Attachment C: SEPA Checklist

Project Name: Fisher Slough - Tidal Marsh Restoration, Levee Setback, and Big Ditch Realignment, Skagit County, Washington

TETRA TECH

SEPA CHECKLIST

Fisher Slough – Tidal Marsh Restoration, Levee Setback, and Big Ditch Realignment, Skagit County, Washington

Table of Contents

A. BACKGROUND

1. **Name of proposed project:** Fisher Slough - Tidal Marsh Restoration, Levee Setback, and Big Ditch Realignment, Skagit County, Washington

2. **Name of applicant:** The Nature Conservancy.

3. **Address and phone number of applicant and contact person:**
   Jenny Baker, Project Manager
   The Nature Conservancy
   410 North 4th Street
   Mount Vernon, WA 98273

4. **Date checklist prepared:** November 23, 2009.

5. **Agency requesting checklist:** Skagit County

6. **Proposed timing or schedule:**
   Phase I – Floodgate Replacement: To Be Completed 12/15/09
   Phase II – Big Ditch Realignment and Siphon Crossing, Levee Setback and Tidal Marsh Restoration: June 2010 – October 2010
   Phase III- Levee Setback Final Loading, Levee Removal, Marsh and Riparian Plantings, Tributary & Tidal Marsh Channel Connections: June 2011 – October 2011

7. **Plans for future additions, expansion, or further activity related to or connected with this proposal:** None at this time.

8. **Environmental information that has been prepared, or will be prepared, directly related to this proposal:**

   - Fisher Slough – Preferred Restoration Plan, Skagit County, WA, Draft Report, October 2006, prepared for The Nature Conservancy by Tetra Tech
   - Fisher Slough – Floodgate Final Design Recommendations, May 2008, prepared for The Nature Conservancy by Tetra Tech
   - Skagit Delta Tidegates and Fish Initiative Implementation Agreement, Working Draft, December 2007, WWAA, NOAA, WDFW
   - Biological Assessment, completed by USFWS Lacey Field Office, 10/15/2009
   - USACE Section 404 Permit Application
   - Phase 1 Cultural Resources Assessment, Tetra Tech, Inc., 6/2009
   - Phase 1 HTRW Assessment, Tetra Tech, Inc., 9/2008
   - Fisher Slough Vegetative Assessment, Tetra Tech, Inc. , 6/ 2008

- The Nature Conservancy Environmental Assessment Form, TNC, 1/2005
- EDR Radius Map, EDR Corp., 4/2008
- Wetlands and Waters of the US Delineation, Tetra Tech Inc. 8/2009

9. **Applications pending for governmental approvals of other proposals directly affecting the property covered by proposal:** None

10. **Government approvals or permits that will be needed for this proposal:**
US Army Corps of Engineers CWA Section 404 Dredge and Fill Permit
US Army Corps of Engineers Rivers and Harbors Act Section 10 Permit
Washington DOE Section 401 Water Quality Certification
Skagit County Critical Areas Ordinance
Skagit County Special Use Permit
Skagit County Substantial Shoreline Development
WDFW Hydraulic Project Approval (HPA)
Fish Habitat Enhancement Exemption
US Fish and Wildlife Section 7 Letter of Concurrence of No Effects to Listed Species
Completion of Section 106 consultation with WA SHPO and area tribes

11. **Description of proposal, including the proposed uses and the size of the project and site.** The purpose of the Fisher Slough Tidal Marsh Restoration Project is to reconnect natural hydrology to approximately 50 acres of currently diked floodplain, restore historical tidal marsh vegetation communities, and remove fish passage barriers. This work is needed to restore rearing areas for juvenile Chinook, increase watershed connectivity for coho, chum and other native fish species, and improve flood and sediment storage conditions for the tributary levee system. Overall, the project will provide multiple benefits including habitat restoration, improved fish passage, restore natural hydrology and provide flood control benefits. The project is a collaborative effort led by The Nature Conservancy with their partners including Dike District #3, Drainage District #17, Skagit County and other partners. Please refer to the attached JARPA for further details.

12. **Location of the proposal.** The project is located on Pioneer Highway (Old SR-530) at Fisher Slough Bridge Crossing, 1.4 Miles South of Conway WA (JARPA Sheet 1). Driving directions: From I-5, take the Conway Exit 221 west, and then continue south 1.4 miles on Pioneer Hwy (Old SR 530) to the Fisher Slough Bridge Crossing. The 60 acre project site is located on the east side of Pioneer Hwy between the Fisher Slough levees. There are four access points for the project site: indicated in the site plans (JARPA Sheet 2) as "Pioneer Hwy Junquist North Access", 'Pioneer Hwy Junquist South Access', 'Pioneer Hwy Smith A South Access', and 'Pioneer Hwy Smith B Access'.

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site: Flat farmland with tributary alluvial fan.

b. **Steepest slope on the site (approximate percent slope):** Steepest slopes are along the banks of Fisher Slough; approximate 26 degree slope on stream and levee banks.

c. **General types of soils found on the site:** The 2002 USGS Geologic Map of Washington Northwest Quadrangle (Dragovich et. al., 2002) indicates that the Fisher Slough Restoration Project site lies within an area of Quaternary alluvium (Qa) consisting of sorted combinations of silt, sand and gravel deposited in streambeds, alluvial fans and locally including peat and lacustrine deposits. A majority of the surface soils at the project are Skagit silt loam. Soil testing, pit tests and borings were performed throughout the site. The underlying soils include medium stiff silts, soft clayey silts, silty sand and pockets of silty sand with gravel.

d. **Surface indications or history of unstable soils in the immediate vicinity:** None apparent.

e. **Purpose, type, sources, and approximate quantities of any filling or grading proposed:** See JARPA Attachment H and Attachment H Addendum.

f. **Erosion potentially occurring as a result of clearing, construction, or use:** Project designs plan for some erosion of tidal channels in the restored floodplain. Also, soils exposed during construction will be more erodible than vegetated soils but will stabilize quickly as marsh vegetation develops. During construction, there are several likely sources of erosion. We refer the reader to the Draft TESC plan for more information. A Draft Temporary Erosion and Sediment Control plan was provided with the Skagit County Grading Application submitted with this SEPA checklist. The project approach has been to outline general TESC and stormwater pollution prevention items, and to ultimately have the construction contractor develop a Stormwater Pollution Prevention Plan (SWPPP) and apply for a Construction General Stormwater Permit, which will have more comprehensive plan identifying all erosion control measures, for which the contractor will be required to implement during construction. In the short term, post construction period, there will be some erosion of the levee removal areas and pilot channel and tributary realignment areas as the restored marsh adjusts to new tidal inflow. Ultimately, the restored floodplain will act as a sediment deposition area over time and will improve sediment storage conditions on the Skagit River and tributary system.

g. **Percent of the site will be covered with impervious surfaces after project construction:** Approximately 1,500sf of new impervious areas will be added to the site. These are the concrete inlet and outlet areas for the new inverted siphon crossing. They will not increase stormwater runoff, as they are for the most part permanently inundated similar to existing channel conditions.

h. **Proposed measures to reduce or control erosion, or other impacts to the earth:** Best management practices (BMPs) will be employed to minimize potential for erosion during construction including access along existing levee road, installation of staging area stabilization rock, and deployment of floating silt curtains and installation of silt fences as needed. The construction contractor will prepare a Stormwater Pollution Prevention Plan (SWPPP) prior to construction. The SWPPP will be reviewed by WDOE and will ensure that sufficient measures are in place to minimize erosion potential and contain eroded materials before they enter waterways.

2. *Air*

a. **Potential types of emissions to the air resulting from the proposal:** No permanent emissions will be generated; however, odors may be temporarily generated when anaerobic soils are excavated; however, this will be temporary. No permanent smoke or dust will be generated. Minor smoke and dust may be generated on a short-term basis during construction. Provisions for dust management/abatement (e.g., water truck) will be provided in the TESC and construction contractor Stormwater Water Pollution Prevention Plan (SWPPP) as required by Washington Department of Ecology General Construction stormwater permit. Minor emissions from machinery or equipment will be generated on a short-term and localized basis during construction.

b. **Off-site sources of emissions or odor that may affect the proposal:** None anticipated or known.

c. **Proposed measures to reduce or control emissions or other impacts to air:** Construction vehicles would be properly maintained, and not left idling at standby to help minimize emissions. Fugitive dust would be controlled by water applications as required during construction.

3. *Water*

a. **Surface:**

1) **Surface water on or in the immediate vicinity of the site:** The project footprint includes the confluence of Little Fisher Creek, Big Fisher Creek, and Carpenter Creek into Fisher Creek which flows into Tom Moore Slough and the Skagit River (See JARPA Sheet 2).

2) **Work required as part of proposal over, in, and adjacent to the previously-described waters:**

During Phase II, the Big Ditch Realignment & South Levee Setback Pre-loading, and Tidal Marsh Restoration Pre-Excavation will occur. This involves realigning Big Ditch to the west to consolidate with other crossing infrastructure, constructing an inverted siphon crossing, pre-loading the south levee realignment setback, pre-excavating the tidal marsh restoration pilot channels, main tidal channel and tributary realignments in the dry, and regrading local irrigation drainage ditches. (See JARPA Sheet 5)

During Phase III, the South Levee Setback Final Loading, South Levee Removal & Tidal Marsh Restoration Channel Connections will occur. This phase involves final loading and completion of the south levee realignment setback, landscaping and plantings, demolition of the Big Ditch crossing, breaching and removal of the existing levee and tidal marsh restoration connection of the tidal marsh restoration pilot channels. (See JARPA Sheet 6)

3) **Amount and location of fill and dredge material to be placed in or removed from surface water or wetlands, and source of fill material:**

With the exception of existing constructed upland areas such as levees, the vast majority of the project site was historically a natural wetland. Much of the site, however, has been diked and drained and is considered poor quality, prior

converted cropland. Anticipated outcomes of this project include increased fish passage and the restoration and enhancement of nearly 50 acres of tidal marsh and tributary riparian areas. No compensatory mitigation is planned, the project is a habitat restoration project and will restore nearly 50 acres of prior converted farmland to wetlands. Areas of fill and totals are listed below. Most fill material will originate onsite. A total of 122,579CY of cut and 128,718CY of fill with a net fill of 6,139CY is proposed for the project. A majority of the net fill will be used to fill and grade non-fish bearing, historic agricultural drainage ditches. During the project, up to 40,000CY of clean levee fill import material may be needed to accommodate sequencing of the cut/fill/grade activities. This number is included in the overall cut/fill net estimates and will be removed and hauled to a local, upland off-site disposal location prior to project completion. A summary of fill areas by wetland and channel type is provided herein.

Wetland fill
South Levee Setback: 6.69 ac

Fill of Existing Channels
Big Ditch (2 areas): 2,070 lf (2.46 ac)
Little Fisher Creek Ditch: 1,550 lf (0.35 ac) (Note: convert to riparian)
South Levee ditches: 4,420 lf (1.80 ac) (Note: convert to tidal wetlands)
Little Fisher Creek channel: 1,550 lf (0.35 ac) (Note: convert to riparian area)
Big Fisher Creek channel: 100 lf (0.03 ac)
Main Tidal Channel Plug: 100 lf (0.11 ac)

Conversion of Wetlands to channel
Big Ditch: 4,145 lf (4.25 ac)
Tidal Channel Realignment: 1,000 lf (0.79 ac)
Pilot Channel A: 1,025 lf (0.07 ac)
Pilot Channel B: 1,600 lf (0.11 ac)
Big Fisher Creek: 1,671 lf (0.67 ac)
Little Fisher Creek: 1,250 lf (0.11 ac)

Excavation of Existing Channels
North Levee ditch: 1,920 lf (0.75 ac)

Inverted Siphon Excavation/Backfill Area
Wetlands: 0.11 ac
Channel: 0.33 ac

Temporary Fill
Staging/stockpiling areas (3): 1.42 ac (Note: Temporary gravel fill area, only as needed, removed and restored upon project completion)

Restored Wetland Area
Tidal Marsh: 49.7 ac (Note: 60.0 ac restored tidal marsh total acreage if including existing 10.0ac)

4) **Surface water withdrawals or diversions required by the project, including purpose and approximate quantities:** Fisher Slough will be dewatered at the

site of the new siphon undercrossing and during demolition of the existing siphon during construction of the siphon. Realignment of the main tidal channel of Fisher Slough and Big Ditch channel will require fill and plugging activities. The upstream end of the main tidal channel realignment will be plugged with the main tidal channel realigned to the south to maximize connection with the tidal marsh area. Big Ditch will be plugged and rerouted west through the Jungquist property, which comprises the northern portion of the project area (See JARPA Figure 5).

5) **Relationship of project site to the 100-year floodplain:** The site is entirely within the 100-year floodplain.
6) **Discharges of waste materials to surface waters required by proposed project:** None are anticipated.

b. ***Ground:***

1) **Ground water to be withdrawn, or water discharged to ground water associated with the project:** Groundwater will be managed during construction dewatering of the inverted siphon installation, seepage cutoff trenches for the levees, and existing Big Ditch culvert demolition work. Infiltration of dewatering systems is anticipated in sedimentation basins as part of the dewatering and TESC/SWPPP erosion, sedimentation BMPs.
2) **Waste material that will be discharged into the ground from septic tanks or other sources:** None. Not applicable.

c. ***Water runoff (including stormwater):***

1) **Source of runoff, method of collection and disposal associated with project: None.** Surface water runoff will occur along existing natural and farm drainage areas. For those areas that may have erosion, turbidity, pollution or diversion activities, appropriate BMPs will be prescribed and implemented as necessary to treat surface water runoff.

2) **Potential for waste materials to enter ground or surface waters:** Potential for spills of vehicle and construction equipment fuels is possible, but considered low with implementation of the SWPPP and the BMPs listed below.

d. **Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:** Any refueling of vehicles and equipment will be done in a controlled environment. Standard fuel spill prevention measures will be employed at construction/laydown site. BMPs to reduce or control include:

- A majority of constructed features will be performed in dry and isolated work areas, with channel reconnections and breaches performed in a slow and downstream to upstream method to limit the potential for on-site erosion and turbidity;
- turbidity will be monitored and work will be halted if signs of high turbidity or of fish in distress are observed;
- biodegradable hydraulic fluids will be used in the machinery at the site;

- refueling will occur in the staging area on the backside of the levee, located landward of the work area with implementation of appropriate handling and source control BMPs;
- fuel spill kits with absorbent pads will be onsite at all times; and,
- drive trains of equipment will not operate in the water.

4. Plants

a. Types of vegetation found on the site: The predominant vegetation on the project site is a monoculture of reed canary grass *(Phalaris arundinaceae).* Other plant species present include Pacific willow *(Salix lasiandra),* dogwood *(Cornus sp.)*, salmonberry *(Rubus spectabilis)*, skunk cabbage *(Lysichiton americanum)*, reed canary grass, Indian plum (*Oemlaria cerasiformis*), and red alder *(Alnus rubra).*

b. Kind and amount of vegetation to be removed or altered by the project: A

The project sites lie in the Eastern Puget Riverine Lowlands ecoregion. This ecoregion is composed of floodplains and terraces. Western red cedar forest, western hemlock forest, and both riverine and wetland habitat were common prior to settlement. Pastures, cropland, and urban centers now dominate the landscape.

The majority of the trees in the project area are medium to small in size and tend to be one of three species; black cottonwood (*Populus trichocarpa*), willows (*Salix* sp.), and red alder (*Alnus rubra*). Weedy species, most of them invasive, dominate much of the project area (see Appendix C for a full species list). Species such as Himalayan blackberry (*Rubus procerus*), reed canary grass (*Phalaris arundinacea*), *Polygonum* sp., and crop plants are common. Other plants found in the project area are red osier dogwood (*Cornus sericea* spp. *sericea)*, baldhip rose (*Rosa gymnocarpa* var. *gymnocarpa*), Nootka rose (*Rosa nutkana*), red elderberry (*Sambucus racemosa* ssp. *pubens*), and crop or planted species such as wheat (*Triticum* spp.), white clover (*Trifolium repens*), and ryegrass (*Lolium* sp.).

c. Threatened or endangered species known to be on or near the project site: The USFWS list of threatened and endangered species for Washington was accessed during preparation of the Biological Assessment for this project (USFWS 2009). No threatened or endangered plant species are known to the habitat types found in the area, nor are they likely to occur there. A Biological Assessment documenting effects to listed species has been prepared USFWS has concurred with the finding of no effect to listed plant or animal species.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site:
The primary areas that will be planted or seeded are as follows:

- Hydroseed exposed surfaces on the new levee setback structure with special grass mix for levees.
- Hydroseed disturbed areas along the toe of the levee and within the marsh areas with marsh seed mix.

- Seed all disturbed areas in the marsh with marsh species mix.
- Plant and seed native woody riparian and herbaceous species at higher and appropriate riparian areas around the site, especially on exposed and graded land surfaces.
- Preserve existing vegetation and limit access and grading areas to the fullest extent possible, which is clearly shown on plans as work limits area for construction equipment.

The vegetation and planting plan is designed to allow natural establishment of native seed sources in the tidal marsh areas, while limiting the potential for invasive species infestations. The areas that will be planted are delineated as follows:

- Levee hydroseed areas
- Hydroseed tidal marsh disturbed areas and pilot channel margins
- Hydroseed and plant riparian areas

The levee setback side slopes will be seeded with a fescue and ryegrass mix that has been applied on other northwest levee setback projects. Some issues that have been observed in plant mixes on levees is that natives species do not work well on levee/dike areas. The compacted soils need good grass cover that can be mowed as part of operations and maintenance activities. An effective mix includes tall fescue with annual ryegrass for quick cover (Kilcoyne, 2009). The seed mix will be applied using a hydroseed with a soil binding agent and tackifier along all exposed areas of the levee from the toe to the top of levee embankment. The access and roadway areas along the top of the levee will not receive hydroseed treatments, as they will be covered with crushed road subsurface and surface materials. The seed mix is specified as follows:

Festuca rubra	Fescue, Creeping Red
Festuca arundinacea	Fescue, Tall
Lolium multiflorum	Ryegrass, Annual or Italian
Trifolium pratense	Clover, Red

The second vegetation and planting area are those disturbed areas of the tidal marsh and pilot channel margins. The likely exposed areas will include thin strips along the toe of the levee, margins of the pilot channel and tributary realignments, and ditch fill areas on the lower elevation portions of the project. Typically in tidal marsh restoration projects, these areas are not seeded or planted as there is enough native seed supply for natural plant establishment to occur. However, for the purposes of this project, the strategy for controlling invasive infestations and limit erosion is to maintain as much existing vegetation as possible on the marsh plain areas, and then seed and plant those disturbed areas to promote rapid growth of native species to outcompete invasive Reed Canary Grass (RCG). Plantings are those arsh species and include the following:

Carex lyngbyei	Lyngbei's Sedge
Aster subspicatus	Douglas aster
Deschampsia cespitosa	Tufted hairgrass
Triglochin Maritimum L.	Seaside Arrowgrass
Hordeum brachyantherum	Meadow barley
Potentilla pacifica	Pacific silverweed

The third vegetation and planting area are the riparian areas associated with the tributary realignments, and higher elevations of the levee removal. The recommendation is to hydroseed exposed areas, and then plant woody species to outcompete invasive RCG. The riparian zones will be planted as buffers following along the tributary realignments of Big Fisher and Little Fisher creeks. Riparian plantings include the following species:

Riparian Area Hydroseed

Agrostis spp.	Bentgrass
Festuca rubra	Fescue, Creeping Red
Festuca trachyphylla	Fescue, Hard
Festuca arundinacea	Fescue, Tall
Lolium multiflorum	Ryegrass, Annual or Italian

Riparian Area Plantings

Cornus stolonifera	Red-osier dogwood
Picea sitchensis	Sitka spruce
Lonicera involucrata	Twinberry
Malus fusca	Pacific crabapple
Rosa nutkana	Nootka rose
Salix hookeriana	Hooker willow
Salix lasiandra	Pacific willow
Populus Trichocarpa	Black Cottonwood

5. Animals

a. **Birds and animals which have been observed on or near the site or are known to be on or near the site (Birds, Mammals, Fish):** Little wildlife has been observed at the proposed project site. Most of the species of wildlife observed have been birds, including great blue heron *(Ardea herodias),* mallard ducks *(Anas platyrhynchos),* northern pintail *(Anas acuta),* and black phoebee *(Sayornis nigricans).* Evidence of pocket gophers (*Thomomys bottae)* was observed, and western fence lizards *(Sceloporus occidentalis*) and gardener snakes (Thamnophis grigas) were also observed.

b. **Threatened or endangered species known to be on or near the site:** Listed species known to the area include steelhead trout *(Onchorhynchus mykiss),* Chinook salmon *(O. tshawytscha),* and bull trout *(Salvelinus confluentus).* Effects to steelhead and Chinook are covered by "Limit 8", which is a programmatic NMFS Biological Opinion (BO) covering projects funded by the Salmon Funding Recovery Board (SFRB). This BO allows SRFB-funded projects to occur without

additional consultation beyond completion of a self-certification form, which was completed and submitted to the US Army Corps of Engineers as part of the Sections 404/10 application process. Effects to bull trout have been documented in a Biological Assessment prepared by the US Fish and Wildlife Service (Lacey, WA, field office) in October, 2009. No adverse effects to bull trout from the proposed action were identified in the Biological Assessment.

c. **Relationship of site to migration routes:** Fisher Slough is on the Pacific flyway, which is the main north-south migration route for migratory birds. The slough itself may be used by waterfowl for resting and foraging and the surrounding fields are likely used for foraging. Anadromous fish including Chinook and coho salmon and cutthroat trout use Fisher Slough as a migration pathway to spawning grounds in streams higher in the watershed.

d. **Proposed measures to preserve or enhance wildlife:** The purpose of this project is to enhance and restore wildlife (fish) habitat. Although mild short-term effects may occur during project construction, the overall effect will be of benefit to wildlife. Specific measures to protect aquatic species include complete isolation of the work areas during major construction using the downstream floodgates and upstream diversion structures. Also a majority of in-water work will be performed at low tides with protective silt curtains BMPs when complete project isolation is not in effect. Any project activities that may affect aquatic areas will only occur during a work window found between July 15 and October 15. 2-week extensions on front and back end of in-water window coordinated with Brian Williams of WDFW. These were necessary to accommodate difficult construction conditions for the inverted siphon crossing, as well as the length of the levee removal.

6. Energy and Natural Resources

a. **Kinds of energy to be used to meet the completed project's energy needs:** The construction contractor may tie into existing powerlines for minor energy needs for lighting, use of electronic or telephone equipment, or use of light equipment that requires electricity (sump pumps, handsaws, etc,) . Construction equipment will be powered by fossil fuels.

b. **Potential effect of the project on use of solar energy by adjacent properties:** None.

c. **Energy conservation features included in the plans, and proposed measures to reduce or control energy impacts:** None

7. Environmental Health

a. **Health Hazards.**

1) **Potential environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous wastes that could occur as a result of this proposal:** None anticipated. A Phase 1 HTRW report

prepared for this project found no potential sources of HTRW and did not recommend further study (Tetra Tech 2008). Although spills of fuels or lubricants are always possible when heavy construction machinery is in use, the SWPPP and BMPs and adherence to OSHA standards will reduce the potential for spills and will specify measures to contain any spilled substances, and provide safety for those individuals involved with the project.

2) **Special emergency services that might be required:** None anticipated.

3) **Proposed measures to reduce or control environmental health hazards:** In addition to the BMPs spelled out in Section 3.d, a water truck will be on site during earth moving work to keep dust to a minimum.

b. Noise

1) **Types of noise exist in the area which may affect project:** None. Setting is rural agricultural, with intermittent vehicle traffic on Pioneer Highway and railroad traffic on BNSF rail line, both crossing through the project site.

2) **Types and levels of noise created by or associated with the project on a short-term or a long-term basis:** There are no sensitive receptors such as schools, hospitals, or wildlife areas in the project area, and the nearest house is approximately 400 yards away from the project location. During the construction period, intermittent noise would be generated during daylight hours at the project site from construction equipment. Levels of noise would be typical of those associated with bulldozers, scrapers, excavators, and trucks. These noise levels generally do not exceed 80 decibels at 50 yards. Construction equipment and vehicles would be properly muffled, and noise levels are not expected to exceed county and local noise regulations for such work.

3) **Proposed measures to reduce or control noise impacts:** Construction equipment and vehicles would be properly muffled, and construction would take place only during daylight hours.

8. Land and Shoreline Use

a. Current use of the site and adjacent properties: The site is currently used for agricultural purposes and flood control. Current landowners grow crops such as cucumbers, potatoes, and wheat. Diking District #3 and Drainage District 17 maintain flood control levees on both sides of Fisher Slough, as well as floodgates found on the west side of Pioneer Highway, where Fisher Slough passes under the highway. The Pioneer Highway and BNSF rail line cross near and adjacent to the site on parallel bridges. Land uses on adjacent properties include cultivated agricultural land to the north, east, and south, and vegetated levees to the north and south of the Fisher Slough riparian area. There are several private residences to the east of the project that are higher in elevation than the affected tidal restoration and flood storage areas of the project.

b. Use of the site for agriculture: See answer to item 8a.

c. Description of existing structures on the site:

The project site near the floodgates contains a county bridge on Pioneer Hwy that spans Fisher Slough; a set of floodgates that connect the Dike District #3 levee system are also located at the bridge; a flood return structure along the North Levee, the existing Big Ditch crossing and spillway structure, and a BNSF railroad crossing west of the Pioneer Hwy bridge. There are also utility crossings in the area including fiber optic cables and overhead electrical utilities that run along the Pioneer Hwy and BNSF railroad corridor. There is a small railroad signal box to the south of the project site.

The downstream floodgate affixed to the Pioneer Hwy bridge provides flood protection during Skagit River floods. This structure is a partial fish passage barrier and had the gates replaced with self-regulating gates to provide fish passage in Phase I of this project.

The Dike District #3 levees are tributary crossing levees that prevent flooding of local farm areas from the Fisher Slough tributaries, and the Skagit River. The north levee has a five-gate return structure that acts to return flows to the Skagit River if levees were to break or overtop north of the project site. The south levee has an emergency spillway at the existing Big Ditch crossing. The entire south levee structure is being set back, and the emergency spillway improved, to provide an additional 300 acre-ft of flood storage and restoration of an additional 50 acres of freshwater tidal marsh habitat.

The Big Ditch crossing is an agricultural drain that has been constructed several feet lower than the surrounding drainage system to provide interior drainage for local farm areas. The existing Big Ditch culvert crosses beneath Fisher Slough, and is a fish passage barrier at the center of the project site. The existing structure is being demolished and realigned and consolidated with other crossing infrastructure to the west near at the Pioneer Hwy bridge. It will be reconstructed as an inverted siphon structure.

On the north side of the project, the Junquist property has minor farm drainage infrastructure including ditches and farm road crossing culverts. Modification of these structures is planned as part of the Big Ditch Realignment.

d. Structures to be demolished: The south levees will be removed from their current location and moved back to the south side of the restoration site. The existing Big Ditch culvert will be demolished and removed as part of the Big Ditch realignment (See JARPA Figure 5).

e. Current zoning classification of the site: Agricultural, Ag-NRL.

f. Current comprehensive plan designation of the site: Natural Resource Lands.

g. **Current shoreline master program designation of the site:** The project site is designated as shoreline as defined by the Shoreline Management Act and the Skagit County Master Plan.

h. **Relationship of project site to any "environmentally sensitive" area:** The proximity to wetlands makes this site a Critical Area as defined by Skagit County's Critical Areas Ordinance. Skagit County Planning has completed a Critical Areas review and determined that no further review is needed as part of this project.

i. **Approximate number of people residing or working in the completed project:** None, not applicable.

j. **Approximate number of people displaced by the project:** None, not applicable.

k. **Proposed measures to avoid or reduce displacement impacts:** None, not applicable.

l. **Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans:** The project is going through review for a Special Use Permit and a Shoreline Substantial Development permit. No project features have been identified through review of county code or Shoreline Act provisions that are incompatible with existing land uses or plans.

9. Housing

Not applicable, since project does not involve housing units.

10. Aesthetics

The proposed project will restore tidal marsh, parts of which may be unvegetated. These areas would be the tidal channels and possibly small ponded areas. Therefore, the main difference in the visual landscape will be the difference between agricultural lands and the restored natural marsh landscape condition. During the construction period, the aesthetics of the site would be temporarily altered by the presence of construction equipment, materials, and activities. Following construction, the site would be restored to former aesthetics, and over time, aesthetics will potentially be enhanced when additional vegetative plantings become established. As vegetation matures over the long term in the marsh and riparian areas, the view will change from farm to natural landscapes.

11. Light and Glare

Not applicable, since the project does not involve any creation of sources of light and glare.

12. Recreation

The project vicinity comprises mostly private agricultural land, an active BNSF railroad right-of-way, The Nature Conservancy lands, and channels and riparian areas associated with Fisher Slough and Skagit River. No formal recreation opportunities are designated in the immediate project vicinity. However, informal access to the slough and river for fishing, and occasional walking/hiking along the levees and a historical abandoned railroad line in the general area may occur. The proposed project would not displace any existing recreational uses, although the levees will now be set back from the slough.

13. Historic and Cultural Preservation

A cultural and archaeological resources field investigation was performed at the site in June of 2009 by a Tetra Tech archaeologist (Tetra Tech 2009). This survey revealed no resources of cultural, historical, or archaeological value at or near the site. The WA SHPO has concurred with the findings of this survey, as did the Swinomish tribe (Campbell 2009), the Sauk-Suiattle tribe (Wolten 2009), and the Stillaguamish tribe (Lyste 2009).

Further reconnaissance-level investigation was performed by representatives of the Stillaguamish tribe on Dec. 1, 2009. This investigation revealed no specific resources of interest to the tribe.

a. **Places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site:** None, see above.

b. **Landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site:** None, see above.

c. **Proposed measures to reduce or control impacts to cultural resources:** The construction crew will be trained in established discovery protocols and will stop work if evidence of protected or sensitive cultural resources is discovered. The Stillaguamish tribe has requested notification be sent so they may opt to provide a monitor during the following work activities:

    a. Regrading of the irrigation farm ditch north of the north levee
    b. Connecting the existing levee into the Moyer hill side
    c. Removal of the existing dike and levee system

    Monitors, as well as an assigned project archaeologist, will be onsite during construction to watch for signs of cultural resources unearthed during construction. The archaeologist will follow the project discovery protocols and has the power to stop work on the project in the discovery area until proper investigation of the resources has been completed.

14. Transportation

Up to 8,000 truck trips to and from the site will occur as a result of the project. Over the course of the project, this averages to 1 truck trip every fifteen minutes of each work day.

Proper methods for traffic control would be employed as necessary to optimize safety and efficiency. The construction contractor will obtain a Right of Way Access/Utility permit from Skagit County, which will spell out required traffic control measures, possibly including flaggers, signs, and/or temporary signal lights. Compliance with the Right of Way/Utilities permit will ensure that there is no significant effect from temporarily increased traffic to and from the site.

15. Public Services

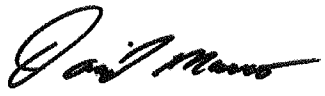
The project would not result in an increased need for public services (e.g., fire protection, police protection, health care, schools, other).

16. Utilities

A utilities map of the area has been obtained from Skagit County and was used during the planning process to ensure that there would be no effect on sewer or water facilities or electrical lines. All heavy construction equipment is self-contained and will not require power from the grid. A set of temporary trailers for project owners, partners, and contractors may be set up for onsite office and storage facilities, and may tie into existing power lines for lighting, heat, use of electronic equipment, and use of small electric handtools.

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: 

Date Submitted: December 3, 2009

Reference Cited

USFWS 2009. Intraservice Biological Evaluation Form for Fisher Slough Restoration Project. USFWS Lacey Field office, Lacey, WA.

Campbell, Larry. 2009. Email response from the Swinomish Tribal Historic Preservation Officer indicating concurrence with a finding of no effect on cultural resources from

Phases II and III of the Fisher Slough Tidal Marsh Restoration Project. Sent by email to Jenny Baker of the Nature Conservancy, Skagit Field Office, Mt. Vernon, WA on Oct. 13, 2009.

Lyste, Kerry. 2009. Letter response from cultural resources representative of the Stillaguamish Tribe indicating concurrence with a finding of no effect on cultural resources from Phases II and III of the Fisher Slough Tidal Marsh Restoration Project. Sent by email to Jenny Baker of the Nature Conservancy, Skagit Field Office, Mt. Vernon, WA on Dec.1, 2009.

Tetra Tech, 2008. Fisher Slough Restoration Project Phase 1 HTRW Report. Prepared by Tetra Tech scientist David Broadfoot, Seattle WA, September 2008.

Tetra Tech, 2009. Cultural Resource Survey for the Proposed Fisher Slough Restoration Project. Prepared by Frank Stipe, Tetra Tech archaeologist, Bothell, WA, June 2009.

Wolten, Richard. 2009. Email response from a representative of the Suak-Suiattle tribe indicating concurrence with a finding of no effect on cultural resources from Phases II and III of the Fisher Slough Tidal Marsh Restoration Project. Sent by email to Jenny Baker of the Nature Conservancy, Skagit Field Office, Mt. Vernon, WA on Oct. 9, 2009.