

## 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.

#### A. BACKGROUND

1. Name of proposed project, if applicable:

The Union River Estuary Habitat Restoration Project

2. Name of applicant:

Washington Department of Fish and Wildlife

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

48 Devonshire Rd

Montesano, WA 98563

360-249-4628

Attention: Mick Cope, R6 Wildlife

Attention: Doris Small, R6 Habitat

4. Date checklist prepared: 10-25-2011

5. Agency requesting checklist:

Washington State Department of Fish and Wildlife

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

- Planning and Preliminary Design – Start 6-1-10
- Project Permitting and Environmental Documentation – Start 7-1-11
- Final Design and Contract Documents – Start 12-1-11
- Advertisement for Bids – 2-1-12
- Start Construction – 4-1-12
- Complete Construction – 10-1-12
- Final Project Documentation 12-23-12

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.  
No future plans.

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

- Revised Report – Wetland and Stream Delineation for the Pacific Northwest Salmon Center Site, Belfair, WA. by GeoEngineers File No. 16264-001-01
- Union River Estuary Restoration – 2010 Washington State Joint Aquatic Resources Permit Application (JARPA).
- Union River Estuary Restoration – RCO Grant – Information Packet – June 9, 2011. By ESA Inc. for the Hood Canal Salmon Enhancement Group.
- Union River Estuary Restoration – Project Description – Prepared June 21, 2011 by Doris Small of the Washington State Department of Fish and Wildlife.
- Cultural Resources Investigation for land acquisition – Nov 2007 by Charles Luttrell

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.**

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

- Washington State Department of Fish and Wildlife – HPA
- Washington State Department of Ecology – 401 Water Quality Certification, and NPDES Storm Water Permit
- United States Department of the Army – Section 404 Permit
- Mason County Grading Permit, Mason County Shoreline Exemption, Mason County Environmental Permit.

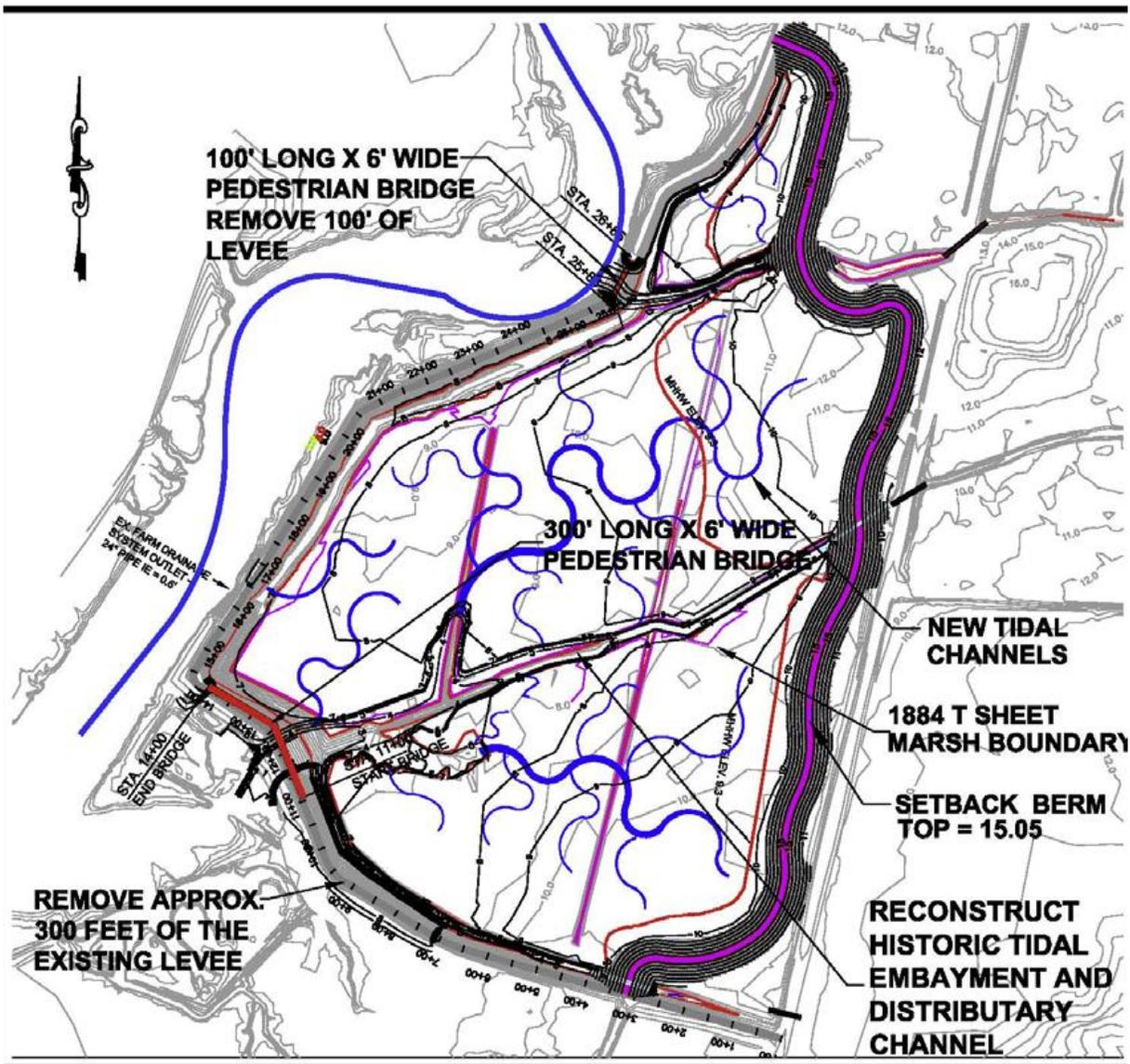
11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies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

The Union River Estuary Restoration project is a habitat restoration project based on the design funded by the SRFB in 2010 (Union Estuary Johnson Farm Restoration Design). It is located at the mouth of the Union River in Mason County adjacent to Belfair and is the final piece in a series of large estuarine habitat projects to protect and restore the original Union/Lynch Cove Estuary.

The purpose of this project is to restore the estuary and tidal function to over 32 acres by breaching the existing dike in two locations, regrading to elevations similar to adjacent marsh conditions, and accommodating stormwater drainage. The estuarine habitat is designed to replicate surrounding marsh conditions of high salt marsh with tidal channels. This type of habitat is valuable to juvenile Hood Canal summer chum salmon and Puget Sound Chinook (both federally listed) salmon, as well as coho salmon and cutthroat trout. In addition, the Lynch Cove estuarine marsh is used by thousands of waterfowl, shorebirds and seabirds.

It is also designed to prevent flooding of surrounding agricultural property while accommodating continued recreational use of the existing trail system (IAC 1994) with pile supported concrete walkways over the dike breaches. One 300 foot breach and another 100 foot breach will allow daily tidal inundation and most habitat forming processes to function, creating maximum value for the scale of the project. This habitat restoration project has been identified as a priority action in the Limiting Factors Analysis (2003) and the HC summer chum recovery plan (2005). The Union River is identified as a Tier 1 priority watershed (HCCC Salmon Habitat Recovery Strategy 2005) for habitat restoration.

See attached document for full description of project (titled: Union River Estuary Restoration Project Description WDFW June 2011).



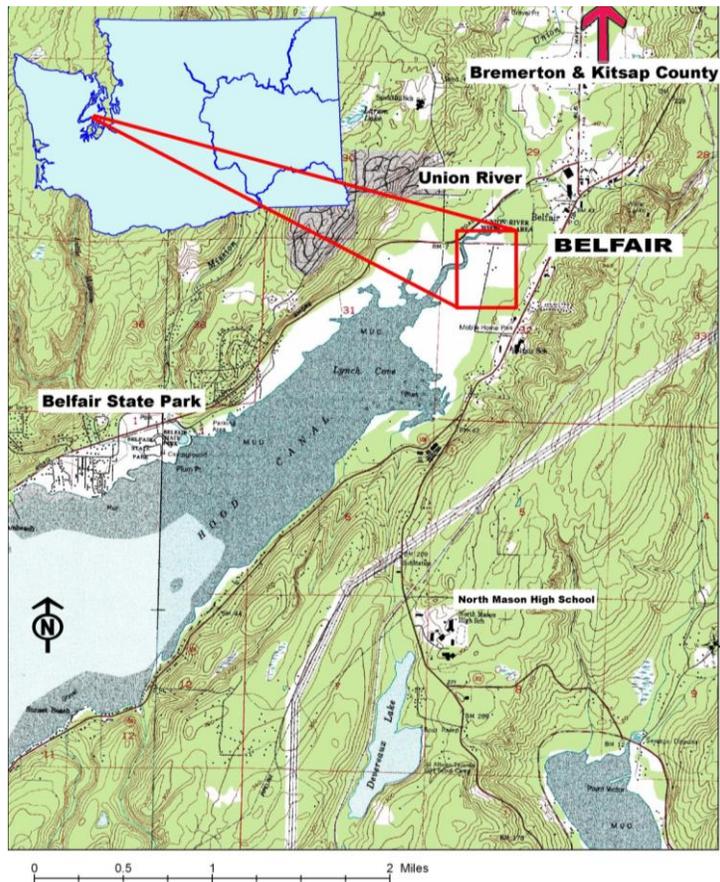
**FIGURE 1:** Proposed estuarine restoration project

*Note: Elevations shown on the drawings in the Environmental Checklist are based on the NAVD 88 datum. To convert to sea level datum add 2.95 feet to the elevations shown on the drawings.*

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 at the terminus of Hood Canal where the Union River meets Lynch Cove near Belfair. Street address is 600 Roessel Road, Belfair, WA. The legal description is Range 1 W, Township 23 North, Sections 31 & 32.

The current 45 acre WDFW site is primarily made up of hay fields bordered by a 3,300 foot dike to the north and south (southwest) cutting it off from the Union River, the salt marsh wetland and Union River estuary.



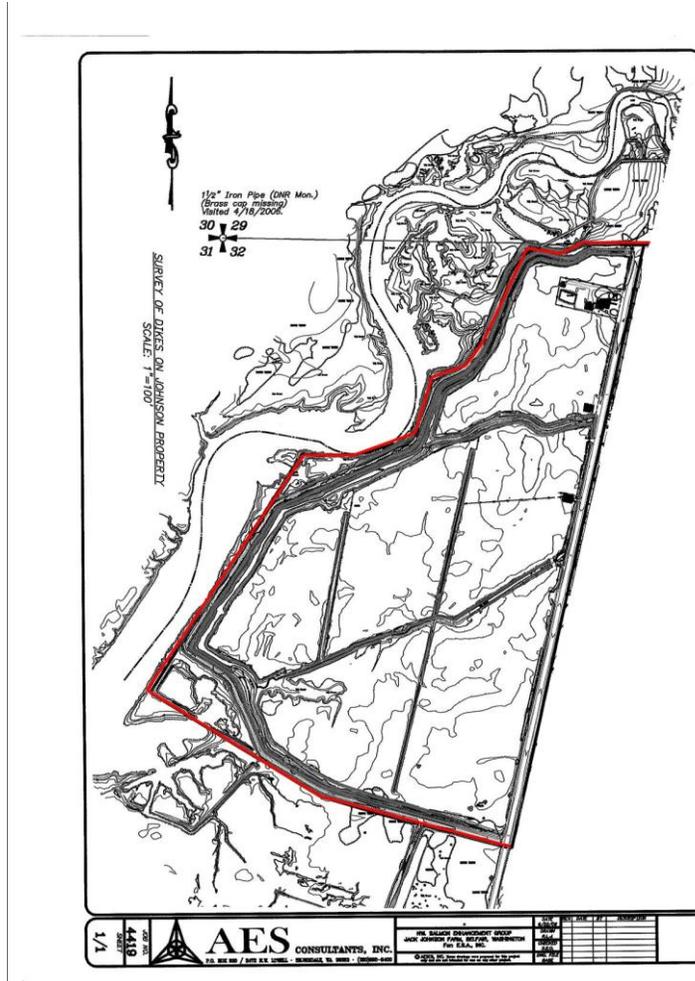
**FIGURE 2: SITE VICINITY MAP**



**FIGURE 3: AERIAL IMAGE OF THE PROJECT SITE**



**FIGURE 4: AERIAL IMAGE OF LYNCH COVE AND SITE**



**FIGURE 5: TOPOGRAPHIC SURVEY OF PROJECT SITE**

## B. ENVIRONMENTAL ELEMENTS

### 1. Earth

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

The 1994 topographic map from the USGS depicts that the site is relatively flat. The dikes on the western boundary of the site were not shown on any historic topographic map examined. The 1990 aerial photo from the USGS clearly shows the presence of the dike and agricultural fields on site. It appears from photographic interpretation that the land use and buildings on site have not changed in the past 17+ years. The DNR FPARS map indicates that one stream runs through northeast of the site from east to west (DNR 2007).

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

The existing dikes and drainage ditches have 2 horizontal to 1 vertical side slopes.

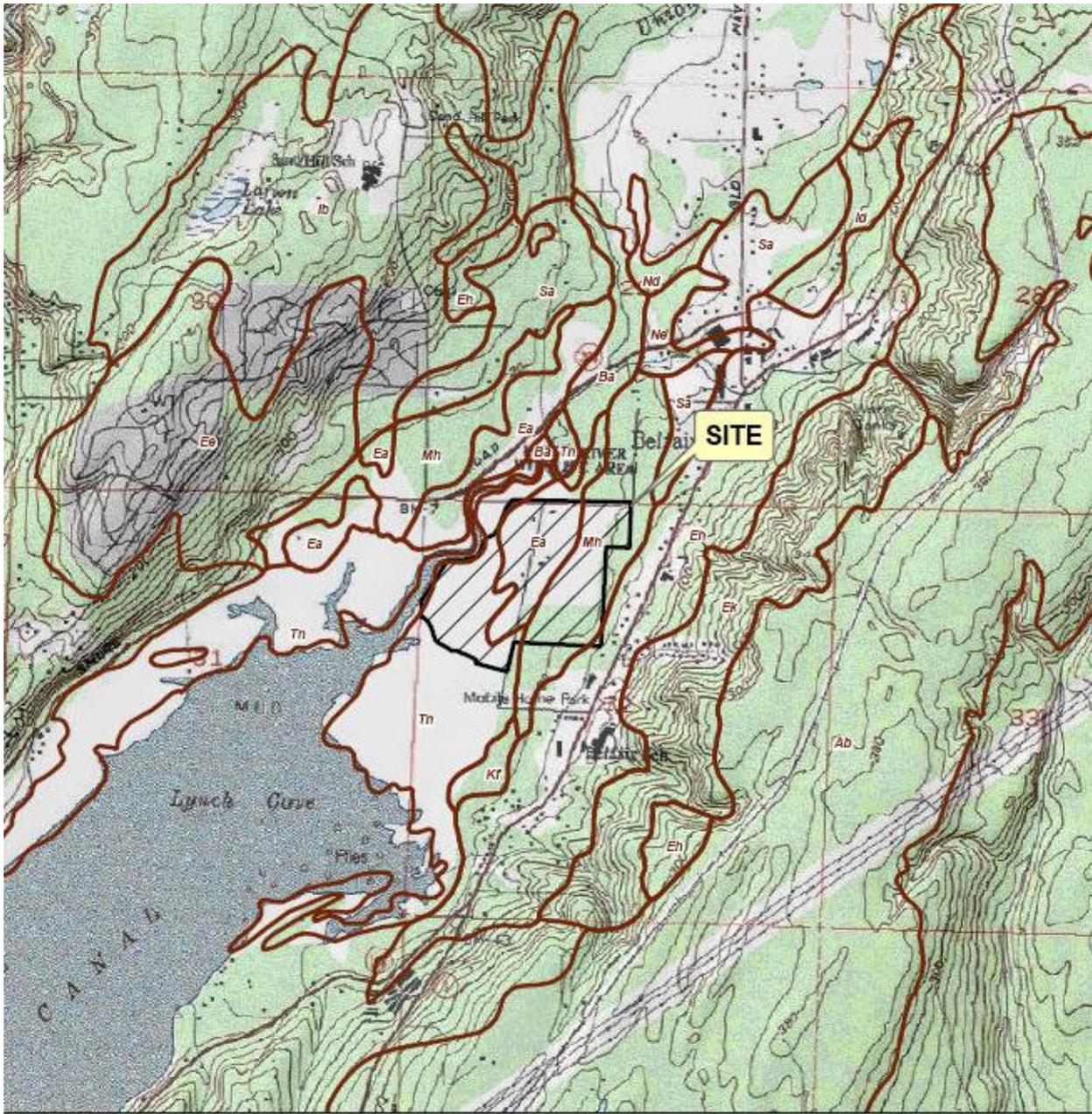
- c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.

The *Soil Survey of Mason County, Washington* (USDA 1960) identifies three soil types as being present within the boundaries of the site. Figure 6 (Soils Survey Map) depicts the locations of the three different soil types. The soil type along eastern portion of the site is Mukilteo peat, shallow over gravel, 0 to 2 percent slopes. Edmonds fine sandy loam, 0 to 2 percent slopes is present in central portion of the site. This soil survey does not recognize the dike along the southwestern portion of the site and existing agricultural activities and lists the western portion of the site as tidal marsh, 0 to 2 percent slopes. All three soils are listed as hydric soils on the hydric soils list for Mason County (USDA 2001). Mukilteo peat (0-2%) and Edmonds fine sandy loam (0-2%) are classified as “prime farmland soils if drained”.

Mukilteo peat, shallow over gravel, 0 to 2 percent slopes is a strongly acid brown peat, saturated to the surface throughout the year. It is a very poorly drained soil that has moderately high water movement in the most restrictive layer. A dense root restrictive layer is greater than 60 inches below the surface. The seasonal zone of water saturation is about 9 inches during January, February, March, and December. The available water capacity is very moderate, the shrink-swell potential is low, it is not flooded and it is not ponded. Organic matter content in the surface horizon is about 40 percent.

Edmonds fine sandy loam, 0 to 2 percent slopes is a friable, medium to strongly acid soil located exclusively in the lower valley of the Union River. During most of the year the water table is within one foot of the surface. Edmonds fine sandy loam can appear dark grayish-brown to light-gray with mottles of varying colors. The soil is poorly drained and water movement in the most restrictive layer is moderately high. A dense root restrictive layer forms greater than 60 inches below the surface. The seasonal zone of water saturation is about 0 inches during January, February, March, April, May, November, and December. The available water capacity to a depth of 60 inches is high, the shrink-swell potential is low, it is not flooded and it is not ponded. Organic matter content in the surface horizon is about 4 percent.

Tidal marsh, 0 to 2 percent slopes is reached by salt water during high tides. It is composed of various kinds of silt, but is mainly medium and fine textured material mixed with fibrous peat. These sediments contain excessive amounts of soluble salt. The soil is very poorly drained and water movement in the most restrictive layer is moderately high. A dense root restrictive layer forms greater than 60 inches below the surface. The seasonal zone of water saturation is about 0 inches during January, February, March, April, May, June, July, August, September, October, November, December. The available water capacity to a depth of 60 inches is high, the shrink-swell potential is low, it is frequently flooded and it is frequently ponded. Organic matter content in the surface horizon is about 1 percent. The soil has a moderately saline horizon within 30 inches of the soil surface. The soil has a slightly sodic horizon within 30 inches of the soil surface.



 Site

 Soils Boundary

Mh = Mukilteo peat, shallow over gravel, 0% to 2% slopes.  
 Tn = Tidal marsh, 0% to 2% slopes.

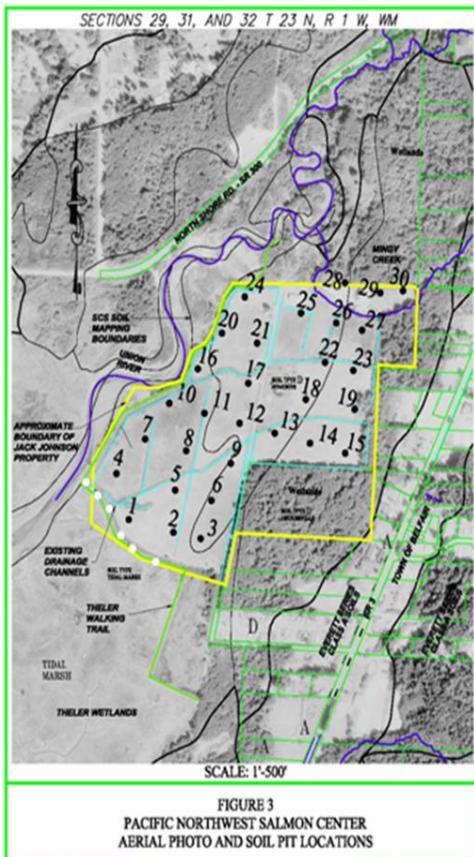


Ea = Edmonds fine sandy loam, 0% to 2% slopes.  
 Eh = Everett gravelly sandy loam, 5% to 15% slopes.  
 Ea = Edmonds fine sandy loam, 0% to 2% slopes.  
 Eh = Everett gravelly sandy loam, 5% to 15% slopes.



**FIGURE 6: SOILS SURVEY MAP OF THE SITE**

Soil pits throughout the site & borings along the dike indicated that the soils are predominantly silty sands with organics (“bay mud”) with a layer of up to two feet of sandy silt and organic top soils.



**FIGURE 7: SOIL PITS**

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

The Mukilteo peat soils would have likely been very unstable until the historic grading and tilling of the area for farming covered these soils with more stable and tillable soils. No signs of unstable soils at this time.

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

TOTAL EXCAVATION = 63,500 CUBIC YARDS

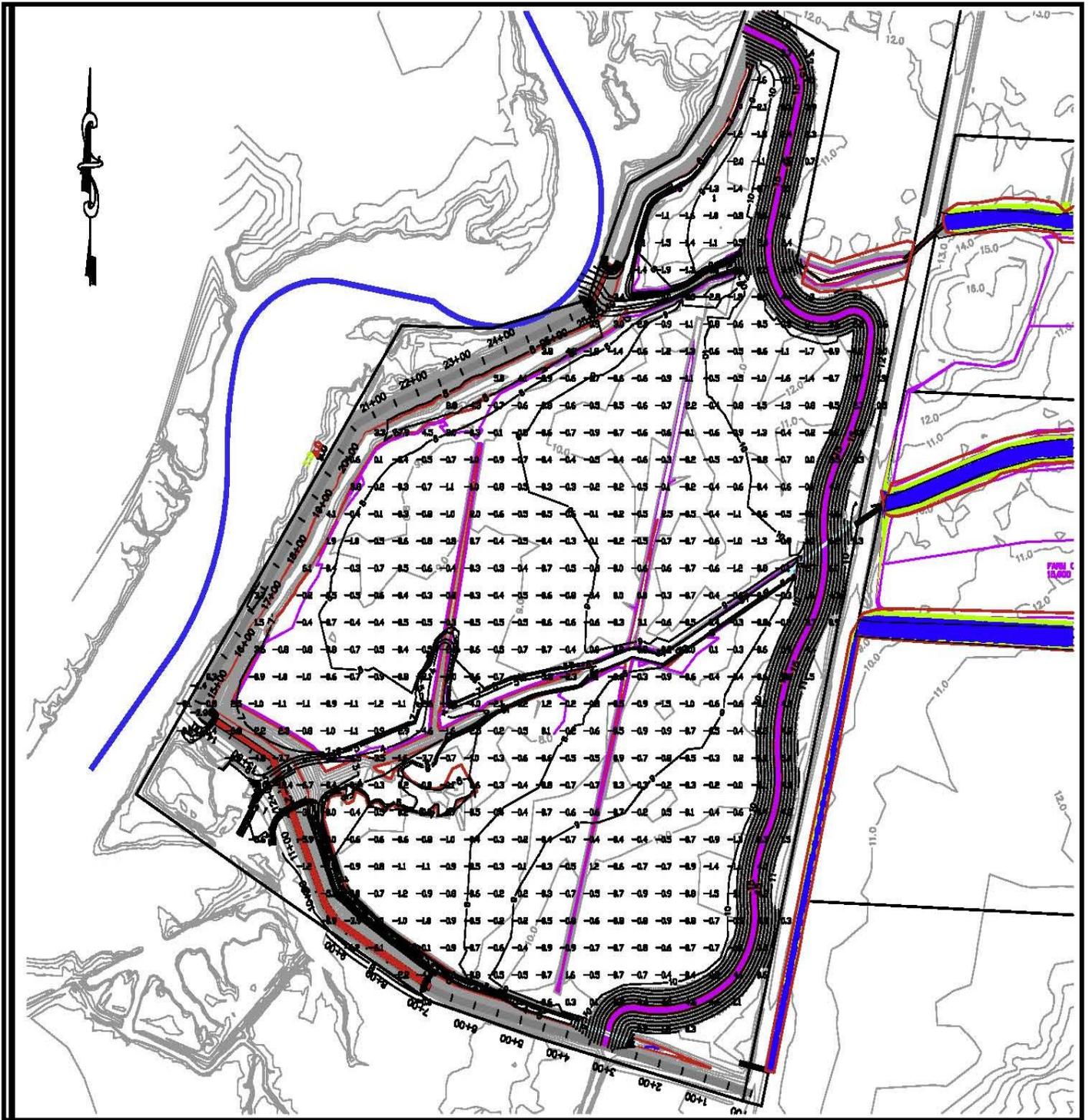
SOURCE OF EXCAVATION

- RESTORATION AREA EXCAVATION = 34,000 CY (TOP SOIL = 18,584 CY)
- EXCAVATION FROM PNWSC DRAINAGE DITCHES FOR STORMWATER CONTROL = 25,500 CY
- DISTRIBUTARY CHANNELS = EST TO = 4,000 CY

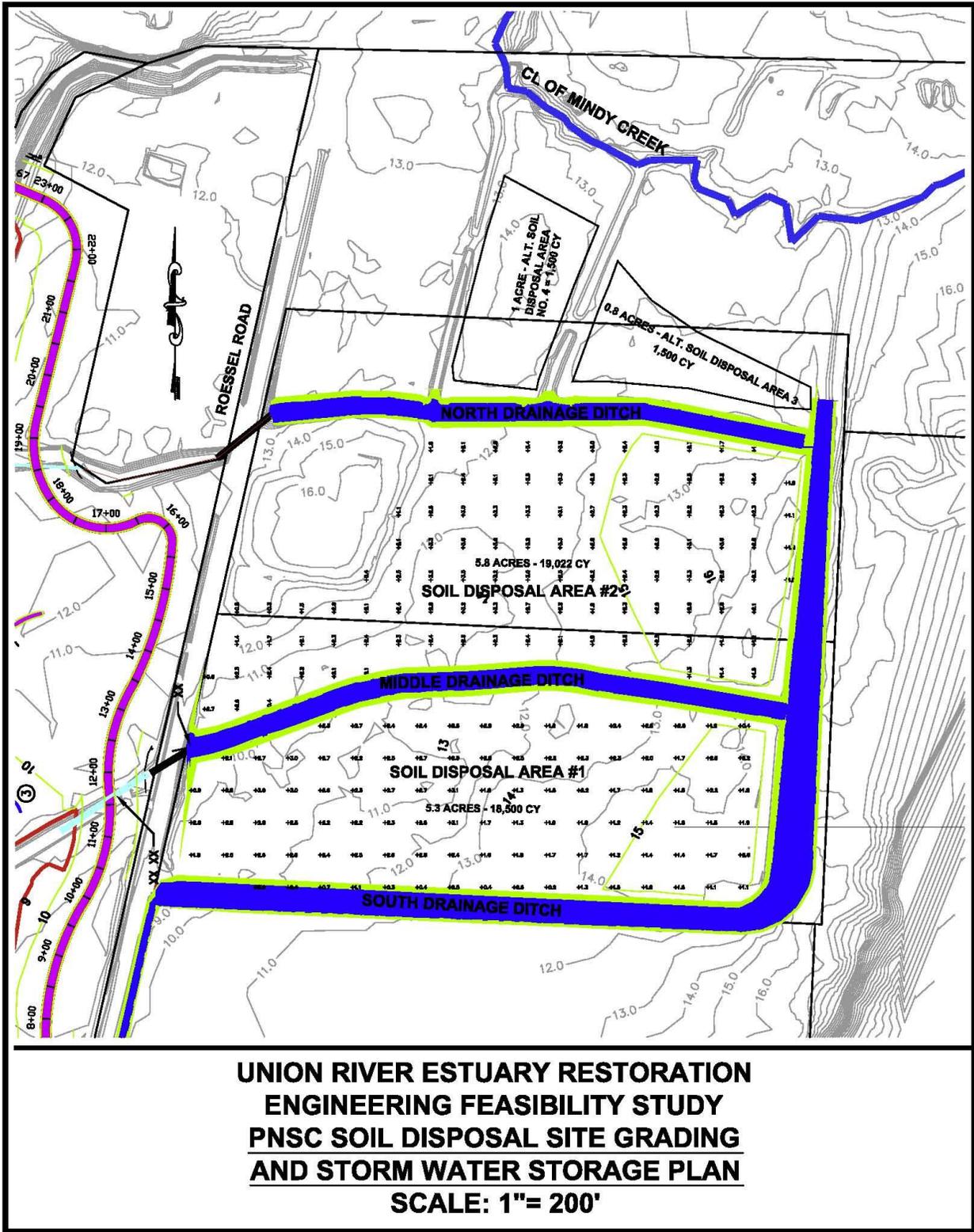
TOTAL FILLING = 63,500 CY

DEPOSITION SITES

- FILL BORROW DITCHES = 10,000 CY
- CONSTRUCT SET BACK DIKE = 19,000 CY
- WASTE EXCESS SOILS ON PNWSC FARM FIELDS = 34,500+ CY



**FIGURE 8: GRADING PLAN FOR ESTUARY RESTORATION AND SETBACK DIKE CONSTRUCTION**



**FIGURE 9: STORMWATER STORAGE EXCAVATION AND WASTE SOILS DISPOSAL**  
 To store the runoff and stormwater from uplands on storm events at high tide, the existing farm drainage ditches at PNWSC will be excavated to be wider and deeper.  
 10 acre feet of storage needed = 25,500 CY excavation

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

Yes erosion could occur. However the project will be constructed behind the existing levees. The existing levees will not be breached until all other work has been completed and best management storm runoff control practices are in place. All the excavation work will be completed between May and September of 2012 – the dryer months of the year – and best management practices will be in place to prevent sediment from reaching the Hood Canal or Mindy Creek. The portion of the channel work that has to be completed outside the existing levees and the removal of the existing levees will be completed in the late August or early September of the 2012 at low tide during the “fish window” for this area. All work will be timed and sequenced so as minimize or eliminate in-water excavation work behind the existing levee – in the drainage ditches. The existing outlet culvert through the levee will be plugged to prevent any discharge of silty water from the site.

A minimum 50 foot wide buffer will be maintained during construction around Mindy Creek and wetland associated with Mindy Creek in northeast corner of PNWSC property (Figure 8). All existing shade trees or shrubs will remain in place. Silt fencing and other best management practices will be in place to prevent contaminated runoff from reaching Mindy Creek.

A NPDES permit will be applied for and a storm water control management plan will be prepared for WSDOE approval. Based on our experience on numerous similar projects – we do not anticipate any stormwater runoff contamination of Hood Canal or Mindy Creek while using the practices described above.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? There will be no impervious surfaces on this project.

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

## 2. Air

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

The only air emissions from the project will be during construction from the construction equipment.

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

Yes, Hood Canal and the Union River Estuary are part of the proposed restoration project. Mindy Creek flows through the PNWSC site.

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, work will be done within 200 feet of the Hood Canal, the Union River, and Mindy Creek.

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.

See 2e above and refer to wetlands delineation report for detailed information.

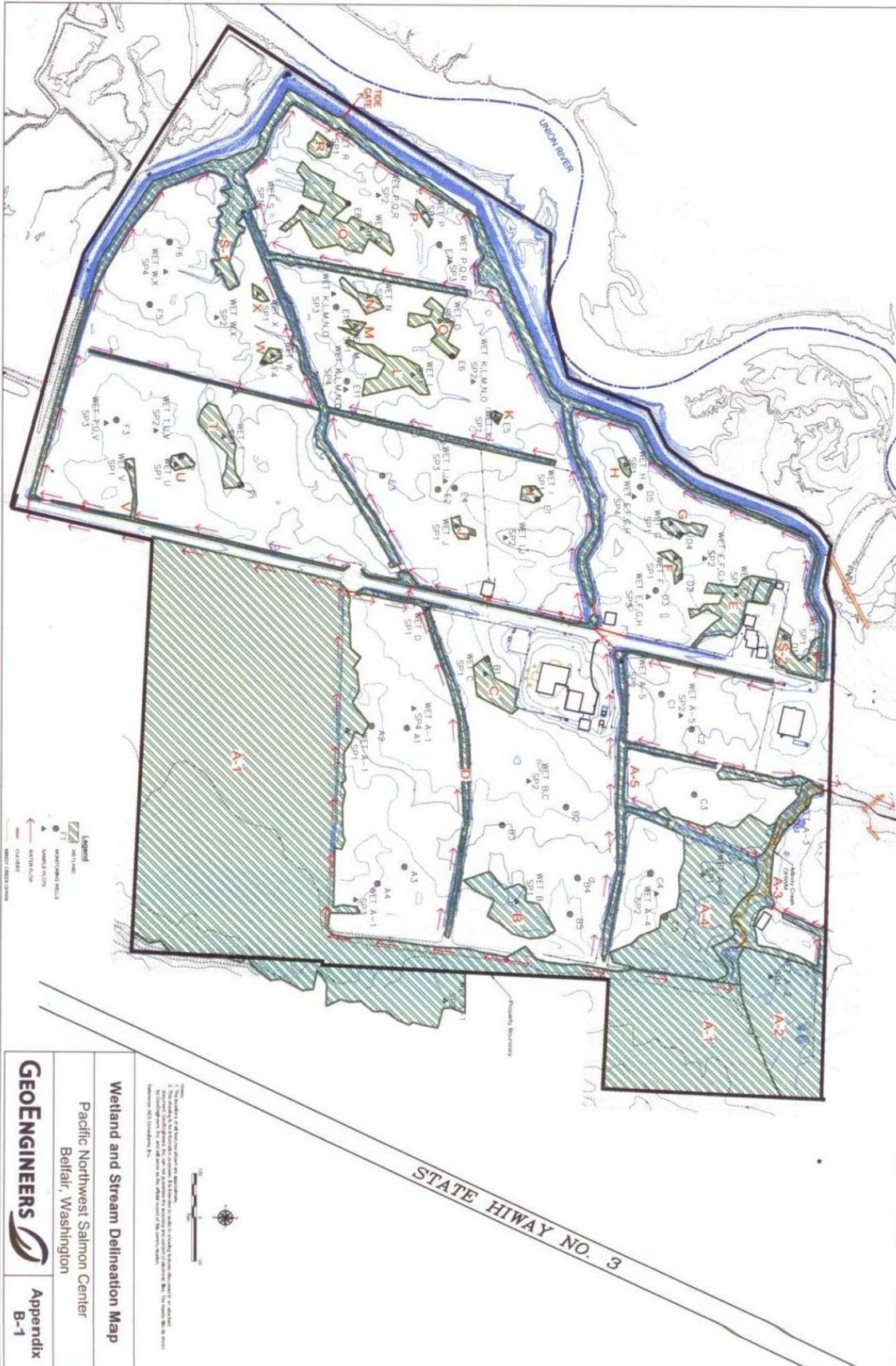
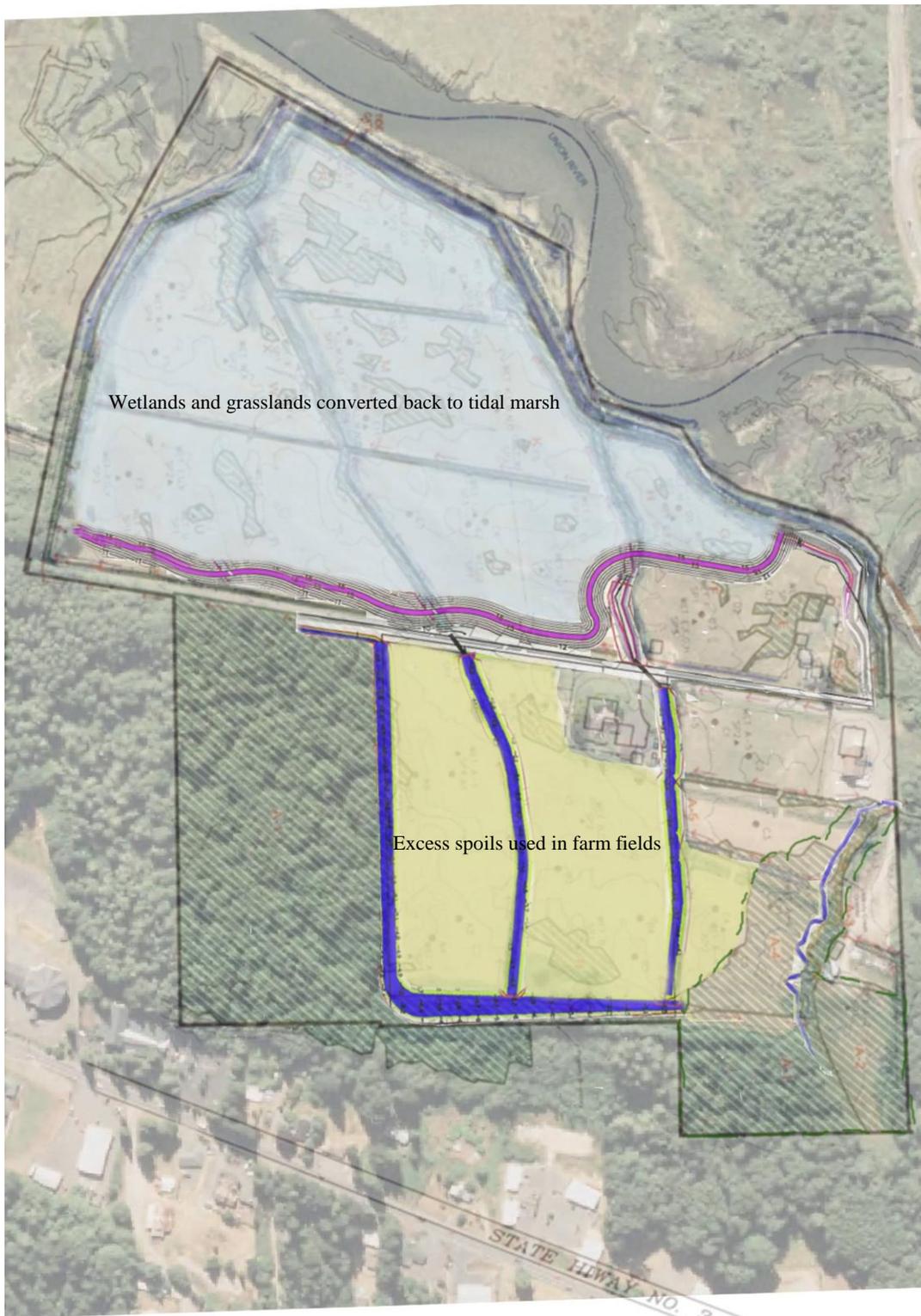


FIGURE 10: WETLAND DELINEATION MAP



**FIGURE 11: EXCAVATION AND SPOILS DISPOSAL OVERLAY WITH WETLANDS**

Excess excavated materials that cannot be used on site (~ 14,000 CY) are proposed for beneficial re-use to improve farm fields at the adjacent Pacific Northwest Salmon Center. This reduces disposal costs and impacts to roads/traffic from transport to a more distant site.

In addition, ~ 25,000 CY of material will be removed from the existing drainage ditches for stormwater storage. Use of the PNWSC farm fields for disposal is a big cost savings to the project.

3a (4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known. No.

3a (5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

100 yr floodplain is waterward of the existing dike but will change with the restoration project.



**FIGURE 12: 100 YR FLOODPLAIN AND SITE**

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. No.

3b. 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. None.

3c. Water runoff (including stormwater):

3c (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.

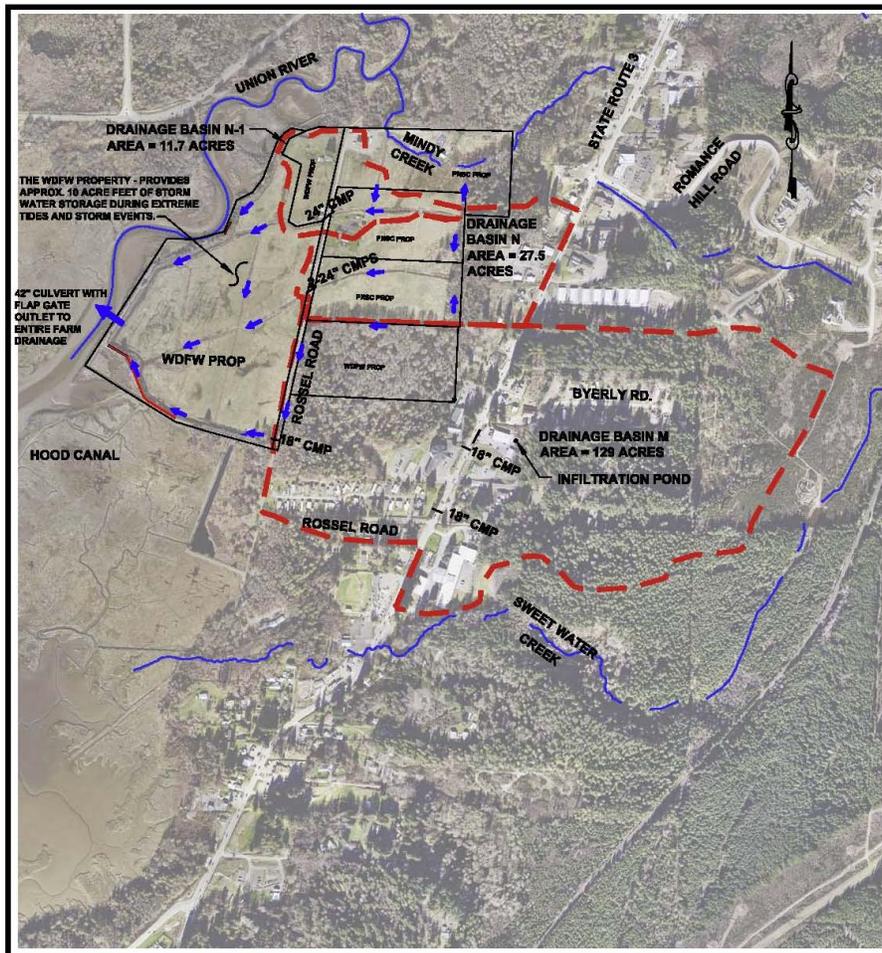
The proposed project will not generate new stormwater. However, the project will change the path of existing stormwater runoff that runs onto the estuarine restoration site.

The existing WDFW property stores water that drains onto the site from the town of Belfair. Historically, flooding during big rain storms and high tide events have been a problem on the property. There are reports of Roesel Road being flooded for short periods of time during high tides in the winter. Figures 13-15 illustrate the existing stormwater drainage patterns for the site, the critical tidal cycle, and the proposed stormwater storage and conveyance facilities when part or the entire existing levee is removed.

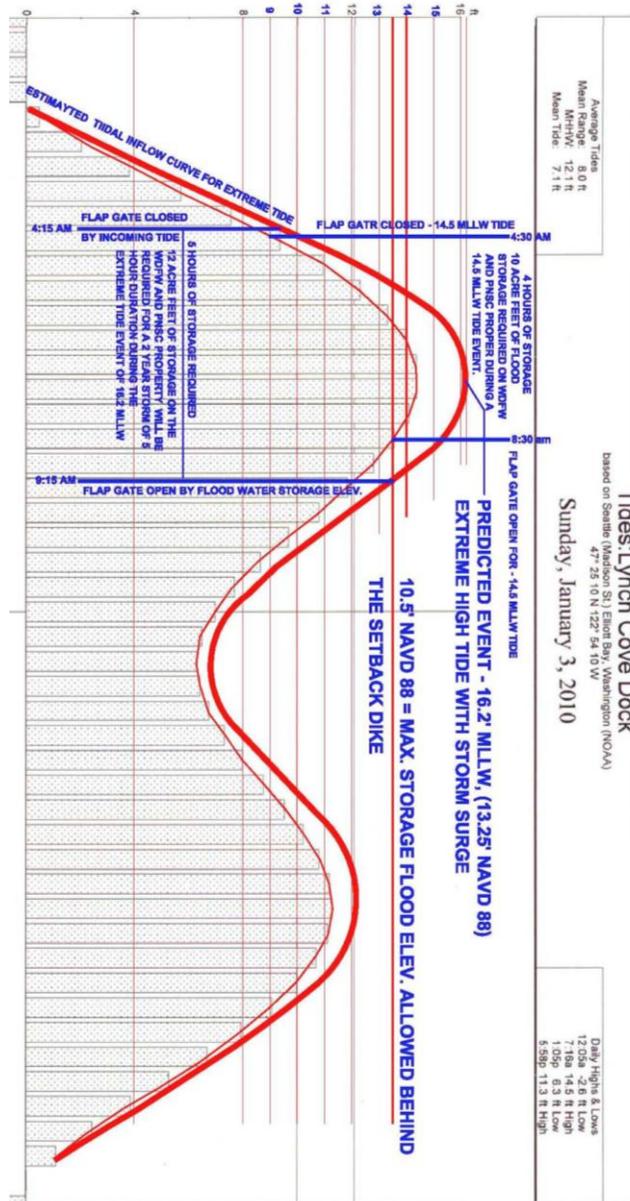
The restoration project proposes alternatives to remove a portion of the existing levee and replace it with a setback dike with a crest elevation of 18.0' (MLLW). In order to prevent flooding of Roesel Road the project must build new storm water storage on the Pacific Northwest Salmon Center Property. The amount of storm

water storage required has been calculated to be approximately 10 acre feet. The storage will be constructed by removing approximately 25,500 cubic yards of earth from the existing farm ditches and placing the soil on the fields or using the soil to construct the setback dike. The computational methods to design the storm water conveyance and storm water storage system are as follows:

1. Calculate – using computer models – the stormwater runoff flow rates and volumes for the site, and the watersheds that drain to the site, for several storm events. The graphic depicting the existing watershed is shown in the EXISTING WATERSHED graphic (Figure 13).
2. Calculate the time the proposed tide gates will be closed during a major storm event that occurs at high tide. A 100 year tide combined with a 2 year wave run-up was selected for the design event. The time the tide gates will be closed by the tide is estimated to be 5 hours (Figure 14).
3. Calculate – using computer models – the volume of stormwater storage required for a 2 year storm event. This volume was calculated to be between 7.5 and 10 acres feet depending on the modeling method.
4. Design the storm water storage area to provide the needed storage below the critical flooding elevation of elevation 10.5'(MLLW).
5. Design the storm water conveyance facilities to carry the flow from 100 year storm events (Figure 15).

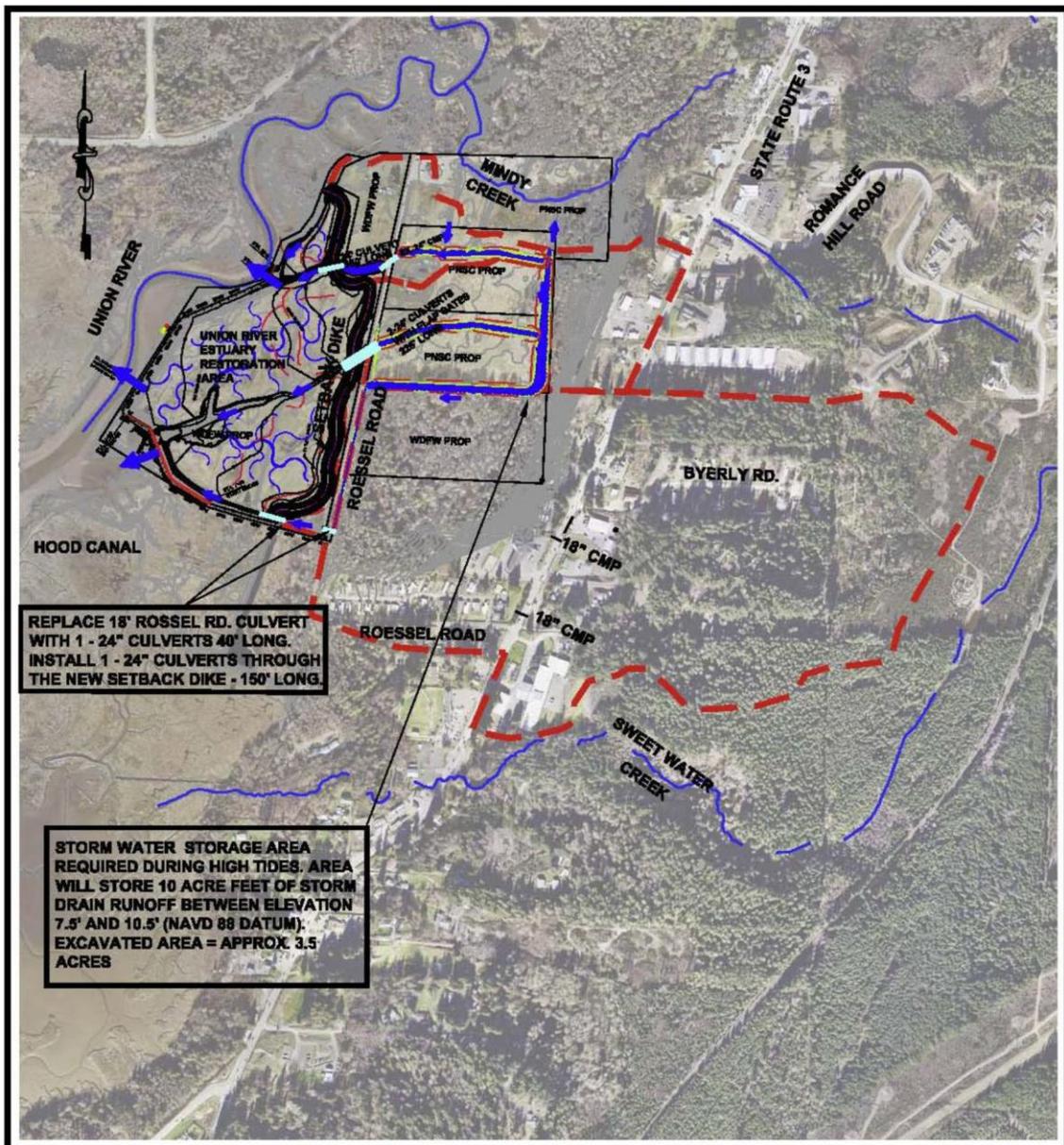


**FIGURE 13: EXISTING DRAINAGE CONDITIONS**



**FIGURE 14: STORMWATER STORAGE ANALYSIS**

Between 4 to 5 hours of stormwater storage will be required below elevation 10.5' (NAVD 88) and on the east of Roessel Road to prevent flooding of Roessel Road during a 2 year storm event and the extreme high tide. The proposed design includes 10 acre feet of flood storage behind the new setback dike below elevation 10.5' (NAVD).



**FIGURE 15: PROPOSED DRAINAGE IMPROVEMENTS**

3c (2) Could waste materials enter ground or surface waters? If so, generally describe. NO

3d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:

Project will be constructed separated from tidal waters for most of the project (with the dike intact). During final breach, work will take place at low tide and separated from tidal waters. Typical erosion control measures (e.g. silt fence, straw bales) will be used to minimize erosion.

#### 4. Plants

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

deciduous tree: alder, maple, aspen, other

evergreen tree: fir, cedar, pine, other

shrubs

grass

pasture

crop or grain

wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other

water plants: water lily, eelgrass, milfoil, other

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

A total of 47.1 acres of existing vegetation will be disturbed:

- 29.1 acres will be restored to estuarine vegetation
- 4 acres will be a low profile setback dike replanted with native vegetation including trees
- 11 acres of disturbed agricultural fields will be replanted in pasture grasses or crops
- 3 acres will be excavated stormwater storage ditches designed to simulate wetland habitat

The following description of the vegetation was taken from the “Revised Report – Wetland and Stream Delineation for the Pacific Northwest Salmon Center Site” dated October 10, 2007 by GeoEngineers included in this Environmental Checklist by reference and hereinafter referred to as the “Wetland Report”. This document describes existing conditions for both the WDFW and PNWSC property in combination.

The site is approximately 90 acres in size and located where the mouth of the Union River meets Lynch Cove at the tip of the Hood Canal. The majority of the 90 acre site has been historically farmed for agricultural hay as well as pasture for livestock. A dike was built along the western and southern boundaries of the site to block tidal waters from the Hood Canal entering the site and numerous manmade ditches were constructed throughout the site to drain water from the agricultural fields. The site is primarily comprised of hay fields and all of the native vegetation has been removed from these fields and hay grasses have been planted. The top 10 inches of the soil in the agricultural fields has been disturbed on a regular basis for haying. This herbaceous plant community dominates the agricultural fields, but some forested areas exist in the eastern and southeastern portions of the site. Several existing structures are located on site including two single-family residences, a barn and several outbuildings. The topography of the site is relatively flat and the elevations of the fields are lower than the observed high tide elevations along the outer edge of the dike.

The surrounding land use to the west consists of the Union River and WDFW public land on the western side of the river. WDFW also owns the land to the north and this land is also open to the public. A public walking trail associated with the Theler Wetlands Center runs along the southwestern, western and northwestern boundary of the site on top of the dike. The eastern and southeastern portions of the site are bordered by single-family residences and several small commercial businesses along Highway 3. Wetland and upland vegetation varies throughout the site based upon topography, soil type and land use.

Two types of wetland vegetation communities are present onsite. Forested wetlands are located on the eastern and southeastern portion of the site. The forested layer in these wetlands is primarily comprised of red alder (*Alnus rubra*, FAC), western red cedar (*Thuja plicata*, FAC) and black cottonwood (*Populus balsamifera* spp. *Trichocarpa*, FAC). The shrub layer is comprised mainly of salmonberry (*Rubus spectabilis*, FAC+), Nootka rose (*Rosa nutkana*, FAC), Pacific willow (*Salix lasiandra*, FACW+) and red-osier dogwood (*Cornus stolonifera*, FACW) with an herbaceous layer of skunk cabbage (*Lysichiton americanum*, OBL), water parsley (*Oenanthe sarmentosa*, OBL), small-fruited bulrush (*Scirpus microcarpus*, OBL) and slough sedge (*Carex obnupta*, OBL). The herbaceous wetlands are located in the agricultural fields and are dominated by sawbeak sedge (*Carex stipata*, OBL), soft rush (*Juncus effusus* FACW), Baltic rush (*Juncus balticus*, FACW+), silverweed (*Potentilla anserine*, OBL), slough sedge, meadow foxtail (*Alopecurus geniculatis*, FACW), short-awn foxtail (*Alopecurus aequalis* spp. *Aequalis*,

OBL) and velvet grass (*Holcus lanatus*, FAC). The upland areas of the site are also generally located in the agricultural fields and were noted to contain sweet vernalgrass (*Anthoxanthum odoratum*, FACU), tall fescue (*Festuca arundinacea*, FAC-), orchardgrass (*Dactylis glomerata*, FACU), perennial ryegrass (*Lolium perenne*, FACU), common timothy (*Phleum pretense* spp. *Pretense*, FAC-), colonial bentgrass (*Agrostis capillaris*, FAC), birdsfoot trefoil (*Lotus corniculatus*, FAC), smooth hawkbeard (*Crepis capillaris*, FACU) and red clover (*Trifolium pretense*, FACU).

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

No known listed plant species

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

The disturbed area west of Roessel Road within the estuary restoration project area will become estuarine habitat and will revegetate via natural recruitment of estuarine wetland vegetation from the surrounding estuary. A farm plan has been prepared for the east side of Roessel Road. The disturbed areas on the east side of Roessel Road will be replanted in pasture hay or in accordance with the farm plan.

## 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.

Hood Canal Summer Chum salmon (Threatened),

Puget Sound Chinook salmon (Threatened),

Puget Sound Steelhead (Threatened)

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

The site is part of waterfowl migration route. Site will be used by juvenile salmon during outmigration.

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

The purpose of this entire project is to preserve and enhance wildlife. See Project Description graphics in Items 11 and 12.

## 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. **No.**

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? If so, describe. **No.**

1) Describe special emergency services that might be required. **No.**

2) Proposed measures to reduce or control environmental health hazards, if any: **No.**

**b. Noise**

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

Some local traffic noise

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.

Construction Equipment only for temporary time period and primarily be limited to daytime hours.

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

None other than the standard mufflers on the equipment. Work during daytime hours primarily, although a small amount of work may be performed during a nighttime low tide.

**8. Land and shoreline use**

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

The site is not currently actively farmed, but hay is cut annually to prevent invasive vegetation. Adjacent properties are in conservation stewardship, a mobile home park and farm fields on the PNWSC property.

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

Yes. The site has been used for farming since sometime before the turn of the 20<sup>th</sup> century. Before that most of the site was estuary and forested wetlands.

c. Describe any structures on the site. **None** in the areas that will be restored or in areas that will be disturbed.

d. Will any structures be demolished? If so, what? **No.**

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

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

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

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

Wetlands are delineated on the site. See Figure 10.

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

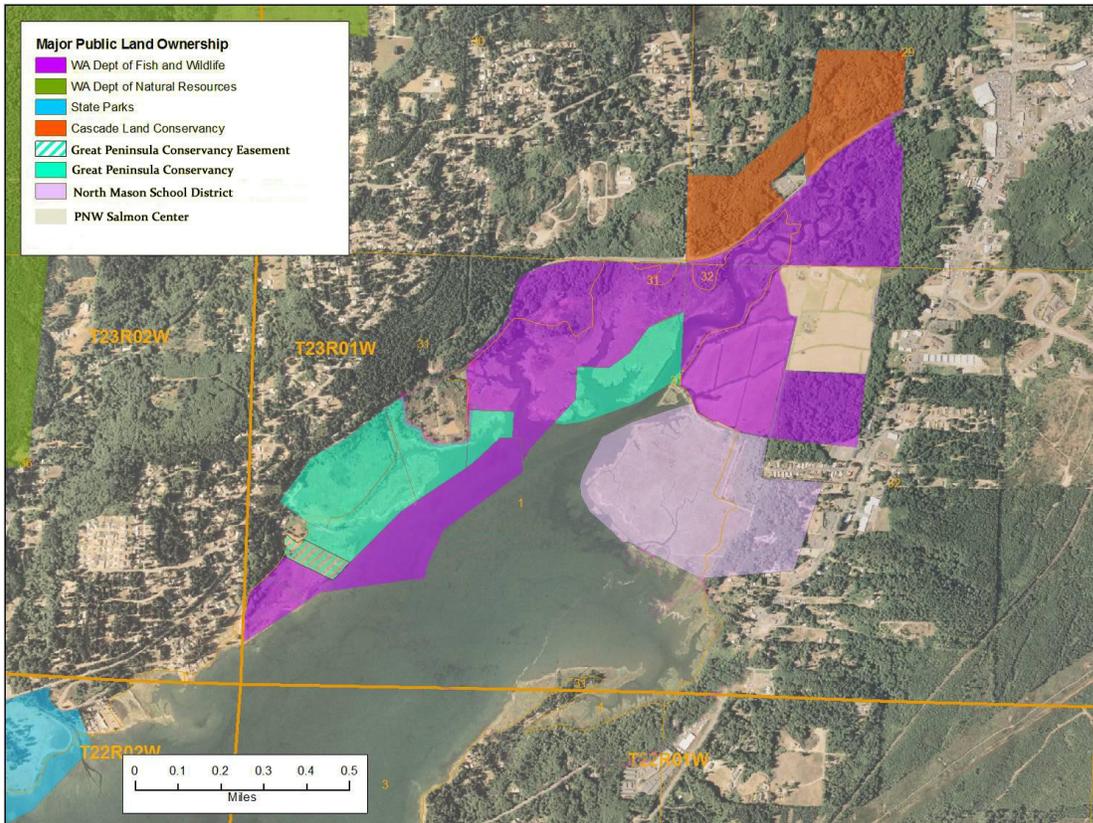
None along the west side of Roessel Road. Farm help will continue to work in the farm fields east of Roessel Road.

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:

The property in WDFW ownership was purchased for wildlife habitat and is in the middle of additional protected estuarine lands (see Figure 16). Estuarine restoration will return the diked pasture to the tidal marsh and match the existing land use in the vicinity very well. The property owned by the Pacific Northwest Salmon Center will remain a farm and will continue to be annually harvested, while protecting wildlife habitat to the greatest extent possible.



**FIGURE 16: LYNCH COVE STEWARDSHIP**

A major issue for this project is the balance between protection of existing farmland and the restoration of former estuarine habitat beneficial to fish and wildlife resources. An extensive community involvement program was implemented by the WDFW and the HCSEG for the last year to assist in development of the current proposal.

The preservation and restoration of the Union River Estuary has been underway for the last 20 years. The project began with purchase of hundreds of acres of the estuary by WDFW and other public and nonprofit entities to preserve undeveloped portions of the estuary. It has continued with the restoration of the Little and Big Mission Estuary (Belfair State Park – completed in 2008). The removal of dikes at the Klingel Wetlands in 2011 restored estuarine habitat that was previously used as farmland. The purchase of the Johnson Farm and the restoration of former marshland connected to Union River will complete the physical restoration of the Lynch Cove salt marsh habitat.

Both the Belfair State Park and Klingel estuarine restoration projects were strongly supported by the community and non-controversial, although some of the issues were similar to the current proposal. Klingel was former pasture and included a dike removal to restore tidal influence to 33 acres. Belfair State Park removed a dike around a tidal wading pool to restore floodplain connectivity and marsh lands to the Big Mission Creek.

Much of the initial public misgivings related to this project proposal focused on the potential loss of the Theler trails atop the dike, as had been rumored in the community. Once it was clear that the trails would remain in the existing location with a bridge spanning any proposed dike opening, much of the controversy decreased. While the construction of the project will have a temporary impact on the Theler Trail system, a bypass trail will be provided on the setback dike during construction. The project proposal should be consistent with surrounding land uses (mostly passive recreation and conservation lands).

Other community members were concerned about loss of existing farmland in Mason County, as the property had been recently farmed (for livestock hay). While the PNWSC farm plan was well received, there is still a loss in overall acreage of farming land related to this proposal.

Designated resource lands in Mason County are to support both farms and natural resource (e.g. forestry, shellfish, and fishing) industries. The estuarine restoration project will support natural resource conservation and salmon recovery. Finding a balance between these resource industries is challenging.

***Mason County Comprehensive Plan (2005) Goals for Economic Development of Resource Industries***  
*GMA recommends Counties maintain and enhance natural resource based industries including productive timber, agriculture, mining, and fisheries industries, and encourage the conservation of productive forest lands and productive agricultural lands, and discourage incompatible uses.*

***CWPP 8.2*** *Maintain and enhance natural resource based industries including productive timber, agriculture, and fisheries industries. Encourage the conservation of productive forest lands and productive agricultural lands, and discourage incompatible uses.*

In consideration for the interest and concerns of the Belfair community, the HCSEG, as the design project sponsor, developed and implemented a community involvement plan. A key element of this plan was the development of a set of project partners to plan and design the project. The partners on this project included:

- Washington State Department of Fish and Wildlife
- Hood Canal Salmon Enhancement Group
- North Mason School District
- Theler Wetlands Board
- Skokomish Indian Tribe
- Hood Canal Coordinating Council
- US Fish and Wildlife Service
- Congressman Norm Dicks Office
- Pacific Northwest Salmon Center

The project partners reviewed more than 13 conceptual design alternatives developed by the consulting team, keeping in mind the community values. Retention of the trail in its existing location was considered a key objective while designing the estuarine habitat restoration project. Development of a farm plan with the Mason

Conservation District for the PNWSC site was also a key factor to retain farming practices on the property in a sustainable manner. The following meetings were held during the planning and design of the project.

TABLE 1: LIST OF STAKEHOLDERS AND PUBLIC MEETINGS

Meeting	Date	PURPOSE
1	3/22/2010	Consultant and HCSEG met with Allan Borden of Mason County DCD to discuss community involvement plan and relationship to the SEPA process
2		Consultant and HCSEG met with Partners to discuss the study plan and introduce them to the consulting team.
3		Consultant and HCSEG met with HCCC and WDFW to discuss design alternatives
4	7/23/2010	Consultant and HCSEG met with Partners to present and discuss conceptual design alternatives
5	8/8/2010	Public meeting at project site – Introduction to project, public involvement plan and presentation of conceptual designs. Public comment opportunity.
6	8/20/2010	Consultant and HCSEG met with HCCC and WDFW to discuss design alternatives
7	8/31/2010	Consultant and HCSEG met with HCCC and WDFW to discuss design alternatives
8	10/1/2010	Consultant and HCSEG met with Partners to present and discuss design alternatives
9	10/6/2010	Public meeting at project site –Presentation of design alternatives. Public comment opportunity.
10	11/9/2010	Consultant and HCSEG met with Partners to discuss design alternatives
11	11/11/2010	Consultant developed powerpoint presentation as a report to describe engineering design and preliminary cost analyses.
12	12/11/2010	Consultant and HCSEG met with Partners to discuss design alternatives and select preferred alternative
13	3/21/2011	Consultant and HCSEG met with HCCC and WDFW to discuss design alternatives and modify preferred alternative for 300' bridge span
14	6/9/2011	Consultant, HCSEG and WDFW met with Mason County to discuss project design, permitting, land use and public process
15	6/27/2011	Public meeting at project site –Presentation of preferred alternative. Public comment opportunity.

**9. Housing**

- a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing. NA
- b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing. NA
- c. Proposed measures to reduce or control housing impacts, if any: NA

**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? NA
- b. What views in the immediate vicinity would be altered or obstructed? None
- c. Proposed measures to reduce or control aesthetic impacts, if any: The existing walking trail will remain.

**11. Light and glare**

- a. What type of light or glare will the proposal produce? What time of day would it mainly occur? NA
- b. Could light or glare from the finished project be a safety hazard or interfere with views? NA

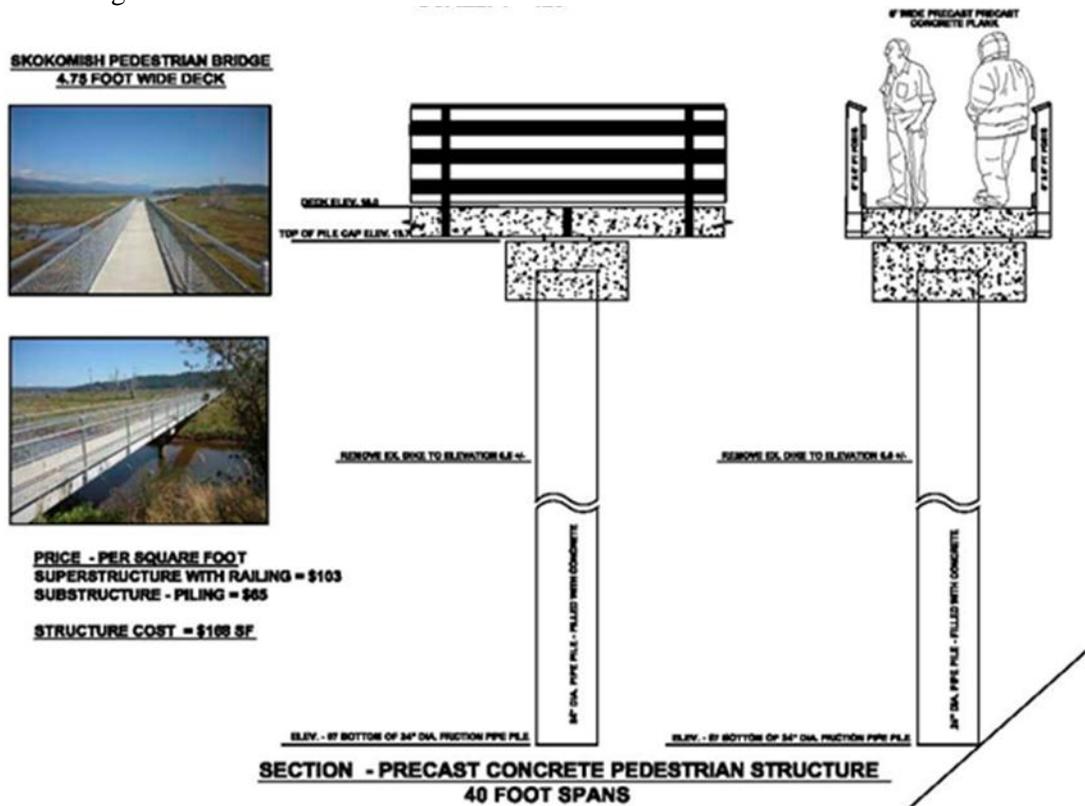
c. What existing off-site sources of light or glare may affect your proposal? NA

d. Proposed measures to reduce or control light and glare impacts, if any: NA

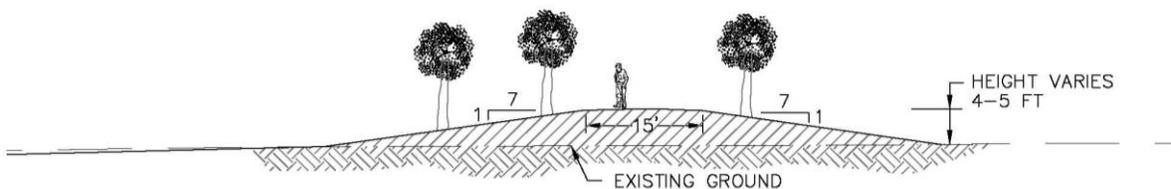
**12. Recreation**

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

A walking trail (the Theler Trail system) exists. A concrete pedestrian structure will be constructed at both of the proposed openings to retain the trail in its existing location. The setback dike will add 2,370 feet of new trail. See Figure 17 and 18.



**FIGURE 17: PROPOSED CONCRETE PEDESTRIAN BRIDGE OVER DIKE OPENINGS**



**FIGURE 18: PROPOSED SETBACK DIKE AND TRAIL**

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

Trail users will temporarily detour the bridge construction area for safety reasons by accessing the trail atop the setback dike. Therefore, Theler Trails will remain open during construction. Users will still be able to access the remaining trails in the Union River Wildlife Area.

- c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any: See above.

**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. None known.

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

None known. We have consulted with Skokomish Tribe cultural specialists and will continue to work with them through the project.

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

An extensive archeological study will be completed during the final design and permitting of the project to assure that no historical artifacts will be disturbed.

**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.

There are no public streets that will be impacted by this project. Roessel Road is a private roadway through the project area. No offsite disposal of waste soil is planned.

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

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

- 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. NA

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

All construction activities will occur separated from roadways used by the public regularly. Cut/fill was designed to require minimal transport onto or off of the site, such that transport will be minimal and off roadways used by the public..

**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. No.

**16. Utilities**

a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.     None

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.     None.

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:     10/31/2011 .....

Attachments:

*Wetland and Stream Delineation – Revised Report for Pacific Northwest Salmon Center Site – by GeoEngineers, October 10, 2007*

*Powerpoint Presentation at June 21, 2011 public meeting by WDFW*

References Cited in Environmental Checklist:

*Kuttel Jr., M. 2003. Salmonid Habitat Limiting Factors Water Resource Inventory Areas 15 (West) Kitsap Basin and 14 (North) Kennedy-Goldborough Basin. Washington State Conservation Commission. <http://www.scc.wa.gov/index.php/174-Salmon-Habitat-Limiting-Factors-Reports/View-category/Page-6.html>*

*Hood Canal Coordinating Council. 2005. Hood Canal and Eastern Strait of Juan de Fuca Summer Chum Salmon Recovery Plan. <http://hccc.wa.gov/Salmon+Recovery/Summer+Chum+Salmon/SummerChumSalmonPlan/default.aspx>*

*Hood Canal Coordinating Council. 2005. Hood Canal Coordinating Council Salmon Habitat Recovery Strategy V9-2005. <http://hccc.wa.gov/Salmon+Recovery/LeadEntity/default.aspx>*

*Washington Department of Natural Resources 2007. Forest Practices Application Review System (FPARS) mapping program. <http://fortress.wa.gov/dnr/app1/fpars/viewer.htm>*

*US Dept. Agriculture 1960. Soil survey report of Mason County, Washington [http://www.or.nrcs.usda.gov/pnw\\_soil/wa\\_reports.html](http://www.or.nrcs.usda.gov/pnw_soil/wa_reports.html)*

*Mason County Comprehensive Plan. 2005 [http://www.co.mason.wa.us/code/Community\\_Dev/index.php](http://www.co.mason.wa.us/code/Community_Dev/index.php)*

*Luttrell, Charles. November 2007. Cultural resources investigations for the Pacific Northwest Salmon Center’s Union River Estuary Land Acquisition Project, Mason County, Washington. Short Report 959, Archaeological and Historical Services, Eastern Washington University.*