Washington Department of FISH and WILDLIFE

State of Washington
DEPARTMENT OF FISH AND WILDLIFE

Mailing Address: 600 Capitol Way N, Olympia, Washington 98501-1091 - (360) 902-2200

ENVIRONMENTAL CHECKLIST
(WAC 197-11-960)

A. BACKGROUND

1. **Name of proposed project, if applicable:** Cherry Valley Fish Passage and Drainage

2. **Name of Applicant:** Washington Department of Fish and Wildlife

3. **Address and phone number of applicant and contact person:**

Washington Dept of Fish and Wildlife
Capitol Programs & Engineering Division
600 Capitol Way North
Olympia, WA 98501-1091

Contact Person: Marty Peoples
Fish and Wildlife Biologist
Telephone Number: (360) 902-8426
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E-Mail: peoplmdp@dfw.wa.gov

4. **Date checklist prepared:** *November 22, 2011*

5. **Agency requesting checklist:** *Washington Department of Fish and Wildlife*

6. **Proposed timing or schedule (including phasing, if applicable):**

   Construction is scheduled to begin in June 2012.

7. **Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.**

   No.

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

   A biological evaluation will be prepared by WDFW.

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.**

   Waterwheel Creek restoration is being considered by Wild Fish Conservancy and is directly next to this project.

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

A King County Shoreline Permit, WDFW Hydraulic Project Approval, Army CORP of Engineers Section 404 Permit, and Ecology 401 Water Quality Certification will be needed.

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.

The Cherry Valley Fish Passage and Drainage Project occurs within the Cherry Valley Wildlife Unit, which is part of the Snoqualmie Wildlife Area. This agricultural area is protected from Cherry Creek and the Snoqualmie River floodwaters by a dike, but still floods on an annual basis. This project is intended to address adverse floodwater impacts by improving capacity for drainage and facilitating fish passage out of this specific site.

During flood events, fish that are present in the river are delivered over the dike into the area within which consists of fields and a series of interconnected ditches and isolated ponds which are part of the Cherry Valley Wildlife Unit. All water entering this area drains through one exit point in the dike where a self-regulating flood gate and pump now exist. This flood-gate and pump will not be modified as part of this project. The project goal is improve fish access and delivery of water to this point.

This project will be performed in two phases. Phase 1 includes the correction of 22 identified water drainage constrictions which also function as fish passage barriers within a series of interconnected agricultural ditches at the Cherry Valley Wildlife Unit. These identified barriers, which impede water drainage and fish passage through the series of ditches and ponds, will be corrected by several methods. 1) Undersized and collapsed culverts will be replaced with larger culverts, vehicular bridges or pedestrian bridges. 2) Ditches blocked by sediment and debris will be cleaned to restore function. This includes one ditch blocked by an earthen dam which will be removed to restore ditch connection and function. One additional culvert will be removed and the location permanently filled because this site does not provide any drainage benefit. Phase 1 activities will result in a net cut of 3577.4 cubic yards of material from within existing ditches.

Phase 2 activities will include hydraulically connecting 7 isolated man-made ponds to the existing ditch system in Cherry Valley to facilitate drainage, especially during periods following high water events. These seven isolated ponds not only impound water but currently strand fish. Phase 2 activities (besides improving drainage) will also allow fish to escape this area and avoid warmer and drier periods that might prove lethal to juvenile salmonids. Ponds will be connected to the existing drainage system by excavating short ditches to connect a series of four adjacent ponds to the ditch, and also excavating short ditches to connect three single ponds to existing ditches. One culvert will be added in a newly created ditch to maintain tractor access to agricultural land. Phase 2 activities will result in a net cut of 1349.16 cubic yards of material from within the work area.

Phase 2 activities will involve hydraulically connecting 7 isolated man-made ponds to the existing ditch system in Cherry Valley to provide fish passage and facilitate drainage and out of the ponds following high water events. These seven isolated ponds not only impound water but strand fish (including juvenile salmonids) that enter these ponds during flooding events. Stranded fish are exposed to lethal temperatures, lethal dissolved oxygen levels, and predation. Phase 2 activities (besides improving drainage) will also allow fish to escape this area and avoid warmer and drier seasons.

PHASE 1

The specific design specifications and components of Phase 1 activities are shown on the attached drawings and identified by a listed site number. The specific components are:

1. ***Install Vehicle Bridges***
   a. *Site #980000 – 3 foot diameter by 29 foot long culvert removed, replaced with 21 foot long by 14 foot wide vehicle bridge*
   b. *Site #980001 – 4 foot diameter by 30 foot long culvert removed, replaced with 30 foot long by 14 foot wide vehicle bridge*
   c. *Site #980003 – 4 foot diameter by 29 foot long culvert removed, replaced with 24 foot long by 14 foot wide vehicle bridge*
   d. *Site #980008 – 3 foot diameter by 22 foot long culvert removed, replaced with 35 foot long by 14 foot wide vehicle bridge*

2. ***Install Pedestrian Bridges***
   a. *Site #980012 – 1.5 foot diameter by 16 foot long culvert removed, replaced with 20 foot long by 4 foot 10 inch wide pedestrian bridge*
   b. *Site #980013 – 2.5 foot diameter by 11 foot long culvert removed, replaced with 20 foot long by 4 foot 10 inch wide pedestrian bridge*
   c. *Site #980014 – 1 foot diameter by 28 foot long culvert removed, replaced with 20 foot long by 4 foot 10 inch wide pedestrian bridge*
   d. *Site #980015 – 1 foot diameter culvert removed, replaced with 20 foot long by 4 foot 10 inch wide pedestrian bridge*
   e. *Site #980017 – 1.5 foot diameter by 16 foot long culvert removed, replaced with 20 foot long by 4 foot 10 inch wide pedestrian bridge*
   f. *Site #980018 – 1.5 foot diameter culvert removed, replaced with 20 foot long by 4 foot 10 inch wide pedestrian bridge*

3. ***Install Larger Culverts***
   a. *Site #980004 – 3 foot diameter by 25 foot long culvert removed – replaced with 5 foot diameter by 25 foot long culvert*
   b. *Site #980006 – 2 foot diameter by 18 foot long culvert removed – replaced with 5 foot diameter by 18 foot long culvert*
   c. *Site #980007 – 3 foot diameter by 30 foot long culvert removed – replaced with 5 foot diameter by 30 foot long culvert*
   d. *Site #980009 – 3 foot diameter by 17 foot long culvert removed – replaced with 5 foot diameter by 17 foot long culvert*
   e. *Site #980011 – 4 foot diameter by 19 foot long culvert removed – replaced with 5 foot diameter by 19 foot long culvert*

4. ***Culvert Removals***
   a. *Site #980005 – remove 3 foot diameter by 19 foot long culvert, clean bedding material from ditch to allow water flow*
   b. *Site #980010 – remove 2 foot diameter culvert and water control structure, clean bedding material from ditch to allow water flow*
   c. *Site #980016 – remove 1 foot diameter by 12 foot long culvert, fill void*

5. ***Dam Removal***
   a. *Site #980071 – remove earthen dam to restore water flow out drainage ditch*

6. ***Ditch Cleaning***

a. *Site 980019 – remove debris and accumulated sediment from 556 feet of existing ditch*
b. *Site 980020 - remove debris and accumulated sediment from 354 feet of existing ditch*
c. *Site 980021 - remove debris and accumulated sediment from 900 feet of existing ditch*

PHASE 2

The specific design specifications and components of Phase 2 activities are shown on the attached drawings and identified by a listed site number. Dimensions for constructed ditches will be 5 feet deep, 5 feet wide at bottom, and 20 wide at top of bank. The specific components are:

1. ***Pond to Pond Connections***
   a. *Site A – excavate new 63 foot long channel between ponds and install 5 foot diameter by 30 long culvert*
   b. *Site B – excavate new 62 foot long channel between ponds*
   c. *Site C – excavate new 59 foot long channel between ponds*

2. ***Pond to Ditch Connections***
   a. *Site D – excavate new 212 foot long channel between pond and existing ditch*
   b. *Site E – excavate new 89 foot long channel between pond and existing ditch*
   c. *Site F – excavate new 102 foot long channel between pond and existing ditch*

3. ***Pond to Culvert Connection***
   a. *Site G – excavate new 28 foot long channel between pond and existing culvert*

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including street address, if any, and section, township, and range, 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 Cherry Valley Wildlife Unit is located adjacent to the town of Duvall on the northeast side. This site is reached by proceeding north on Highway 203 from Duvall for 1 mile. The access site into the project area is located on the east side of the road. The project site is in King County, Section 7, Township 26 North, Range 7 East. The parcel number is 072607-9031.

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site (underline one): <u>flat</u>, rolling, hilly, steep slopes, mountainous, other_____.

b. What is the steepest slope on the site (approximate percent slope)? *5%.*

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of the agricultural soils, specify them and note any prime farmland.

The soil is classified as approximately 50% Seattle muck and 50% Woodinville silt loam. These are both very poorly drained soil types, but are classified as prime farmland if drained. This

project area is entirely within historically farmed areas.

d. **Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.** *No.*

e. **Describe the purpose, type and approximate quantities of any filling or grading proposed. Indicate source of fill.**

Phase 1 activities will result in a net cut of 3577 cubic yards. This cut material is the result of larger culverts replacing smaller culverts, ditch cleaning and culvert removal and replacement with an open channel or bridge structures. Phase 2 activities will result in a net cut of 1349 cubic yards. This cut material will result from excavation of new channels that connect isolated ponds. All excess cut material will be hauled offsite to an approved dumpsite above the floodplain.

f. **Could erosion occur as a result of clearing, construction or use? If so generally describe.**

Minor erosion could occur during construction but is not likely. Work will occur on flat topography, and will be done in the summer months when precipitation and overland flow is minimal, thus reducing the opportunity for suspended sediments to be carried to surface waters outside the work area.

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

New bridge surfaces will result in a 1% increase in impervious surfaces in this project site. Approximately 2% of the area will be covered with impervious surfaces at the conclusion of this project.

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

Any potential erosion will be prevented using erosion control Best Management Practices. Specifically, a silt fence will be installed around upland and aquatic construction sites.

2. **Air**

a. **What type of emissions to the air would result from the proposal (i.e., dust automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.**

Vehicle exhaust and dust from construction is expected. No long-term change in emissions is expected from the completed project.

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

No.

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

None.

3. **WATER**

a. **Surface**

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 or wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.**

Waterwheel Creek is a year-round stream and is within the work area.

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.**

One element of this project will occur within Waterwheel Creek. An existing culvert in Waterwheel Creek will be removed and bedding material removed. A vehicle bridge will be installed in the same location and above the stream channel. This specific task is part of Phase 1 activities specified in project drawings. All other elements will occur in ditches that have been constructed with the purpose of providing drainage.

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.**

The entire project area is within a jurisdictional wetland. The total amount of removal and fill required for each phase of the project is as follows:

Phase 1

Cut - A total of 3946.05 cubic yards will be cut while installing bridge abutments, installing new culverts and cleaning ditches.

Fill - A total of 368.65 cubic yards of fill will be placed while burying bridge abutments and seating new culverts. This fill will be mostly comprised of cut material. Approximately 60 cubic yards of crushed rock will be imported from local quarries and used to surface approaches to vehicle bridges.

Net - There will be a net cut of 3577.4 cubic yards from this site.

Phase 2

Cut - A total of 1426.28 cubic yards of dirt will be cut while constructing new connecting channels.

Fill - A total of 77.12 cubic yards of fill will be placed while abandoning one culvert site. This fill will be comprised of cut material from nearby pedestrian bridge installations.

Net - There will be a net cut of 1349.16 cubic yards from this site during Phase 2 activities.

4) **Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.** *No.*

5) **Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.**

Yes. The entire project area is located in the floodplain of the Snoqualmie River and Cherry Creek.

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

No waste material will be discharged into surface waters.

b. **Ground**

1) **Will ground water be withdrawn, or will water be discharged to ground water? Give general description purpose, and approximate quantities, if known.** *No.*

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.**

No waste material will be discharged.

c. **Water Runoff (including storm water):**

1) **Describe the source of runoff (including storm water) and method of collection and disposal, if any (including quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.**

The source of runoff at the construction site would be precipitation, which is expected to minimal during the summer construction period. Storm water treatment will not be not changed or affected in any way. Currently storm water flows from driving surfaces and is infiltrated within grass filter strips at the edge of roadways.

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

With the implementation of impact minimization measures, no waste materials are anticipated to enter ground or surface waters.

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

General Impact Reduction Measures

1. Any storm water runoff will be contained using erosion control Best Management Practices. Specifically, a silt fence will be installed around upland construction sites to filter sediment which may be suspended in runoff water.

2. A turbidity curtain will be installed around the perimeter of the culvert removals and installations to prevent sediment laden water from impacting surfaces waters.

3. Equipment will be washed before entering the job site and inspected daily for fuel or lubricant leaks.

4. Equipment staging and fueling areas will be completely isolated from surfaces waters to avoid the possibility of impacts to surfaces waters resulting from fueling or staging activities.

5. If necessary this entire area can be temporarily isolated from the waters of Cherry Creek through the flood gate regulation. This temporary closure would allow suspended sediments to settle out of the water before being carried offsite.

4. PLANTS

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

_x_ deciduous tree: alder, willow, maple, aspen, cottonwood, other

___ evergreen tree: fir, cedar, pine, spruce

_x_ shrubs

_x_ grass

_x_ pasture

___ crop or grain

_x_ wet soil plants: cattail, buttercup, bulrush, skunk cabbage, other

_x_ water plants: waterlily, eelgrass, milfoil, other

___ other types of vegetation

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

Reed canary grass occurs within the specific work areas and will be removed during ditch cleaning and culvert upgrade activities. All disturbed areas above water will be replanted with a native grass seed mix. Additional plantings of native shrubs will be performed at the vehicle bridge installations sites.

c. List threatened and endangered species [of plants] known to be on or near the site.

No threatened or endangered plant species are known to occur in this area.

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

Native shrubs will be planted next to the vehicle bridges. All upland disturbed areas will be planted with a native grass mix. Species and density of plantings are listed on Phase 1 drawings.

5. ANIMALS

a. Underline any birds or animals, which have been observed on or near the site or are known to be on or near the site:

Birds: hawk, heron, eagle, songbirds, other: waterfowl

Mammals: deer, bear, elk, beaver, other:

Fish: bass, salmon, trout, herring, shellfish, other: Olympic mudminnow

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

Federally threatened species have been observed within and near the project area, including Puget Sound Chinook, Puget Sound Steelhead and Bull Trout. Additionally, state-listed Olympic mudminnow have been observed within the streams at the Cherry Valley Wildlife Unit.

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

Waterfowl species use this area as part of a migration route.

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

To preserve fish and wildlife resources, WDFW will perform this project during periods designed to have minimal effect on waterfowl and fish species due to limited presence. WDFW will also minimize work within water to avoid any harmful impacts upon fish species.

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. *N/A.*

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: *None.*

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.

Materials likely to be present include gasoline and diesel fuel, hydraulic fluid and lubricants. An accidental spill of one these products could occur during project operations.

1) Describe special emergency services that might be required.

None anticipated.

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

A spill prevention and pollution control plan will be prepared by WDFW project engineers to reduce risk of spills and to provide guidance if a spill occurs.

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)? *None.*

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

Increased levels of noise during construction activities are expected from this project. Hours of increased noise levels will be 7am to 6pm. No change in noise level is expected from the completed project.

3) **Proposed measures to reduce or control noise impacts, if any:** *None.*

8. **LAND AND SHORELINE USE**

a. **What is the current use of the site and adjacent properties?**

This land is currently used as a Washington Department of Fish and Wildlife Area which provides public access and also protects critical habitat for wildlife. This site is a popular waterfowl hunting area as well as wildlife viewing. Adjacent properties are currently used for private home sites and agricultural production.

b. **Has the site been used for agriculture? If so describe?** *No.*

c. **Describe any structures on the site.**

Structures on this site are limited to a portable toilet, two gates, primitive roads and remnants of fences.

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

15 culverts will be demolished and replaced with larger culverts or bridges. 3 additional culverts will be demolished and not replaced.

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

Agricultural.

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

Agricultural.

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

h. **Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.**

Parts of this area are classified as Cherry Valley Wetlands within the WDFW Priority Habitats and Species database and are considered sensitive.

i. **Approximately how many people would reside or work in the completed project?** *None.*

j. **Approximately how many people would the completed project displace?** *None.*

k. **Proposed measures to avoid or reduce displacement impacts, if any:** *None.*

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

No change in land use is proposed.

9. **HOUSING**
   a. **Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.** *None.*

   b. **Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.** *None.*

   c. **Proposed measures to reduce or control housing impacts, if any:** *None.*

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 tallest new structure will be the vehicle bridges which have a 4 foot guard rail above the bridge deck. The principle building material will be concrete and steel.

   b. **What views in the immediate vicinity would be altered or obstructed?** *None.*

   c. **Proposed measures to reduce or control aesthetic impacts, if any:** *None.*

11. **LIGHT AND GLARE**
   a. **What type of light or glare will the proposal produce? What time of day would it mainly occur?**

      No change will result in glare.

   b. **Could light or glare from the finished project be a safety hazard or interfere with views?**

      No.

   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:** *None.*

12. **RECREATION**
   a. **What designated and informal recreational opportunities are in the immediate vicinity?**

      Within the Cherry Valley Wildlife Unit, waterfowl hunting, dog training, wildlife viewing, and nature walking are the primary activities. Fishing, boating and swimming occur within the Snoqualmie River and Cherry Creek.

   b. **Would the proposed project displace any existing recreational uses? If so, describe.**

      No.

   c. **Proposed measures to reduce or control impacts on recreation, including recreational opportunities to be provided by the project or applicant, if any:** *None.*

13. **HISTORIC AND CULTURAL PRESERVATION**
   a. **Are there any places or objects listed on, or proposed for, national, state, or local**

preservation registers known to be on or next to the site? If so, generally describe. *No.*

b. **Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.** *None.*

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

This project will remain within the existing footprint of prior development and earthwork.

14. TRANSPORTATION

a. **Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.**

State Highway 203 provides direct access to this site.

b. **Is site currently served by public transit? If no, what is the approximate distance to the nearest transit stop?**

The site is not served by public transit. The nearest stop is 1 mile away in Duvall.

c. **How many parking spaces would the completed project have? How many would the project eliminate?**

The completed project will not affect parking capacity.

d. **Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).** *No.*

e. **Will the project 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? If known, indicate when peak volumes would occur.**

No additional vehicle trips are anticipated to result from this project.

g. **Proposed measures to reduce or control transportation impacts, if any:** *None.*

15. PUBLIC SERVICES

a. **Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so generally describe.** *No.*

b. **Proposed measures to reduce or control direct impacts on public services, if any:** *None.*

16. UTILITIES

a. **Underline utilities currently available at the site: Electricity, Natural Gas, Water, Refuse Service, Telephone, Sanitary Sewer, Septic System, Other.**

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 proposed.

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: Marty Rogers **DATE SUBMITTED:** 11/22/11