

# SEPA ENVIRONMENTAL CHECKLIST

UPDATED 2014

## ***Purpose of checklist:***

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

## ***Instructions for applicants:***

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

## ***Instructions for Lead Agencies:***

Please adjust the format of this template as needed. Additional information may be necessary to evaluate the existing environment, all interrelated aspects of the proposal and an analysis of adverse impacts. The checklist is considered the first but not necessarily the only source of information needed to make an adequate threshold determination. Once a threshold determination is made, the lead agency is responsible for the completeness and accuracy of the checklist and other supporting documents.

## ***Use of checklist for nonproject proposals:***

For nonproject proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of sections A and B plus the [SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS \(part D\)](#). Please completely answer all questions that apply and note that the words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for non-projects) questions in Part B - Environmental Elements –that do not contribute meaningfully to the analysis of the proposal.

## **A. BACKGROUND**

1. Name of proposed project, if applicable:

**Tumwater Falls Park Fish Hatchery Redevelopment**

2. Name of applicant:

**Washington Department of Fish and Wildlife**

3. Address and phone number of applicant and contact person:  
**600 Capitol Way N, Olympia, WA 98501: (360) 902-8380 Douglas Mackey**
4. Date checklist prepared:  
**12/11/2014**
5. Agency requesting checklist:  
**Washington Department of Fish and Wildlife**
6. Proposed timing or schedule (including phasing, if applicable):  
**Spring 2015**
7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.  
**Yes. WDFW supports plans to build an interpretive trail to provide pedestrian access along the Deschutes River corridor from Tumwater Falls Park north to Budd Inlet and south to Pioneer Park. However, the trail is not a formal component of this project, and thus will not be covered under this SEPA Checklist.**

**A Deschutes Watershed Center, proposed adjacent to Pioneer Park, is envisioned as a fish hatchery and community educational facility, including such features as; classroom learning, general community meeting areas, interpretive displays, interpretive trails and plantings at the park, as well as a watershed trail along the Deschutes River. WDFW continues to work with *Friends of Deschutes Watershed Center* (FDWC) a community-based organization established to promote watershed stewardship and educational opportunities within the Deschutes River watershed, and surrounding communities. The FDWC interim board and officers are representatives of organizations that have demonstrated a commitment to the project, including the City of Tumwater, Olympia-Tumwater Foundation, Squaxin Island Tribe, Trout Unlimited, Puget Sound Anglers, Northwest Indian Fisheries Commission, and WDFW. Interim elected officers of the organization are representatives of the City, the Tribe, and Trout Unlimited. FDWC will work to obtain private sponsorship for educational displays, interpretive signage and development of the Watershed Center.**

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

**Deschutes Master Plan Part 1 – Initial Site Assessment. January 2002.**

**Prepared for WDFW. Prepared by FishPro, Inc.**

**A Master Plan for the Deschutes Watershed Center. December 2002 (draft).**

**Prepared for WDFW. Prepared by FishPro, Inc.**

**Wetland Delineation Report. June 2004 and 2009, prepared for WDFW by HDR/FishPro Engineering. The report is currently being updated with a 2014 wetland delineation.**

**Cultural Resources Assessment. June 2004. Prepared for WDFW through FishPro/HDR Engineering. Prepared by Western Shore Heritage Services, Inc. Floodplain Delineation and Detailed Flood Study. August 2004. Prepared for WDFW. Prepared by FishPro/HDR Engineering.**

**In addition, the project has undergone preliminary review with City, County, State, Tribal, and community entities including:**

- 1. Department of Ecology: Effluent discharge issues and potential discharge limitations; National Pollutant Discharge Elimination System (NPDES) permitting requirements; water right permitting; ordinary high water mark delineation; and WDFW participation in on-going water quality studies on the Deschutes River**
- 2. City of Tumwater, Thurston County, and Federal Emergency Management Agency (FEMA): Floodplain fill and compensatory flood storage at Tumwater Falls Park**
- 3. City of Tumwater and Department of Ecology: Wetland buffer impacts. (Wetland buffers are areas adjacent to wetlands that serve as buffer zones to provide increased protection of wetlands in their transitional zone to uplands.)**
- 4. U.S. Army Corps of Engineers (COE): In-water work activities (intake placement) and National Environmental Policy Act (NEPA) requirements**
- 5. Squaxin Island Tribe and Washington State Office of Archaeology and Historic Preservation: Cultural resources assessment and review; submittal of site assessment report**
- 6. Squaxin Island Tribe: Overview of the proposed project and tribal support of project**
- 7. Washington State Legislature: Natural Resources sub-committee (9/21/04) Presentation of project status**
- 8. City of Tumwater City Council: Presentations of project overview**
- 9. City of Tumwater: 2004 Pre-application meeting; a subsequent 2014 Pre-application meeting is scheduled to review permitting requirements**
- 10. Olympia-Tumwater Foundation: Review of the project revisions with staff and the Board of Directors**

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

**The land use easement is being updated with Olympia-Tumwater Foundation for the appropriate use of their property as land owner.**

10. List any government approvals or permits that will be needed for your proposal, if known.

**City of Tumwater Permits and Approvals**

- a. Certificate of Appropriateness**
- b. Critical Areas permits**
  - 1. Fish and Wildlife Protection Plan**
  - 2. Geologically Hazardous areas report**

- c. Shoreline Substantial Development Permit
- d. Floodplain permit
- e. Stormwater Drainage and Erosion Control Plan
- f. Site Development and Grading permit (Includes Tree Permit)
- g. Building permits, several including: Remodel, Propane Tank, and Generator
- h. Wetland and wetland buffer permit

**Other Permits/Approvals**

- a. 404 COE permit/Joint Aquatic Resources Permit Application for in-water work; including NEPA compliance, Section 106 of National Historic Preservation Act Endangered Species Act (ESA) issues: U.S. Fish and Wildlife Service (USFWS)/ NOAA Fisheries – this project will require a Biological Evaluation
- b. 401 Water Quality Certification, coupled with Coastal Zone Management
- c. NPDES Permit for Aquaculture Facility (Ecology may determine that below-threshold levels of fish and fish food make this unnecessary).
- d. National Pollutant Discharge Elimination System (NPDES) Construction Stormwater General Permit administered through the Department of Ecology.
- e. WDFW – Hydraulic Project Approval (HPA)

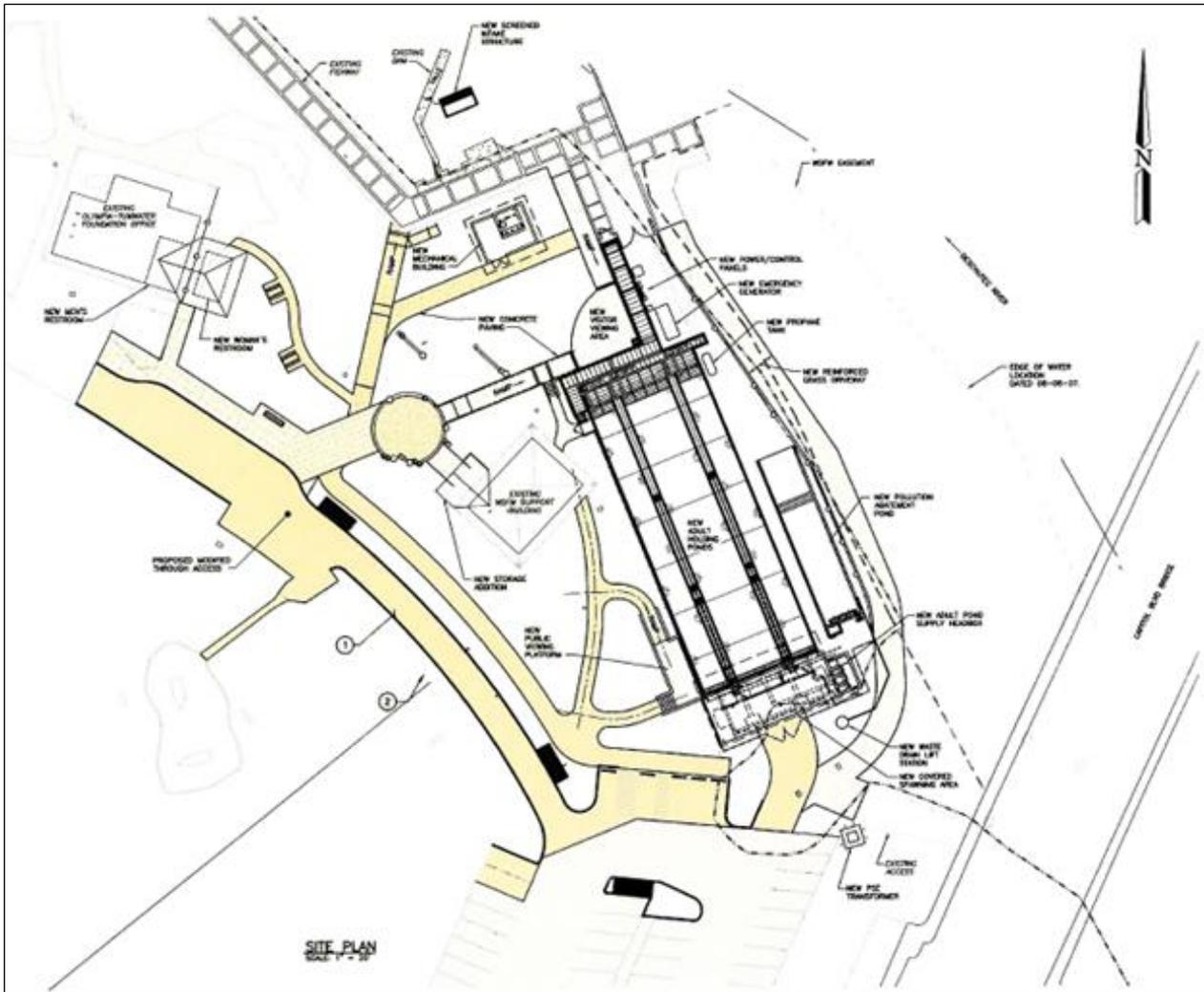
11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

**PROJECT DESCRIPTION**

**The Tumwater Falls Park is approximately 16 acres, with WDFW currently utilizing 1.5 acres. Development of additional facilities would disturb approximately one acre. Existing park facilities include: access roads, public parking, walking trails, picnic/play areas, restrooms and an Olympia-Tumwater Foundation office/shop building. Existing fish culture facilities at this site include: fish ladders, two adult holding ponds, spawning area, surface water intake and pump station, and an office/storage building. Currently, adult salmon are collected at this site, held until spawning, and then eggs are collected and shipped to a number of hatcheries outside of the Deschutes watershed and health management zones. Juveniles are returned to the site for limited acclimation prior to release.**

**Proposed new facilities include: three adult holding ponds with fish viewing windows, a new section of adult fish ladder connecting to the existing ladder at the falls, re-located surface water intake and pump station (to alleviate sedimentation and future-phase trail access issues), effluent treatment clarifier, and public viewing area. Proposed action also calls for repair of those elements within the existing fish ladders requiring critical maintenance.**

**The proposed site will continue to collect and spawn returning hatchery-origin Chinook salmon, and acclimate and release Chinook salmon juveniles. Approximately 800,000 sub-yearling Chinook salmon would be released from the Tumwater Falls Park facility. The facility will utilize an existing water right for a surface water supply of 54 cfs (9 cfs for rearing and 45 cfs for operation of the fish ladders). Water usage for fish rearing will be non-consumptive and will be returned to the Deschutes River through the fish ladders.**



Simplified Site Plan for reference purposes (See Appendix A for more details)

**The Tumwater Falls facility will only collect and rear fish of hatchery origin, and the Co-Managers Fish Health Policy that regulates movements of eggs and fish between management zones will be adhered to. The proposed project does not increase the number of fish released within the Deschutes River.**

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, and county if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

**The Tumwater Falls Park site is located on the Deschutes River at Tumwater Falls on Deschutes Way at C Street. The Park is owned by the Olympia-Tumwater Foundation, and WDFW currently has an easement for fishery operations within the park.**

**The project is located within Section 26 Township 18N, Range 2W. The address of record is 114 Deschutes Way SW, Tumwater, WA 98501. Access is by land owner permission only. The attached project drawings include a vicinity map and site plan. Thurston County**

The parcel of record in the City of Tumwater Assessor's office is: 09470001000. The geographic location on the water is approximately: 47.015° N 122.905° W.

## B. ENVIRONMENTAL ELEMENTS

### 1. Earth

a. General description of the site (circle one): **Flat**, rolling, hilly, steep slopes, mountainous, other: **The project area is generally flat with the exception of the adjacent Tumwater Falls geological feature.**

b. What is the steepest slope on the site (approximate percent slope)?  
**This site is flat with no steep slopes with the exception of the armored banks along the Deschutes River.**

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.  
**The soils are clay, silt, sand, gravel, bedrock basalt and peat. Depth to bedrock in the area ranges from 4.5 ft to 15.5 ft. Soils as mapped by Natural Resources Conservation Service (NRCS) (Pringle 1990) 46 Indianola loamy sand and 48 Indianola loamy sand. The site contains no agricultural land of interest commercially.**

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.  
**Soft clay and peat occur on the western edge of the Deschutes River. These soils are moisture sensitive and are prone to settlement when loaded.**

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.  
**Fill (approx. 60 yards<sup>3</sup>) is anticipated for use in placing the new water intake; otherwise there is no fill necessary for improvements at Tumwater Falls. Raceways have been sited outside of the floodway and the 100-year floodplain, with a small portion of the spawning shed in the floodplain.**

**Grading will occur on site to prepare the area for construction. The disturbed area is estimated to be one acre.**

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.  
**There is a potential for erosion to occur during land clearing and construction activities as soils will be exposed. The extent of erosion is anticipated to be minimal as construction areas are flat and Best Management Practices (BMPs) such as silt fencing, placement of straw bales, and protection of exposed soils will be implemented.**

- g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

**Approximately 0.11 acres of impervious surface will be added to the site or parcel (less than 1% of the 16 acre Park area).**

- h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

**Use of silt fencing, placement of straw bales, and protection of exposed soils would be implemented during construction. Disturbed soils will be re-vegetated following construction. Since public education is an important feature of this project, native plant demonstration areas may be incorporated into the landscape plan. Topsoil removed during construction would be stockpiled for use elsewhere on the site. Erosion potential would be reduced during construction by directing surface water runoff to on-site stormwater facilities. Erosion control plans and maintenance guidelines for sediment removal facilities would be submitted with City of Tumwater in clearing, filling and grading permits. A drainage plan will be prepared in accordance with City of Tumwater guidelines, which follow the 2009 Thurston County Drainage Design and Erosion Control Manual, and the Department of Ecology's 2012 Stormwater Management Manual for Western Washington (SMMWW). The project will also be required to include a Construction Stormwater General Permit form to the Department of Ecology as the project will disturb an area larger than one acre. This NPDES permit requires creation of a project-specific stormwater pollution prevention plan. It should be noted that the current "General Permit" expires in December of 2015; and the new permit, effective January 1, 2016 may have different requirements.**

**Thurston County and City of Tumwater regulations apply to development in floodplains. Both jurisdictions are being consulted to determine which code provisions apply to the floodplain code as part of their environmental review.**

**To comply with floodplain regulations, the project design includes placement of the minimal amount of fill within the floodway (limited to the intake structure and discharge pipeline). Additionally, all in-water work adjacent to the floodway is regulated by the US Corps of Engineers.**

**Finally, building design and construction must adhere to International Building Code earthquake requirements.**

## **2. Air**

- a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

**Temporary, localized increases in atmospheric concentrations of carbon monoxide, nitrogen dioxide, volatile organic compounds, and particulate matter, the typical pollutants in engine exhaust, would result from construction vehicle use, diesel generators, and other construction equipment. The scale of construction activities would be considered minor and emission would be unlikely to exceed the boundaries of the construction site.**

**Odor generated from operational activities will be limited to periods of maintenance and cleaning of the clarifier pond. The pond will be utilized to remove settleable solids (fish feces, feed particles and solids entering from the river). This material is concentrated within the clarifier. During maintenance events (approximately duration is three to four days, two**

times per year) the clarifier cell will be taken off-line and clarified water is drained into discharge pipelines. Settled solids are allowed to dehydrate and then removed using a front-end loader or similar equipment. Solids from the clarifier will be disposed of at an approved sanitary landfill. This action would result in infrequent localized odor. Based on experience at other urban aquaculture facilities, and the proximity of the proposed facilities to adjacent properties, odor is not anticipated to be a problem for surrounding residences.

- b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

**None.**

- c. Proposed measures to reduce or control emissions or other impacts to air, if any:

**Grading that causes dust during dry periods will be mitigated by watering or covering exposed soils and minimizing the duration and extent of exposure. Potential for tracking dirt and dust off-site could be reduced by minimizing off-site trips and cleaning vehicles before they enter public streets.**

### 3. Water

- a. Surface Water:

- 1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

**The Deschutes River flows adjacent to the project site. This river flows into Capitol Lake and then enters Puget Sound near downtown Olympia and the 4<sup>th</sup> Avenue Bridge.**

- 2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

**The project will require work within the Deschutes River. Although Category III wetlands occur on-site, no work within wetlands is anticipated to occur. According to City of Tumwater, the proposed facilities would be considered low-intensity, requiring 40-foot buffers for Category III wetlands. Approximately 1,600 square feet of Category III wetland buffers would be impacted. The project will have no direct impacts to wetlands. In accordance with WDFW recommended mitigation policies, work in the wetland buffers has been avoided to the extent feasible, the abatement pond was moved out of the wetland buffer and a reinforced concrete block "grass-crete" access road required to access and maintain the intake supplying water to the fish ladder. Therefore wetland buffer impacts are unavoidable, there are several mitigation options: 1) wetland buffer averaging to reduce impacts to buffers, and 2) mitigation for impacts to wetland buffers through on-site enhancement. These options are discussed in the Critical Areas Summary Report with the buffer averaging option the preferred approach. WDFW will mitigate per the City of Tumwater municipal code Chapter 16.28.**

**All proposed facilities would be located within 200 ft of the river. These include: improvements to the existing fish ladders, surface water intake, new adult fish ladder to new rearing ponds (connected to existing), raceway viewing area, three raceways and a pollution abatement pond. In-water work to repair the existing fish ladders would**

require the placement of a cofferdam using plastic liner tarps, ecology blocks and washed gravels and associated dewatering structures to isolate the construction area. Portable pumps would maintain a dry work area. Pump discharge would be routed through an upland sediment basin prior to discharge into the Deschutes downstream of the construction site. Although fish passage would still be available, cofferdam placement would result in a temporary reduction in available habitat for fish that reside within the river or that are migrating upstream or downstream during the construction period. Diverted flow is not expected to affect water temperatures. Cofferdamming activities have a temporary effect on sedimentation but subsequent flows would have the ability to scour away light deposits.

Wetlands at the Tumwater Falls site are limited to the riparian fringe, in areas that are frequently subjected to flood flow. These areas contain scattered willows and thick wetland soils comprised of alluvial deposition. Little emergent vegetation occurs as these areas are often scoured.

- 3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

**Design estimates for locating the new intake structure:**

**Intake excavation: up to 50 cy (dredge)**

**Associated fill**

**structure : 26 cy (Not "fill" to ACE)**

**fill backfill: 24 cy fill**

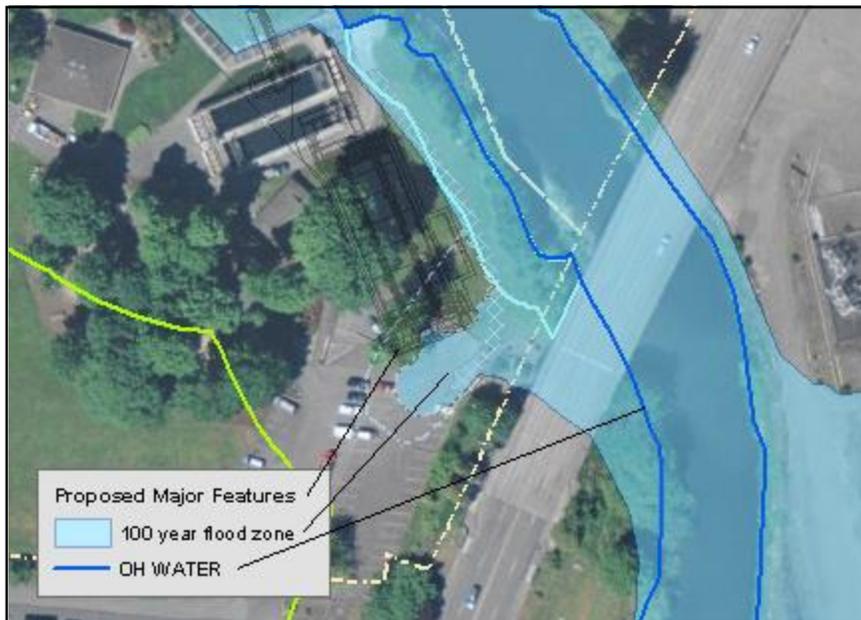
**bank stabilization: 10 cy fill**

- 4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

**A surface water intake currently exists at this location, and WDFW holds a 54 cfs water right for withdrawals from the Deschutes River. Of this water right a maximum of 45 cfs is required for operation of the existing fish ladders. Nine cfs would be required for operation of the fish facility (juvenile rearing and adult collection). This project proposes to relocate the intake structure and pump station downstream from the present location to a site close to the top of the falls and fish ladder structure. This location should provide sufficient water flows to clean fish screens and would reduce maintenance efforts for sediment removal. The intake would be screened to meet NOAA-Fisheries and WDFW fish screening criteria. Water would be diverted from the river at the falls and returned to the river through the fish ladders.**

**A portion of the site is within the FEMA designated 100-year floodplain. The relocated intake structure must be located within the 100-year floodplain in order to function. Although the proposed raceways are immediately adjacent to the floodplain boundary, every effort has been made to site them as far from the floodplain as functionally possible.**

**A small portion of hatchery operation will take place in the floodplain. This 150ft<sup>2</sup> is out of the floodway. See the illustration below.**



**100 year floodplain intersects 150 ft<sup>2</sup> of the Spawning Shed**

**Aquaculture is a permitted use within the 100-year floodplain per the City of Tumwater Municipal Code (18.38.055 A).**

- 6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

**The Deschutes River is a 303(d) listed stream which is impaired due to elevated temperatures; discharge of water that is warmer than receiving waters is considered a pollutant. Discharges from the hatchery will meet the requirements of the fin fish NPDES permit, issued by Department of Ecology for aquaculture facilities, for all parameters, including temperature. Due to the flow through nature of the facility and rearing unit turnover rate (once per hour) the raceways will not be subject to measurable solar thermal gain.**

**The hatchery operation currently uses two compounds (formalin and erythromycin), both of which are included on the list of compounds requiring use disclosure for the NPDES permit for the facility and are utilized according to approved label direction.**

b. Ground Water:

- 1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.

**No groundwater will be utilized at this site.**

- 2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals. . . ; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

None

c. Water runoff (including stormwater):

- 1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow?

Will this water flow into other waters? If so, describe.

**Proposed new facilities include a new section of adult fish ladder (to the new raceways), three new raceways with a spawning shed, and a public viewing area. Runoff from the spawning shed roof is anticipated to be minimal and would be directed to stormwater treatment facilities.**

- 2) Could waste materials enter ground or surface waters? If so, generally describe.

**Discharge waters containing waste materials will be treated prior to entering surface waters. Solids would be removed through settling. Dissolved components would be discharged to the Deschutes River. Discharges parameters of concern are regulated through Department of Ecology administered permits.**

- 3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

**The drainage pattern is designed to meet current stormwater treatment and flow control requirements and will be directed to needed small treatment features per the City of Tumwater guidelines.**

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any:

**Washington State and the City of Tumwater require that new projects meet state and city stormwater management standards. These standards reference treatment standards outlined in the Washington State Department of Ecology's Stormwater Management Manual (SMM) for Western Washington (2012). The 2012 SMM requires either stormwater attenuation or stormwater infiltration of runoff from new or redeveloped facilities, with infiltration as the preferred option. Water quality treatment of runoff from pollution-generating surfaces on the site, as well as the implementation of source control practices is also required. New on-site stormwater conveyance systems are required to carry the contributing flow from the 100-year, 24-hour storm event. New projects are also required to incorporate Best Management Practices (BMPs) for stormwater management as outlined in the SMM, along with preparation and implementation of a Temporary Erosion and Sedimentation Control Plan (TESC) and a SWPPP.**

4. Plants

a. Check the types of vegetation found on the site:

deciduous tree: **red alder, maple**, aspen, other: (specifically: bigleaf maple)

evergreen tree: fir, cedar, pine, other

shrubs: **willow**

grass

pasture

crop or grain

Orchards, vineyards or other permanent crops.

- \_\_\_\_ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other  
\_\_\_\_ water plants: water lily, eelgrass, milfoil, other  
\_\_\_\_ other types of vegetation: **cattail, buttercup, bullrush, skunk cabbage, other**

b. What kind and amount of vegetation will be removed or altered?

**Herbaceous vegetation disturbance at the site would be limited to the removal of approximately 0.24 acres of maintained lawns. Approximately nine big leaf maple (*Acer macrophyllum*) and one alder that occur in the proposed raceway footprint would also be removed. No wetland vegetation would be impacted. However, approximately 1,600 square ft of Category III wetland buffers would be impacted with construction of a reinforced grass driveway. Wetland buffer averaging will occur to mitigate for impacts.**

c. List threatened and endangered species known to be on or near the site.

**There are no known threatened or endangered plant species on or near the site. The Natural Heritage Program (NHP) databases as well as the state (WDFW) and federal agency listings (USFWS), were examined for threatened or endangered plants on November 11, 2014. There are no listed plants within 2,500 feet of the project area.**

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

**The overall approach to mitigation for potential natural habitat impacts is to first avoid impacts to the extent possible through careful site design, planning, construction techniques, and strict adherence to BMPs. If avoidance is not possible, mitigation measures to minimize impacts to vegetation communities are proposed to compensate for alterations to the vegetation from the proposed activity. The removal of riparian vegetation, both trees and understory, will be mitigated through plantings within the riparian zone. If avoidance is not possible, the removal of trees will be mitigated by planting of trees within the riparian zone as stipulated by the City of Tumwater. Impacts to grasslands, wetland buffers and the riparian habitat area will be mitigated on-site through use of native species plantings to meet or exceed requirements of the HPA and US Army Corps of Engineers permit requirements. All impacts will be mitigated in accordance with the City of Tumwater's municipal code:**

- **Chapter 16.08 Protection of Trees and Vegetation**
- **Chapter 16.28 Wetland Protection Standards (for impacts to wetland buffers)**
- **Chapter 16.32 Fish and Wildlife Habitat Protection**

**Detailed mitigation plans, including planting lists, locations and contingencies, will be prepared in compliance with the City of Tumwater's Fish and Wildlife Habitat Protection Plan, as well as a wetland buffer impact mitigation plan. These plans will document habitat improvement plans, including hydroseeding of disturbed soils and revegetation of disturbed site with native plantings, as well as plans for the removal and control of invasive and noxious weeds, where possible.**

e. List all noxious weeds and invasive species known to be on or near the site.

**English ivy and Himalayan blackberry are managed with moderate success.**

## 5. Animals

- a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site. Examples include:

birds: **hawk, heron, eagle, songbirds**, other: **waterfowl**

mammals: **deer, bear, elk, beaver**, other: **muskrat, river otter**

fish: **bass, salmon, trout**, herring, shellfish, other: **sculpin**

- b. List any threatened and endangered species known to be on or near the site.

**Threatened or Endangered Species**

USFWS data indicated that both the Northern spotted owl (*Strix occidentalis caurina*) and the marbled murrelet (*Brachyramphus marmoratus*) may occur within Thurston County.

However, no known habitat for either species occurs in the vicinity of Tumwater Falls and the closest populations most likely occur far from the project sites, in the vicinity of Mount Rainer National Park.

No other federally listed threatened or endangered species are a matter of record as inhabitants of the land or water within .5 miles of the hatchery with the possible exception of Chinook Salmon. (See Critical Areas Summary Report) Sources checked include the USFWS, NMFS, and the Washington State Department of Natural Resources that works cooperatively with USFWS on federally listed plants.

**Sensitive Species**

The following species are documented as occurring in the vicinity of the project action area by the WDFW in their Priority Habitat Species (PHS) database (12/3/14):

The Capital Lake area approximately .5 miles to the north are a waterfowl concentration area, particularly important for wintering waterfowl including mallards, gadwalls, American wigeons, scaups, buffleheads, ruddy ducks, ring-necked ducks, and goldeneyes.

This area is a breeding area for wood duck (*Aix sponsa*), cavity nesters that utilize trees in the fringe of the lake's water. The area is used by nesting bald eagles; and is forage habit for the same as well as osprey and great blue heron.

Mink (*Mustela vison*), frequent this area, for which the habitat value is recognized by inclusion in the PHS. Bats (*Myotis spp.*), regularly forage over the lake and night roost in trees along the shoreline.

**Aquatic Species**

The Deschutes River watershed has documented use by fall Chinook (*Oncorhynchus tshawytscha*) and coho salmon (*Oncorhynchus kisutch*), winter steelhead (*Oncorhynchus mykiss*) and sea-run and resident cutthroat trout (*Oncorhynchus clarki*; (WDFW 1960's to the present). A brief history of the Deschutes Chinook salmon, likely a representative of the South Sound Tributaries fall Chinook salmon hatchery stock, is discussed in the Critical Areas Summary Report being issued as part of the Shoreline Substantial Development Permit review process. Bull trout, that may occur in Thurston County, have not been documented to occur in the Deschutes system.

The project Critical Areas Summary Report contains a Fish and Wildlife Protection Plan addressing the City of Tumwater's Municipal Code, Chapter 16.32.

- c. Is the site part of a migration route? If so, explain.

The site is considered adult immigration and juvenile emigration routes for anadromous fish species including Chinook and coho salmon, and sea-run cutthroat trout. In addition, the site is located within the Pacific Flyway for migratory waterfowl. Therefore, during the migratory season this site, located adjacent to the water, is used by migrating waterfowl.

- d. Proposed measures to preserve or enhance wildlife, if any:

As required under Chapter 16.32 of the City of Tumwater's municipal code, Fish and Wildlife Habitat Protection, a habitat protection plan is required when protected habitats will be impacted by construction activities. Protected habitats include rivers planted with game fish, specifically, the Deschutes River, as well as areas with which listed species have a primary association. In accordance with these regulations, a Habitat Protection Plan is being prepared to comply with City regulations. This plan will detail native vegetation plantings and mitigation strategies intended to preserve important plants and habitats. As required by the City, seasonal restriction of construction activities within protected habitats will occur. Based on the known presence of salmonids in the Deschutes mainstem, a general work window of June 15 through September 15 may be appropriate for project construction to avoid impacts to both juveniles and adults. All in-water work, listed by WDFW as July 16 - August 31, may be adjusted by the WDFW Area Habitat Biologist and finalized in the HPA.

Although fish in the immediate vicinity of instream activities may be temporarily disturbed, passage would still be possible, as only one side of the river would be cofferdammed. All impacts to instream habitat would be temporary and are not anticipated to result in long-term adverse impacts to populations of listed or sensitive species on a watershed scale. The discharge pipeline and fish outlet channel will be located within the same pipeline corridor. The outlet channel has not been fully designed at this time, but will not change the river bank profile. Juvenile fish will be released in the spring during higher flows; the fish outlet channel will be constructed to release fish beneath the surface of the water to ensure a safe delivery of smolts to the river. The discharge pipeline outfall will be placed to prevent scouring of the riverbed. Placement and utilization of these structures will not result in erosion to the streambed or banks as they will be designed to dissipate flow energy to avoid impacts to redds that may be constructed in the vicinity.

- e. List any invasive animal species known to be on or near the site.  
**None are know at this time.**

## 6. Energy and natural resources

- a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

**The Tumwater Falls Park site is currently served by electric power and natural gas and the proposed renovations would continue to use these sources to meet energy needs, with propane used to supply an emergency generator. The primary energy needs would be for surface water pumping, heating and site lighting.**

- b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

**No.**

c. What kinds of energy conservation features are included in the plans of this proposal?

List other proposed measures to reduce or control energy impacts, if any:

**Where possible, Leadership in Energy and Environmental Design (LEED) Green Building Rating System guidelines will be incorporated at the Tumwater Falls Park facility.**

## 7. Environmental health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal?

If so, describe.

**Discharge of residual amounts of chemicals would occur due to fish rearing operations at the facilities. Formalin may be used to help prevent pre-spawning mortality by controlling fungal infections that can affect adult fish. (See discussion in Section 3.a.6)**

1) Describe any known or possible contamination at the site from present or past uses.

**The site includes soils listed on the Department of Ecology's Confirmed and Suspected Contaminated Sites List, Facility-Site ID 4637; with two listed contaminants: Lead, and PAHs (Polynuclear Aromatic Hydrocarbons). These soils were discovered during work on the municipal water lines and investigated beginning in 2009. State and Federal investigations and inspections were completed in August of 2013. Pre-construction soil investigations will be conducted and all federal state and local regulations strictly followed should contaminated soils be encountered during construction.**

2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

**None**

3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.

**Formalin may be used to help prevent pre-spawning mortality by controlling fungal infections that can affect adult fish. (See discussion in Section 3.a.6)**

4) Describe special emergency services that might be required.

**None**

5) Proposed measures to reduce or control environmental health hazards, if any:

**None**

## b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

**Short-term noise impacts would occur from operation of construction equipment.**

**Noise levels from construction equipment are projected to be 70-90 dBA, as is typical of construction equipment, at 100 ft from the source. Noise levels at adjacent structures and in the park may exceed 60 dBA for short periods during construction. Noise during**

**the construction period would be confined to daytime hours. Construction noise is exempt from Washington State Noise Standards contained in WAC 173-60.**

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

**Noise sources during construction would include heavy equipment, potentially well drilling equipment, air compressors and back-up indicator alarms. Short-term noise levels and expected durations associated with construction are described above. Post-construction noise would be regulated by Washington State noise standards (WAC 173-60). Noise levels at residential receiving properties cannot exceed 57 dBA during the day and 47 dBA between the hours of 10:00 p.m. and 7:00 a.m. Long-term noise sources would be those related to operation of the facility, including noise from pumps, stand-by generator, increased vehicular traffic, and park visitors.**

3) Proposed measures to reduce or control noise impacts, if any:

**To reduce temporary construction noise associated with the project, contractors would be required to comply with all applicable regulations. The following measures should be employed to reduce construction noise:**

- **All equipment should have sound-control devices no less effective than those provided on the original equipment.**
- **No equipment would have an un-muffled exhaust.**
- **Equipment should be turned off when not in use and not left idling.**

**Warning devices such as back-up alarms are exempt from noise regulations. Additionally, construction will comply with the Tumwater Municipal Code noise ordinance.**

**Operational noise is not likely to exceed that of the current facility. Therefore, no mitigation for operational noise is proposed.**

## **8. Land and shoreline use**

a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.

**The Tumwater Falls Park site is currently occupied by the WDFW Tumwater Falls fish hatchery. Adjacent land uses include the Tumwater Falls Park, an office building for the Olympia-Tumwater Foundation, public restrooms and hiking paths for access to the falls. The Falls Terrace Restaurant is located nearby. The project may cause a slight increase in public use in the park areas and restaurant.**

b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?

**The site would have to have been logged during early Euro-American settlement. It's unlikely that long-term agricultural practices occurred at the site.**

1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how:

**No**

c. Describe any structures on the site.

**The site is currently occupied by the WDFW Tumwater Falls fish hatchery, including a hatchery building, office, pump station, fish raceways, and associated gravel walkways. The Olympia-Tumwater Foundation office and shop are located in the northwestern corner of the park.**

d. Will any structures be demolished? If so, what?

**Yes. The adult/juvenile ponds will be removed. The existing Tumwater Falls fish ladders may be upgraded so that they will continue to be operational for many years to come. No changes to the integrity of the ladders are proposed, only upgrades to existing structures that currently operate inefficiently and are near the end of their life expectancy.**

e. What is the current zoning classification of the site?

**The site is zoned as “historic commercial” with a floodplain overlay zone (C. Carlson, Planner, City of Tumwater).**

f. What is the current comprehensive plan designation of the site?

**The current comprehensive plan designation of the site is: Deschutes neighborhood, shoreline environment (C. Carlson, Planner, City of Tumwater).**

g. If applicable, what is the current shoreline master program designation of the site?

**The current shoreline master program designation of the site is: “urban conservancy.”**

h. Has any part of the site been classified as a critical area by the city or county? If so, specify.

**Within the City of Tumwater, protected habitats include rivers planted with game fish, specifically, the Deschutes River, as well as areas with which listed species have a primary association. According to City code, therefore, the Deschutes River and adjacent riparian corridor would be considered environmentally sensitive. Impacts to environmentally sensitive areas would be limited to the surface water supply intake structure, the fish outlet and water discharge pipeline. Instream work would be completed within one season and would occur with an approved instream work window. Based on the known presence of salmonids in the Deschutes mainstem, a general work window of June 15 through September 15 may be appropriate for project construction to avoid impacts to both juveniles and adults. However, all in-water work will be limited to the construction window developed in conjunction with the US Army Corps of Engineers and the WDFW Area Habitat Biologist.**

i. Approximately how many people would reside or work in the completed project?

**Currently three full time and two part time staff work at this facility.**

j. Approximately how many people would the completed project displace?

**No people would be displaced as a result of the proposed project.**

k. Proposed measures to avoid or reduce displacement impacts, if any:

**No displacement impacts are anticipated.**

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

**The hatchery has existed on the site for over fifty years. The City of Tumwater Municipal Code (18.26.020), per recent updates, identifies “Fish hatcheries, associated appurtenances, and related interpretive centers” as a permitted a use. The City’s Shoreline Master Program also supports this “permitted” use within the shoreline zone.**

m. Proposed measures to ensure the proposal is compatible with nearby agricultural and forest lands of long-term commercial significance, if any:

**No special measures are planned as these land uses; they do not occur nearby.**

## 9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

**No residential units would be provided.**

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

**No residential units would be eliminated.**

c. Proposed measures to reduce or control housing impacts, if any:

**No housing impacts are anticipated.**

## 10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

**The new raceways and adult fish ladder would be elevated to allow for public viewing. The height of these structures would match the height of existing elevated raceways, which are approximately ten vertical feet off the ground. Modifications to the WDFW and Olympia-Tumwater Foundation buildings**



**will match existing structures with regard to height and building materials. Exterior building material would be primarily concrete.**

- b. What views in the immediate vicinity would be altered or obstructed?  
**From the existing parking lot area, the new raceways would obstruct the view of approximately 120ft of the Deschutes River. No obstruction of the river views from residential or commercial establishments would occur.**
- c. Proposed measures to reduce or control aesthetic impacts, if any:  
**Views of the Deschutes River would be accessible if visitors walk around the raceways, or if visitors use existing walking trails that run adjacent to the river. Viewing opportunities of the Deschutes River Chinook salmon would be enhanced through the proposed action as a public viewing area would be provided to observe fish at eye-level in the fish ladder extensions to the raceways.**

## 11. Light and glare

- a. What type of light or glare will the proposal produce? What time of day would it mainly occur?  
**Existing onsite lighting will be adequate to provide for security and facility operations.**
- b. Could light or glare from the finished project be a safety hazard or interfere with views?  
**Lighting associated with the proposed project would not be a safety hazard.**
- c. What existing off-site sources of light or glare may affect your proposal?  
**None.**
- d. Proposed measures to reduce or control light and glare impacts, if any:  
**Additional lighting is anticipated to be minimal and will not likely produce more glare impact than currently exists on the site.**

## 12. Recreation

- a. What designated and informal recreational opportunities are in the immediate vicinity?  
**There are several recreational opportunities in the immediate vicinity of the Tumwater Falls Park including walking, picnicking, fish viewing at the hatchery and within the Deschutes, and wildlife and bird watching.**
- b. Would the proposed project displace any existing recreational uses? If so, describe.  
**The maintained lawn area proposed for raceway development would no longer be available for its historic recreational use as a park environment with picnic tables. Public recreation opportunities will be developed related to salmon biology and the operation of this fish hatchery.**
- c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:  
**Site plans include addition of a landscaped access area in the former site of the fish raceways. This area will be constructed with trees, shrubs and grasses to provide recreation with park benches and ADA-compliant accessible paths to the fish viewing areas.**

### 13. Historic and cultural preservation

- a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers located on or near the site? If so, specifically describe.

**The Tumwater Historic District (recognized by the state and federal governments) includes this project site. The hatchery portion of the parcel, including the public parking area, is the southern-most part of this Historic District.**

**The Tumwater Falls vicinity has the potential for a wide variety of historic archaeological resources related to the development of the historic settlement of Tumwater. However, based on the absence of identified archaeological materials or deposits during Western Shore Heritage Services, Inc. (WSHS) cultural resources assessment, the proposed project is not anticipated to have any effect on cultural resources. The extensive use by Native Americans and early European settlers in the immediate vicinity of Tumwater Falls Park creates some concern. Given the historic development and the prehistoric land use of the area, it is likely that archaeological material is present, perhaps at a greater depth than that which was tested by the shovel probe methods during WSHS's investigation. Furthermore, some areas of the proposed project were unable to be systematically tested. If the project were to proceed as planned, archaeological monitoring is recommended at the Tumwater Falls Project area.**



- b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.

**A professional archaeological survey was completed for the site by Western Shore Heritage Services, Inc. (WSHS) on April 30, 2004.**

**Of the shovel probes excavated, no units contained archaeological material. Areas closest to the river such as the surface water intake and the southeastern segment of the new recreational trail under the Capitol Boulevard Bridge were highly disturbed and contained modern garbage including plastic bottles, bottle caps, glass, and metal wire. Shovel probes placed along the recreational trail to the west of the Capitol Boulevard Bridge were free of archaeological material, but also contained evidence**

of disturbance to a depth of 50cm, although this degree of disturbance was not consistent over the entire area. The numerous shovel probes located in the planned raceway footprints also failed to locate any archaeological material.

- c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.

**The Department of Archaeology and Historic Preservation (OAHP at the time) issued a concurrence letter October 29, 2004, ten years ago. This office will again review the project to assure that any changes in the standard of care can be included a review of the 2014 project. The field investigation methods are included as they appear in the report:**

*Field investigations at Tumwater Falls Park consisted of 10 shovel probes spaced throughout the areas anticipated to be disturbed based on current site plans. Areas investigated included the raceways, surface water intake and the new trail on the eastern side of the project area (trail is not included in this action). Portions of the new raceway were unable to be tested because of the current raceways on the northern portion, and the parking lot on the southern portion.*

- d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.

**Monitoring of construction activities is deemed necessary at this site. In the event that ground disturbing or other construction activities result in the inadvertent discovery of archaeological resources, work should be halted in the immediate area, and contact made with city and county officials, the DAHP's State Historic Preservation Officer (SHPO), and appropriate Squaxin Island Tribal officials. In the unlikely event of the inadvertent discovery of human remains, work should be immediately halted in the discovery area, the remains covered and secured against further disturbance, and communication established with county administrative and law enforcement personnel, the office of the SHPO, and authorized Squaxin Island Tribal representatives.**

#### 14. Transportation

- a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.

**The Tumwater Falls Park is owned by the Olympia-Tumwater Foundation and is bounded by Interstate-5 and accessed via Deschutes Way. The site would continue to be serviced via Deschutes Way and no changes to the existing road system are proposed.**

- b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?

**There are no public transit stops in the immediate vicinity of the park. The closest stop is at Tumwater Square, approximately one mile from the site.**

- c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate?

**No new parking is proposed for the Tumwater Falls site. The relocation of the raceways will require the removal of approximately 7 parking spaces.**

- d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).

**No**

- e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

**No**

- f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates?

**Total vehicular traffic associated with hatchery activities is estimated at three round trips per day during typical operations. The addition of educational facilities and viewing windows at the site may result in an increase in the number of visitors. Peak visitor traffic currently occurs during the fall spawning activities when numerous school/educational groups tour the facility.**

- g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.

**No; these land uses are not nearby.**

- h. Proposed measures to reduce or control transportation impacts, if any:

**Facility improvements are not anticipated to result in a transportation problem, so no transportation mitigation measures are proposed.**

## 15. Public services

- a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.

**Because the Tumwater Falls site is already extensively used by the public, the proposed renovations and the addition of raceways is not anticipated to increase the need for public services.**

- b. Proposed measures to reduce or control direct impacts on public services, if any.

**While no appreciable public use increases are anticipated, WDFW has agreed to improve the restroom facilities at the Olympia-Tumwater Foundation office/visitor center to meet an existing need that could increase with the greater visibility of migrating salmon in the fishway to the hatchery.**

## 16. Utilities

- a. Circle utilities currently available at the site:

**electricity, natural gas, water, refuse service, telephone, sanitary sewer**, septic system, other:

**Phone, natural gas, electricity, water, refuse service, sewer are all currently available on site.**

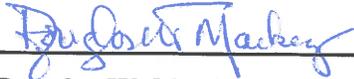
- b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

**No additional utilities would be required at this site.**

### **C. Signature**

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: \_\_\_\_\_



Name of signee **Douglas W. Mackey**

Position and Agency/Organization:

**Fish and Wildlife Biologist, Washington Department of Fish and Wildlife**

Date Submitted: **December 11, 2014**

### **Appendix A Project Drawings**