

WAC 197-11-960 Environmental checklist.

ENVIRONMENTAL CHECKLIST

Purpose of checklist:

The State Environmental Policy Act (SEPA), chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decide whether an EIS is required.

Instructions for applicants:

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can.

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later.

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

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.

Use of checklist for nonproject proposals:

Complete this checklist for nonproject proposals, even though questions may be answered "does not apply." IN ADDITION, complete the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (part D).

For nonproject actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer," and "affected geographic area," respectively.

A. BACKGROUND

1. Name of proposed project, if applicable: **Fir Island Farm Estuary Restoration Project**
2. Name of applicant: **Washington State Department of Fish and Wildlife (WDFW)**
3. Address and phone number of applicant and contact person:

**Attn: Mr. Brian Williams
P.O. Box 1100
La Conner, WA 98257
(360)466-4345 EXT. 250**

4. Date checklist prepared: **January 27, 2014**
5. Agency requesting checklist: **WDFW**
6. Proposed timing or schedule (including phasing, if applicable):

**Overall Schedule: January 2015 – June 2017 (as funding allows):
Year 1 (2015): Construct setback dike and earthwork landward of existing dike
Year 2 (2016-2017): Construct spur dike extension and remove existing dike**

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

None.

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

In 2011, WDFW completed a feasibility study for the project that included a review of eight alternatives, including a no action and preferred alternative. As part of this feasibility and design studies, the following environmental reports and analysis were completed:

- Wetland and vegetation reconnaissance
- Geotechnical studies
- Interior drainage and surface and groundwater studies
- 3D hydrodynamic modeling study
- Baseline fisheries assessment
- Cultural resource assessment
- Analysis of effects to WDFW's snow goose management
- Analysis of effects to agriculture

In addition, the following studies have been completed at the project site through the Final Design Project:

- Draft Geotechnical and Hydrogeologic Data Report
- Draft Coastal Engineering Report
- Draft Interior Drainage Study Report
- Cultural Resources Report
- Hydrodynamic Modeling Analysis

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.

No other proposals are pending which could directly affect this project proposal.

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

Those governmental approvals required include the following:

- Skagit County Shoreline Master Program, Shoreline Substantial Development Permit
- Skagit County Special Use Permit
- Skagit County Fill and Grade Permit
- Skagit County Building Permit
- Skagit County Critical Areas Review
- Floodplain Development Permit
- Clean Water Act, Sections 401 and 404
- Rivers and Harbors Act, Section 10
- Clean Water Act, Section 402
- National Historic Preservation Act, Section 106
- Endangered Species Act, Section 7
- Hydraulic Project Approval
- Coastal Zone Management Consistency Determination
- Bald and Golden Eagle Act, Eagle Take Permit

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.)

The Fir Island Farm Estuary Restoration Project will restore the tidal ecosystem processes of the Skagit River delta to the project site through the following actions as illustrated on Joint Aquatic Resource Permits Application (JARPA), Figure 3:

- Remove approximately 3,900 lineal feet (lf) of existing coastal flood dike. Use the native substrate materials from the existing flood dike to back fill the existing man made drainage channel and borrow channel along the south and north toe of the existing dike.
- Construct approximately 5,900 lf of new setback flood dike.

- **Retain and augment approximately 550 lf of existing Brown Slough flood dike along the east shore south of the existing Brown Slough tide gate complex.**
- **Construct 200 lf of a new spur dike that extends the existing and augmented flood dike along the east shore of Brown Slough south into the existing intertidal marsh.**
- **Armor the bayside toe and face of the new flood dike with large rock materials.**
- **Remove and dispose the of the existing Claude O. Davis Slough tide gates.**
- **Construct new tide gates in No Name Slough along the alignment of the new setback flood dike.**
- **Construct a new log boom structure on the bayside of the new No Name Slough tide gates.**
- **Construct a new 5- to 7-acre drainage storage pond (approximately 200 feet [ft] wide) along the landward side of the new setback dike connected to the No Name Slough interior drainage channel.**
- **Use existing dike materials to elevate the farm field elevations at select areas along the south side of the new flood dike to created and support high marsh habitat restoration.**
- **Construct a new floodgate or flow control structure that connects the new drainage storage pond with the Dry Slough interior drainage channel.**
- **Construct a new pump station between the new drainage storage pond and new setback flood dike. Consistent with the Skagit Drainage and Fish Initiative requirements, the new pump station will be constructed a minimum of 300 feet from the interior drainage channels of No Name Slough and Dry Slough to avoid potential juvenile salmonid entrainment.**
- **Construct a new culvert/tide gate at the existing Dry Slough tide gate complex.**
- **Excavate new tidal pilot channels in the farmland area of the project site. Use native substrate material excavated from the new tidal pilot channels to elevate the farm field elevations at select areas along the south side of the new flood dike to created and support high marsh habitat restoration.**
- **Relocate the southern end of the existing public access road towards the west, near the toe of the existing Brown Slough flood dike.**

The actions associated with this restoration project is expected to restore approximately 127.5 acres of complex tidal marsh and 17.4 acres of tidal channels and produce an estimated 65,000 to 320,600 juvenile Chinook smolts annually. Snow goose management, public access, and agriculture will be maintained at the project site. Agriculture drainage, flood protection, and protection from saltwater intrusion will be maintained for the remaining farmland at the project site and for the neighboring farms. The new setback dike design incorporates the results of a 3D Hydrodynamic Model analysis of the existing coastal process of Skagit Bay as well as the latest climate change and sea level rise predictions.

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, 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 project is located on Fir Island in Skagit County, Washington, between the towns of Conway and La Conner. The site is located in Section 22, Township 33 North, Range 3 East, Willamette Meridian. The address for the site is: 15802 Fir Island Road, Mount Vernon, WA 98273. See JARPA, Figure 1.

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site (circle one): Flat, rolling, hilly, steep slopes, mountainous, other

The site is comprised of farm fields that are generally flat and at an elevation of approximately 6 ft (NADV88) with an existing dike along its southern perimeter with a top elevation ranging from approximately 13 to 14.5 ft (NADV88). Historical estuarine wetlands adjacent to the existing dike are approximately 2 to 3 ft higher in elevation than the farm fields behind the dike.

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

The steepest slopes on site are the 2:1 (2 ft horizontal run to 1 ft vertical rise) slopes at points along the existing dike. However, the general slope of the dike is 3:1.

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 prime farmland.

The U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey mapping system identifies the surface soils on site as Skagit silt loam and Sumas silt loam throughout the existing Fir Island Farm farm fields with Hydraquents, tidal soils bayward of the existing dike. Both Skagit silt loam and Sumas silt loam soils are considered prime farmland if drained.

The U.S. Geological Survey maps the surficial geology of the site as including Nearshore deposits (Holocene) (Qn), Marsh deposits (Holocene) (Qm), Skagit River alluvium (Qas), and fill (af).

Five general soil units were identified during the feasibility studies. These five soils types include dike fill (Hf), an agricultural layer, Holocene mudflat deposits (Hm), Holocene alluvium (Ha), and Holocene estuarine deposits (He).

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

Slumping is observed along sections of the existing dike. Previous geotechnical explorations identified liquefiable soils at the site.

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

The project will require 150,000 cubic yards (cy) of fill imported to construct the new 5,900 linear foot (lf) setback dike and 200 lf long spur dike extension. Fill materials will be sourced by the contractor from approved commercial suppliers. Fill material will include suitable soil materials to achieve the necessary compaction requirements for the setback and spur dike structures, crushed gravel materials for the access roads on top of and landward of the new setback dike, and rock materials for dike protection along the bayfront side.

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

Construction activities such as clearing and excavation could result in erosion and sedimentation. A site-specific temporary erosion and sediment control (TESC) plan, stormwater pollution prevention plan (SWPPP), and spill prevention control and countermeasures plan (SPCCP) will be prepared for the project prior to beginning construction to minimize erosion during the project.

The project design includes the excavation of tidal pilot channels within farm fields behind the existing dike, which will be exposed to tidally influenced surface water following the breaching of the existing dike. A 3D hydrodynamic model was developed to characterize post-construction tidal conditions. In response to this 3D hydrodynamic modeling, the project will retain and augment a portion of existing dike to function as a spur dike, which will be extended by approximately 200 lf further into Skagit Bay. The purpose of this spur dike and

proposed in-water excavation during the dike removal is to protect the Brown Slough complex and minimize the erosion and deposition of on-site soils into Skagit Bay following the dike removal. Additionally, the 3D hydrodynamic model shows that erosion of the main tidal inlet will occur, and an excavation and grading plan for this area is planned. Finally, pilot tidal channels will be excavated in the marsh to limit erosion. Nevertheless, it is expected that some erosion of the tidal channels will occur following construction.

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

The project does not propose new buildings or asphalt impervious surfaces. However, two permanent access roads will be constructed along the new setback dike alignment, one on top of the setback dike and one on the landward side, for periodic dike inspection and maintenance. The surface of the access road along the top of dike will be crushed rock while the access on the landward side of the dike will be grass. The area of these two access roads will total approximately 4.47 acres. Additionally, the southern extent of the existing access road to the site off of Fir Island Road will be relocated to the west, towards the toe of the east Brown Slough flood dike. The relocated portion of the access road will be comprised of crushed rock while the abandoned portion of the access road will be converted to active agricultural fields.

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

A project specific TESC Plan, SWPPP, and SPCCP will be prepared that describes a specific plan and approach to reducing erosion during construction. However, expected best management practices (BMPs) within these plans include:

- Perform earthwork during the “dry season” to the greatest extent practical.
- Install construction access.
- Identify clearing limits with high visibility fencing.
- Control sedimentation through the installation of silt fencing, straw wattles, or similar perimeter protection.
- Install permanent cover, such as vegetation and rock cover, to protect exposed soils.
- Perform in-water construction during the approved fish-windows following dewatering and defishing activities in accordance with the Skagit Drainage and Fish Initiative and fish removal guidelines with the Programmatic Biological Assessment for Restoration Actions in Washington State.
- Comply with applicable conservation measures described within the Programmatic Biological Assessment for Restoration Actions in Washington State, which this project generally falls within.

2. Air

a. What types 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.

No permanent emissions or odors will result from this project. However, temporary fugitive dust emissions could occur during construction. Dust control measures, such as water application, will be implemented during construction to minimize fugitive dust from leaving the project site. Additionally, the project will be constructed using diesel-powered heavy equipment such as loaders, haulers, and excavators. The contractor will also be responsible for maintaining this equipment and ensuring that the equipment used on site is in good working condition and meets all required emission standards.

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

Farming activities on and off-site may result in temporary fugitive dust emissions. Additionally, local dairy operations result in periodic offsite odors.

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

BMPs will be included within the project SWPPP to control fugitive dust emissions. These BMPs are likely to include water application. Additionally, the contractor will be responsible for maintaining equipment on site in good working condition and ensuring all equipment complies with required emission standards.

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

There are several drainages with associated palustrine and estuarine wetland complexes that occur on or adjacent to the site. These drainages and wetland complexes include Brown Slough Complex, No Name Slough Complex, Claude O. Davis Slough Complex, Dry Slough Complex, and Skagit Bay Marsh. Farmed potential wetlands also occur on site. All drainages and wetlands are hydrologically connected to Skagit Bay. See JARPA, Figure 2.

- 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.

Yes. The project will require in-water work within the aforementioned drainages and wetland complexes as well as within estuarine wetlands and tidal channels in Skagit Bay. This in-water work is necessary to construct the new 5,900 lf setback dike, 200 lf spur dike extension, installation of new or replaced tide gates, installation of outfalls associated with the new interior drainage pond, excavation of tidal pilot channels, removal of the 3,900 lf existing dike, and in-water excavation to connect new pilot channels with existing tidal channels. See JARPA, Figures 3 and 4.

- 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 project will require approximately 150,000 cy of fill imported to the site to construct the new setback dike and spur dike extension. This fill material will be sourced by the contractor from an approved commercial supplier. Of this imported fill, 2.1 acres of permanent wetland fill is expected to occur.

Another 8.2 acres of temporary wetland impacts will occur from excavation (dredging) and filling within estuarine wetlands and borrow ditches that occur along the existing dike alignment. The source of the dredge and fill material along this alignment includes the existing dike fill material and the estuarine wetlands and tidal channels.

The project is expected to result in 127.5 acres of restored estuarine wetland, a net increase of 90.5 acres of wetland.

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

The project will require temporary defishing and dewatering of interior drainages and bayward borrow ditches during in-water work activities in accordance with the Skagit Drainage and Fish Initiative and defishing guidelines within the Programmatic Biological Assessment for Restoration Actions in Washington State. Temporary diversion of No Name Slough may be required during the installation of two replaced tide gates within the footprint of the new setback dike fill prism.

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

The project is located entirely within the 100-year floodplain.

- 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.

None are anticipated.

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 permanent groundwater withdrawal or discharges into groundwater will occur. Temporary groundwater dewatering during construction is expected for construction of the new interior drainage pond and installation of tide gates at a minimum.

An existing water well is located on the Maynard Axelson property approximately 700 ft north of Fir Island Road and approximately 2,500 ft from the proposed setback dike. According to the well log for this well, water in this well is saline and was intended for rare bird ponds.

- 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 are anticipated.

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.

Runoff from the site will occur along the existing farm drainage areas north of the setback dike, as they do at present, and off of the new setback dike. Runoff will also occur off of newly restored tidal areas bayward of the new setback dike. BMPs will be implemented to minimize turbidity during construction to the greatest extent practical. Temporary turbidity plumes are expected, however, during and immediately after the breaching of the existing dike as the tidal waters first enter into the newly restored tidal areas and during the subsequent tidal cycles until the site equilibrates. It is expected that these temporary turbidity plumes will occur for approximately one week and dissipate over time.

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

No waste materials are anticipated. Due to current and past uses on and adjacent to the site, unknown contaminants, such as farm pollutants and lead shot may be present. Due diligence surveys have been performed, but these pollutants remain a risk.

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

The project will develop a site-specific TESC Plan, SWPPP, and SPCCP to control erosion and sedimentation to the greatest extent practical. This will include project sequencing and the installation of BMPs to control erosion and sedimentation during construction. Temporary turbidity plumes are expected, however, to occur following the breaching of the existing dike as tidal waters first flood and ebb from the site's newly restored tidal waters until the site equilibrates to its new tidal environment.

4. Plants

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

X _____ deciduous tree: alder, maple, aspen, other

_____ evergreen tree: fir, cedar, pine, other

X _____ shrubs

_____ grass

X _____ pasture

X _____ crop or grain

X _____ wet soil plants: cattail, buttercup, bulrush, skunk cabbage, other

X _____ water plants: water lily, eelgrass, milfoil, other

_____ other types of vegetation

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

The project will largely impact existing farm fields where crops are grown predominantly for snow goose forage. However, the project will also require cut and fill activities within aquatic areas (e.g., wetlands, interior drainages, and the bayfront estuarine marsh) where wet soil plants occur. The onsite wetlands and interior drainages are dominated by herbaceous vegetation including common cattail, spear saltbush, Nootka rose, and reed canarygrass. The bayfront estuarine marsh is dominated by herbaceous vegetation including Lyngbye's sedge, creeping bentgrass, narrow leaf cattail, Pacific silverweed, saltmarsh bulrush, and Baltic rush.

The project will include approximately 160 acres of vegetation removal or disturbance through construction of the new setback dike, interior drainage pond, temporary access road, spur dike extension, pilot channel excavation, regrading/reuse of excavated soil onsite, removal of the existing dike, and excavation/filling activities bayward of the existing dike. These disturbed areas will be revegetated or permanently protected through a combination of dike protection, landscaping, adjacent seed banks, or converted to open water.

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

No federally listed threatened or endangered plant species are listed or known to occur on or near the site.

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

The project will revegetate or stabilize disturbed areas on site. Revegetation of the restored estuarine marsh conditions on site will occur through a combination of landscaping and natural recruitment from existing seed banks with native halophytes adapted for the tidal environment. However, a detailed planting plan has not yet been developed for the project.

5. Animals

a. Circle any birds and 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:

mammals: deer, bear, elk, beaver, other:

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

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

The following federally listed threatened or endangered species under the Endangered Species Act are listed in Skagit County and/or Puget Sound.

- Puget Sound Chinook
- Puget Sound steelhead
- Puget Sound bull trout (Unit 2)
- Southern resident killer whales
- Marbled murrelet
- Northern spotted owl
- Canada lynx
- Gray wolf
- Grizzly bear

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

The site is within the Pacific flyway, a north-south migratory route for migratory birds. The estuarine bayfront marsh and Skagit Bay may be used by migratory waterfowl. However, the site itself is managed by WDFW as a snow goose reserve with forage crops grown for the birds during their layover at the site in the winter months. Anadromous fish are expected to use the tidal channels and coastal waters south of the existing dike as a migration corridor to spawning grounds in the Skagit River.

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

The purpose of the project is to restore important estuarine habitat for wildlife, specifically juvenile Chinook salmon, while preserving WDFW's onsite snow goose reserve management. The project is expected to significantly enhance wildlife habitat.

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 project will be constructed using diesel-powered equipment and generators. During construction, temporary access to existing utilities (electricity and telephone) may be required to provide basic services to the contractor. A new permanent electric power line will be brought into the site off of Fir Island Road to provide operational power to a pump station to be constructed at the interior drainage pond.

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

No impacts to adjacent solar energy potential will occur.

- 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:

The contractor will minimize unnecessary idling of equipment during construction. No other conservation measures will occur.

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.

Diesel-powered equipment, including generators, will be operated by the contractor. Given the use of diesel-powered equipment, the chance of fire or explosion exists although is unlikely. Additionally, there is a risk of unknown farm pollutants and lead shot contamination from current and past operations on and adjacent to the site despite due diligence surveys having been completed. No other environmental health hazards are expected.

- 1) Describe special emergency services that might be required.

None anticipated.

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

None anticipated.

b. Noise

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

Existing noise sources include adjacent farm operations and Fir Island Road traffic. These noises, while present, are not expected to affect the project.

- 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.

Sensitive noise receptors near the site include a bald eagle nest approximately 400 ft northwest of the site, snow geese when present, and the Hayton family's residences located approximately 1,500 ft to the east and 3,000 ft northeast of the site.

The project would result in a temporary increase of onsite noise levels during construction up to 90 A-weighted decibels based on the average noise levels of the expected equipment to be used at the site. The construction noise levels are expected to attenuate to background noise levels within 1,600 ft of the site.

During the setback dike construction, vehicle traffic on Fir Island Road may increase above background as haulers import fill material necessary to construct the new dike. These haulers will deliver fill to the site during normal, daylight working hours (0700-1700).

Construction will occur during normal work hours of 0700 to 1700 from Monday to Saturday with the exception of the days when the in-water activities occurred along the bayfront (southern) limits of the site to breach the dike, construct the spur dike extension, and install the tide gate within Dry Slough. These activities will occur during the low tide to minimize water quality impacts, which may occur outside normal work hours depending on the conditions.

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

Work will be limited to normal, daylight work hours (0700 to 1700) when possible and will be further limited and potentially prohibited when snow geese are present.

8. Land and shoreline use

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

WDFW's Fir Island Farm is productive agriculture land that is currently managed by WDFW as a snow goose reserve. As such, the farm is leased to a neighboring farm to grow row crops during the spring, summer, and fall and snow goose forage crops during the winter. The agriculture potential of the farm is maintained through a system of flood dikes, drainage watercourses, and tide gates that are managed by Skagit County Consolidated Diking District #22 (CDD#22) in consultation with WDFW. Watchable wildlife recreation is encouraged at the farm through a driveway access, parking lot, and short dike top trail. Hunting is not a permitted activity at the farm.

The project site is bordered by Skagit Bay to the southwest, Brown Slough to the north and west, Fir Island Road to the north, and Dry Slough to the east and southeast. Surrounding land uses include rural residential and commercial agriculture to the north, east, and west. A private gun club uses their estuarine marsh ownership on the bayside of the project site flood dike between the Claude O. Davis Slough tide gates and Brown Slough for hunting.

- b. Has the site been used for agriculture? If so, describe.

Yes. The site is currently leased for farming row crops during the spring, summer, and fall and snow goose forage crops are grown in the winter months.

- c. Describe any structures on the site.

The site currently includes two primary structure types: the existing flood dike and tide gates. Additional structures and facilities on site include a public parking facility, access road, fencing, informational signage for visitors, and ancillary culverts and crossings over the internal drainages to support the agricultural activities on site.

Existing Dike:

The existing dike is located along the project site's south and west boundaries, and provides coastal flood protection to Fir Island. The dike, which currently has a top elevation of 13 to 14.5 NAVD88 (15.2 to 16.7 mean lower low water), is part of a diking system operated and managed by CDD#22 and constructed between the mid- to late-1800s to 1930s using on-site borrow materials. The southwest corner of the dike, near Brown Slough, has overtopped several times during high astronomical tides and deep low-pressure weather system storm surges. The dike failed and was manually breached near Claude O. Davis and Brown Sloughs during the 1990/1991 floods. Repairs were then completed by CDD#22 with assistance from the USDA's NRCS.

Existing Tide Gates:

Tide gates currently exist in Brown Slough, Claude O. Davis Slough, and Dry Slough. The existing tide gates on or near the site are as follows:

- *Claude O'Davis Slough:* No Name Slough joins with Claude O. Davis Slough before draining through two 48-inch, top-hinge flapgates.
- *Brown Slough:* Brown Slough, located west of the site, drains through two 48-inch, top-hinge flapgates and one 48-inch screwgate flapgate. The screwgate flapgate is operated in a full open position with the exception of during periods of river flooding.
- *Dry Slough:* Dry Slough drains through two 48-inch, top-hinge flapgates.

The Claude O. Davis Slough and Dry Slough tide gates were both installed in 1913. The Claude O. Davis Slough tide gates currently leak and allow for saltwater intrusion into No Name Slough and Claude O. Davis Slough, which are used for interior drainage. The existing tide gates on Claude O. Davis Slough and Dry Slough allow for upland interior gravity drainage to Skagit Bay.

Existing Interior Crossings:

Three existing farm crossings over interior drainages exist on site landward of the existing dike. These crossing include:

- One 21-foot-long by 15-inch-diameter polyethylene pipe culvert in Claude O. Davis Slough, upstream of its confluence with No Name Slough.
- One 21-foot-long by 48-inch-diameter corrugated metal pipe culvert within Claude O. Davis Slough, below an access road off of the existing dike and into the farm fields.
- A concrete farm bridge spanning No Name Slough, downstream of the setback dike.

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

Yes. The project will remove 3,900 lf of existing dike, two existing Claude O. Davis Slough tide gates, and the existing interior crossings (culverts and farm bridge).

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

Agriculture - Natural Resource Lands (Ag-NRL)

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

Agriculture - Natural Resource Lands (Ag-NRL)

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

Rural.

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

Yes. The site includes wetlands and other aquatic areas hydrologically connected to Skagit Bay.

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

Zero.

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

Zero.

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:

The project has gone through an alternatives analysis to balance the existing uses on site, which include snow goose habitat, farmland, public access and wildlife viewing, and salmon habitat. Part of the property will continue to function as agriculture and has been designed to mitigate potential drainage impacts on adjacent agricultural lands. Additionally, the restoration project is consistent with several watershed and fisheries protection and restoration plans for the Skagit River and Puget Sound.

9. **Housing**

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

Zero.

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

Not applicable.

- 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 new setback dike is the tallest structure proposed, which will have a top elevation of 15 ft (NAVD88) after compaction and settlement, which is approximately 9 ft above the existing farm field elevation.

- b. What views in the immediate vicinity would be altered or obstructed?

None.

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

Work will occur during day light hours except for those activities which are tidal dependent.

11. **Light and glare**

- a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

None.

- 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?

Public access and wildlife viewing is currently provided at the site along approximately 500 lf of the existing dike.

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

No. Public access and wildlife viewing would be maintained.

- c. Proposed measures to reduce or control impacts on recreation, including recreation 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.

The Washington State Department of Archaeology and Historic Preservation's Washington Information System for Architectural and Archaeological Records Data mapping system identifies two properties: the Hayton Berry Farm and the Maynard Axelson properties. The Hayton Berry Farm, located at 16494 Fir Island Road, is located east of the site, was built in 1876 and is on the Washington State Heritage Barn Register. The Marynard Axelson property, located at 15929 Fir Island Road, is north of the site, was built in 1903 and is on the National Historic Register.

- b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

A cultural resources study has been performed during the feasibility study and the final design phases of this project. No evidence of historic, archaeological, scientific, or cultural importance was observed. However, consultation with the Swinomish, Stillaguamish, Upper Skagit, and Sauk-Suiattle tribal communities under Section 106 of the National Historic Preservation Act is ongoing.

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

An incidental discovery protocol will be developed and the contractor and their subcontractors will be trained on the appropriate responses should discovery occur during construction.

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.

The project will utilize the existing road system to access the site, including delivering imported fill material. An existing access to the WDFW Fir Island Snow Goose Reserve occurs on the west side of the site, off of Fir Island Road, and terminates at a small WDFW parking lot at the edge of the existing dike. This existing access road will be a primary access to the site. A temporary construction access road will be constructed on the east side of the site, with access off of Fir Island Road. This temporary access road is necessary to facility efficient movement of vehicles and equipment through the site.

- b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

No. The closest transit stop is at the South Mount Vernon Park & Ride located 6.4 miles northeast of the site.

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

The project will not add or remove parking spaces at the onsite WDFW parking lot.

- 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).

None at this time.

- 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.

None.

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

Construction related equipment and vehicles will access the site during day light hours where practical. Proper methods for traffic control will be employed to optimize safety and efficiency. Right-of-Way Access/Utility permits from the County will be obtained and will discuss suitable traffic control measures which could include flaggers, signs, and beacons.

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. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.

There are no known utilities currently available at the site although water and electric utilities are present along Fir Island Road.

- 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.

Temporary electricity and telephone service is expected to be needed during construction by the contractor. A permanent electric utility will be installed onsite to provide power to a pump station constructed as part of the project.

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: 1/30/2014