

ENVIRONMENTAL CHECKLIST

Skagit Environmental Bank

Prepared for

Clear Valley Environmental Farm, LLC
9 Teaberry Lane
Tiburon, California 94920

Prepared by

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Environmental Checklist

A. Background

1. Name of proposed project if applicable:

Skagit Environmental Bank

2. Name of applicant:

Clear Valley Environmental Farm, LLC

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

Clear Valley Environmental Farm, LLC
9 Teaberry Lane
Tiburon, California 94920

Contact: Jerome Ryan (415) 435-3734

4. Date checklist prepared:

June 27, 2006

5. Agency requesting checklist:

Skagit County

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

The Skagit Environmental Bank project will be constructed in three phases. Phase I is expected to begin and end between June and August 2007. Phase II and III are expected to occur between 2008 and 2009. Grading activities will occur in the summer. Planting will occur in late fall or winter.

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

No.

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

Skagit Environmental Bank – Wetland Delineation Report (prepared by Sustainable Environments Skagit, LLC, August 2005)

Skagit Environmental Bank – Wetland Mitigation Bank Prospectus (prepared by Clear Valley Environmental Farm, LLC, Revised February 14, 2005)

Skagit Environmental Bank Habitat Restoration Project – Biological Assessment (prepared by Herrera Environmental Consultants, October 31, 2005)

Skagit Environmental Bank Habitat Restoration Project – Biological Assessment Addendum (prepared by Herrera Environmental Consultants, March 22, 2006)

Skagit Environmental Bank – Hydrologic and Hydraulic Basis of Design Report (prepared by Herrera Environmental Consultants, June 2006).

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.**

Section 404 permit, U.S. Army Corps of Engineers

Endangered Species Act compliance, U.S. Fish and Wildlife Service, NOAA Fisheries

Section 401 water quality certification, Washington State Department of Ecology

Coastal Zone Management Act consistency, Washington State Department of Ecology

NPDES permit, Washington State Department of Ecology

Aquatic resources use authorization notification, Washington Department of Natural Resources

Shoreline permit, Skagit County

Grading Permit, Skagit County.

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 Skagit Environmental Bank project will restore stream reaches along Nookachamps Creek and East Fork Nookachamps Creek. In addition, the project will reestablish,

rehabilitate, and enhance associated wetlands. The development of this mitigation bank is being coordinated with the Mitigation Bank Review Team (MBRT), which includes members of the Washington State Department of Ecology, U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, and Washington Department of Natural Resources. The proposed project will be constructed in three phases and will rehabilitate approximately 13,000 feet (2.5 miles) of existing stream channel and riparian habitat, construct 9,720 feet (1.8 miles) of new high-flow back channels; enhance, reestablish, or rehabilitate 261 acres of emergent, scrub-shrub, and forested wetlands; and enhance 109 acres of upland areas, including buffers (see Sheet R-5 in Appendix B of the hydrologic and hydraulic basis of design report) on the Skagit Environmental Bank site. Approximately 4 acres of the project site consists of water line and power line easements, which will be converted to wetland or upland habitat. The total acreage of the project site is 374 acres.

Phase I includes filling ditches and constructing three engineered log jams (ELJs) in Nookachamps Creek and East Fork Nookachamps Creek. The objective of Phase I is to restore the floodplain hydrology associated with these streams, resulting in restored wetland hydrology conditions. Construction will occur within a 75-day construction window that coincides with the time that fish are least likely to be present (June 15 to August 31). Earth disturbed during Phase I will be seeded with a native grasses. Hydrologic monitoring will be conducted after the completion of Phase I to assess how the local ground water table responds to the filling of ditches and installation of ELJs.

Phase II will include the construction of high-flow back channels off Nookachamps Creek and East Fork Nookachamps Creek and the planting of native vegetation across the project site. The following activities will occur during Phase II:

- Each of the three new high-flow back channels will be approximately 1,400 to 3,800 feet long and approximately 75 wide. The actual channel dimensions will not be determined until the hydrologic conditions resulting from the modifications during Phase I are analyzed.
- The back channels will be excavated during dry conditions, and a soil plug will be left in place at the confluence of the back channel with the existing stream channel. Excavated material will be stockpiled on the site, in a staging area.
- Water will be introduced to the channels slowly, and turbid water will be pumped to upland sedimentation/infiltration areas before the establishment of connectivity between the high-flow channels and the existing stream channels.
- Silt booms and turbidity monitoring stations will be in place downstream of work areas when flows are introduced into the new channels.
- In disturbed areas where the hydrologic conditions are well understood and not expected to change after the channel construction, final plantings will be installed. Other disturbed areas that may require additional grading during Phase III will be

seeded with native grasses, and the final plantings will be installed during Phase III.

- See Section B.4.d below for a list of plant species that will be planted across the site.

Phase III will include final site grading that will include up to 20 percent of the project site and final planting of all areas that are not planted during Phase II.

- Minor grading will remove most of the dry soil areas that remain after Phase I and II operations. The excavation will reduce the elevation of the remaining high spots to a point where the hydrologic conditions will support wetland vegetation.
- Up to three additional high-flow back channels may be added during Phase III, depending on the results of the hydrologic analysis after the completion of Phase I.
- It is estimated that approximately 30 percent of the site will remain as upland areas, referred to as forested "islands."
- Additional planting will occur during Phase III. The entire project site will consist of restored native revegetation at the conclusion of Phase III.

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 Skagit Environmental Bank site is located 1.5 miles northeast of the urban center of Mount Vernon, Washington, just outside the Mount Vernon city limits (see Sheet 1 of the JARPA and Sheet G-1 in Appendix B of the hydrologic and hydraulic basis of design report). The project site is bordered by State Route (SR) 538 on the south, SR 9 and Babcock Road on the east, and Swan Road on the north. Nookachamps Creek borders the western portion of the site. Barney Lake is located west of Nookachamps Creek. The project site lies in Sections 10, 11, 15, and 14, Township 34 North, and Range 4 East.

The Skagit Environmental Bank consists entirely or partially of 33 parcels within Skagit County including the following parcel numbers: P24443, P24498, P24490, P24491, P24492, P24493, P24494, P24495, P24496, P24497, P24498, P24512, P24530, P24531, P24532, P24533, P24535, P24692, P24694, P24695, P24696, P24697, P24730, P24731, P24733, P24743, P24801, P24804, P24805, P24806, P24890, P109225, and P109241.

B. Environmental Elements

1. Earth

a. General description of the site (check one):

- ☒ flat
☐ rolling
☐ hilly
☐ steep slopes
☐ mountainous
☐ other: _____

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

Steep slopes occur only on the banks of Nookachamps Creek and East Fork Nookachamps Creek. In places, slopes are nearly vertical (100 percent). The steepest slopes are on the banks of Nookachamps Creek upstream of the confluence with East Fork Nookachamps Creek. In addition, nearly vertical slopes occur along the upper sections of East Fork Nookachamps Creek.

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 Skagit Environmental Bank site has been actively farmed for the past 80 years. Low-lying areas of the site are underlain by unconsolidated alluvial sediment that were deposited in the Skagit River floodplain after the retreat of the Cordilleran ice sheet. Upland areas surrounding Barney Lake consist of glaciomarine outwash and till. Glacial outwash found upstream of the site supplies most of the coarse sediment observed in both the lower Nookachamps Creek and East Fork Nookachamps Creek. According to the soil survey of Skagit County (SCS 1989), Five silt loam soil series occur on the site, including Bellingham silt loam (hydric), Nookachamps silt loam (hydric), Skipopa silt loam, Sumas silt loam (hydric), and Field silt loam.

According to the soil survey, soils on the site are suited for hay, pasture, corn, wheat, peas, and potatoes.

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

There is some evidence of bank failure along the upper portions of East Fork Nookachamps Creek. Based on a review of existing information and observations of the surface conditions, there are no other surface indications of unstable soils on the project site and no history of unstable soils in the vicinity of the project site.

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

- A total of 8,550 linear feet of ditches will be filled during Phase I (see Sheet C-1 in Appendix B of the hydrologic and hydraulic basis of design report). Ditches 1, 2, 3, 4, 6, 7, and 8 will be filled. Ditch 5 will remain untouched so as not to disrupt flows in Mud Creek. Approximately 27.5 acres of earth will be disturbed as part of the ditch filling. Ditches will be filled with soil from existing berms adjacent to the ditches and areas adjacent to the berms. Approximately 13,677 cubic yards of fill will be permanently placed in the ditches (see Sheets C-2 through C-5 in Appendix B of the hydrologic and hydraulic basis of design report).
- A total of approximately 1,077 cubic yards of stream gravel will be placed at ELJ locations (Phase I). The gravel is intended to stabilize the ELJ structure, provide grade control, and provide fish habitat. Clean gravel will be obtained from a local gravel supplier.
- A revised grading plan will be developed after an analysis of the new hydrologic conditions resulting from the modifications in Phase I. Large portions of the site will be extensively graded as a result of back-channel creation (Phase II) and general regrading in order to establish proper wetland conditions. Excavated soils will be moved to onsite locations designated as forested upland (see Sheet R-5 in Appendix B of the hydrologic and hydraulic basis of design report). Upland areas containing excavated material will make up approximately 30 percent of the site. No material will be exported offsite.

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

Minor erosion could occur during construction of the proposed project. Construction during the summer when it is least likely to rain will minimize the potential for erosion. In addition, the erosion potential will be minimized by redirecting flows around the proposed ELJ sites (see Sheets ESC-1 and ESC-2 in Appendix B of the hydrologic and hydraulic basis of design report). All areas to be cleared will be replanted with native vegetation after the construction activities.

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

No impervious surfaces are proposed.

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

Temporary erosion and sedimentation control (TESC) measures will be in place before work begins (see Sheets ESC-1 and ESC-2 in Appendix B of the hydrologic and hydraulic basis of design report). All water and soil particles will be retained on the work

site. Best management practices (BMPs) will be implemented to prevent dust, soil, and stormwater runoff from entering Nookachamps Creek and East Fork Nookachamps Creek.

The BMPs will be monitored and maintained throughout construction. Written records of the weekly reviews of the TESC facilities will be kept on the site throughout the course of the project. In the event that a release of turbid water occurs, the contractor will be directed to stop work and to implement additional erosion and sedimentation controls before work is allowed to proceed.

The TESC measures that will be documented in the TESC plan are the minimum requirements for the expected site conditions. During the construction period, these TESC facilities will be upgraded as necessary for unexpected storm events and changing site conditions (e.g., additional pumps or relocation of silt fences).

Filter fabric for use in the silt fencing will be purchased in a continuous 5-foot-wide roll and cut into the length of the needed barriers to avoid the use of joints. When joints are necessary, the filter fabric will be spliced together only at a support post, with a minimum overlap of 6 inches. The fence posts will be spaced a minimum of 6 feet apart and securely driven 12 inches into the ground. The filter fabric will be buried in a shallow ditch upstream and adjacent to the post.

Silt fences will be removed at the direction of the project engineer but not before the upslope areas have been permanently stabilized. Silt fences will also be inspected immediately after rainfall events, and required repairs will be made immediately.

Areas that will be unworked for more than 7 days during the dry season or 2 days during the wet season will be covered with straw, wood fiber mulch, compost, plastic sheeting, or an equivalent material. If straw mulch is used, it will be applied at a minimum thickness of 2 inches. Areas that remain unworked for more than 30 days will be seeded or sodded. Upon completion of the project, all disturbed areas will be stabilized. Sediment that has accumulated behind BMP structures will be disposed of in accordance with all local, state, and federal laws.

Stabilized construction entrances and roads will be installed at the beginning of construction and maintained for the duration of the proposed project. Additional measures, such as wash pads, may be required to ensure that all paved areas in the project vicinity remain clean for the duration of the project.

At no time will more than 6 inches of sediment be allowed to accumulate behind a silt fence or in a sediment trap. Cleaning of fencing and sediment traps will not result in the discharge of sediment-laden water into Nookachamps Creek or East Fork Nookachamps Creek.

Stormwater that collects on the site will be pumped by means of a sump pump to an upslope vegetated area that is approved by the site engineer for filtering. Temporary

stream diversions will be implemented at the location of ELJ construction in order to divert streamflow around the proposed areas of in-water work

2. Air

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

Construction vehicle emissions to air and dust generation will occur, but they will be temporary and rapidly dissipated. After project completion, no further emissions to air will occur.

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

There are no offsite sources of emissions that will affect the project.

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

Standard methods of reducing impacts on air will be used; these include keeping all heavy equipment in good operating condition. To reduce dust generation, exposed soils and soil stockpiles will be covered or watered during grading or during dry periods when they are subjected to equipment traffic.

3. Water

- 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, or wetlands)? If yes, describe and provide names. If appropriate, name the stream or river it flows into.***

The Nookachamps Creek watershed is located in the Lower Skagit-Samish River water resource inventory area 3 (WRIA 3). WRIA 3 drains an area of 741 square miles and is located in the Cascade and Puget Lowland ecoregions of Washington (WDF 1975). The Skagit Environmental Bank site includes portions of Nookachamps Creek, East Fork Nookachamps Creek, and Mud Creek, all of which eventually drain to the Skagit River. Approximately 59 acres of existing wetlands associated with farmed areas, ditches, Nookachamps Creek, and East Fork Nookachamps Creek were delineated on the site. Barney Lake is a large wetland system that is located directly west of the Skagit Environmental Bank site.

Nookachamps Creek (designated as Stream 03-0227) originates at the outlet of Lake McMurray and drains an area of approximately 70 square miles (WDF

1975). Nookachamps Creek flows for 14.3 miles to the northwest and drains into Big Lake before continuing north through the project site. Nookachamps Creek flows into the Skagit River at river mile (RM) 18.8, between the towns of Burlington and Sedro Woolley.

East Fork Nookachamps Creek (designated as Stream 03-0230) is approximately 9.4 miles long and flows into Nookachamps Creek at RM 2.9, near the wetlands adjacent to Barney Lake. Walker Creek is a major tributary of East Fork Nookachamps Creek that flows into the East Fork at RM 5.1.

Mud Creek (designated as Stream 03-0229) is approximately 1.8 miles long and flows into Nookachamps Creek at RM 2.15. Mud Creek originates at Mud Lake.

2) *Will the project require any work over, in, or adjacent to (within 200 feet of) the described waters? If yes, please describe and attach available plans.*

Yes. There are three activities that will involve working within surface waters and within 200 feet of surface waters: (1) filling of drainage ditches, (2) installation of ELJs, and (3) grading and native species planting.

Filling of Drainage Ditches

Portions of Ditches 1, 2, 3, 4, 6, 7, and 8 will be filled within 200 feet of Nookachamps Creek, East Fork Nookachamps Creek, or Mud Creek (see Sheets C-2 and C-3 in Appendix B of the hydrologic and hydraulic basis of design report).

The ditches will be filled in the summer, when water levels in the ditches are expected to be low. If water is present in the ditches, fish handling procedures will be implemented in accordance with the requirements of the National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NOAA Fisheries). Fish handling in ditches will include isolation of the ditch from Nookachamps Creek or East Fork Nookachamps Creek using block nets followed by seining of the ditches from upstream to downstream. Further details of the fish handling procedures will be included in a site-specific fish handling plan that will be developed before the construction activities begin.

Before the ditches are cleared of vegetation or filled, and after the necessary fish handling is completed, each ditch will be isolated at the downstream end using a bulk bag dam, and a silt boom will be set up to contain any fine-grained sediment that is mobilized. A water quality monitoring station will be established downstream of the ditch outlet according to permit requirements.

Any water that remains in the ditches will be pumped to upland areas after the fish removal and before the ditches are filled.

Ditches, the berms adjacent to them, and any additional adjacent areas that will be graded during the ditch filling effort will be cleared of vegetative material before the ditch filling begins.

Water pumps used to dewater construction areas will have fish screens installed, operated, and maintained according to the NOAA Fisheries fish screen criteria (NMFS 1995), including the addendum for pump intakes (NMFS 1996), and the Washington state screening requirements for water diversions (Revised Code of Washington, Title 77, Chapter 77.55, Section 320 [RCW 77.55.320]). Additionally, all fish screens that will be used for the project will follow the draft Fish Protection Screen Guidelines for Washington State (WDFW 2000).

Installation of ELJ–Grade-Control Structures

Three ELJ–grade-control structures will be constructed, including one within Nookachamps Creek and two within East Fork Nookachamps Creek. Construction activities will be performed during the low-flow season and the approved fish work window (see Sheets C-1, C-6, C-7, and C-8 in Appendix B of the hydrologic and hydraulic basis of design report).

Log Procurement and Decking

Logs for the ELJ structures will be imported from offsite locations and decked (staged) onsite until construction. They will be obtained from a permitted log supply source. Logs will be prepared for decking by cutting and trimming them to the appropriate length, in accordance with the construction specifications. Limbs removed from logs will be used as slash material to stabilize the ELJ structures.

Log Placement

A water barrier is proposed for the front (upstream side) of each ELJ structure, orientated perpendicular to the channel (see Sheets C-6 through C-8 in Appendix B of the hydrologic and hydraulic basis of design report). The water barrier is intended to prevent erosion under and around the ELJ structure. The water barrier consists of logs piled on top of each other between piles forming a buried wall. The water barrier will be buried approximately 5 feet below the existing grade of the channel bed and will extend approximately 180 feet from each bank at a 90-degree angle.

The remainder of each ELJ structure will consist of multiple logs, with and without rootwads, that will be completely or partially buried within the existing banks and channel bed. Gravel and slash (debris such as branches, tree tops, and uprooted stumps) will be added to the existing channel bed to provide stability for the overall ELJ structure.

Grading and Native Planting

Initially (during Phase I), all areas disturbed by construction activities will be seeded with a native grass mix. Final planting of the site will occur during Phases II and III and will involve the installation of appropriate native herbaceous, shrub, and tree species throughout the project site in areas that were disturbed during the previous phases and in areas that were not previously affected by construction.

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.***

- A total of approximately 1,077 cubic yards of stream gravel will be placed at the ELJ locations (Phase I). Clean gravel will be obtained from a local gravel supplier.
- A total of approximately 240 cubic yards of soil and substrate from stream banks and the channel bed will be excavated during the installation of logs at each ELJ location (Phase I). The excavated material will be used as backfill. Any excess material will be retained onsite.
- Approximately 11,372 cubic yards of fill material (native soil) will be placed in wetlands that occur within ditches (Phase I). The sources of fill material will be adjacent berms or areas adjacent to berms.

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

Nookachamps Creek and East Fork Nookachamps Creek will be diverted from the in-channel construction areas during the construction of the ELJ-grade-control structures (see Sheet ESC-1 in Appendix B of the hydrologic and hydraulic basis of design report). The depth of water in the channels may be up to 7 feet at the time of construction. The diversion of water at each ELJ location will consist of the following elements:

- After upstream water passes through a fish block net, it will be diverted into a diversion channel. A dam at the upstream end of the ELJ work area will divert water into the temporary channel.
- A second dam will be located at the downstream limits of the ELJ work area. A silt boom will be located downstream of the dam to filter sediment out of water that leaks through the dam.
- The diversion channel will discharge to the main channel downstream of the silt boom. A temporary rock dissipater will be located at the confluence of the diversion channel and the main channel.
- The diversion channels will be excavated under dry conditions, and excavated material will be temporarily stockpiled adjacent to the channels. The diversion channels will be lined with biomatting to minimize the disturbance of the channel beds and side slopes.
- Water will be introduced to the diversion channels slowly, and turbid water will be pumped to upland sedimentation/infiltration areas before connectivity is established between the diversion channels and the main channel.
- Turbidity monitoring stations will be in place downstream of the work areas when flows are initiated through the diversion channels.

- ELJ construction will occur between the upstream and downstream dams. Standing water in the work area will be pumped to an energy dissipater constructed of straw bales. The energy dissipater will be located at least 100 feet away from the stream. Turbid water will filter through the straw bales.
- Once the grade control structures are completed, flow will be redirected to the main stem channels, and the diversion channels will be backfilled.

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

The entire site lies within the 100-year floodplain of the Skagit River.

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 discharge of waste materials to surface water is proposed as part of this project.

b. ***Ground water:***

1) ***Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.***

No ground water withdrawals or discharges are proposed as a part of this 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 waste, containing the following chemicals . . . ; agricultural waste; 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.***

There will be no discharge of waste material into the ground associated with this project.

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

1) ***Describe the source of runoff (including stormwater) 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.***

Stormwater flow in the project area contributes flow to Nookachamps Creek and East Fork Nookachamps Creek. The project will not result in an increase of stormwater flow, as there will be no new impervious surfaces. Rather, the project may result in a decrease of stormwater flow as a result of ditch filling and revegetation activities. See Section B.1.h for stormwater management during construction activities.

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

The project presents a potential for waste materials (sediments) to enter surface waters, particularly during construction. Best management practices will be implemented to minimize onsite erosion and sedimentation. During construction, precautions will be taken to minimize the potential for any release of gas, oil, or diesel from equipment used or temporarily stored on the site. An emergency spill containment kit will be located on the construction site, and a spill prevention, control, and countermeasures (SPCC) plan will be prepared to address the prevention and cleanup of accidental spills.

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

Temporary erosion and sedimentation control measures will be implemented during construction to limit downstream impacts due to siltation, including but not limited to the installation of gravel filter berms downstream of the proposed construction. Precautions to prevent leaks and spills from equipment will also be taken.

4. **Plants**

a. *Check types of vegetation found on the site:*

<input checked="" type="checkbox"/>	deciduous tree:	
<input checked="" type="checkbox"/>	alder	
<input type="checkbox"/>	maple	
<input type="checkbox"/>	aspen	
<input type="checkbox"/>	others:	
<input checked="" type="checkbox"/>	evergreen tree:	
<input type="checkbox"/>	fir	
<input checked="" type="checkbox"/>	cedar	
<input type="checkbox"/>	pine	
<input type="checkbox"/>	others:	
<input checked="" type="checkbox"/>	shrubs	Salmonberry, Nootka rose, red-osier dogwood
<input checked="" type="checkbox"/>	grass	
<input checked="" type="checkbox"/>	pasture	
<input checked="" type="checkbox"/>	crop or grain	
<input checked="" type="checkbox"/>	wet soil plants:	
<input checked="" type="checkbox"/>	cattail	
<input checked="" type="checkbox"/>	buttercup	
<input checked="" type="checkbox"/>	bulrush	
<input checked="" type="checkbox"/>	skunk cabbage	
<input checked="" type="checkbox"/>	others:	
<input checked="" type="checkbox"/>	water plants:	
<input checked="" type="checkbox"/>	water lily	
<input checked="" type="checkbox"/>	eelgrass	
<input checked="" type="checkbox"/>	milfoil	
<input checked="" type="checkbox"/>	others:	
<input type="checkbox"/>	other types of vegetation:	

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

- Approximately 5.65 acres of vegetation will be cleared during the ditch filling activities. Most of the affected vegetation will consist of reed canarygrass and occasional shrubs and trees (willows and alders). Measures will be taken to protect large trees (e.g., cottonwoods) adjacent to the ditches.
- Shrub and tree species within the riparian corridor (approximately 20 acres) of Nookachamps Creek and East Fork Nookachamps Creek will be protected from construction-related activities.
- The remainder of the site, consisting mostly of agricultural field and pastures (approximately 320 acres) will be cleared during grading activities and the excavation of high-flow back channels. Most of the affected vegetation in this area will consist of reed canarygrass, winter rye, and corn.

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

There are no known threatened or endangered plant species known to be on or near the site.

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

Initially (during Phase I), all areas disturbed by construction activities will be seeded with a native seed mix. Final planting of the site will occur during Phases II and III and will involve the installation of appropriate native herbaceous, shrub, and tree species throughout the project site, both in areas that were disturbed during the previous phases and in areas that were not previously affected.

Restoration plantings will include native trees such as big-leaf maple (*Acer macrophyllum*), Sitka spruce (*Picea sitchensis*), black cottonwood (*Populus balsamifera*), Douglas-fir (*Pseudotsuga menziesii*), western hemlock (*Tsuga heterophylla*), and western red cedar (*Thuja plicata*). Proposed native shrubs include salal (*Gaultheria shallon*), Indian plum (*Oemleria cerasiformis*), snowberry (*Albus symphocarpus*), elderberry (*Sambucus racemosa*), twinberry (*Lonicera involucrata*), salmonberry (*Rubus spectabilis*), Nootka rose (*Rosa nutkana*), Pacific ninebark (*Physocarpus capitatus*), red-osier dogwood (*Cornus sericea*), Hooker's willow (*Salix hookeriana*), Scouler's willow (*Salix scouleriana*), Sitka willow (*Salix sitchensis*), and Pacific willow (*Salix lucida*). Proposed emergent plants include skunk cabbage (*Lysichiton americanum*), small-fruited bulrush (*Scirpus microcarpus*), various rush species (*Juncus* spp.), and hard-stemmed bulrush (*Scirpus acutus*).

5. Animals

a. List the names of any birds and animals that have been observed on or near the site or are known to be on or near the site:

Birds:	Hawks, eagles, herons, and songbirds
Mammals:	Deer, beavers, coyotes
Fish:	Coho salmon, chinook salmon, bull trout, steelhead, coastal cutthroat trout

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

The following species are known to be on or near the site:

- Bald eagle (*Haliaeetus leucocephalus*): federal threatened and state threatened species
- Bull trout (*Salvelinus confluentus*): federal threatened species and state species of concern
- Marbled murrelet (*Brachyramphus marmoratus*): federal threatened species and state threatened species
- Puget Sound chinook salmon (*Oncorhynchus tshawytscha*): federal threatened species and state species of concern
- Puget Sound steelhead (*Oncorhynchus mykiss*): proposed as a federal threatened species and not listed by the state.

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

The Skagit Environmental Bank site is one of many sites that make up a complex and interdependent network of sites in the vicinity used for bird feeding, resting, and nesting. Birds and other wildlife are known to migrate daily from the site to other feeding areas throughout the Skagit River basin. Approximately 400 trumpeter swans (*Cyrus buccinator*) roost at Debays Slough and have been seen frequently using the project site. In the winter, a large trumpeter swan population roosts overnight on Barney Lake, the offsite area adjacent to the project site (Korthuis 2004). Trumpeter swans were first sighted using the project site in the 1930s (NWMC and Skagit County 1995).

Habitat for migrating birds is plentiful in the vicinity of the project site. Padilla Bay, which is one of 18 National Estuarine Research Reserve System sites, is located 9 miles west of the project site. Approximately 50,000 ducks consisting of 26 species use Padilla Bay in the winter. Waterfowl species noted as common to the project site include goldeneyes, gadwalls, buffleheads, green-winged teals, mallards, pintails, geese, and swans (Korthuis 2004).

The Skagit flats in the vicinity of the project site support one of the largest known wintering populations of peregrine falcons in North America (PSWQAT 1994), and peregrines have been noted using the project site (Korthuis 2004).

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

The proposed project has been designed and scheduled to avoid or minimize impacts on wildlife species.

Because construction activities, including vibratory pile driving, will occur during the bald eagle nesting period, the status of the onsite bald eagle nest will be monitored beginning in the spring, before the beginning of Phase I activities. If bald eagles are using the nest, construction activities will begin at the locations farthest from the nest. Construction activities will move closer to the nest as the project progresses, and a qualified wildlife biologist will monitor the nest throughout construction. If nesting activity is adversely affected, construction will cease.

Improvement of fish habitat. The quality, diversity, and quantity of aquatic, riparian, off-channel, and floodplain habitats will be improved by means of an improvement in water quality, a reduction in sediment runoff into the streams, a reduction in water temperatures in the summer over the long term, and the provision of instream, off-channel, rearing, refuge, and migration habitat for fish, other aquatic species, and water-dependent species.

Improvement of wildlife habitat and local and regional wildlife habitat connectivity. Restoring the wetlands and riparian vegetation on the project site will improve wildlife habitat by creating more diverse and complex habitat that will benefit numerous wildlife species. Additionally, foraging conditions for bald eagles will be improved as a result of the improved fish and aquatic habitat. The connectivity of wildlife habitat will be improved by connecting the 340 acres of wetland and the 2.5 miles of stream corridor that make up the project site, with nearby wetlands and stream corridors associated with the Nookachamps River watershed. Habitat connectivity will also be improved by adding holding and rearing habitat for migrating salmon species and a major feeding and resting area for migrating birds that come from a network of nearby significant waters of the state.

6. **Energy and Natural Resources**

a. ***What kinds of energy (for example, electricity, 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.***

After project completion, the project will not require energy.

b. ***Will 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:*

No energy conservation features are necessary.

7. Environmental Health

- a. *Are there any environmental health hazards, including exposure to toxic chemicals or risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.*

The only possibility of spill or other hazards would be associated with the operation and fueling of heavy equipment used to construct the project.

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

Use of special emergency services is not expected during construction at the site. In the unlikely event of an accident (spill, fire, or other exposure) involving toxic chemicals or hazardous wastes, the local fire department and emergency medical services would respond. Any accidents involving nonhazardous materials may also require medical services. Safety and accident response supplies will be onsite to treat any emergency.

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

During construction, precautions will be taken to minimize the potential for any release of gas, oil, or diesel from equipment used or temporarily stored on the site. Heavy equipment will be refueled away from streams where there is no danger of fuel directly entering the streams. Equipment will use vegetable-based hydraulic fluids. An emergency spill containment kit will be located on the construction site, and a spill prevention, control, and countermeasures (SPCC) plan will be prepared to address the prevention and cleanup of accidental spills.

b. Noise

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

There is no noise in the area that would affect this project.

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

Noise generated by this project will be temporary noise from the operation of heavy equipment during construction.

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

Hours of operation will be limited to standard working hours (7 a.m. to 6 p.m.) Monday through Friday and will comply with city noise control regulations.

8. Land and Shoreline Use

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

The site is used to grow feed for an adjacent dairy farm (Clear Valley Environmental Farm).

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

Land use activities involve pastureland and growing corn and hay for feed.

c. *Describe any structures on the site.*

There are two aerial high-voltage electric transmission lines and a subsurface water line on the site (see Sheet C-1 in Appendix B of the hydrologic and hydraulic basis of design report). A new 36-inch-diameter water line will be installed (summer 2006) parallel to the existing water line. It will be contained in the existing easement. There are also two bridges located on the site: one over East Fork Nookachamps Creek and one over Nookachamps Creek.

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

None of the above structures will be removed.

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

The site is zoned as Agriculture-NRL by Skagit County.

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

Agriculture-NRL.

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

Rural.

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

No. In support of the project, all environmentally sensitive areas have been identified, including wetlands and streams.

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

None.

j. *Approximately how many people will the completed project displace?*

None.

k. *Proposed measures to avoid or reduce displacement impacts, if any:*

None are anticipated.

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

Creation of the Skagit Environmental Bank site is in conformance with, or consistent with the following:

Skagit County Comprehensive Plan (SCPPC 2003) goals:

- Encourage the restoration and enhancement of lost or degraded wetlands.
- Protect aquifer recharge areas and ground and surface water quality and quantity.
- Protect hydrologic functions and reduce the potential for physical injury and property damage associated with flooding.
- Protect, restore where practical, and enhance fish and wildlife populations and their associated habitats.
- Cause Skagit County to recognize the creek systems within the county as pivotal freshwater resources and to manage development within the greater watershed in a manner consistent with planning practices that enhance the integrity of the aquatic resource, fish and wildlife habitat, and recreational and aesthetic qualities.

2005-2007 Puget Sound Priorities, Puget Sound Action Team (PSAT 2004) goals:

- Conserve and recover salmon and non-salmonid fish.
- Restore degraded freshwater habitats on Puget Sound rivers and streams.

Nookachamps Watershed Nonpoint Action Plan, Washington State Department of Ecology-Approved (NWMC and Skagit County 1995) goals:

- Prevent and abate nonpoint source pollution within the lower Skagit watershed.
- Maintain and enhance water quality in the lower Skagit watershed and restore and maintain the watershed's beneficial uses such as drinking water supplies, fisheries habitat, and recreational opportunities.

- Promote desirable or “beneficial uses” in the watershed, including fisheries resources (salmonids and resident fish) and wildlife habitat (riparian zones, wetlands, and open water).

9. Housing

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

Not applicable.

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

None.

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

None.

10. Aesthetics

- a. What is the tallest height of any proposed structure, not including antennas; what is the principal exterior building material proposed?*

Not applicable.

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

Not applicable.

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

Not applicable.

11. Light and Glare

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

None.

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

No.

- c. *What existing offsite sources of light or glare may affect your proposal?*

None.

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

None; no measures necessary.

12. Recreation

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

There are no designated recreational opportunities in the immediate vicinity of the project site.

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

No.

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

No measures necessary.

13. Historic and Cultural Preservation

- a. *Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.*

No places or objects listed or eligible for preservation registers are known to exist on or near the project site.

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

No places or objects of cultural or historic significance are known to exist on or near the project site. If necessary, a cultural resources study will be conducted for the project site.

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

Should historic or cultural resources be inadvertently discovered during construction associated with any component of the proposed project, ground-disturbing activity will be halted and the Washington State Office of Archaeology and Historic Preservation and a professional archaeologist will be immediately notified.

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:*

During and after construction, the site will be accessed via private drives (see Sheet C-1 in Appendix B of the hydrologic and hydraulic basis of design report).

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

Skagit County transit stops are located approximately 0.5 miles south of the site, along East College Way/SR 538.

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

Not applicable.

- 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).*

A private, temporary access road (consisting of stabilized construction entrances and exits) will be constructed at the easternmost boundary of the site, west of Route 9. This access road ends at Staging Area 1.

- e. *Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.*

None.

- f. *How many vehicular trips per day will be generated by the completed project? If known, indicate when peak volumes will occur.*

Not applicable.

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

No measures necessary.

15. Public Services

- a. *Will 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 measures necessary.

16. Utilities

a. *Check utilities currently available at the site:*

☐ electricity
☐ natural gas
☐ water
☐ refuse service
☐ telephone
☐ sanitary sewer
☐ septic system
☐ other: _____

None of the above utilities is available on the project site.

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 that might be needed.*

No utilities are proposed.

C. Signature

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

Signature: 

Date: 6/28/06

D. Supplement for Nonproject Actions

1. How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise?
 - a. *Proposed measures to avoid or reduce such increases:*
2. How would the proposal be likely to affect plants, animals, fish, or marine life?
 - a. *Proposed measures to protect or conserve plants, animals, fish, or marine life:*
3. How would the proposal be likely to deplete energy or natural resources?
 - a. *Proposed measures to protect or conserve energy and natural resources:*
4. How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection, such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farmland?
 - a. *Proposed measures to protect such resources or to avoid or reduce impacts are:*
5. How would the proposal be likely to affect land and shoreline use? Would it allow or encourage land or shoreline uses incompatible with existing plans?

a. Proposed measures to avoid or reduce shoreline and land use impacts:

6. How would the proposal be likely to increase demands on transportation or public services and utilities?

a. Proposed measures to reduce or respond to such demands:

7. Identify, if possible, how the proposal might conflict with local, state, or federal laws or requirements for the protection of the environment.

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