# SEPA ENVIRONMENTAL CHECKLIST

***Purpose of checklist:***

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

***Instructions for applicants:***

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

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

***Instructions for Lead Agencies:***

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

***Use of checklist for nonproject proposals:*** [help]

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

## A. Background [help]

1. Name of proposed project, if applicable: [help]
   Leque Island Estuary Restoration Project

2. Name of applicant: [help]
   Washington Department of Fish and Wildlife

3. Address and phone number of applicant and contact person: [help]

Contact: Loren Brokaw

16018 Mill Creek Boulevard

Mill Creek, WA 98012

Phone: (425) 775-1311, x105

4. Date checklist prepared: [help]

October 3, 2018

5. Agency requesting checklist: [help]

Washington Department of Fish and Wildlife

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

June 2019 to October 2019. Construction would occur during a 16-week work window, with work beginning as soon as all permits are secured and site conditions allow. It is possible the work may extend into 2020.

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

The Leque Island Estuary Restoration Project (Project) is the second phase of a salt marsh restoration project which would restore tidal function to 250-acres on Leque Island. In 2017, the first phase of the project - the Preparation Project – was permitted and constructed by WDFW. The Preparation Project included work interior of the perimeter levee, including construction of an interior tidal channel network, fill of artificial drainage features and borrow areas, and removal of interior berms, footbridges, and water control structures.[1] No additional future restoration actions are proposed for Leque Island after the current project is implemented.

[1]Some of the interior tidal channel network in the northern portion of the project area was not constructed in 2017 due to ongoing discussions on how to attenuate wind-generated waves in the vicinity of the City of Stanwood. In addition, several existing artificial drainage ditches and borrow areas in the southeastern corner of the project area were not filled in 2017, in part to provide continued drainage onsite. Those components have been carried forward to the current phase of the project. In addition, the alignments of a few select tidal channels constructed in 2017 would be modified under the current project to accommodate the location of the wave attenuation berm and associated changes in drainage / water flow within the tidal channels.

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

- Geotechnical Engineering Report, GeoDesign, Inc., 2007
- Geotechnical Engineering Report, GeoDesign, Inc., 2008
- Hydrogeologic Evaluation (Salt Water Intrusion Report), Pacific Groundwater Group, 2012[2]
- Determination of Impact of Leque Island Restoration Project on Camano Island Sole Source Aquifer, EPA, 2013[2]
- Hydrodynamic Asessment of Preferred Restoration Alternatives at Leque Island and zis a ba sites, Stillaguamish Estuary, Pacific Northwest National Laboratory, 2018
- Determination of Eligibility for Listing on the National Register of Historic Places: Leque Island Levee, USFWS & DAHP, 2009
- Cultural Resources Inventory Report for the Leque Island Estuary Restoration Project, Cardno, 2017

[2] During design and permitting of a previous restoration project that was proposed in the project area in 2008-2009, representatives of an adjacent drinking water district expressed concern about the project's effects on water quality in the aquifer from which the district draws its water. In 2010, the Environmental Protection Agency (EPA) intervened and suggested that WDFW and Ducks Unlimited complete a groundwater monitoring and modeling study; as a result, Pacific Groundwater Group was hired by WDFW/Ducks Unlimited to complete the requested work (referenced above as the "Hydrogeological Evaluation"). In 2013, EPA reviewed the report and wrote a determination letter that agreed with the study's findings that estuary restoration on Leque Island poses no additional threat to drinking water resources.

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. [help]

WDFW is not aware of other proposals that may directly affect Leque Island.

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

USACE Section 404/10 Permit, WDOE Water Quality Certification, WDFW Hydraulic Project Approval, WDNR Aquatic Lands Lease, Snohomish County permits (to be determined). Consultation with USFWS and NOAA Fisheries for effects on federally-listed fish and wildlife species. Consultation and outreach to DAHP and the Native American tribes for potential effects on cultural resources.

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.) [help]

The Project would restore tidal inundation to 250-acres on Leque Island. This is the final proposed phase of restoration at this time. Project components include:

- Excavation of up to 5,800 linear feet of new interior tidal channels, including minor modifications to the alignments of the channels constructed in 2017.
- Fill of existing artificial drainage features (ditches, borrow areas) interior of the perimeter dike, and well as one tidal channel to redirect water away from the new wave attenuation berm.
- Removal of the perimeter levee, including two existing tide gates and material (rock, concrete blocks, sand bags) previously used to repair several sections of the levee.
- Excavation of five new breaches to connect the interior tidal channel network to the adjacent tidal estuary, including two breaches to Davis Slough, two breaches to Port Susan (Puget Sound), and one breach to South Pass (Stillaguamish River).
- Removal of Eide Road and an existing parking lot.
- Removal of all chain link fence and underground utility infrastructure.
- Construction of a wave attenuation berm along the northeastern portion of the project area.
- Construction of a new parking area on the northern (exterior) side of the wave attenuation berm, near the entrance to the project area from State Route (SR) 532.
- Construction of a new access to an informal hand-carry boat launch in the northwestern corner of the project area.

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. [help]

The project would be located on Leque Island, just west of Stanwood and south of SR 532 within Snohomish County in Section 26, Township 32N, Range 5E. Please refer to the attached vicinity map on a USGS quadrangle map (Figure 1) and project area map on aerial imagery (Figure 2), as well as the attached design figures.

## B. ENVIRONMENTAL ELEMENTS [help]

### 1. Earth [help]

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

b. What is the steepest slope on the site (approximate percent slope)? [help]
1-2 percent (outside of the side slopes of the perimeter levee which may be 5:1)

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 agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils. [help]
Soils in the project area are predominantly comprised of Puget Silty Clay Loam. None of the soils in the project area are classified as associated with agricultural land of long-term commercial significance.

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

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill. [help]

- Construct Tidal Channels – up to 5,800 linear feet of new tidal channels, including minor modifications to alignments of existing channels. Five new breaches to connect the interior tidal channel to the adjacent estuary would be constructed. Excavation of new tidal channels and breaches would impact up to 2.9 acres and remove up to 13,325 cubic yards (CY) of material.
- Fill Artificial Drainage Features – fill of up to 2.7 acres of existing artificial drainage features (ditches, borrow areas) interior of the perimeter dike, as well as one existing tidal channel that needs to be filled to direct water away from the new wave attention berm. Up to 7,679 CY of material excavated on site would be used to fill these areas.
- Remove Perimeter Levee – the entirety of the perimeter levee (about 12,000 linear feet) would be removed. Up to 30,220 CY of material (soil, rock, concerte blocks, and sand bags) would be removed. Soil from the perimeter levee that is not used to fill artificial drainage features onsite would be spread in a thin layer over the interior portion of the island to serve as a grade transition between the exterior of the dike and the subsided interior. Other materials (concrete, rock, sand bags) would be disposed of offsite. Removal of the perimeter levee would impact about 6.86 acres; reallocation of soil onsite would result in fill spread over about 21 acres of the project area.
- Construct Wave Attenuation Berm and Parking Area - A wave attenuation berm would be

constructed along the northeastern portion of project area to protect the City of Stanwood from wind-generated wave erosion. The berm would be about 2,700 feet long with a top width of 15-feet. Riprap (3-feet) and topsoil (1-foot) would be installed along the western (interior) side of the new berm to protect it from wave erosion, and native shrubs would be planted along its length. A new parking area would be constructed on the northern (exterior) side of the wave attenuation berm, near the entrance to the project area from State Route 532. The 5,600 square foot parking area would be constructed of compacted fill and surfaced with gravel. Concrete ecology blocks (2-feet x 2-feet x 6-feet) would be placed at 3-foot intervals around the perimeter of the parking area to limit car movement while providing drainage. Up to 36,229 CY of material (soil, gravel, rock riprap) would be used to construct the wave attenuation berm and parking area. These components would fill up to 4.98 acres.

- Remove Eide Road. Eide Road and an existing parking lot would be removed. About 1,750 CY of asphalt and rock within 1.07 acres would be removed from the project area. Portions of Eide Road located below the wave attenuation berm would be ground and left in place.
- Remove Other Infrastructure. Two existing tides gates, underground utility infrastrucuture, and all chain link fence in the project area would be removed.
- New Trail / Hand-Held Boat Launch. A new trail would be constructed from the parking area in the northwest corner of the island to Tidal Channel 6. The trail would provide hand-carry boat access to the project area and adjacent estuary. Small fence posts and/or wood chips may be used to mark the location of the access trail, but no grading or other surfacing would occur.

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

All grading and excavation activities completed interior of the perimeter dike would be completed in the dry, with site-specific construction best management practices (BMP) implemented to minimize erosion potential. The site is largely flat, so erosion on steep slopes would not occur. Some amount of turbidity will occur during construction of the breaches into Davis Slough, South Pass, and Stillaguamish River, and as tidal flows are reintroduced to the island.

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

The new parking area, wave attenuation berm, and spur road from SR 532 will encompasss about 2% of the project area after construction. This will be an overall reduction in the amount of impervious surface currently onsite because Eide Road and the perimeter dike will be removed in their entirety.

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

Standard construction BMPs will be implemented to reduce / control erosion, and provided in a project-specific Stormwater Pollution Prevention Plan (SWPPP). Representative BMPs include:

- Staging construction materials that may leak petroleum products, fuel, lubricants, or other hazardous materials in designated upland areas, away from waterbodies or runoff areas and sensitive natural communities.
- Washing vehicles and equipment offsite.
- Using sediment traps or catch basins, temporary berms, inlet (tide gate) protection, or other measures to limit movement of soil into waterways and wetlands.
- Work will stop if rain conditions that may cause siltation, erosion, or a dangerous work environment are encountered during construction.
- Site inspections will be completed at least one time per week and after storm events of 0.5 inches or greater to verify erosion and sediment controls are in good working order.

## 2. Air [help]

a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known. [help]
Air emissions would be limited to heavy equipment and worker vehicle trips during a 16-week construction window. The quantities of emissions are not known. No operational emissions would occur, and maintenance-related emissions would be limited to periodic site inspections by WDFW staff (which would be minimal).

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe. [help]
No.

c. Proposed measures to reduce or control emissions or other impacts to air, if any: [help]
All heavy equipment would be outfitted with appropriate emission control measures, and would not be allowed to idle for extended periods of time. Water would be applied during construction to control dust levels, as needed.

3. **Water** [help]

a. Surface Water:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into. [help]
There are no surface waterbodies on Leque Island. Waterbodies adjacent to Leque Island include Davis Slough to the west, Port Susan (Puget Sound) to the south, and the Stillaguamish River to the east and north. All of these waterbodies flow through Puget Sound to the Pacific Ocean.

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. [help]
Yes. Enhancement activities would occur on and adjacent to the perimeter levee of Leque Island, which is within 200 feet of each of the above named waterbodies. Five breaches to connect the interior tidal channel to the adjacent estuary would also required limited excavation into Davis Slough (two locations), South Pass (two locations), and the Stillaguamish River (one location). Please refer to the design figures included with this checklist.

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. [help]
Outside of levee removal, most proposed work would occur within a surface water or wetland. Please refer to the quantities and areas described in (B)(1)(e) above. All fill material would be derived onsite.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known. [help]
The project would not require surface water withdrawals or diversions.

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan. [help]
The entire project area is located within a 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. [help]
The project does not involve any discharge of waste materials to surface waters.

b. Ground Water:

1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known. [help]
No groundwater would be withdrawn under the project.

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. [help]
No waste material would be discharged into the ground under the project.

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. [help]
Stormwater delivered to the site from SR 532 is currently retained onsite until it is discharged to Puget Sound / Davis Slough via tidegates (or allowed to percolate into the ground). After the project is implemented, stormwater would continue to drain to Leque Island, but would flow through the tidal channel network to Puget Sound.

2) Could waste materials enter ground or surface waters? If so, generally describe. [help]
As described above, stormwater introduced to the site from SR 532 may be delivered to surface waters via the new tidal channel network after the project is implemented. No other waste materials are known to the project area.

3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe. [help]
Yes. The purpose of the project is to restore tidal flows to Leque Island. After the perimeter levee is removed, surface waters would be allowed to enter the tidal channel network constructed in 2017 and flow directly to Puget Sound. Refer to the design figures for an illustration of how drainage patterns onsite would be modified.

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any: [help]
Please refer to the representative BMPs provided above at (B)(1)(e).

4. **Plants** [help]

a. Check the types of vegetation found on the site: [help]

____deciduous tree: alder, maple, aspen, other
____evergreen tree: fir, cedar, pine, other
__X__shrubs (limited; on perimeter levee)

____grass
____pasture
____crop or grain
____ Orchards, vineyards or other permanent crops.
__X__ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
____water plants: water lily, eelgrass, milfoil, other
____other types of vegetation

b. What kind and amount of vegetation will be removed or altered? [help]
Limited shrubs scattered along the length of the 12,000 foot perimeter levee would be removed as it is deconstructed. Native shrubs would be planted along the interior portion of the 2,700 foot long wave attenuation berm. Up to 16 acres of freshwater emergent vegetation woud be buried, removed, or temporarily disturbed to construct the new wave attenuaton berm and parking area; excavate new tidal channels; and to provide general construction access within Leque Island. Up to 1 acre of tidal marsh vegetation exterior of the perimeter levee may also be disturbed to connect the interior tidal channel network to the estuary at the five breach locations. Once implemented, the vegetation community on Leque Island would shift from freshwater to tidal marsh.

c. List threatened and endangered species known to be on or near the site. [help]
No state or federally-listed plant species are known to the project area.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any: [help]
Native shrubs would be planted along the interior side of the wave attenuation berm. Tidal marsh vegetation would be allowed to reestablish naturally within the project area after construction is complete.

e. List all noxious weeds and invasive species known to be on or near the site. [help]
None.

5. **Animals** [help]

a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site. [help]

Examples include:

birds: hawk, heron, eagle, songbirds, other:
mammals: deer, bear, elk, beaver, other:
fish: bass, salmon, trout, herring, shellfish, other _____

Leque Island and the surrounding area provides habitat for a variety of bird species, including raptors (owls, hawks, eagle), shorebirds, and waterfowl, as well as small mammals. The adjacent waterbodies provide habitat for various fish and shellfish species, including salmonids and bull trout.

b. List any threatened and endangered species known to be on or near the site. [help]
Four federally-listed fish species may occur in waters adjacent to Leque Island: bull trout, dolly varden, Puget Sound chinook salmon and Puget Sound steelhead. Southern resident killer whale are also known to Puget Sound.

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

Yes. Leque Island supports various species of migrating waterfowl, and the adjacent waterbodies provide migration habitat for salmonids and other fish species.

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

- To the extent possible, construction, staging and access areas will be limited to designated areas, including paved roads and berms, to minimize the potential for injury to less mobile terrestrial wildlife species. Construction access within Leque Island will be limited to as few routes as possible.
- To the extent possible, construction activities, including vegetation removal, will be limited to the period outside the typical breeding season for most bird species (i.e., April to July).
- Adverse effects on water quality, which may affect fish utilizing adjacent waters, would be minimized by implementing site-specific erosion control measures to reduce sediment delivery to waters during construction (See Section B(1)(h)).

After the project is implemented, the new tidal channel network would benefit juvenile salmonids by providing off-channel estuarine habitat, increased habitat complexity, and improved water quality.

e. List any invasive animal species known to be on or near the site. [help]

None

## 6. Energy and Natural Resources [help]

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. [help]

The project has no long-term energy needs.

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

The project would have no effect on the potential use of solar energy by adjacent properties.

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: [help]

The project would not require any energy and does not include any energy reduction or control features.

## 7. Environmental Health [help]

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. [help]

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

Leque Island was and has historically been used in agricultural production, where fertilizers or other chemicals may occur in soils onsite. No specific areas of contamination are known to occur.

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

Underground utility lines (electrical) are located along the east side of Leque Island. These lines would be relocated from the project area in coordination with the utility provider.

3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project. [help]
Petroleum products (fuel, lubricants) would be used to operate heavy machinery during construction. No other toxic or hazardous chemical would be stored, used, or produced during project development, construction, or operation.

4) Describe special emergency services that might be required. [help]
No special emergency services would be required.

5) Proposed measures to reduce or control environmental health hazards, if any: [help]
Standard worker and environmental health protection measures would be employed during construction, including use of appropriate safety gear (hard hats, ear protection) and dust suppression (as required). No other environmental health hazards are anticipated.

b. Noise [help]

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)? [help]
Traffic noise from SR 532 occurs along the northern boundary of Leque Island.

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. [help]
Limited construction-related noise from use of heavy equipment would occur during construction. This noise would be short-term, and would only occur during daylight hours.

3) Proposed measures to reduce or control noise impacts, if any: [help]
Work would only be completed during daylight hours. In addition, there are few (if any) sensitive noise receptors located in the vicinity.

## 8. Land and Shoreline Use [help]

a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe. [help]
Leque Island is currently managed by WDFW as part of the Skagit Wildlife Area as habitat for migrating and wintering waterfowl and for recreational uses. It is bound by Puget Sound and tidelands controlled by WDNR on the west, south, and east. SR 532, which is managed by WSDOT, is located on the north side of the island and provides access between Stanwood and Camano Island. The Stillaguamish River is located to the east and north of the project site.
The project would not affect current land uses on adjacent properties. Some changes in recreational uses will occur on the island itself; for example, pheasant hunting (which was previously allowed on the island prior to implementation of the Preparation Project) would no longer occur. Alternately, the project would include construction of a hand-held boat launch to provide access to tidal estuarine habitats in the vicinity, which is an amenity not currently provided on the island. WDFW is coordinating with WSDOT to ensure the project will not adversely impact SR 532.

b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to

other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use? [help]
Leque Island has been used as working farmland in the past, with portions of the island planted in cereal grain as food for wintering waterfowl. Since the accidental dike breach and subsequent repair in March 2015, the island has not been planted with agricultural crops due to leassee concerns with farmability due to salt intrusion during the breach event. All land previously in agricultural production on Leque Island (i.e., up to 250-acres) would be converted to tidal marsh under the project.

The project is included in the Snohomish County Sustainable Lands Strategy (SLS), which is a partnership of salmon recovery of agricultural interests. SLS has developed a package of projects that when evaluated cumulatively, offers a net gain for salmon recovery and agriculture viability. The SLS Executive Committee has supported including the project as one of the salmon recovery projects in the package.

1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how: [help]
The project would not affect – or be affected by – surrounding working farm or forest land normal business operations.

c. Describe any structures on the site. [help]
A perimeter levee surrounds the west, east, and south sides of Leque Island; SR 532 runs along the north side. Two tide gates are located in the perimeter levee – the northwest tidegate drains to Davis Slough and the southwest tidegate drains to South Pass. Eide Road, a paved access road within Leque Island, and a small parking area currently provides limited vehicle access near the eastern perimeter levee. All other infrastructure (low berms, footbridges, water control structures) were removed during implementation of the first phase of restoration work in 2017.

d. Will any structures be demolished? If so, what? [help]
The perimeter levee, tidegates, and existing road / parking area will be removed (a portion of Eide Road will be ground and buried under the wave attenuation levee). Existing chainlink fence will also be removed, and underground utility lines will be relocated.

e. What is the current zoning classification of the site? [help]
A-10

f. What is the current comprehensive plan designation of the site? [help]
Riverway Commercial Farmland

g. If applicable, what is the current shoreline master program designation of the site? [help]
Aquatic Shoreline and Resource Shoreline

h. Has any part of the site been classified as a critical area by the city or county? If so, specify.
Yes. Snohomish County has classified the following critical areas on the site: (1) Wetlands and Associated Buffers; (2) Fish and Wildlie Habitat Conservation Areas (including Streams and Buffers, Marine Waters, and Primary Association Areas); (3) Aquifer Recharge Areas; and (4) Flood Hazard Area (potentially).

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

None.

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

None.

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

Not applicable.

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

WDFW will coordinate with Snohomish County to ensure the project is consistent with applicable zoning ordinances and comprehensive plan requirements.

m. Proposed measures to reduce or control impacts to agricultural and forest lands of long-term commercial significance, if any: [help]

Not applicable.

9. **Housing** [help]

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

None.

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

None.

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

Not applicable.

10. **Aesthetics** [help]

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

The wave attenuation berm would be approximately 8-feet high. On the interior (northwestern) side, it would be surfaced with topsoil (1-foot) and rock (3-feet); on the exterior (northeastern) side it would be surfaced with topsoil (1-foot). Native shrubs would be planted along its length.

b. What views in the immediate vicinity would be altered or obstructed? [help]

Views of Leque Island would change from one typical of a a freshwater emergent marsh to a tidal estuary adjacent to the Stillaguamish River and Puget Sound.

c. Proposed measures to reduce or control aesthetic impacts, if any: [help]

None.

11. **Light and Glare** [help]

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

The project would not produce light or glare during or after construction. All construction would be completed during daylight hours.

b. Could light or glare from the finished project be a safety hazard or interfere with views? [help]
No light or glare would be generated by the project.

c. What existing off-site sources of light or glare may affect your proposal? [help]
Traffic on SR 532 is visible from Leque Island, as are limited residential lights from Stanwood and Camano Island. These light sources would not affect the project.

d. Proposed measures to reduce or control light and glare impacts, if any: [help]
Not applicable.

12. **Recreation** [help]

a. What designated and informal recreational opportunities are in the immediate vicinity? [help]
WDFW currently manages Leque Island for various recreational uses, including bird watching, nature photography and waterfowl and pheasant hunting. Fishing and boating opportunities are also provided in the various adjacent waterbodies.

b. Would the proposed project displace any existing recreational uses? If so, describe. [help]
The project will make foot access more difficult for some uses, including waterfowl hunting and bird watching/photography, and will displace pheasant hunting.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any: [help]
The project includes construction of a new access to an informal hand-carry boat launch in the northwestern corner of the project area, which is an amenity not currently available on the Island. In addition, WDFW is working with a Recreation Advisory Committee to identify recreational opportunities that could be enhanced onsite after the project is complete. As a result of this effort, WDFW has secured funding for design and construction of a motorized boat launch on the Stillaguamish River less than 1 mile upstream of the project area that would provide new motorized boat access onto the site and adjacent Skagit/Port Susan Bays. WDFW will continue working with stakeholders to adaptively manage the site for recreation.

13. **Historic and cultural preservation** [help]

a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers ? If so, specifically describe. [help]
In 2009, the DAHP evaluated and determined the perimeter levee on Leque Island (the Leque Island Dikes) was not eligible for listing in the National Register of Historic Place. WDFW is currently working with a professional archaeologist to evaluate wood pilings located on the exterior portion of the perimeter dike in the vicinity of the proposed breaches to determine if they may be eligible for listing in the Register. No other historic buildings or structures are known to occur on site.

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources. [help]
None known. WDFW and DU contracted with an archaeological consulting firm, Cardno, to assess the potential for Leque Island to support buried cultural resources. Subsurface testing of potential sensitive

areas was completed by Cardno in 2016, and a qualified archaeoglocial monitor observed ground disturbing activities during construction of the Preparation Project in 2017. No cultural resources were identified in the January 2017 report prepared by Cardno (see *Cultural Resources Inventory Report for the Leque Island Estuary Restoration Project*), or during the 2017 construction project. WDFW is currently working with Cardo to determine if additional monitoring may be required during removal of the perimeter levee, or excavation of the proposed breaches.

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

The methods used to assess the potential for cultural resources to occur onsite were developed by Cardno, in collaboration with USACE, DAHP, and the tribes. The assessment included a literature review in combination with an on-site archaeological survey. Prior to the survey, Cardno and the Stillaguamish Tribe THPO used LiDAR technology to identify seven high probability areas (HPAs) encompassing 61 acres to survey. Within the HPAs, field staff completed 101 shovel probes. Excavated material was run through ¼ hardware mesh. In addition to investigation within the HPAs, field staff completed a pedestrian survey and 4 additional shovel probes in the broader project area. An archaeological monitor was also present during all ground disturbing activites conducted in sensitive areas during construction of the Preparation Project in 2017. As noted above, Cardno is currently working with USACE, DAHP, and the tribes to determine if additional monitoring during removal of the perimeter levee and/or at the proposed breach locations is warranted.

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

WDFW and DU are contracting with Cardno to perared a Monitoring and Indavertent Discovery Plan (MIDP) in the event ground-disturbing activities uncover a previously unknown cultural resource. Additional monitoring of excavation activities, if warranted, will be determined in collaboration with USACE, DAHP, and the tribes during development of the formal permit application materials.

14. **Transportation** [help]

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

Leque Island can be accessed from SR 532. Access within Leque Island is provided by Eide Road.

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

Public transit does not serve Leque Island.

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

The existing parking area accommodates about 10 cars. The new parking area could accommodate up to 15 cars.

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

The project would remove Eide Road. The spur road from SR 532 would be reconstructed to provide access to the new parking area in the northeast corner of the island.

e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.
The project would not use water, rail, or air transportation.

f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates? [help]
Up to 10 worker vehicle trips per day would occur during the 16 week construction period. Workers would typically access the site between 7 a.m. and 6 p.m., depending on daylight working hours. The number of vehicle tripes are provided as estimates – no modeling has been used to estimate vehicular trips.

g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe. [help]
The project would not interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area.

h. Proposed measures to reduce or control transportation impacts, if any: [help]
Not applicable.

15. **Public Services** [help]

a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe. [help]
The project would not result in an increased need for public services.

b. Proposed measures to reduce or control direct impacts on public services, if any. [help]
Not applicable.

16. **Utilities** [help]

a. Circle utilities currently available at the site: [help]
electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other _____
None. Underground utility lines (presumed to be electric lines) are located along the east side of the Leque Island and would be relocated under the project. These lines do not specifically serve the project area.

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. [help]
No utilities are proposed under the project.

## C. Signature [help]

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

Signature: 

Name of signee __**Loren Brokaw**_____

Position and Agency/Organization **_Restoration Project Coordinator, WDFW____**

Date Submitted: 10/31/18 .....