint HCP and Clean Water Act document. He thinks it is the only one he's worked on that deliberately included EPA. Simpson wanted it this way and it has worked.
 - 2) It's a good example of very detailed site conditions. There are 40+ different geomorphic types, with specific riparian conditions for each type. The document is specifically tailored to their landscape, and is the most detailed site descriptive HCP he's worked on.
 - 3) There is has a multi-agency scientific advisory committee to guide them. They meet regularly to advise Simpson on how to meet implementation objectives.
-

**WASHINGTON DEPARTMENT OF FISH AND WILDLIFE,
HCP EVALUATION PROJECT**

Interview Form for Permittees

Name of HCP: Forest Practices HCP

Interviewee: Charlene Rogers

Interviewee's Affiliation and Role on the Project:

Project team member

INTERVIEWEE'S CONTACT INFORMATION

Phone: 360-902-1409

E-mail: charlene.rogers@wadnr.gov

Mailing Address: DNR Forest Practices 1111 Washington St SE, PO Box 47012, Olympia WA 98504-7012

PMX Staff Member Who Conducted Interview: Tavia White

Date of Interview: 11/7/2006

QUESTIONS FOR PERMITTEES

LENGTH OF TIME FOR HCP PROCESS

How many years did it take you to complete the HCP process? 4 years

Did the process take longer (or shorter) than you anticipated? Had planned on 3 years

If longer, what were the sources of delays? Nothing specific, just the general process

If you were to do the process again, how do you think you could expedite the process?

Don't see how.

COSTS AND FUNDING FOR THE HCP PLANNING AND PERMITTING

What were the total costs for planning and producing (from project initiation to finalization of the HCP document) the HCP?

No idea. Doesn't think these numbers have ever been put together.

**WASHINGTON DEPARTMENT OF FISH AND WILDLIFE,
HCP EVALUATION PROJECT**

Interview Form for Permittees (continued)

QUESTIONS FOR PERMITTEES (CONTINUED)

What were your total costs associated with permitting (i.e., NEPA/SEPA, Section 7, and Implementation Agreement negotiations)?

Same as above – no idea

What were your funding sources? Grants, in kind Services from stakeholders

If you were to do it again, would you do anything differently in terms of your budget, ways to streamline costs, etc.?

No idea.

COSTS AND FUNDING FOR HCP IMPLEMENTATION

Implementation costs and funding: No idea. Pretty large, because includes whole FP program. Would be hard to separate out HCP costs.

Has funding been adequate? Yes so far, but have to go before the Legislature each year.

Interactions with USFWS/NMFS

How did your process with USFWS/NMFS work – what went well, what didn't, and what would you do differently in the future?

Went well. They were good to work with have having done so many they were helpful in the process.

Miscellaneous HCP Process Questions

Do you have any other comments related to how easy or successful the HCP planning process was?

They didn't really know what they were doing in the beginning, so it took time to figure out and go through the process. Not difficult, but just took time.

Do you have any other comments regarding the ease and success of the implementation process?

No problems. They were implementing before they began writing it.

Would you do it again? Why or why not?

Yes.

Do you have any other comments on what aspects of the process worked well or poorly, or what you would do differently if you were to do it again?

No.

**WASHINGTON DEPARTMENT OF FISH AND WILDLIFE,
HCP EVALUATION PROJECT**

Interview Form for Permittees (continued)

QUESTIONS FOR PERMITTEES (CONTINUED)

For interviewees who are representatives of public agencies, did you encounter any challenges that you feel were unique to your position as a public agency applying for an Incidental Take Permit?

Not a significant factor. They had to do public meetings, but didn't feel it was a problem. As a public agency they were already used to that process and how to do it.

**WASHINGTON DEPARTMENT OF FISH AND WILDLIFE
HCP EVALUATION PROJECT**

Interview Form for USFWS Representatives

Name of HCP: WA DNR Forest Practices

Interviewee: Sally Butts

Interviewee's Affiliation and Role on the Project:

Fish & Wildlife Biologist, Project Lead for Forest Practices HCP

INTERVIEWEE'S CONTACT INFORMATION

Phone: 360-753-5832

E-mail: sally_butts@fws.gov

Mailing Address: 510 Desmond Dr SE, Lacey, WA 98503

PMX Staff Member Who Conducted Interview: Tavia White

Date of Interview: 11/9/06

QUESTIONS FOR USFWS/NMFS REPRESENTATIVES

How did your process with the permittee work – what went well, what didn't, and what would you do differently in the future?

The actual HCP process took about 3 years, but the ideas had been ongoing for a long time. She considered 3 years a reasonable minimum – if including EIS, etc., then there are certain built-in timeframes that have to be accounted for. There was some struggle early on about who was in control of the NEPA process. Also, there were some federal grant money available for developing HCPs and some to pay for the NEPA process, so there was some issues regarding who had the final say, as DNR (and their contractor) were developing federal documents with federal funds.

They were on a very pressured schedule, and their process included lots of consensus at every level. There were many stakeholders that had been involved in the process for a long time, and they were answering to all of them at every stage.

In some way this HCP may have been easier, since the Forest Practices regulations were already in effect, they just had to fit them to federal NEPA requirements, i.e. developing alternatives, public comment period, etc.

They received 750-800 comments, and took the approach of responding to the subject matter rather than each individual comment.

**WASHINGTON DEPARTMENT OF FISH AND WILDLIFE
HCP EVALUATION PROJECT**

Interview Form for NMFS Representatives

Name of HCP: WA DNR Forest Practices

Interviewee: Laura Hamilton

Interviewee's Affiliation and Role on the Project:

Fisheries Biologist, author of NMFS Biological Opinion

INTERVIEWEE'S CONTACT INFORMATION

Phone: 360-753-5820

E-mail: laura.hamilton@noaa.gov

Mailing Address: 510 Desmond Dr SE, Lacey, WA 98503

PMX Staff Member Who Conducted Interview: Tavia White

Date of Interview: 11/09/06

QUESTIONS FOR USFWS/NMFS REPRESENTATIVES

How did your process with the permittee work – what went well, what didn't, and what would you do differently in the future?

Not involved with development. Wrote BO for NMFS; job was to get the process across the finish line.

Recommended to always be thinking about the resource first. It is a *conservation* plan. It's not intended to just maintain the species, but to actually help it to recover.

**WASHINGTON DEPARTMENT OF FISH AND WILDLIFE,
HCP EVALUATION PROJECT**

Interview Form for Permittees

Name of HCP: Plum Creek Native Fish HCP

Interviewee: Brian Sugden

Interviewee's Affiliation and Role on the Project:

Helped develop plan and has lead coordinating and implementation of the plan for the past 4 years.

INTERVIEWEE'S CONTACT INFORMATION

Phone: 406-892-6368

E-mail: brian.sugden@plumcreek.com

Mailing Address: PO Box 1990, Columbia Falls, MT 59912

PMX Staff Member Who Conducted Interview: Tavia White

Date of Interview: 11/8/2006

QUESTIONS FOR PERMITTEES

LENGTH OF TIME FOR HCP PROCESS

How many years did it take you to complete the HCP process? 3 years

Did the process take longer (or shorter) than you anticipated? About right

If longer, what were the sources of delays? NEPA stage was 1/2 the total time; it took about 1 1/2 years for the technical work and 1 1/2 for NEPA

If you were to do the process again, how do you think you could expedite the process?

This was one of the first combined HCP EISs. He felt that combining documents was a good idea for streamlining. Getting ITPs from both NMFS and USFWS he felt protracted the process a bit.

COSTS AND FUNDING FOR THE HCP PLANNING AND PERMITTING

What were the total costs for planning and producing (from project initiation to finalization of the HCP document) the HCP?

About \$2 million as a round number. 1/2 to 1/3 of that was the technical work (consultants who prepared tech reports, etc.) and about 1/2 to 2/3 of that was the NEPA process.

**WASHINGTON DEPARTMENT OF FISH AND WILDLIFE,
HCP EVALUATION PROJECT**

Interview Form for Permittees (continued)

QUESTIONS FOR PERMITTEES (CONTINUED)

What were your total costs associated with permitting (i.e., NEPA/SEPA, Section 7, and Implementation Agreement negotiations)?

About \$1 million, round number.

What were your funding sources? Land management activities for revenue (timber sales). No external funding.

If you were to do it again, would you do anything differently in terms of your budget, ways to streamline costs, etc.?

Felt NEPA cost was somewhat high. Also suggested keep consultant costs down as much as possible by staying as focused and efficient as possible. Also suggested having a fully negotiated (as much as possible) plan beforehand was helpful.

COSTS AND FUNDING FOR HCP IMPLEMENTATION

Implementation costs and funding: About \$300,000/year for first 5 years for monitoring/adaptive management expenses and staff. This figure does not include on-the-ground implementation, such as improving roads, stream buffers, etc., cost for which are over and above that.

Has funding been adequate? Yes.

Interactions with USFWS/NMFS

How did your process with USFWS/NMFS work – what went well, what didn't, and what would you do differently in the future?

Needing 2 permits from/negotiating with two different agencies that had two different approaches was difficult. USFWS and NMFS had to negotiate some behind the scenes.

Miscellaneous HCP Process Questions

Do you have any other comments related to how easy or successful the HCP planning process was?

All parties must desire to make it happen and be committed to making it happen. Helps to collaborate with all parties from the beginning, as a "creative partnership."

Do you have any other comments regarding the ease and success of the implementation process?

They have just undertaken a 5-year review. The plan appears to be on track. For the first couple of years they had to make a few tweaks to the plan. He suggested it was important in the adaptive management process to create a framework for minor changes and modifications over time. Part of making the adaptive management plan work well included a well-defined framework for studies to be performed, information produced, and evaluation of the results.

**WASHINGTON DEPARTMENT OF FISH AND WILDLIFE,
HCP EVALUATION PROJECT**

Interview Form for Permittees (continued)

Would you do it again? Why or why not?

Yes.

Do you have any other comments on what aspects of the process worked well or poorly, or what you would do differently if you were to do it again?

None.

QUESTIONS FOR PERMITTEES (CONTINUED)

For interviewees who are representatives of public agencies, did you encounter any challenges that you feel were unique to your position as a public agency applying for an Incidental Take Permit?

**WASHINGTON DEPARTMENT OF FISH AND WILDLIFE
HCP EVALUATION PROJECT**

Interview Form for USFWS Representatives

Name of HCP: Plum Creek NFHCP

Interviewee: Ted Koch

Interviewee's Affiliation and Role on the Project:

Supervisory Fish & Wildlife Biologist

INTERVIEWEE'S CONTACT INFORMATION

Phone: 208-378-5293

E-mail: ted_koch@fws.gov

Mailing Address: 1387 S. Vinnell Way, Boise ID 83709

PMX Staff Member Who Conducted Interview: Tavia White

Date of Interview: 11/9/06

QUESTIONS FOR USFWS/NMFS REPRESENTATIVES

How did your process with the permittee work – what went well, what didn't, and what would you do differently in the future?

What worked well: Both parties engaged in "interest-based" negotiations, meaning that both parties had the goal of increasing the amount of "the pie" available for all, i.e. increasing the value for all. (rather than "positional based" negotiation, where the pie is perceived as static and one side's gain is the other's loss). They assiduously applied themselves to this interest-based negotiating.

USFWS and Plum Creek designated specific project leads and gave them the resources (i.e., time) to commit to getting the job done. They were empowered to be dedicated to this project and to coordinate other resources. (His impression was that NMFS did not provide this kind of dedicated staff and as a result were less satisfied with the outcome).

Plum Creek was an experienced applicant who knew the process. Also, they embraced the regulatory process, including NEPA, and weren't scared by it.

Plum Creek had two key ingredients that led them to negotiate in good faith:

- 1) A genuine interest in species conservation, rather than viewing species on their land as a liability.
 - 2) Genuine regulatory concern. PC manages more bull trout lands in the nation than anyone other than the federal government, so were interested in working with the Services. This helped compel them to negotiate in good faith.
-

**WASHINGTON DEPARTMENT OF FISH AND WILDLIFE
HCP EVALUATION PROJECT**

Interview Form for USFWS Representatives

Name of HCP: Plum Creek NFHCP

Interviewee: Tim Bodurtha

Interviewee's Affiliation and Role on the Project:

Fish and Wildlife Biologist

INTERVIEWEE'S CONTACT INFORMATION

Phone: 406-758-6882

E-mail: tim_bodurtha@fws.gov

Mailing Address: 780 Creston Hatchery Road, Kalispell, MT 59901

PMX Staff Member Who Conducted Interview: Tavia White

Date of Interview: 11/21/06

QUESTIONS FOR USFWS/NMFS REPRESENTATIVES

How did your process with the permittee work – what went well, what didn't, and what would you do differently in the future?

Overall this HCP is going very well. Regarding implementation, he would encourage a 5 year check-in review evaluation. Five years is enough time to have a sense of how things are going, and to plan for what the next five years might look like. They also hold an annual meeting in the winter (Feb-March) after the field seasons. Plum Creek and USFWS report on HCP activities (such as riparian harvest activities, road constructions, etc). This is also a chance to bring up any concerns or requests that each may have. This information is useful in planning for next year. He said that the first annual meeting is particularly important. Both groups should share information right off the bat, and the Services should be clear about exactly what their expectations are regarding the content of the first annual report. Also, the parties should discuss how USFWS will access private property. He also recommended that USFWS personnel wear their uniforms and bring clear identification when working on private property.

He said that Plum Creek has been very good at cultivating a mutual partnership with USFWS, and that it goes both ways. For example, Plum Creek invites USFWS staff to their internal inspections, and requests feedback from USFWS. PC and USFWS are able to communicate any issues that arise right away. He also said that having people available on both sides to address changed circumstances has been very good. He also recommended that the Service be involved in the development of the plan, which makes the permitting much easier.

The Service has provided two full time people to work on monitoring. This has gone very well, and has led to USFWS being satisfied with the implementation and compliance monitoring. They have had the

time and resources to conduct the field inspections and effectiveness monitoring that they want.

Plum Creek invited USFWS to their staff training (foresters), and asked for USFWS critique afterward.

The one thing the foresters complained about was the amount of paperwork required, so PC set up a web-based system for staff reporting and documenting, to share HCP information internally and reduce paperwork.

Under the adaptive management portion of the plan is included a provision for “cooperative management response” (CMR). This allows USFWS or PC to address concerns of practicality on the ground. Either side can write a proposal to address the problem, suggest a solution, and ask if the other side approves. This allowance for improving the prescriptions in light of practical applications has been great, flexible, and practical.

Address concerns early, and have a free flow of information sharing.

He also said to include in the plan how to handle HCP lands being sold off in the future, specifically how to ensure that HCP requirements are fulfilled anyway. The one unresolved problem they’ve encountered in this HCP is the question of enforcement of HCP requirements on lands that have been sold. PC enacted restrictive covenants on some of the lands sold to developers, but no one is sure who is responsible for ensuring that those covenants are upheld. The beneficiary is supposed to uphold them, but no one can agree on who the beneficiary is. USFWS says the beneficiary is Plum Creek, because they get the mitigation credit. Plum Creek says the beneficiary is the public and the fish. The county says it is not obligated to uphold restrictive covenants. He recommends making this clear from the outset, or making it clear in the restrictive covenant. This remains the one major unresolved issue. But overall this plan has been very successful and Plum Creek and USFWS are both very satisfied.

**WASHINGTON DEPARTMENT OF FISH AND WILDLIFE,
HCP EVALUATION PROJECT**

Interview Form for Permittees

Name of HCP: Clark County MSHCP

Interviewee: Marci Henson

Interviewee's Affiliation and Role on the Project:

Administrator. Became administrator 2 years ago, after plan had already been adopted.

INTERVIEWEE'S CONTACT INFORMATION

Phone: 702-455-3118

E-mail: mhenson@co.clark.nv.us

Mailing Address: 500 S Grand Central Parkway, PO Box 555210, Las Vegas, NV 89155

PMX Staff Member Who Conducted Interview: Tavia White

Date of Interview: 11/8/2006

QUESTIONS FOR PERMITTEES

LENGTH OF TIME FOR HCP PROCESS

How many years did it take you to complete the HCP process? 6 years

Did the process take longer (or shorter) than you anticipated? About as anticipated

If longer, what were the sources of delays? Challenges included keeping the contractor on the timeline for deliverables, etc. Also, they had very aggressive public involvement, which included strengths and weaknesses.

If you were to do the process again, how do you think you could expedite the process?

Would adopt criteria beforehand for deciding what species to consider. The plan as it is now is very large. They didn't have enough criteria in the beginning for which species to cover and why. In some cases there may have been too much reliance on biological experts without enough understanding of the laws and regulations. Also, Clark County is the administrator of the plan, but several cities and local jurisdictions are also permittees. In the beginning there was not enough understanding of various applicable laws.

**WASHINGTON DEPARTMENT OF FISH AND WILDLIFE,
HCP EVALUATION PROJECT**

Interview Form for Permittees (continued)

COSTS AND FUNDING FOR THE HCP PLANNING AND PERMITTING

What were the total costs for planning and producing (from project initiation to finalization of the HCP document) the HCP?

Don't know. Not sure if it was really tracked well.

QUESTIONS FOR PERMITTEES (CONTINUED)

What were your total costs associated with permitting (i.e., NEPA/SEPA, Section 7, and Implementation Agreement negotiations)?

Don't know.

What were your funding sources?

Fairly unique situation: Clark County has adopted a local mitigation fee that is paid by private landowners when applying for grading permits - \$550/acre. Clark County administers these funds and aggressively invests them to accrue more funds for plan management. They also receive funds under the Southern Nevada Lands Management Act (2001), where designated BLM lands were sold and the proceeds are administered by BLM and designated for 5 or 6 uses, one of which is HCP development and implementation.

If you were to do it again, would you do anything differently in terms of your budget, ways to streamline costs, etc.?

Possibly overfunded in the beginning, due to the land rush and building boom in southern Nevada. The plan left a lot of questions up to "adaptive management," so there wasn't strong guidance on what to do. They may have tried to do too many unnecessary things, whereas a smaller budget would have required them to focus on the most important things.

COSTS AND FUNDING FOR HCP IMPLEMENTATION

Implementation costs and funding: About \$1 million/year for staffing, administration, expenses. For 2005-2007, \$38 million allocated for mitigation/conservation action.

Has funding been adequate? Yes.

Interactions with USFWS/NMFS

How did your process with USFWS/NMFS work – what went well, what didn't, and what would you do differently in the future?

It's very helpful if USFWS is willing to work with the permittee throughout the process and is flexible in response to the needs of the HCP. Their particular challenge was sometimes feeling like USFWS was extorting them and threatening to not grant the permit. Work hard to try to maintain a positive relationship

**WASHINGTON DEPARTMENT OF FISH AND WILDLIFE,
HCP EVALUATION PROJECT**

Interview Form for Permittees (continued)

with the Services. It may have helped to start off with a set of ground rules regarding negotiations, etc. with USFWS beforehand.

Miscellaneous HCP Process Questions

Do you have any other comments related to how easy or successful the HCP planning process was?

Clarity. Be specific on species and covered activities and why (regulatory requirements, etc.) you are seeking that coverage. This lays the groundwork for the plan.

Do you have any other comments regarding the ease and success of the implementation process?

The implementation is only as good as the documents are. Don't leave too much in the document open for interpretation.

Would you do it again? Why or why not?

Yes. Especially for county activities. They also included private property in the HCP and felt that may have been overly generous in the end – it was a lot of work for a local government agency.

Do you have any other comments on what aspects of the process worked well or poorly, or what you would do differently if you were to do it again?

None.

QUESTIONS FOR PERMITTEES (CONTINUED)

For interviewees who are representatives of public agencies, did you encounter any challenges that you feel were unique to your position as a public agency applying for an Incidental Take Permit?

They have a history of being very involved in local government, which is good. They have a Citizen's Advisory Committee that has been very involved. They have been working on this since 1990, so had a good idea of what they were doing. Also they worked hard to keep all the interested parties at the table. This HCP has never been challenged, and they have tried hard to provide an outlet for interested parties other than lawsuits.

**WASHINGTON DEPARTMENT OF FISH AND WILDLIFE
HCP EVALUATION PROJECT**

Interview Form for USFWS Representatives

Name of HCP: Clark County MSHCP

Interviewee: Bob Williams

Interviewee's Affiliation and Role on the Project:

Nevada State Field Manager

INTERVIEWEE'S CONTACT INFORMATION

Phone: 775-861-6311

E-mail: bob_d_williams@fws.gov

Mailing Address: 1340 Financial Blvd, Ste 234, Reno, NV 89502

PMX Staff Member Who Conducted Interview: Tavia White

Date of Interview: 11/15/06

QUESTIONS FOR USFWS/NMFS REPRESENTATIVES

How did your process with the permittee work – what went well, what didn't, and what would you do differently in the future?

Recommends the applicant come to the table well prepared with the activities they are looking to have covered. Know what you want. Much of the negotiation is focused on the species to be covered, so knowing what activities you want covered can help in the negotiations. He also recommended focusing on listed and candidate species only. Don't get tangled up in too many species.

The applicant should demand that the Services engage in the discussion and tell the applicant what they need. Force the Services to be specific on what information, mitigation, etc. is needed to satisfy them to move the process along. Push them to participate in the analysis up front and be specific on what they want.

Specific to the Clark County MSHCP, the Services deferred too much to adaptive management. 93% of land in Nevada is public, so while Clark County had plenty of funds it was hard to come up with enough mitigation land. Ultimately, it comes down to being clear in the negotiations between what the applicant proposes and what the Services think is a high priority.

**WASHINGTON DEPARTMENT OF FISH AND WILDLIFE,
HCP EVALUATION PROJECT**

Interview Form for Permittees

Name of HCP: San Joaquin MSHCP

Interviewee: Steve Mayo

Interviewee's Affiliation and Role on the Project:

Senior Planner in charge of project.

INTERVIEWEE'S CONTACT INFORMATION

Phone: 209-468-3913

E-mail: smayo@sjcog.org

Mailing Address: 555 E Weber Ave, Stockton, CA 95202

PMX Staff Member Who Conducted Interview: Tavia White

Date of Interview: 11/3/06

QUESTIONS FOR PERMITTEES

LENGTH OF TIME FOR HCP PROCESS:

How many years did it take you to complete the HCP process? 7 years, 4 months, 7 days (3 1/2 years to gather local consensus, 4 years for development and permitting) There were 2 prior starts on the local level that did not get completed.

Did the process take longer (or shorter) than you anticipated? Much longer

If longer, what were the sources of delays? For the first 3 years, the delays were regarding jurisdictional issues and getting everyone (local agencies, etc.) on board. The next 4 years just took a long time to cover every detail with the permitting agencies. This was one of the first in Northern CA to undergo this process, which made it slower.

If you were to do the process again, how do you think you could expedite the process?

Pull concepts from other plans/programs. Establish consensus as to the goals ahead of time.

**WASHINGTON DEPARTMENT OF FISH AND WILDLIFE,
HCP EVALUATION PROJECT**

Interview Form for Permittees (continued)

COSTS AND FUNDING FOR THE HCP PLANNING AND PERMITTING

What were the total costs for planning and producing (from project initiation to finalization of the HCP document) the HCP?

Direct costs - \$700,000 to \$800,000. Indirect costs not tracked.

QUESTIONS FOR PERMITTEES (CONTINUED)

What were your total costs associated with permitting (i.e., NEPA/SEPA, Section 7, and Implementation Agreement negotiations)?

Not tracked separately, included in above total

What were your funding sources? Local mitigation funds, grants, local money, some from local 1/2 cent sales tax fund. It seems that more grants are available now than there were when they started the process.

If you were to do it again, would you do anything differently in terms of your budget, ways to streamline costs, etc.?

Plan more room for a learning curve. Also Plan more for implementation costs. The administrative costs in the first few years were much higher than expected, but then evened out down the road.

COSTS AND FUNDING FOR HCP IMPLEMENTATION

Implementation costs: \$560,000/ year for administration (every-day running of project, office, computers, legal meetings, advisory meetings, 2 1/2 FTE).

Has funding been adequate? Yes, relatively low.

Interactions with USFWS/NMFS

How did your process with USFWS/NMFS work – what went well, what didn't, and what would you do differently in the future?

Lots of negotiating. No control over final decision. The BO controls everything and they didn't have much say in the end. Recommends don't let them bully you into "jump-start program" (having lands set aside in the beginning). For example, they were required to have a vernal pool jump start even though there were no vernal pool resources impacted in the plan. Also some confusion which they are in negotiations over regarding whether/how jump-start lands can be counted toward later mitigation.

Miscellaneous HCP Process Questions

Do you have any other comments related to how easy or successful the HCP planning process was?

It was what it was – bureaucracy, politics.

**WASHINGTON DEPARTMENT OF FISH AND WILDLIFE,
HCP EVALUATION PROJECT**

Interview Form for Permittees (continued)

Do you have any other comments regarding the ease and success of the implementation process?

If the USACE permitting process (404) could be streamlined it would be a lot easier.

Would you do it again? Why or why not?

Yes, but would tweak a few things. Regarding implementation, figure out what's best for all the stakeholders beforehand.

Do you have any other comments on what aspects of the process worked well or poorly, or what you would do differently if you were to do it again?

This plan allows to pay a fee or bring land in lieu of fee. Suggested that land in lieu is much easier and less headache.

QUESTIONS FOR PERMITTEES (CONTINUED)

For interviewees who are representatives of public agencies, did you encounter any challenges that you feel were unique to your position as a public agency applying for an Incidental Take Permit?

Non-profit (hold own easements) within a public agency. Not really any unique challenges – they had an already established joint powers authorization with local representatives, etc., so local contacts and representation were already established.

**WASHINGTON DEPARTMENT OF FISH AND WILDLIFE
HCP EVALUATION PROJECT**

Interview Form for USFWS Representatives

Name of HCP: San Joaquin MSHCP

Interviewee: Jana Milliken

Interviewee's Affiliation and Role on the Project:

Fish & Wildlife Biologist

INTERVIEWEE'S CONTACT INFORMATION

Phone: 916-414-6600

E-mail: jana_milliken@fws.gov

Mailing Address: 2800 Cottage Way, Rm W-2605, Sacramento, CA 95825-1846

PMX Staff Member Who Conducted Interview: Tavia White

Date of Interview: 11/13/06

QUESTIONS FOR USFWS/NMFS REPRESENTATIVES

How did your process with the permittee work – what went well, what didn't, and what would you do differently in the future?

This plan is habitat based rather than species based, so they have to track the amount of habitat taken rather than the number of individuals taken. Therefore it has been hard to measure the impact/benefit to the species. The determination about affected habitat is based on habitat maps, rather than what's actually on the ground, and they have found that some of the maps are wrong. In general, being habitat based makes implementation easier, but tracking take harder.

The details in the plan are kind of vague. This is both good and bad; the challenge is in balancing the necessary flexibility with figuring out how to actually implement it.

Initially the fees weren't high enough to cover the cost of mitigation land acquisition, so they are behind in mitigation, but they are about to pass an amendment to catch up on funding and thereby mitigation land. They are also about to pass an amendment to add one species and additional "contingency acreage."

Their current catch phrase is "stick to the plan." Look into it as much as possible, and try to read between the lines. Don't make things up or it won't be defensible. If something isn't working, then amend the plan. They have one person still working on the project who has been there from the beginning, which she said is a great help in interpreting the plan when it's not clear, and keeping consistency in the project.

She also recommended having the Services be clear on which species they are most interested in, i.e. which species are being most affected. Be sure their interests are addressed. Pay attention to the issues, cooperate on solutions, and get the Services involved in developing those solutions.

This plan has come a long way in the past couple of years, and the permittee is making efforts to improve implementation. At first, mitigation wasn't keeping up with development. Overall, after a few initial hiccups, the plan is working well. Species and habitats have benefited.

**WASHINGTON DEPARTMENT OF FISH AND WILDLIFE,
HCP EVALUATION PROJECT**

Interview Form for Permittees

Name of HCP: Tacoma Water HCP

Interviewee: Paul Hickey

Interviewee's Affiliation and Role on the Project:

INTERVIEWEE'S CONTACT INFORMATION

Phone: 253-502-8692

E-mail: phickey@cityoftacoma.org

Mailing Address: Tacoma Public Utilities 3628 S 35th Street, Tacoma WA 98409-3192

PMX Staff Member Who Conducted Interview: Tavia White

Date of Interview: 11/3/06

QUESTIONS FOR PERMITTEES

LENGTH OF TIME FOR HCP PROCESS:

How many years did it take you to complete the HCP process? Late 1998 to July 2001 – 3 years

Did the process take longer (or shorter) than you anticipated? About right, little longer

If longer, what were the sources of delays? Dealing with Muckleshoot Tribe, WDFW; Unique to this project, they were dealing with the USACE working on a water supply project and had to figure out how to blend that with the HCP (Section 7 and Section 10).

If you were to do the process again, how do you think you could expedite the process?

COSTS AND FUNDING FOR THE HCP PLANNING AND PERMITTING

What were the total costs for planning and producing (from project initiation to finalization of the HCP document) the HCP?

Approximately \$1.5 million for development (staff, consultants [both biological and legal], printing, etc.)

**WASHINGTON DEPARTMENT OF FISH AND WILDLIFE,
HCP EVALUATION PROJECT**

Interview Form for Permittees (continued)

QUESTIONS FOR PERMITTEES (CONTINUED)

What were your total costs associated with permitting (i.e., NEPA/SEPA, Section 7, and Implementation Agreement negotiations)?

Included in above figure.

What were your funding sources? Tacoma Water rate-payers

If you were to do it again, would you do anything differently in terms of your budget, ways to streamline costs, etc.?

No

COSTS AND FUNDING FOR HCP IMPLEMENTATION

Implementation costs and funding: He is writing the 5 year report right now that will include costs. Approximately 85-90% of costs has been for development of the water supply project, which has been about \$3 million for 5 years. Funding comes from rate-payers.

Has funding been adequate? Yes. They sell a product that everyone uses so have a steady stream of income.

Interactions with USFWS/NMFS

How did your process with USFWS/NMFS work – what went well, what didn't, and what would you do differently in the future?

Went well. Since the ITP was issued USFWS has been much more involved than NMFS. USFWS contact calls periodically, and they have taken him to the site, etc. It is a positive relationship.

Miscellaneous HCP Process Questions

Do you have any other comments related to how easy or successful the HCP planning process was?

This HCP was developed prior to PS chinook and bull trout listing, so thinks it was easier than subsequent permittees' process. They had more of the Service's time — the Services weren't so busy with others.

Do you have any other comments regarding the ease and success of the implementation process?

Feels it was successful. But slower than expected, due to the link with the USACE water supply project – an unusual circumstance that caused some delays.

Would you do it again? Why or why not?

Yes, no other alternative.

Do you have any other comments on what aspects of the process worked well or poorly, or what you

**WASHINGTON DEPARTMENT OF FISH AND WILDLIFE,
HCP EVALUATION PROJECT**

Interview Form for Permittees (continued)

would do differently if you were to do it again?

No. Pretty happy with planning and implementation.

QUESTIONS FOR PERMITTEES (CONTINUED)

For interviewees who are representatives of public agencies, did you encounter any challenges that you feel were unique to your position as a public agency applying for an Incidental Take Permit?

Have to be responsible to rate-payers. Feels this requires more transparency than a private company might have. Tacoma Water has a trust relationship with the public.

**WASHINGTON DEPARTMENT OF FISH AND WILDLIFE
HCP EVALUATION PROJECT**

Interview Form for USFWS Representatives

Name of HCP: Tacoma Water

Interviewee: Tim Romanski

Interviewee's Affiliation and Role on the Project:

Fish & Wildlife Biologist, Division of Conservation and Hydropower Planning

INTERVIEWEE'S CONTACT INFORMATION

Phone: 360-753-5823

E-mail: tim_romanski@fws.gov

Mailing Address: 510 Desmond Dr SE, Lacey, WA 98503

PMX Staff Member Who Conducted Interview: Tavia White

Date of Interview: 11/13/06

QUESTIONS FOR USFWS/NMFS REPRESENTATIVES

How did your process with the permittee work – what went well, what didn't, and what would you do differently in the future?

The document spends most of the time with the applicant and their consultants, so the timeline is basically up to them. Develop a timeline by identifying an end point for the process and working backward from that date. Assume/allow the maximum length for the comment period when developing timeline. Have informal comment periods with key groups before the general public comment period. This may help in allowing certain questions to be addressed in the draft, as well as in knowing how to plan for other possible comments and responses.

**WASHINGTON DEPARTMENT OF FISH AND WILDLIFE
HCP EVALUATION PROJECT**

Interview Form for NMFS Representatives

Name of HCP: Tacoma Water

Interviewee: Mike Grady

Interviewee's Affiliation and Role on the Project:

Senior Policy Analyst

INTERVIEWEE'S CONTACT INFORMATION

Phone: 206-526-4645

E-mail: michael.grady@noaa.gov

Mailing Address: 7600 Sand Point Way NE, Seattle, WA 98115

PMX Staff Member Who Conducted Interview: Tavia White

Date of Interview: 11/14/06

QUESTIONS FOR USFWS/NMFS REPRESENTATIVES

How did your process with the permittee work – what went well, what didn't, and what would you do differently in the future?

Have a willing applicant who wants try and do things and hires capable consultants. Have the right people at the table. Make a concerted effort to involve the Tribes and other interested parties.

To keep costs down and streamline process, applicant should just start drafting a sample HCP with whatever resources they have at their disposal. Identify early on who the NEPA person will be.

There was a mad dash at the end to get it signed, which centers around having the delegation in town, but he thinks this is probably typical of most HCPs.

Felt this was a very successful process over all.

APPENDIX C

Electronic Copies of HCPs

APPENDIX C

“Electronic copies of each of the 17 HCPs are being provided on CDs, with one exception: the Etowah HCP is not yet available. Information on the Etowah HCP process and background documents can be viewed at <http://www.etowahhcp.org/>.”