



**APPENDICES TO
THE MITIGATION
BANKING
INSTRUMENT**

Skagit Environmental Bank

Skagit County, Washington

April, 2011

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Exhibit 1: Legal Description of Bank Site Area
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APPENDIX A: GENERAL BANK INFORMATION

APPENDIX A.1: Phase 1

A.1.1. Business Purpose and Ecological Goals of Phase 1

The purpose of the Bank is to generate mitigation credits for projects that will have an adverse impact on the aquatic environment, and that need to compensate for those impacts as a condition of their permits or other regulatory requirements resulting from project impacts.

The primary ecological goal of Phase 1 of the Bank is to restore hydrologic processes on the site to initiate re-establishment of floodplain emergent, scrub-shrub, and forested wetlands. These habitats will provide valuable forage for ungulates and other mammals. These wetlands will also provide cover for nesting, resting, and foraging waterfowl and upland birds, habitat for small mammals and reptiles, reproductive habitat for amphibians, and rearing and wintering habitat for fish.

Goal: Improve Floodplain Hydrologic and Hydraulic Conditions

Restore in-channel stream morphology and alter the ground water hydrology on at least 30 percent of the site by adding three engineered log jams in the Nookachamps and East Fork Nookachamps at certain intervals in order to affect change in geomorphic process (e.g., riffle and pool formation, channel bank undercutting, point bar formation, and duration of wetland inundation). In addition, all farming activities will cease and drainage ditches, constructed to drain the land for crop production, will be filled.

Goal: Improve Fish and Wildlife Habitat, and Water Quality Conditions

Stabilize the hydric and non-hydric soils and provide wildlife habitat by removing all farming activities, filling drainage ditches, and constructing the engineered log jams and by planting a cover crop of herbaceous plants.

A.1.2. Phase 1 Location and Legal Description

The Bank is located at 14000 McLaughlin Extension Road, Mount Vernon, WA, 98273 in Skagit County, Washington, 1.5 miles northeast of the Mount Vernon urban center, but just outside the city limits of Mount Vernon and immediately adjacent to a large wetland area known as Barney Lake. See **Figure A-1** Site Location Map.

At 48.407196 latitude and -122.321767 longitude, the property lies within Sections 10, 11, 15, and 14, Township 34 North, Range 4 East on the Mount Vernon 7.5 minute USGS quadrangle map, Skagit County. From a watershed view, the Bank is home in the Washington State Water Resource Inventory 3 - Lower Skagit-Samish Watershed.

As further described in Article III.D (Real Estate Provisions) of this Instrument, the Sponsor owns or has been granted use of all of the real property to be included within the Bank site area, legally described in Exhibit 1 attached to this Instrument.



Figure A-1. Site location.

All portions of the Bank site have been pledged for use in the Bank in a manner consistent with this Instrument. The overall bank property size is approximately 396 acres. Neither the (i) inclusion of the aforementioned property in the Bank (ii) granting of a conservation easement restricting future land uses for the benefit of the Bank, nor (iii) reserving an exclusive use easement restricting future land uses for the benefit of the Bank, shall convey or establish any property interest on the part of any Party to this Instrument, nor convey or establish any interest in Bank credits. The Instrument does not authorize, nor shall it be construed to permit, the establishment of any lien, encumbrance, or other claim with respect to the property, with the sole exception of the right on the part of the Corps and Ecology to require the Sponsor to implement elements of this Instrument, including recording the conservation easement and an assignment of the exclusive easement rights, each as a condition of a permit issued under Sections 404 and 401 of the Clean Water Act for discharges of dredged and fill material into Waters of the United States associated with construction and operation and maintenance of the Bank.

A.1.3. Site Description and Baseline Site Conditions

A.1.3.1 Site Description:

The site is in the Lower Skagit Watershed Resource Inventory Area (WRIA 03) watershed, and the Nookachamps sub-watershed. The entire western edge of the Bank site is bounded by the Nookachamps Creek. The East Fork Nookachamps Creek bisects the property. Mud Creek enters the northeastern edge of the site. The site is bisected by a number of drainage ditches that intercept surface and groundwater flow and maintain drier soil conditions on most of the site throughout the year. The topographic slopes on the entire site range from 0.4 to 1.5 percent. Elevations range from approximately 22 feet to 48 feet above sea level (NAVD88).

Almost the entire bank site is plowed and planted annually with cattle feed crops, primarily corn. The hydrology of these uplands is maintained to support the upland row crops. There are small areas along the creek edges and within the ditches that are not plowed and support monocultures of reed canary grass. In addition, small patches of remnant shrub and forested riparian areas are found along the northwest portion of Nookachamps Creek. In the early spring surface water runoff maintains saturated soil conditions in some areas. Once the winter rains have subsided, these areas dry out enough to be plowed and planted along with the remainder of the site.

The **Figure** A-2, Existing Conditions shows the physical condition of the site as described above and the baseline site conditions that follow.

A.1.3.2 Existing Conditions:

The baseline conditions of the Bank site are what attracted the sponsors to select this site. Located in Section A of the Resource Folder, the Rationale for Site Selection presents additional information for selecting this site.

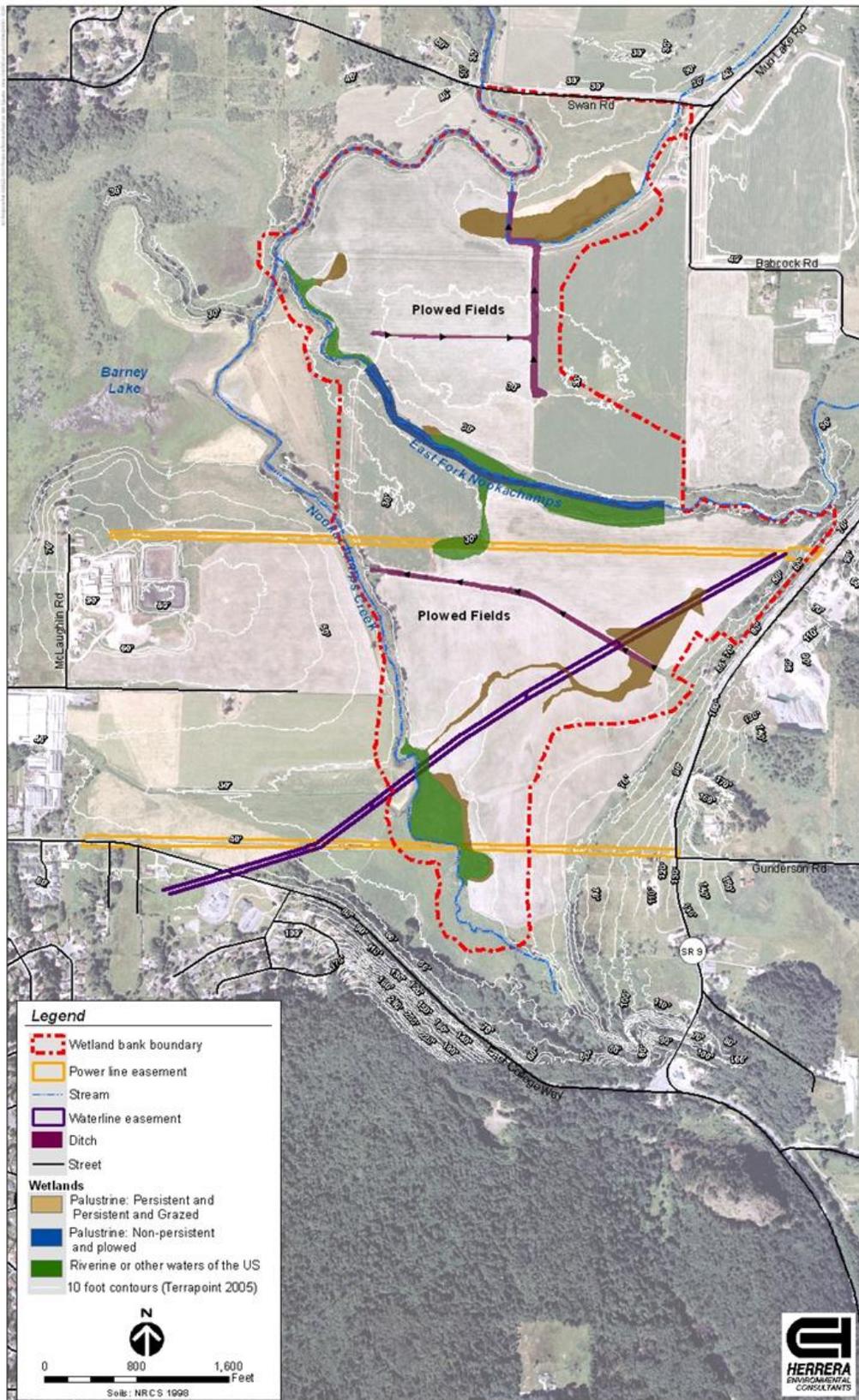


Figure A-2. Existing conditions.

Existing Soils

According to the Soil Survey of Skagit County Area, Washington (Soil Conservation Service compiled in 1980) there are five mapped silt-loam soil series on the Bank: Bellingham silt-loam, Nookachamps silt-loam, Skipopa silt-loam, Sumas silt-loam, Field silt-loam. As of 2006 the Natural Resource Conservation Service has defined all soil series that are present on the bank site as hydric.

Field samples from plowed areas suggest that the soils have been modified by tilling, grading, and drainage ditching. Variations in these soil conditions were field verified. Despite the affects of plowing, some soils still contain hydric characteristics. Those areas were mapped as wetlands (palustrine, non-persistent and plowed). Most of the soils sampled during the delineation process, and delineated as palustrine persistent and persistent and grazed wetlands, where plowing does not regularly occur exhibited hydric characteristics typical of the soil series descriptions. More detail on the soil conditions is located in the Wetland Delineation Report in Section A of the Resource Folder.

The project site is located in an area that is frequently flooded by the Skagit River and Nookachamps Creek system and is within one of the few remaining areas of the lower Skagit River that has not been protected by dikes. While agricultural drainage ditches have been installed over the years, the soils remain saturated on the site for long periods of time. Given the frequent flooding and soil saturation, this property has not been used as an area for growing high value crops.

The bank is in compliance with the provisions of WAC 173-700-303(2). While the bank site is located within an area designated by Skagit County as agricultural lands of long-term commercial significance, Skagit County granted all necessary county permits for this use, finding it to be in compliance with applicable County zoning and shoreline management regulations. Because of the frequency of flooding and persistent soil saturation, the bank site is not located on prime farmland soils as defined in WAC 173-700-104. Moreover, as discussed in more detail below, the hydrologic monitoring and modeling of the site and surrounding properties has demonstrated that the bank will not adversely affect hydrologic conditions on any nearby agricultural operations. Conditions have been imposed by Skagit County, and are reiterated in Appendix G.1.2, for hydrologic monitoring and implementation of future mitigation measures, if necessary. Finally, vegetative plantings that are proposed will not cause any shading impacts on adjacent farms.

Existing Hydrology

The Bank site contains a series of ditches that serve as conduits that drain surface water runoff and ground water. They are hydrologic boundaries to the ground water aquifer which are deep enough to intercept ground water levels during the growing season. As the creeks recede, the ground water is drawn into the ditches and flows out into the creek channels. The ditches are functioning for the farmer by intercepting the ground water and diverting it to the creeks. More detail on the hydrologic conditions is located in the Hydrologic and Hydraulic Basis of Design Report (Section B of the Resource Folder) the Wetland Delineation Report (Section A of the Resource Folder).

Today, two hydrologic sources are at work on the Bank site: 1) Precipitation or ponding from above-ground sources such as rainfall and river bank overtopping, and 2) Shallow ground-water fluctuation. Both of them affect the soil hydrologic conditions on the Bank during the growing season. Groundwater conditions within the floodplain of the Nookachamps Creek are influenced by recharge from upland areas, flooding from the Skagit River, and flow in the main-stem and East Fork Nookachamps Creek. Deforestation and drainage improvements for agriculture at the Bank site are the two most significant landscape modifications to have impacted local groundwater conditions. Both of these modifications likely contributed to the lowering of the groundwater table throughout the Bank.

Evidence of Historic Wetlands

Prior to Euro-American settlement, the lower floodplain of the Nookachamps Creek (the entire Bank site) was covered with a mature wetland forest. Archival records indicate the Skagit River valley in the vicinity of the Bank site exhibited a multiple-thread channel network with forested islands and frequent woody debris jams. Barney Lake, across the northwest edge of the Bank site, and the floodplain at the southern portion south of the Bank site are all that remain of a once extensive wetland forest. Early operators of the farm property apparently graded the floodplain to fill low areas and constructed ditches to drain the land for agriculture. Both the main-stem and East Fork Nookachamps Creek have been impacted to some extent by straightening and confinement. Two historic maps, 1872 Skagit Valley Survey Map and 1944 Aerial Photograph of Skagit Environmental Bank, show the historic conditions on the bank site (see Figures A-3 and A-4).

Existing Wetlands and Aquatic Resources

The U.S. Army Corps of Engineers has determined (in their letter reference: 200600098) that the waters of the U.S., including wetlands, as described in the Skagit Environmental Bank Wetland Delineation Report (see Section A of the Resource Folder) prepared by Sustainable Environments LLC and dated Revised February 2006 accurately identifies waters of the U.S. in the bank project area.

There are 53 acres of existing wetlands that are comprised of palustrine or riverine wetlands in the Bank. They exhibit all of the definitional wetland characteristics, and therefore have been delineated as existing wetlands. The remaining area of the Bank are plowed areas that have modified hydrologic conditions; they were likely wetlands prior to being ditched or graded to drain for row cropping (sometime after 1941), but no longer meet the definition of wetlands.

We used evidence in the soils, evidence of surface ponding, 2003 and 2004 spring and fall precipitation data, the farmers' observations, and well data to identify evidence of hydric and non-hydric conditions, and to determine the timing and duration of inundation. The evidence suggests that the palustrine non-persistent and plowed wetland areas are inundated or saturated to the surface for a consecutive number of days for between 12 days, or 5 percent of the growing season, and 30 days, or 12.5 percent of the growing season, in most years.

Survey of Skagit County Area, Washington (Soil Conservation Service issued in 1989), the growing season is 242 days from March 14 through November 11. The Palustrine Wetland areas (that is, those areas that are vegetated with emergents, but not plowed) have all three indicators of wetland condition throughout most of the growing season and are comprised primarily of reed canary grass (*Phalaris arundinacea*) (facw); creeping buttercup (*Ranunculus repens*) (facw); and meadow foxtail (*Alopecurus pratensis*) (facw).

The adjacent vegetated uplands are covered primarily with white clover (*Trifolium repens*) (facu); orchard grass (*Dactylis glomerata*) (facu); and tall fescue (*Festuca arundinacea*) (facu). There are individual, or patches of, woody plant species scattered throughout the vegetated wetland areas and found along the upland edges of the bermed areas including black cottonwood (*Populus balsamifera*) (fac) and red alder (*Alnus rubra*) (facw). The few plants that were found in the riverine system that could out-compete the reed canary grass (*Phalaris arundinacea*) (facw), include yellow iris (*Iris pseudacorus*) (obl) and yellow pond lily (*Nuphar luteum*) (obl).

Most of the plants (other than corn) common in the 262 acres of plowed fields (palustrine, non-persistent and plowed) are grasses planted by the farmer as over-winter crops (primarily orchard grass (*Dactylis glomerata*) (facu); and white clover (*Trifolium repens*) (facu). Upland and wetland pioneer plants are established in between the planted species. Plant dominance was one factor we used in determining the wetland boundaries in the plowed areas. Additional vegetation in the plowed wetlands or uplands (depending on dominance) includes creeping buttercup and broadleaf plantain (*Plantago major*) (facu).

According to the Washington Department of Natural Resources (2003) Washington Natural Heritage Program information on rare plants and high quality ecosystems, there are no rare plants or high quality ecosystems on the Bank site. The bearded sedge (*Carex comosa*) is listed as a species of concern that is reported as existing near the Bank Site (NWMC et al. 1995). It was not identified in the proposed Bank site areas and, if it exists, it would likely be in the protected off-site areas of Barney Lake. According to the Natural Heritage Program's historical account, the bearded sedge was last observed within a 4-mile area (that includes the Bank site) in 1933 and has not been verified. It is listed by the State as Sensitive and ranked as Imperiled.

Additional Site Assessments

In addition to the traditional ways of defining a site, the sponsors had additional reports prepared, please see Section A of the Resource Folder for the following:

Biological Assessment. Skagit Environmental Bank Habitat Restoration Project. Skagit County, Washington. October 2005.

Cultural Resources Assessment for the Skagit Environmental Bank Skagit County, Washington. October 2005.

Laboratory Testing Report & Soil Bearing Capacity Estimates Nookachamps Project. June 2007.

Shoreline Compliance Narrative. Skagit Environmental Bank. July 2007.

APPENDIX A.2: Phase 2

A.2.1. Business Purpose and Ecological Goals of Phase 2

The purpose of the Bank is to generate mitigation credits for projects that will have an adverse impact on the aquatic habitat, and that need to compensate for those impacts as a condition of their permits or other regulatory requirements resulting from project impacts.

As for Phase 2, its goals build on the restoration goals of Phase 1. They are:

Goal: Re-establish emergent, scrub-shrub, and forested wetland conditions on at least 65% of the site which will include planting herbaceous plants, shrubs, and trees in all areas of the bank site that have wetland hydrologic conditions.

Goal: Restore high-flow back channel rearing, refuge, and migration habitat for salmonids, resident fish, amphibians, reptiles, and other aquatic dependent species.

A.2.2. Phase 2 Location and Legal Description

Phase 2 encompasses the same spatial area as Phase 1, and therefore the “Location and the Legal Description” is the same as Phase 1 above.

A.2.3. Site Description and Baseline Site Conditions

Phase 2 encompasses the same spatial area as Phase 1, and therefore the “Site Description” is the same as Phase 1 above.

APPENDIX A.3: Phase 3

The original purpose of providing a diversity of mitigation credits for aquatic , streams and critical areas identified in Phase 1 applies to Phase 3 as well.

Primary goals of Phase 3 build on the restoration goals of Phase 1 and Phase 2. They are:

Goal: Increase the diversity and area of wetland habitats within the Bank by restoring palustrine forested, scrub-shrub, and emergent habitat that will extend well beyond the edges of the creek channel and effect change in numerous hydrologic and hydraulic floodplain and wetland functions. It is anticipated that a minimum of 81% of the site will meet wetland hydrologic conditions.

Goal: Diversify wildlife habitat nesting, rearing, and feeding opportunities by creating a mosaic of upland islands within the forested wetlands (forest mosaic wetlands).

A.3.2. Phase 3 Location and Legal Description

Phase 3 encompasses the same spatial area as Phases 1 &2, and therefore the “Site Description” is the same as Phase 1 above.

A.3.3. Site Description and Baseline Site Conditions

Phase 3 encompasses the same spatial area as Phase 1 & 2, and therefore the “Site Description” is the same as Phase 1 & 2 above; with the exception of the hydrological changes that were undertaken in Phase 1, and the excavation, grading and plantings of Phase 2.

APPENDIX B: BANK DEVELOPMENT PLAN AND DESIGN

Overview of Bank Development

Skagit Environmental Bank began with the intent to create the highest ecologically functional wetland. Building on that strong ecological intent we propose a unique, three-phased approach to restoring the Bank site, called “Functional Phasing”.

Functional phasing will be the introduction of changes, done in a logical sequence, to modify specific functions on the entire Bank site. This approach is based on incrementally restoring functions on the entire site, rather than the traditional approach of making construction modifications to change all the functions on three separate portions of the Bank site. Functional Phasing involves waiting to see how these changes affect the Bank, and then moving forward with the next functional modifications based on this real data. The design will then be refined to the actual site response conditions.

Currently we plan on constructing the Bank in these three general phases:

- Phase 1: Make the modifications to restore the hydrology to the entire Bank site by improving the geomorphology of the two stream systems within the Bank site with engineered log jams, restoring the natural drainage of the by filling in ditches, and planting a wetland or upland seed cover crop as appropriate and monitor the change in site hydrology over an appropriate period of time.
- Phase 2: Grade elevations to create wetland conditions (where appropriate) and the high-flow back channels. The grading elevations will be determined using well data collected after the construction of Phase 1.
- Phase 3: Excavate the remaining “high” areas (or those areas that do not meet the wetland conditions), and plant these excavated areas.

Additional detail about the approach for Phase 1 is presented in Appendix B and in Section B of the Resource Folder. Additional details for Phase 2 and 3 will be updated once Phase 1 has been constructed.

As an obligation independent of this instrument, Skagit County requires that activities on the Bank site comply with its applicable regulations.

APPENDIX B.1: Phase 1

B.1.1. Phase 1 Development Plan

The first functional phase will restore the wetland and floodplain hydrology to the majority of the Bank by removing all farming activities, filling all of the ditches, and constructing three Engineered Log Jams (ELJs) in Nookachamps Creek and the East Fork Nookachamps Creek. See Figure B-1. We will plant a cover crop of herbaceous plants to stabilize the soils on the remaining Bank area. The species seed composition will be competitive with reed canary grass and we expect natural recruitment of other native herbaceous and woody plant species. We feel that these three actions will significantly change the hydrology and improve the fish and wildlife habitat. We know from the well data that we have collected so far that the ditches are functioning to drain or lower the ground water levels in certain areas of the Bank. We also know, from experience on other projects, that placement of the engineered log jams (ELJs) will raise the average river surface elevations and the surrounding ground water elevations. Please refer to the hydrology modeling reports in Section B of the Resource Folder.

We will assess the changes in hydrology, as affected by the installation of the ELJs and the ditch filling during the early growing season of the 2 years following the Phase 1 construction. This will give us an estimate of the additional area that will have to be hydrologically restored in Phase 2.

B.1.2 Phase 1 Design

As an obligation independent of this instrument, Skagit County requires that the Phase 1 design be consistent with applicable County codes and requirements.

B.1.2.1 Hydrologic Basis for Phase 1 Design

Hydraulic and hydrologic conditions on and adjacent to the project site were evaluated in 2006 and updated HEC-RAS hydraulic modeling was conducted in 2007 and 2009. The results of the model have been reviewed by the Skagit County Surface Water Group and the State Department of Ecology and they both concur with the findings of this analysis.

Three reports were prepared for this assessment; the design report focuses on the bank site, the other two reports address and disperse any concerns on the hydrologic impact to the neighboring properties. All three reports, Hydrologic and Hydraulic Basis of Design Report, the Updated HEC-RAS hydraulic model (2007), and the Updated HEC-RAS Model (2009) can be found in Section B of the Resource Folder.

The construction of three ELJs will raise the stream elevation (also referred to as “backwater”) upstream of the structure. This higher stream elevation will reconnect the stream to the Nookachamps floodplain helping to restore natural floodplain processes and ground water elevations. This in turn will support the restoration of riverine and palustrine wetlands and increase the amount of critical habitat for fish and wildlife.

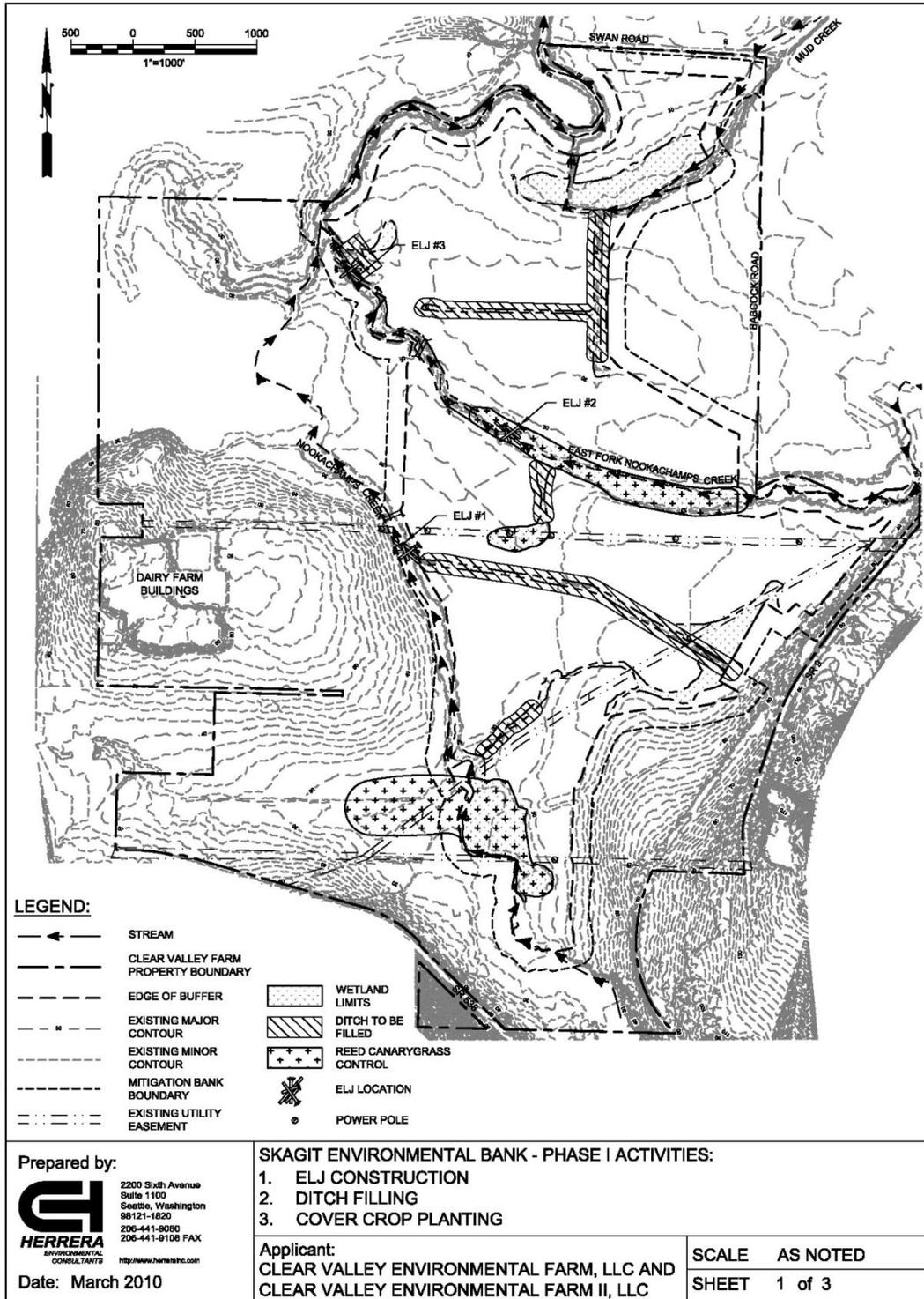


Figure B-1.

The main purpose of this analysis was to (1) predict elevations of stream and groundwater based on their size and location and (2) ensure that this project will not result in any adverse flooding effects to adjacent properties outside of the SEB site.

Based on the analysis, ELJ 1 will not affect surface or groundwater hydrology on sections of Nookachamps Creek upstream of the SEB site. The backwater influence of ELJ 2 will result in a 1.1-foot increase in the water surface elevation on East Fork Nookachamps Creek in the vicinity of the east boundary of the Clear Valley Farm property. The result shows that the increased water surface elevations extend no farther than 3,372 feet upstream of the project site boundary under any flow conditions. The magnitude of this increase at its furthest point is no more than 0.2 feet. That being said, this rise in water elevation at the boundary of the SEB site is not sufficient to cause groundwater recharge or flooding. In turn, there will be no adverse affect on the agricultural production of the adjacent upstream property. Modeling results also have shown that the proposed project ELJs do not result in an increased occurrence of flooding during high-magnitude events and when the site is influenced by backwater in the Skagit River.

Groundwater monitoring will be performed at eight wells for the purpose of monitoring the proximal groundwater table to further ensure that no adverse impacts will come to adjacent landowners. Five wells are located either on the boundary of the project site or in very close proximity to the project site: two of these wells are located on the northern boundary of the site (wells 39 and 38 on sheet R-1 in Exhibit 2), one well is located on the eastern boundary of the site (well 35 on sheet R-1 in Exhibit 2), and two wells are located just to the east of the eastern site boundary (wells 36 and 37 on sheet R-1 in Exhibit 2). The other three wells will be installed in locations that will monitor groundwater further away from the site (Figure F-1). Data will be collected once per month during the growing season. These data will be summarized in an annual report delivered to the Skagit County Planning Department at the end of the calendar year (this information will also be presented in the annual monitoring report submitted annually in February to the Corps and Ecology, in consultation with the IRT). The details of the monitoring procedure and well locations are provided in Appendix F. [Note: These eight monitoring wells will be referred to as “off-site wells” in the remainder of this document, even though three of the wells are technically on the bank site property boundary lines, because their purpose is to monitor proximal (off-site) groundwater conditions.]

B.1.2.2 Wetland Design

Planting will immediately follow the hydraulic and hydrologic modifications. Disturbed and unplanted areas that will not be graded in Phase 2 will be seeded with an herbaceous seed mix designed to germinate in a variety of hydrologic conditions. Areas that will be graded in Phase 2 will be stabilized at this time by seeding with an herbaceous seed mix designed to germinate in a variety of hydrologic conditions to provide cover and prevent invasive species. Trees and shrubs will not be planted in these areas at this time. Management plans for reed canary grass, Himalayan blackberry, and knotweed are part of the construction procedures for Phase 1. See Construction Documents sheets G-2, G-3, C-2, C-3 and C-16 included in Exhibit 2.

B.1.2.3 Riverine Design

Three ELJ grade control structures will be placed in the two streams on site. Two ELJs will be constructed on Nookachamps Creek. One ELJ will be constructed on the East Fork Nookachamps. These three structures will raise surface water elevations and the local ground water table closer to the ground surface, hence increasing the duration and extent of surface water flooding of the surrounding land. This in turn will provide adequate hydrology to create wetlands and improve the geomorphology of the stream. Construction will occur during the identified fish window. In an effort to avoid the import of fill material the ditches will be filled first, with material from adjacent berms and second with material from the anticipated locations of Phase 2 high-flow back channels. Every effort will be made to extract the fill in a manner that blends with the adjacent landscape. Disturbed stream banks resulting from the installation of the ELJs will be planted with riverine tree, shrub, and emergent species in Phase 1. See Construction Documents sheets C-6 to C-15 and C-21.

B.1.2.4 Upland Design

Uplands will be those areas that do not gain wetland conditions after installation of the ELJs and the filling of the ditches. Disturbed and unplanted areas that will not be graded in Phase 2 will be seeded with a mixture of native grasses. Areas that will be graded in Phase 2 will be seeded with a sterile ryegrass. Please see the Construction Documents sheets C-2 and C-3.

B.1.2.5 Erosion and Sediment Control Plan

Typical temporary erosion and sedimentation control (TESC) measures will be employed during construction activities. All TESC measures will be installed before project activities begin. Refer to sheets ESC-1 and ESC-2 in the Construction Documents. TESC measures may include but are not limited to the following:

- **Placement of silt fences around all work areas.** Approved filter fabrics are Celanese fiber, polyvinyl chloride woven cloth, reinforced chlorosulfonated polyethylene cloth, and chlorinated polyethylene woven cloth (e.g., Mirafi 100 X, Typar 3401, Stablenka 100, or an approved equivalent).
- **Stabilization of disturbed areas.** Soils exposed by construction activities will not be left exposed for more than 2 days from October 1 to April 30, and 7 days from May 1 to September 30. Soils will be stabilized with covering control measures (e.g., mulching, seeding, plastic covering, surface roughening, sod, or jute matting).
- **Delineation of clearing limits and boundaries of sensitive areas.** Boundaries of sensitive areas will be identified, staked, and isolated by orange plastic construction fence and silt fence as determined necessary by the project engineer.

APPENDIX B.2: Phase 2

B.2.1. Phase 2 Development Plan

In preparing for Phase 2 construction, we will measure the exact area of hydrologic change (using well data and river level data) resulting from Phase 1 activities (ELJ construction, farm activity removal, and ditch filling). Refer to **Figure B-2**. We will then construct the high-flow back channels based on the measured changes to river elevations and ground water hydrology. A preliminary grading plan has been developed based on data collected and presented in the Resource Folder. See Construction Documents sheet C-17 included in Exhibit 2. The final grading plan will be updated based on the new hydrologic data.

Extensive grading will occur throughout the site to create a series of high-flow back channels and other wetland areas. It is anticipated that between 200,000 cubic yards and 1.24 million cubic yards of material will be placed outside of the 100-year floodplain and outside of any waters of the State or United States and stockpiled outside of the SEB site, but within the boundary of the Clear Valley Farm. This will increase the flood storage capacity of the project site by 16 acre-feet. In other words, the greater storage capacity as a result of this project will accommodate an additional 16 acre-feet of water that is currently displaced elsewhere. All areas within the site will positively drain to Nookachamps Creek system. Areas of Mud Creek within the SEB site will be re-graded to also facilitate flow to Nookachamps Creek resulting in no adverse impacts on groundwater or flooding on adjacent properties upstream of the site.

As soon as we have completed grading, we will plant all disturbed areas. The choice of herbaceous and woody plants on all phases will depend on the plant species and hydrologic requirements that we measure at our reference areas.

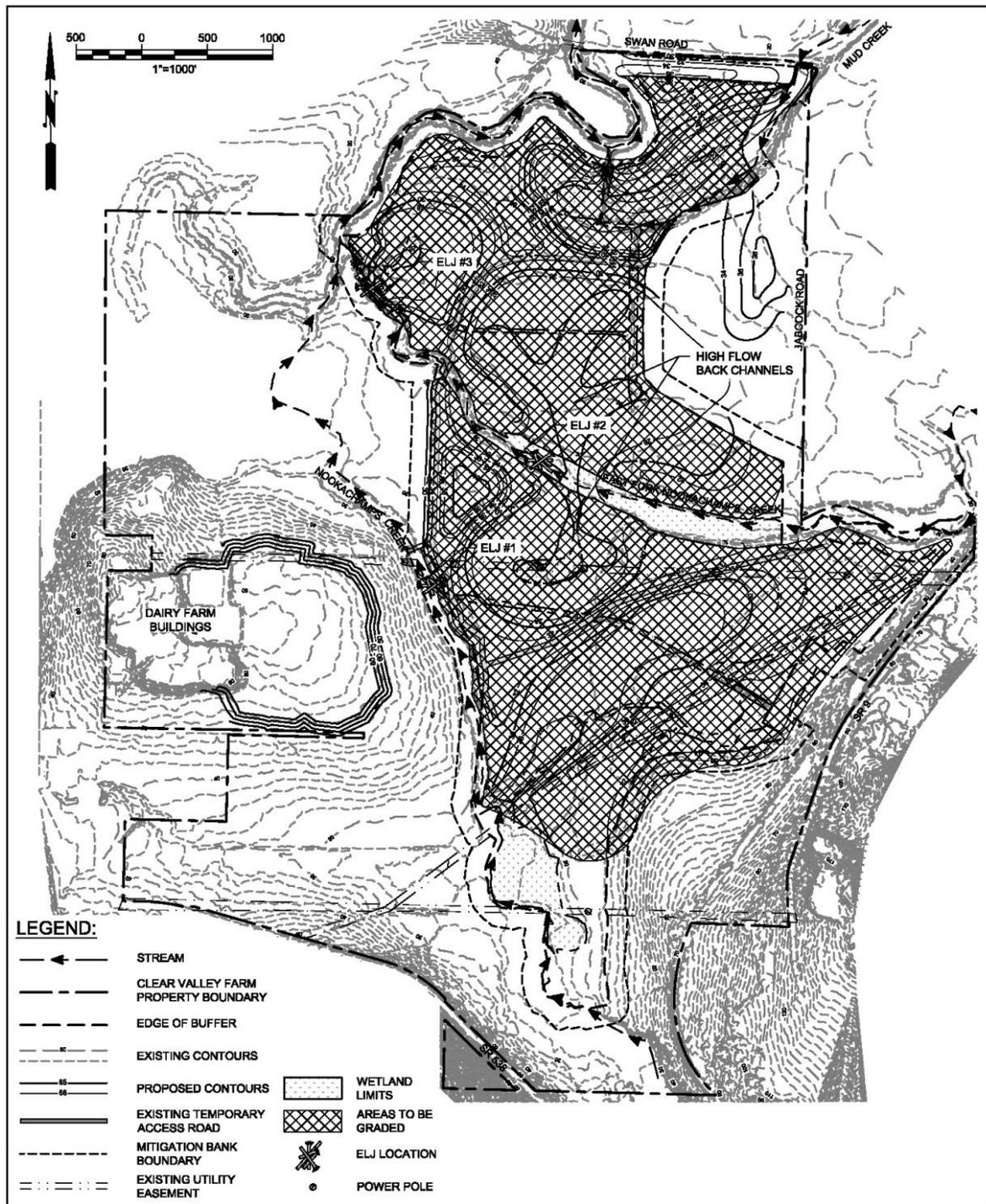
All buffers will be planted during Phase 2 with the exception of the buffer area near Babcock Road, see construction drawings sheets C-20 to C24. The zones of planting in the buffer corresponds to the zones delineated within the bank (see sheet C-19), emergent wetland, scrub-shrub wetland, forest mosaic wetland, as well as the upland zone within the buffer. As with the planting proposed for the Bank proper, the hydrology will be assessed in the buffers and the planting plan revised accordingly. Plant species that define these zones are listed in the plant schedule on sheet C-24. In areas where there is existing vegetation, appropriate plants will be selected and located to blend the newly planted communities to the existing community. The mixture and placement of the plants, within each zone, will be random.

B.2.2. Phase 2 Design

As an obligation independent of this instrument, Skagit County requires that the Phase 2 design be consistent with applicable County codes and requirements.

B.2.2.1 Wetland Design

Most of the grading and planting on the site will occur during Phase 2. This will result in a diverse wetland environment of emergent and scrub-shrub forested and forest mosaic



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SKAGIT ENVIRONMENTAL BANK - PHASE II ACTIVITIES:

1. INITIAL SITE GRADING
2. HIGH-FLOW BACK CHANNEL CONSTRUCTION
3. PLANTING

Applicant:
 CLEAR VALLEY ENVIRONMENTAL FARM, LLC AND
 CLEAR VALLEY ENVIRONMENTAL FARM II, LLC

SCALE AS NOTED
 SHEET 2 of 3

Date: March 2010

Figure B-2.

wetlands. In addition, four high-flow back channels will be created and planted to form additional emergent and scrub-shrub wetlands.

The major wetland communities of Phase 2, were designed based on water level data collected from wells during the second quarter of 2005/2006/2007 (April/May/June). These ground water wells were located in anticipated representative wetland communities. See Construction Documents sheets R-1 to R-7 for the well locations, data collected, and ground water elevations and contours projected. The final location of the wetlands will be re-established by excavating to elevations that will be based on the hydrologic monitoring data collected after Phase 1 installation. Wetland areas outside of the high-flow back channels will also be re-established by excavating to elevations that will be based on the hydrologic monitoring data collected after Phase 1 installation. Site grading will be based on effected ground water elevations and river levels that will support the planting distribution. See Construction Documents sheet C-17, included in Exhibit 2, for the preliminary grading plan based on data collected from 2005 through 2007 and sheet C-19, included in Exhibit 2, for the preliminary wetland communities.

The four high-flow back channels are located off the Nookachamps Creek and the East Fork Nookachamps Creek. They will be graded and planted to provide emergent wetland interspersed with scrub-shrub wetland on hummocks. These high-flow back channels will also serve as rearing habitat for juvenile salmonids. The high-flow back channels will be excavated to an elevation defined by the ground water elevations and the creek fluctuation data and will be connected to the ground water table. During most of the dry season, they will have a low flow elevation that will provide seasonally inundated or saturated surface conditions within the creek channel. During the non-growing rainy season, the channels will be permanently flooded and provide fish and waterfowl habitat. We will grade the ground surface to positively drain towards the main channels, which will prevent any ponding of water or stranding of fish. The positive draining characteristics also allow them to drain efficiently to prevent solar insolation impacts, which lead to increases in water temperatures. In addition, the water temperatures within the high-flow back channels will be moderated by the shading provided by re-established mature forested wetland and riparian vegetation. This effect will be augmented by decreasing sediment delivery to the streams currently caused by runoff from adjacent farm fields; sedimentation (and subsequent turbidity) will be reduced by stabilizing these soils through revegetation.

All areas of the site will be planted, with two exceptions, with a diverse plant palette of emergent, scrub-shrub, and forested wetlands surrounded by a forest wetland/upland buffer. The two exception areas are the access roads and the buffer near Babcock Road. See the Construction Documents sheet C-24 for the list of plant materials.

B.2.2.2 Upland Design

Upland planting will expand the herbaceous cover of Phase 1 to include deciduous and evergreen trees and shrubs. See the Construction Documents sheet C-19, C-20 and C-24 for the locations and plant materials.

B.2.2.3 Erosion and Sediment Control Plan

Typical temporary erosion and sedimentation control (TESC) measures will be employed during construction activities. All TESC measures will be installed before project activities begin. Refer to sheets ESC-1 and ESC-2 in the Construction Documents. TESC measures may include but are not limited to the following:

- **Placement of silt fences around all work areas.** Approved filter fabrics are Celanese fiber, polyvinyl chloride woven cloth, reinforced chlorosulfinated polyethylene cloth, and chlorinated polyethylene woven cloth (e.g., Mirafi 100 X, Typar 3401, Stablenka 100, or an approved equivalent).
- **Stabilization of disturbed areas.** Soils exposed by construction activities will not be left exposed for more than 2 days from October 1 to April 30, and 7 days from May 1 to September 30. Soils will be stabilized with covering control measures (e.g., mulching, seeding, plastic covering, surface roughening, sod, or jute matting).
- **Delineation of clearing limits and boundaries of sensitive areas.** Boundaries of sensitive areas will be identified, staked, and isolated by orange plastic construction fence and silt fence as determined necessary by the project engineer.

APPENDIX B.3: Phase 3

B.3.1. Phase 3 Development Plan

The third functional phase will be to excavate (down to the appropriate hydrologic conditions) the remaining upland areas of the Bank including the construction staging areas and the access roads. See Figure B-3. Uplands planted during Phase 2 will remain undisturbed during and after Phase 3 construction. We believe that the areas that are non-hydric after Phase 1 and 2 modifications will be the graded soils or bermed areas close to the creeks as well as the temporary access road. The final site grading is designed to create islands of upland habitat within the wetland areas. We refer to these as forest mosaic wetlands. The location and size of the upland islands will increase the habitat and wildlife use opportunities significantly. Finally, these areas will be planted along with the buffer along Babcock Road. See the Construction Documents sheet C-29.

B.3.2. Phase 3 Design

As an obligation independent of this instrument, Skagit County requires that the Phase 3 design be consistent with applicable County codes and requirements.

B.3.2.1 Wetland Design

Most of the remaining non-hydric soils will be excavated down to elevations that will support hydrophytic species. Some non-hydric areas will be graded into an upland/wetland mosaic which is a mix of small upland islands within some of the wetland areas. We refer to these areas as forested mosaic wetlands. Final elevations will be based on a review of the hydrologic and hydraulic data collected after Phase 1 and Phase 2 are installed. These forested mosaic wetlands are anticipated to be planted per the Construction Documents sheet C-29. Sheet C-29 will be updated based on data collected after Phase 1 and Phase 2 are installed. Construction Documents are included in Exhibit 2.

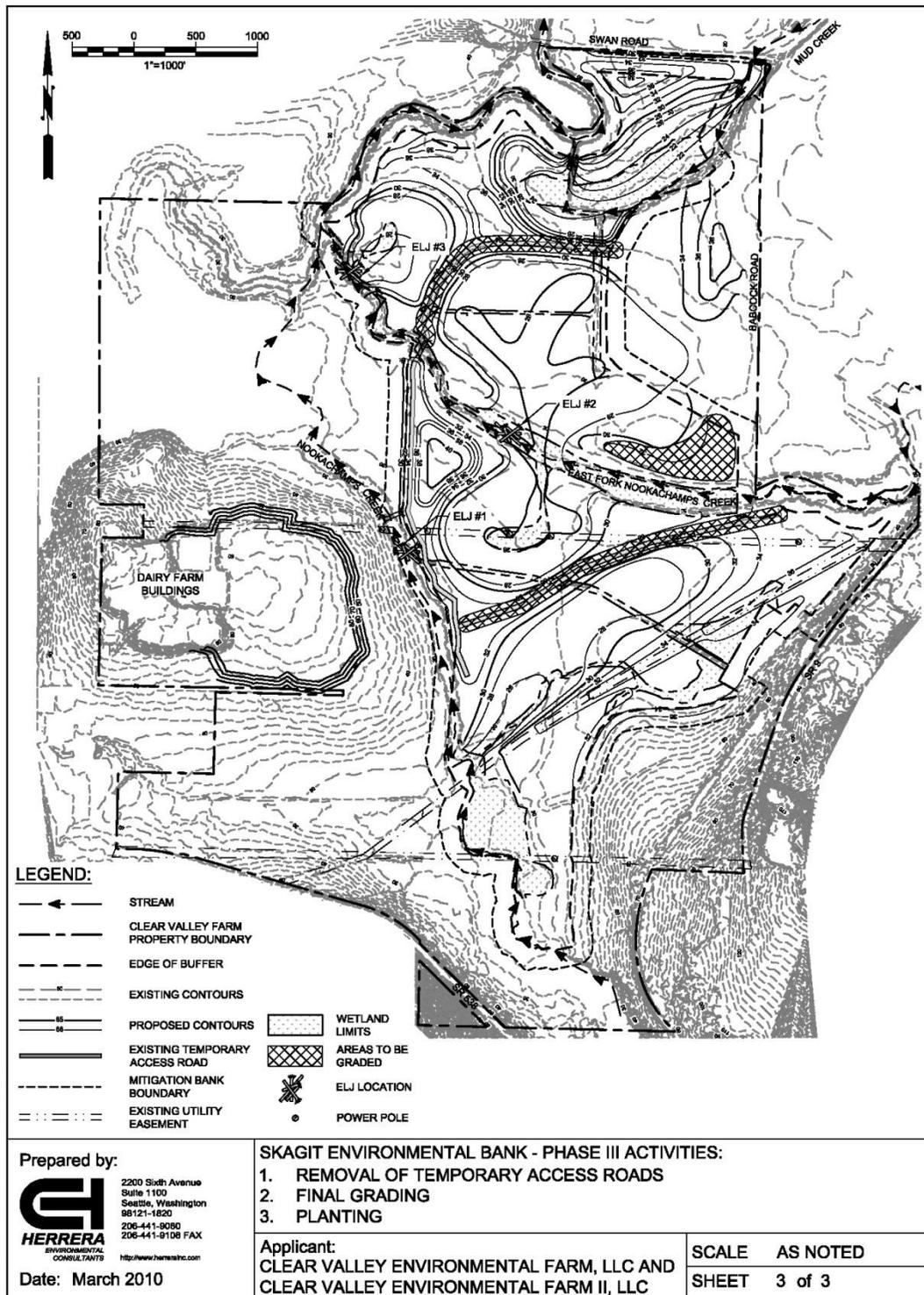
B.3.2.2 Upland Design

Portions of the temporary access road will be graded to create a forest mosaic wetland pattern. The remaining buffer areas that were not planted during Phase 2 will be planted at this time. These forested mosaic wetlands will be planted per the Construction Documents sheet C-29. Sheet C-29 will be updated based on data collected after Phase 1 and Phase 2 are installed. Construction Documents are included in Exhibit 2.

B.3.2.3 Erosion and Sediment Control Plan

Typical temporary erosion and sedimentation control (TESC) measures will be employed during construction activities. All TESC measures will be installed before project activities begin. Refer to the Construction Document sheets ESC-1 and ESC-2. TESC measures may include but are not limited to the following:

- **Placement of silt fences around all work areas.** Approved filter fabrics are Celanese fiber, polyvinyl chloride woven cloth, reinforced chlorosulfonated



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Figure B-3.

polyethylene cloth, and chlorinated polyethylene woven cloth (e.g., Mirafi 100 X, Typar 3401, Stablenka 100, or an approved equivalent).

- **Stabilization of disturbed areas.** Soils exposed by construction activities will not be left exposed for more than 2 days from October 1 to April 30, and 7 days from May 1 to September 30. Soils will be stabilized with covering control measures (e.g., mulching, seeding, plastic covering, surface roughening, sod, or jute matting).
- **Delineation of clearing limits and boundaries of sensitive areas.** Boundaries of sensitive areas will be identified, staked, and isolated by orange plastic construction fence and silt fence as determined necessary by the project engineer.

APPENDIX C: BANK OBJECTIVES AND PERFORMANCE STANDARDS

APPENDIX C.1: All Phases

C.1.1. Bank Objectives and Performance Standards for All Phases

- A. Implementation of the Skagit Environmental Bank is anticipated to result in substantial gains in aquatic ecosystem functions, as compared to those now present, or those that would likely accrue on the site if the Bank were not constructed. The Sponsor must be able to demonstrate tangible aquatic ecosystem gains before Bank credits can be awarded for sale, use, or other transfer, because these functional gains will be used to offset comparable losses to other components of the aquatic environment in the Bank service area. The Bank's success will be measured by the enumerated objectives, each of which is subdivided into specific performance standards. The prescribed performance standards each provide a gauge for measuring the success of the ecological restoration and enhancement efforts at the Bank.
- B. Unless otherwise noted, all documentation required for demonstrating attainment of performance standards will be submitted to the IRT for review and approval as a condition of credit award. Documentation can typically be included in required monitoring reports. IRT award of credits will be reflected in a letter issued using a joint letterhead and signed by the Co-chairs.
- C. Recreational, educational, seed harvesting, and scientific activities that do not conflict with the use limitations or other provisions of the conservation easement, do not interfere with the delineated purposes and goals of the Bank, and do not adversely affect the ecological viability and functionality of the Bank may take place on the Bank site. As an obligation independent of this Instrument, Skagit County requires that activities on the Bank site comply with applicable Skagit County Code.

APPENDIX C.2: Phase 1

C.2.1. Bank Objectives and Performance Standards for Phase 1

Objective 1: Permanently protect aquatic ecosystem functions at the Bank by instituting the Instrument and implementing a conservation easement with permanent funding for site stewardship. Each of the performance standards associated with this objective must be met before any Bank credits may be awarded, and before any construction or other implementation activities may be initiated pursuant to this Instrument. Any construction or implementation activities conducted on-site prior to the inception of the establishment period must cease as of the effective date of this Instrument pursuant to Article VI.B.1, until the Objective 1 and 2 performance standards have been accomplished. The initial award of credits in recognition of accomplishment of these performance standards will serve as the IRT's notification that construction and implementation activities are authorized to commence.

Performance Standard	Documentation
IA. Complete the development of an appropriate Mitigation Banking Instrument and Appendix.	Mitigation Banking Instrument has been signed by the Sponsor and the applicable regulatory agencies. An original signed Instrument must be provided to each of the signatories.
IB. Protect ecosystem function by placing an IRT-approved conservation easement on the property.	Provide the IRT a copy of the signed, IRT-approved conservation easement and evidence that it has been recorded with Skagit County and placed on the property title.
IC. Establish a Long-Term Management and Maintenance Endowment Fund escrow account pursuant to the requirements established in Article III.C.2 of the Instrument.	Demonstrate to the IRT that a Long-Term Management and Maintenance Endowment Fund have been initiated through establishment of a compliant and acceptable escrow account.

The overall objective for Phase 1 is to restore in-channel stream morphology and alter the ground water hydrology at least 30 percent of the site by filling existing ditches on site and adding three engineered log jams in the Nookachamps and East Fork Nookachamps. The objective of Phase 1 is to effect change in geomorphic process (e.g., riffle and pool formation, channel bank undercutting, point bar formation, and duration of wetland inundation) of the stream reaches associated with the ELJs, and raise the ground water hydrology after filling the drainage ditches. In the event that Phase 2 is not constructed within four years of completing Phase 1 installation, the IRT will at that time evaluate the need for revising Phase 1 performance standards.

Objective 2: Protect aquatic ecosystem functions at the Bank by instituting financial assurance for Phase 1. The performance standard associated with this objective must be met before any Bank credits may be awarded, and before any construction or other implementation activities may be initiated for this Phase pursuant to this Instrument. Any construction or implementation activities conducted on-site prior to the inception of the establishment period must cease as of the effective date of this Instrument pursuant to Article VI.B.1, until the Objective 1 and 2 performance standards have been accomplished. The initial award of credits in recognition of accomplishment of this performance standard will serve as the IRT’s notification that construction and implementation activities are authorized to commence.

Performance Standard	Documentation
2A. Provide financial assurance for Phase 1 by establishing an IRT-accepted financial assurance mechanism pursuant to the requirements established in Article III.C.1. Of the Instrument.	Demonstrate to the IRT that a compliant and acceptable financial assurance mechanism has been established to provide financial assurance for Phase 1.

Objective 3: Increase wetland hydrology observed on site through installation of Engineered Log Jams (ELJs), filling of ditches on site, and installing a cover planting to stabilize site soils.

Performance Standard	Documentation
3A. ELJs constructed and ditches filled according to IRT approved plans.	As-built drawings showing completed engineered log jams, monitoring wells, stream gauges, and filled drainage ditches are approved by IRT.
3B. A minimum of three ELJs will be present seven years following installation.	Monitoring report approved by the IRT documenting ELJ presence, location, and approximate composition.
3C. Establish Wetland Hydrology over a minimum of 30% of the bank site excluding buffers by 2 years following IRT approval of Phase 1 as-built drawings. Wetland hydrology is defined as saturation to the soil surface or free water in soil pits at 12 inches or less below the soil surface for at least 10% of the growing season.	Monitoring report approved by the IRT. Monitoring will involve a wetland determination and will occur early in the growing season. Monitoring and reporting for this performance standard will occur prior to beginning construction of Phase 2.

Objective 4: Control invasive species vegetation on site.

Performance Standard	Documentation
4A. Cover planting installed on site according to IRT approved plan for Phase 1.	As-planted drawings showing completed plantings are approved by the IRT.
4B. Areal cover of Himalayan blackberry, Canadian thistle, and reed canary grass will not exceed 40% of the mitigation bank site areas (including buffers) by 2 years following ELJ installation and filling of the ditches.	Conduct annual inventory approximately from June or July. Monitoring report documenting identification and eradication approved by the IRT.

APPENDIX C.3: Phase 2

C.3.1. Bank Objectives and Performance Standards for Phase 2

The overall objective for Phase 2 of the project is to create wetland conditions on 65% of the site, resulting in the final distribution of wetland types as defined in the design plan. Phase 2 will restore off-channel rearing, refuge, and migration habitat for salmonids, resident fish, amphibians, reptiles, and other aquatic dependent species. The work associated with Phase 2 will also involve planting herbaceous plants, shrubs, and trees in all areas of the bank site that have wetland hydrologic conditions. Uplands that will not be disturbed during phase 3 actions will be planted according to the Phase 2 Planting Plan.

Objective 5: Protect aquatic ecosystem functions at the Bank by instituting financial assurance for Phase 2. The performance standards associated with this objective must be met before any Phase 2 Bank credits may be awarded, and before any construction or other implementation activities may be initiated for this Phase pursuant to this Instrument. The award of credits in recognition of accomplishment of this performance standard will serve as the IRT’s notification that construction and implementation activities are authorized to commence for Phase 2.

Performance Standard	Documentation
5A. Provide financial assurance for Phase 2 by establishing an IRT-accepted financial assurance mechanism pursuant to the requirements established in Article III.C.1. of the Instrument.	Demonstrate to the IRT that a compliant and acceptable financial assurance mechanism has been established to provide financial assurance for Phase 2.
5B. Complete an amendment or modification of the Appendices with an approved grading and planting plan for Phase 2.	Submit a fully executed amendment or modification of the Appendices with IRT approved updates for text and figures.

Objective 6: Increase wetland area and side-channel rearing habitat by grading site to create high-flow back channels and microtopography near high-flow back channels.

Performance Standard	Documentation
6A. High-flow back channels and microtopography on site constructed according to IRT approved plans.	As-built drawings showing completed grading are approved by IRT.
6B. Wetland hydrology will be present over a minimum of 65% of the bank site 2 years following completion of Phase 2 grading and initial planting. Wetland hydrology is defined as saturation to the soil surface or free water in soil pits at 12 inches or less below the soil surface for at least 10% of the growing season.	Monitoring report approved by the IRT. Monitoring will involve a wetland determination and will occur early in the growing season.
6C. No more than 3% of the bank site outside of the existing stream channels will be permanently inundated and un-vegetated 2 years after completion of Phase 2 grading and initial planting.	Monitoring report approved by the IRT. Surface hydrology monitoring will occur between August 1 and September 30

Objective 7: Increase habitat diversity and establish wetland areas by planting emergent, shrub, and tree vegetation on site.

Note that vegetation density and cover standards under Objective 7 do not apply to areas that will be planted in Phase 3. See Objective 13 for similar standards that apply to Phase 3 areas.

Performance Standard	Documentation
7A. Vegetation installed according to IRT approved planting plans for Phase 2.	Phase 2 as-planted drawings showing completed plantings are approved by the IRT.
7B. Wetland will be present on a minimum of 65% of the bank site 4 years following completion of Phase 2 initial planting.	Full site delineation conducted and report is approved by the IRT. Delineation will be conducted and documented according to the 1987 Corps of Engineers Delineation Manual and appropriate supplements, as well as the current Washington State Wetlands Identification and Delineation Manual.
7C. Areal cover by native hydrophytic herbaceous plant species in areas targeted as emergent wetland will be at least 40% by 1 year following Phase 2 initial planting.	Monitoring report documenting areal coverage of vegetation during the growing season is approved by the IRT.
7D. Areal cover by native hydrophytic herbaceous plant species in areas targeted as emergent wetland will be at least 50% by 3 years following Phase 2 initial planting.	Monitoring report documenting areal coverage of vegetation during the growing season is approved by the IRT.
7E. Areal cover by native hydrophytic herbaceous plant species in areas targeted as emergent wetland will be at least 70% by 5 years following Phase 2 initial planting.	Monitoring report documenting areal coverage of vegetation during the growing season is approved by the IRT.
7F. At least 3 native hydrophytic herbaceous species will have at least 8% areal coverage each in areas targeted as emergent wetland 3 years following Phase 2 initial planting. .	Monitoring report documenting species diversity during the growing season is approved by the IRT.
7G. At least 3 native hydrophytic herbaceous species will have at least 10% areal coverage each in areas targeted as emergent wetland 5 years following Phase 2 initial planting.	Monitoring report documenting species diversity during the growing season is approved by the IRT.
7H. Native hydrophytic shrub species will have a density of at least 90% of the original planting density in areas targeted as scrub-shrub wetland 1 year following Phase 2 initial planting.	Monitoring report documenting species density during the growing season is approved by the IRT.
7I. Native hydrophytic shrub species will have at least 35% areal cover in areas targeted as scrub-shrub wetland by 3 years following Phase 2 initial planting.	Monitoring report documenting areal coverage of vegetation during the growing season is approved by the IRT.
7J. Native hydrophytic shrub species will have at least 50% areal cover in areas targeted as scrub-shrub wetland by 5 years following Phase 2 initial planting.	Monitoring report documenting areal coverage of vegetation during the growing season is approved by the IRT.
7K. Native hydrophytic shrub species will have at least 70% areal cover in areas targeted as scrub-shrub wetland by 8 years following Phase 2 initial planting.	Monitoring report documenting areal coverage of vegetation during the growing season is approved by the IRT.
7L. At least 3 native hydrophytic shrub species will have at least 6% areal cover each in areas targeted as scrub-shrub wetland 3 years following Phase 2 initial planting.	Monitoring report documenting areal coverage of vegetation during the growing season is approved by the IRT.

Performance Standard	Documentation
7M. At least 3 native hydrophytic shrub species will have at least 8% areal cover each in areas targeted as scrub-shrub wetland by 5 years following Phase 2 initial planting.	Monitoring report documenting areal coverage of vegetation during the growing season is approved by the IRT.
7N. At least 3 native hydrophytic shrub species will have at least 10% areal cover each in areas targeted as scrub-shrub wetland by 8 years following Phase 2 initial planting.	Monitoring report documenting areal coverage of vegetation during the growing season is approved by the IRT.
7O. Native hydrophytic woody species will have a density of at least 90% of the original planting density in areas targeted as forested wetland by 1 year following Phase 2 initial planting. (Woody species refers to non-herbaceous trees and shrubs.)	Monitoring report documenting species density during the growing season is approved by the IRT.
7P. Native hydrophytic woody species will have at least 35% areal cover in areas targeted as forested wetland by 3 years following Phase 2 initial planting.	Monitoring report documenting areal coverage of vegetation during the growing season is approved by the IRT.
7Q. Native hydrophytic woody species will have at least 50% areal cover in areas targeted as forested wetland by 5 years following Phase 2 initial planting.	Monitoring report documenting areal coverage of vegetation during the growing season is approved by the IRT.
7R. Native hydrophytic woody species will have at least 65% areal cover in areas targeted as forested wetland by 8 years following Phase 2 initial planting.	Monitoring report documenting areal coverage of vegetation during the growing season is approved by the IRT.
7S. At least 3 native hydrophytic woody species will have at least 6% areal cover each in areas targeted as forested wetland by 3 years following Phase 2 initial planting.	Monitoring report documenting species areal coverage during the growing season is approved by the IRT.
7T. At least 3 native hydrophytic woody species will have at least 8% areal cover each in areas targeted as forested wetland by 5 years following Phase 2 initial planting.	Monitoring report documenting species areal coverage during the growing season is approved by the IRT.
7U. At least 3 native hydrophytic woody species will have at least 10% areal cover each in areas targeted as forested wetland by 8 years following Phase 2 initial planting.	Monitoring report documenting species areal coverage during the growing season is approved by the IRT.

Objective 8: Increase habitat diversity by planting trees and shrubs in upland areas.

Note that vegetation density and cover standards under Objective 8 do not apply to areas that will be planted in Phase 3. See Objective 15 for similar standards that apply to Phase 3 areas.

Performance Standard	Documentation
8A. Native woody species will have a density of at least 90% of the original planting density in areas targeted as upland 1 year following Phase 2 initial planting. (Woody species refers to non-herbaceous trees and shrubs.)	Monitoring report documenting species density during the growing season is approved by the IRT.
8B. Native woody species will have at least 20% areal cover in areas targeted as upland by 3 years following Phase 2 initial planting.	Monitoring report documenting areal coverage of vegetation during the growing season is approved by the IRT.
8C. Native woody species will have at least 35% areal cover in areas targeted as upland by 5 years following Phase 2 initial planting.	Monitoring report documenting areal coverage of vegetation during the growing season is approved by the IRT.
8D. Native woody species will have at least 50% areal cover in areas targeted as upland by 8 years following Phase 2 initial planting.	Monitoring report documenting areal coverage of vegetation during the growing season is approved by the IRT.
8E. At least 3 native woody species will have at least 4% areal cover each in areas targeted as upland by 3 years following Phase 2 initial planting.	Monitoring report documenting species areal coverage during the growing season is approved by the IRT.
8F. At least 3 native woody species will have at least 6% areal cover each in areas targeted as upland by 5 years following Phase 2 initial planting.	Monitoring report documenting species areal coverage during the growing season is approved by the IRT.
8G. At least 3 native woody species will have at least 10% areal cover each in areas targeted as upland by 8 years following Phase 2 initial planting.	Monitoring report documenting species areal coverage during the growing season is approved by the IRT.

Objective 9: Increase habitat diversity by controlling invasive vegetation.

Performance Standard	Documentation
9A. Areal Cover of Himalayan blackberry, Canadian thistle, and reed canary grass species total cover will not exceed 30% of the total area of the site outside the 19 acres of existing reed canary grass by 3 years following Phase 2 initial planting.	Monitoring report documenting invasive species cover is approved by the IRT.
9B. Areal cover of Himalayan blackberry, Canadian thistle, and reed canary grass will not exceed 25% of the mitigation bank site areas (including buffers) by 5 years following Phase 2 initial planting.	Monitoring report documenting invasive species cover is approved by the IRT.
9C. Areal cover of Himalayan blackberry, Canadian thistle, and reed canary grass will not exceed 20% of the mitigation bank site areas (including buffers) by 8 years following Phase 2 initial planting.	Monitoring report documenting invasive species cover is approved by the IRT.
9D. Maintain zero tolerance of Japanese knotweed , purple loosestrife, and English ivy colonization. Map any specimens and eradicate during growing season of same year.	Inventory annually and report documenting identification and eradication approved by the IRT

Objective 10: Increase wildlife habitat by installing perch poles and cavity trees.

Performance Standard	Documentation
10A. Habitat structures constructed and installed according to IRT approved plans.	As-built drawings showing completed structures are approved by IRT.

APPENDIX C.4: Phase 3

C.4.1. Bank Objectives and Performance Standards for Phase 3

The overall objective for Phase 3 of the project is to create wetland conditions of most of the upland that may remain after Phases 1 and 2 are complete. It is anticipated that at least 65 percent of the bank site will have wetland conditions after completion of Phase 2. About 27 acres of the bank site will be excavated in Phase 3 to create forest wetland mosaics. This will involve converting the temporary access roads into wetland habitat as shown in the phase 3 Planting Plan.

Objective 11: Protect aquatic ecosystem functions at the Bank by instituting financial assurance for Phase 3. The performance standards associated with this objective must be met before any Phase 3 Bank credits may be awarded, and before any construction or other implementation activities may be initiated for this Phase pursuant to this Instrument. The award of credits in recognition of accomplishment of this performance standard will serve as the IRT’s notification that construction and implementation activities are authorized to commence for Phase 3.

Performance Standard	Documentation
11A. Provide financial assurance for Phase 3 by establishing an IRT-accepted financial assurance mechanism pursuant to the requirements established in Article III.C.1. of the Instrument.	Demonstrate to the IRT that a compliant and acceptable financial assurance mechanism has been established to provide financial assurance for Phase 3.
11B. Complete an amendment or modification of the Appendices with an approved grading and planting plan for Phase 3.	Submit a fully executed amendment or modification of the Appendices with IRT approved updates for text and figures.

Objective 12: Increase wetland area by grading upland/wetland mosaic.

Performance Standard	Documentation
12A. Upland/wetland mosaic constructed according to IRT approved plans.	As-built drawings showing completed grading are approved by IRT.
12B. Wetland hydrology will be present over a minimum of 81% of the bank site 2 years following completion of Phase 3 grading and planting. Wetland hydrology is defined as saturation to the soil surface or free water in soil pits at 12 inches or less below the soil surface for at least 10% of the growing season.	Monitoring report approved by the IRT. Monitoring will involve a wetland determination and will occur early in the growing season.
12C. Wetland will be present on a minimum of 81% of the bank site 8 years following completion of Phase 3 grading.	Full site delineation conducted and report is approved by the IRT. Delineation will be conducted and documented according to the 1987 Corps of Engineers Delineation Manual and appropriate supplements as well as the current Washington State wetland delineation manual.
12D. No more than 3% of the bank site outside of the existing stream channels will be permanently inundated and un-vegetated 2 years after completion of Phase 3 grading and initial planting.	Monitoring report approved by the IRT. Surface hydrology monitoring will occur between August 1 and September 30

Objective 13: Increase habitat diversity and establish wetland areas by planting trees and shrubs in wetland mosaic area.

Performance Standard	Documentation
13A. Vegetation installed according to IRT approved planting plans for Phase 3.	Phase 3 as-planted drawings showing completed plantings are approved by the IRT.
13B. Native woody species will have a density of at least 90% of the original planting density in areas targeted as forested wetland by 1 year following Phase 3 initial planting activities. (Woody species refers to non-herbaceous trees and shrubs.)	Monitoring report documenting species density during the growing season is approved by the IRT.
13C. Native woody species will have at least 35% areal cover in areas targeted as forested wetland by 3 years following completion of Phase 3 initial planting.	Monitoring report documenting species areal coverage during the growing season is approved by the IRT.
13D. Native woody species will have at least 50% areal cover in areas targeted as forested wetland by 5 years following completion of Phase 3 initial planting.	Monitoring report documenting species areal coverage during the growing season is approved by the IRT.
13E. Native woody species will have at least 65% areal cover in areas targeted as forested wetland by 8 years following completion of Phase 3 initial planting.	Monitoring report documenting species areal coverage during the growing season is approved by the IRT.
13F. At least 3 native woody species will have at least 6% areal cover each in areas targeted as forested wetland by 3 years following Phase 3 initial planting.	Monitoring report documenting species diversity and areal coverage during the growing season is approved by the IRT.
13G. At least 3 native woody species will have at least 8% areal cover each in areas targeted as forested wetland by 5 years following Phase 3 initial planting.	Monitoring report documenting species diversity and areal coverage during the growing season is approved by the IRT.
13H. At least 3 native woody species will have at least 10% areal cover each in areas targeted as forested wetland by 8 years following Phase 3 initial planting.	Monitoring report documenting species diversity and areal coverage during the growing season is approved by the IRT.

Objective 14: Increase habitat diversity by controlling invasive vegetation.

Performance Standard	Documentation
14A. Areal cover of Himalayan blackberry, Canadian thistle, and reed canary grass will not exceed 20% of the mitigation bank site areas (including buffers) by 5 and 8 years following Phase 3 planting.	Monitoring report documenting invasive species cover is approved by the IRT.
14B. Maintain zero tolerance of Japanese knotweed, purple loosestrife, and English ivy colonization. Map any specimens and eradicate during growing season of same year.	Inventory annually and report documenting identification and eradication approved by the IRT

Objective 15: Increase habitat diversity by planting upland areas.

Performance Standard	Documentation
15A. Native woody species will have a density of at least 90% of the original planting density in areas targeted as upland 1 year following Phase 3 initial planting.	Monitoring report documenting species density during the growing season is approved by the IRT.
15B. Native woody species will have at least 20% areal cover in areas targeted as upland by 3 years following Phase 3 initial planting.	Monitoring report documenting areal coverage of vegetation during the growing season is approved by the IRT.
15C. Native woody species will have at least 35% areal cover in areas targeted as upland by 5 years following Phase 3 initial planting.	Monitoring report documenting areal coverage of vegetation during the growing season is approved by the IRT.
15D. Native woody species will have at least 50% areal cover in areas targeted as upland by 8 years following Phase 3 initial planting.	Monitoring report documenting areal coverage of vegetation during the growing season is approved by the IRT.
15E. At least 3 native woody species will have at least 4% areal cover each in areas targeted as upland by 3 years following Phase 3 initial planting.	Monitoring report documenting species diversity and areal coverage during the growing season is approved by the IRT.
15F. At least 3 native woody species will have at least 6% areal cover each in areas targeted as upland by 5 years following Phase 3 initial planting.	Monitoring report documenting species diversity and areal coverage during the growing season is approved by the IRT.
15G. At least 3 native woody species will have at least 10% areal cover each in areas targeted as upland by 8 years following Phase 3 initial planting.	Monitoring report documenting species diversity and areal coverage during the growing season is approved by the IRT.

Objective 16: Increase wildlife habitat by installing perch poles and cavity trees throughout the entire site.

Performance Standard	Documentation
16A. Perch-pole habitat structures constructed and installed according to IRT approved plans.	As-built drawings showing completed structures are approved by IRT.
16B. A minimum of 50 perch poles or snags will occur on the site 8 years following Phase 3 installation of 62 poles.	Monitoring report documenting locations of habitat structures. Naturally recruiting structures can be counted toward this total.

APPENDIX D: CREDIT GENERATION AND AWARD SCHEDULE

APPENDIX D.1: All Phases

The Justification for Credits is located in the Section D of the Resource Folder.

D.1.1. Generation of Credits for all Phases

- A. Credits will be established and awarded to the Bank upon the Sponsor's demonstration that the performance standards reflected in **Table C-1** of Appendix C have been met.
- B. A credit is defined as a unit of measure representing the increase in the ecological value of the bank site. A credit for this Bank represents the increase in functions, values and areal extent of the wetland, riparian and upland systems on the project site. This increase in function results from the re-establishment and rehabilitation of wetlands; re-establishment and rehabilitation of riparian systems; and enhancement of uplands on the Bank site.

The anticipated credits reflected in **Table D-1** are determined based on the anticipation that the Bank will rate as a high functioning system at maturity. The wetland systems anticipated at the Bank include the following:

- Hydrogeomorphic Classification
 - Depressional
 - Riverine
- Cowardin System (Cowardin et al. 1979)
 - Palustrine
 - Riverine

A credit is also based on the water quality, water quantity and habitat functions the Bank will provide as performance standards are met.

- C. The precise number of credits actually generated by the Bank cannot be determined until the project is constructed and the success of restoration and enhancement activities is assessed by the Corps and Ecology, in consultation with the IRT. The final number of credits will be determined by the Corps and Ecology, in consultation with the IRT and will be based on achievement of the performance standards.
- D. Credits generated by the Bank will be calculated as shown in the table below:

Table D-1. Wetland Credit Generation by Bank Development Activity

Bank Activity	Affected Area (acres)	Utility Easement Acres (Not counted towards credits)	Credit Ratio (Activity area: universal credit)	Anticipated Number of Credits
Re-established Wetland	199	4.9	1 to 1	199.0
Rehabilitated Wetland, Plowed Field	14.9	0.1	1.5 to 1	9.9
Rehabilitated Wetland, Reed Canary	31.2	1	1.5 to 1	20.8
Riparian Upland	4.6	0.2	3 to 1	1.5
Upland	52.3	2.9	5 to 1	10.5
Buffer	84.9		0	0
Utility Easements (Power and Water)	9.1		0	0
TOTAL	396		N/A	241.7

D.1.2. Credit Award Schedule for all Phases

- A. Credits will be awarded to the Bank for sale, use, or other transfer as the performance standards associated with those credits are met, with the following exceptions: (1) no credits may be awarded prior to meeting all of the performance standards associated with Objective 1 and 2, (2) no credits may be awarded for Phase 2 prior to meeting all of the performance standards associated with Objective 5, (3) no credits may be awarded for Phase 3 prior to meeting all of the performance standards associated with Objective 11, and (4) no credits associated with the final year of performance standards for a particular phase may be awarded until at least 60% of all possible credits for a particular phase have been awarded. Refer to the Resource Folder “Additional Information on Credit Release Percentages” and **Tables D-2 through D-4** for Credit Release Schedules.
- B. For each phase of the Bank, the Corps and Ecology, in consultation with the IRT will typically approve the award of credits according to the schedules in **Table D-2.1** through **D-4.1**. Credits may not be awarded sooner than specified in these tables, except where otherwise noted or in extraordinary situations with the written approval of the Corps and Ecology, in consultation with the other members of the IRT. If the Bank is not able to meet a particular performance standard by the year indicated in these tables, the Sponsor may submit documentation of successful satisfaction of that performance standard during a subsequent year, and the Corps and Ecology, in consultation with the IRT will give full consideration to the award of appropriate credits for sale, use, or transfer without reduction or other penalty. The credit award schedule for each phase is independent from the others. The years shown in each table refer to time following approval of as-builts for that particular phase.
- C. The Corps and Ecology may, at their discretion, following consultation with the IRT, award partial credit for partial accomplishment of a performance standard. In the event a specific performance standard is not met but the IRT feels that the site is progressing satisfactorily, the Corps and Ecology may, at their discretion following consultation with the IRT, award credits.

- D. Once a credit is awarded, the Bank may sell, use, or otherwise transfer that credit at any time, subject to the provisions of this Instrument.

- E. If the institution of an adaptive management or remedial action plan as described in Section F.1.1.4 of Appendix F causes delay in the achievement of a performance standard, the timeline for achievement of each subsequent milestone for that performance standard will be deferred for a like interval, unless otherwise specifically approved by the Corps and Ecology, following consultation with the IRT. The Corps and Ecology, in consultation with the IRT and the Sponsor, will determine what remedial actions are necessary to correct the situation, pursuant to Article IV.H. and Section F.1.1.4, and direct their performance prior to the award of any additional mitigation credits.

APPENDIX D.2: Phase 1

D.2.1. Generation of Credits for Phase 1

The number of credits expected to be generated by Phase 1 of the Bank is 30% of the Bank total or 72.49 credits.

TABLE D.2.1. Generation of Credits for Phase 1

Phase 1 Performance Standard		Actual Credit Release per Year								
Phase 1 Timeline [Represents 30% of Total Credits]	Pre-Construct	0	1	2	3	4	5	6	7	Total
1A Signed MBI	8.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.05
1B Placement of Conservation Easement	8.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.05
1C Formation of Long-term Management and Maintenance Fund	8.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.05
2A. Financial Assurance for Phase 1	4.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.83
3A. As-builts for ELJs & Ditches	0.00	14.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.50
3B. Minimum of 3 ELJs Present Year 7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.04	6.04
3C. Minimum Wetland Hydrology (Determination)	0.00	0.00	0.00	12.09	0.00	0.00	0.00	0.00	0.00	12.09
4A. Cover Planting Installed	0.00	3.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.63
4B. Invasive Cover Control to 40%	0.00	0.00	0.00	3.63	0.00	0.00	0.00	0.00	3.63	7.25
ANNUAL TOTALS	28.98	18.13	0.00	15.71	0.00	0.00	0.00	0.00	9.67	72.49
Potential Annual Release %	12.0%	7.5%	0.0%	6.5%	0.0%	0.0%	0.0%	0.0%	4.0%	30.0%
CUMULATIVE TOTALS	28.98	47.11	47.11	62.82	62.82	62.82	62.82	62.82	72.49	0.00

Year 0 is the year as-built drawings are approved. Year 1 is normally the first year of site monitoring.

APPENDIX D.3: Phase 2

D.3.1. Generation of Credits for Phase 2

The number of credits expected to be generated by Phase 2 of the Bank is 55.25% of the total Bank credits or 133.54 credits.

TABLE D.3.1. Generation of Credits for Phase 2

Phase 2 Performance Standard	Credit Release Per Year											
	Phase 2 Timeline [Represents 55% of Total Credits]	Pre-Construct	0	1	2	3	4	5	6	7	8	Total
5A. Phase 2 Financial Assurances		1.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.21
5B. Phase 2 Grading and Planting Plans		1.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.21
6A. As-builts for Grading		0.00	16.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.92
6B. Establish WL Hydrology (determination)		0.00	0.00	0.00	0.00	12.09	0.00	0.00	0.00	0.00	0.00	12.09
6C. Limit Un-vegetated, Permanently Inundated Area		0.00	0.00	0.00	0.00	2.42	0.00	0.00	0.00	0.00	0.00	2.42
7A. Vegetation As-planted Report		0.00	4.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.83
7B. Minimum Wetland Area (Delineation)		0.00	0.00	0.00	0.00	0.00	0.00	12.09	0.00	0.00	0.00	12.09
7C. Emergent Cover 40%		0.00	0.00	2.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.42
7D. Emergent Cover 50%		0.00	0.00	0.00	0.00	2.42	0.00	0.00	0.00	0.00	0.00	2.42
7E. Emergent Cover 70%		0.00	0.00	0.00	0.00	0.00	0.00	2.42	0.00	0.00	0.00	2.42
7F. Emergent Diversity 8% for 3 Species		0.00	0.00	0.00	0.00	2.42	0.00	0.00	0.00	0.00	0.00	2.42
7G. Emergent Diversity 10% for 3 Species		0.00	0.00	0.00	0.00	0.00	0.00	2.42	0.00	0.00	0.00	2.42
7H. Shrub Density		0.00	0.00	2.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.42
7I. Total Scrub Cover 35%		0.00	0.00	0.00	0.00	2.42	0.00	0.00	0.00	0.00	0.00	2.42
7J. Total Scrub Cover 50%		0.00	0.00	0.00	0.00	0.00	0.00	2.42	0.00	0.00	0.00	2.42
7K. Total Scrub Cover 70%		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.42	2.42
7L. Shrub Cover 6% for three species each		0.00	0.00	0.00	0.00	2.42	0.00	0.00	0.00	0.00	0.00	2.42
7M. Shrub Cover 8% for three species each		0.00	0.00	0.00	0.00	0.00	0.00	3.63	0.00	0.00	0.00	3.63
7N. Shrub Cover 10% for three species each		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.63	3.63
7O. Forest Density		0.00	0.00	2.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.42
7P. Total Forest Cover 35%		0.00	0.00	0.00	0.00	2.42	0.00	0.00	0.00	0.00	0.00	2.42
7Q. Total Forest Cover 50%		0.00	0.00	0.00	0.00	0.00	0.00	2.42	0.00	0.00	0.00	2.42
7R. Total Forest Cover 65%		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.42	2.42
7S. Forest Cover 6% for three species each		0.00	0.00	0.00	0.00	2.42	0.00	0.00	0.00	0.00	0.00	2.42
7T. Forest Cover 8% for three species each		0.00	0.00	0.00	0.00	0.00	0.00	3.63	0.00	0.00	0.00	3.63
7U. Forest Cover 10% for three species each		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.63	3.63
8A. Upland Forest Density		0.00	0.00	2.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.42
8B. Upland Species Cover 20%		0.00	0.00	0.00	0.00	2.42	0.00	0.00	0.00	0.00	0.00	2.42
8C. Upland Species Cover 35%		0.00	0.00	0.00	0.00	0.00	0.00	2.42	0.00	0.00	0.00	2.42
8D. Upland Species Cover 50%		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.42	2.42
8E. Upland Forest Cover 4% for three species each		0.00	0.00	0.00	0.00	2.42	0.00	0.00	0.00	0.00	0.00	2.42
8F. Upland Forest Cover 6% for three species each		0.00	0.00	0.00	0.00	0.00	0.00	3.63	0.00	0.00	0.00	3.63
8G. Upland Forest Cover 10% for three species each		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.63	3.63
9A. Invasive Cover Control to 30%		0.00	0.00	0.00	0.00	2.42	0.00	0.00	0.00	0.00	0.00	2.42
9B. Invasive Cover Control to 25%		0.00	0.00	0.00	0.00	0.00	0.00	2.42	0.00	0.00	0.00	2.42
9C. Invasive Cover Control to 20%		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.02	3.02
9D. Zero Tolerance Invasives		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.42	2.42
10A. Habitat Structure As-Builts		0.00	2.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.42
ANNUAL TOTALS		2.42	24.17	9.67	0.00	36.26	0.00	37.46	0.00	0.00	23.57	133.54
Potential Annual Release %		1.0%	10.0%	4.0%	0.0%	15.0%	0.0%	15.5%	0.0%	0.0%	9.8%	55.25%
CUMULATIVE TOTALS		2.42	26.59	36.26	36.26	72.51	72.51	109.97	109.97	109.97	133.54	0.00

Year 0 is the year as-built drawings are approved. Year 1 is normally the first year of site monitoring

APPENDIX D.4: Phase 3

D.4.1. Generation of Credits for Phase 3

The number of credits expected to be generated by Phase 3 of the Bank is 14.75% of the total Bank credits or 35.65 credits.

TABLE D.4.1. Generation of Credits for Phase 3

Phase 3 Performance Standard	Credits Release per Year											Total
	Pre-construct	0	1	2	3	4	5	6	7	8		
Phase 3 Timeline [Represents 15% of Total Credits]												
11A. Financial Assurances	1.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.21
11B. Phase 3 Grading and Planting Plans	1.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.21
12A. As-builts for Grading	0.00	7.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.25
12B. Establish Minimum WL Hydrology (Determination)	0.00	0.00	0.00	2.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.42
12C. Establish Minimum WL Area (Delineation)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.42	0.00	0.00	2.42	2.42
12D. Limit Un-vegetated, Permanently Inundated Area (3%)	0.00	0.00	0.60	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.60
13A. Vegetation As-planted Report	0.00	3.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.63
13B. Forest Density (90%)	0.00	0.00	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.60
13C. Forest Diversity 35% for Forest Species	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.60
13D. Forest Diversity 50% for Forest Species	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.60
13E. Forest Diversity 65% for Forest Species	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.60	0.60
13F. Forest Cover 6%	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.60
13G. Forest Cover 8%	0.00	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00	0.00	0.00	1.21
13H. Forest Cover 10%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.60	0.60
14A. Invasive Cover Control to 20%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81	1.81
14B. Zero Tolerance Invasives	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.60	0.60
15A. Upland Forest Density	0.00	0.00	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.60
15B. Upland Forest Diversity 20% for Upland Species	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.60
15C. Upland Forest Diversity 35% for Upland Species	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.60
15D. Upland Forest Diversity 50% for Upland Species	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.60	0.60
15E. Upland Forest Cover 4%	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.60
15F. Upland Forest Cover 6%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.21	0.00	0.00	0.00	1.21
15G. Upland Forest Cover 10%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.60	0.60
16A. Habitat Structures As-Built	0.00	2.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.42
16B. Minimum Perch Poles/Snags	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.42	2.42
ANNUAL TOTALS	2.42	13.29	1.21	3.02	2.42	0.00	3.63	0.00	0.00	9.67	35.65	
Potential Annual Release %	1.0%	5.5%	0.5%	1.3%	1.0%	0.0%	1.5%	0.0%	0.0%	4.0%	14.75%	
CUMULATIVE TOTALS	2.42	15.71	16.92	19.94	22.36	22.36	25.98	25.98	25.98	35.65	0.00	

Year 0 is the year as-built drawings are approved. Year 1 is normally the first year of site monitoring.

APPENDIX E: PROCEDURES FOR USE OF MITIGATION BANK CREDITS AND DEBIT USE

APPENDIX E.1: All Phases

E.1.1. Service Area

The service area for the Bank extends to within the Skagit County portion of the Water Resources Inventory Area 03 (WRIA 03), located in the Lower Skagit River Basin. The service area includes all fresh water wetland habitats of the Lower Skagit/Samish Watershed east of the easternmost boundaries of Swinomish Slough, Skagit Bay, Padilla Bay, and Samish Bay, excluding all islands and all brackish marshes, halotrophic wetlands or wetlands influenced by saline conditions of >0.5 parts per thousand salt at any time during the year.

- A. The Service Area Map shows the delineation of the service area (Figure E-1). The Service Area Rationale is located in the Section E of the Resource Folder.
- B. The Bank may be used to compensate for permitted impacts outside of the approved service area if specifically approved by the appropriate agencies requiring mitigation and the Corps and Ecology, following consultation with the IRT, provided that such mitigation would be practicable and environmentally preferable to other mitigation alternatives. As such, out-of-service-area impacts will only be allowed in special circumstances, which will be evaluated on a case-by-case basis (e.g., projects that span multiple basins such as transportation and utility corridors and pipelines, and settlement of enforcement actions).

E.1.2. Credit-Debit Ratios

- A. Bank credits may be used, subject to the approval from the regulatory agencies with jurisdiction over the impact projects to compensate for authorized permanent or temporary impacts, as well as to resolve enforcement or permit compliance actions such as replacing previously implemented project-specific mitigation that has partially or completely failed.
- B. Each credit transaction agreement that is associated with a permit must indicate the permit number of the impacting project, the number of universal credits transacted, and must expressly specify that the Sponsor, its successors and assigns assumes responsibility for accomplishment and maintenance of the transferee's compensatory mitigation requirements associated with the impacting project, upon completion of the credit transaction.
- C. The following table depicts the approximate number of Bank credits typically required by the IRT agencies to compensate for each unit of permanent loss of listed aquatic resource type and functional level. The actual number of Bank credits required to compensate for an adverse impact to aquatic resources in any particular situation depends on many factors (e.g., whether the impact is permanent or temporary) and will be determined on a case-by-case basis by the regulatory agency(ies) authorizing the impact. The wetland

functional categories are based on Washington State Wetland Rating System for Western Washington, revised (Ecology Publication # 04-06-025 Units of loss are measured in acres for wetland and buffer impacts and may be measured in either acres or linear feet for stream impacts. Due to the variety and typically high level of functioning of Category I wetlands, compensation for impacts to these resources by Bank credits will be determined by the regulatory agencies on a case-by-case basis.

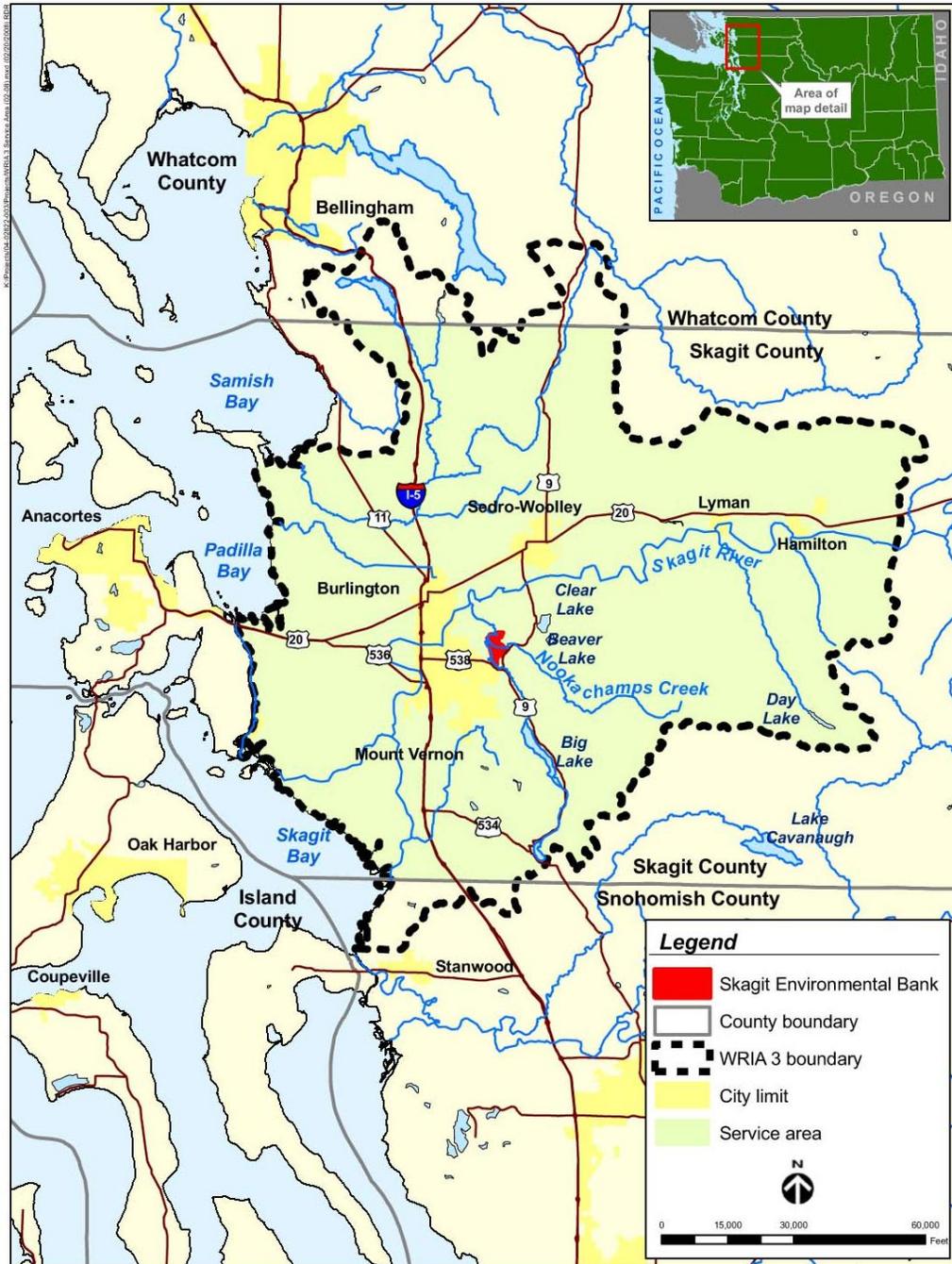


Figure E-1. Service area.

TABLE E-1: Credit-Debit Ratios

Resource Impact	Bank Credits: Impact Acreage
Wetland, Category I	Case-by-Case
Wetland, Category II	1.2:1
Wetland, Category III	1:1
Wetland, Category IV	0.85:1

E.1.3 Procedures for Use of Mitigation Bank Credits

- A. Use of Mitigation Bank Credits: Public and private proponents of activities regulated under Sections 401 and 404 of the Clean Water Act (33 U.S. Code §§ 1341, 1344), Section 10 of the Rivers and Harbors Act of 1899 (33 U.S. Code § 403), Washington State Water Pollution Control Act (Chapter 90.48, RCW), Shoreline Management Act (RCW 90.58), Growth Management Act (RCW 36.70A), Hydraulic Code (RCW 75.20), and other Federal, State, Skagit County, and local authorities may be eligible to use the Bank as mitigation for unavoidable impacts. The Bank will be eligible to serve public and private end users by providing advance compensatory mitigation for authorized impacts to regulated areas that require mitigation to settle enforcement claims.
- B. An applicant seeking a permit for a project with adverse impacts to the aquatic environment within the service area must generally obtain the approval of each regulatory agency with jurisdiction over that project, in order to use the Bank as a source of compensatory mitigation. To receive approval to use the Bank, the applicant must demonstrate to the satisfaction of the pertinent regulatory agencies that the project complies with all applicable requirements pertaining to alternatives and mitigation sequencing and that purchasing credits from the Bank for compensatory mitigation would be in the best interest of the environment. Specifically, a permit applicant must generally be able to demonstrate to the satisfaction of the involved regulatory agencies that:
- (1) There is no practicable alternative to adversely impacting the water body, critical area, buffer, or other regulated area;
 - (2) All appropriate and practicable measures to minimize adverse impacts to the aquatic ecosystem have been considered and included in the project; and
 - (3) All appropriate and practical on-site compensatory mitigation for unavoidable adverse impacts is included in the project.
- It is solely the determination of the agency(ies) permitting the project with adverse impacts as to whether a proposed use of Bank credits within the service area is appropriate and environmentally preferable to other mitigation alternatives.
- C. Upon receiving permission to utilize credits from the Bank the permittee must contact the Sponsor to ensure that credits are available. Upon completion of the transaction, the

Sponsor will inform the permitting agencies of each completed transaction, via email or letter with an attached copy of the accounting ledger.

- D. Other types of credit users may include, but are not necessarily limited to, purchases made that will not be associated with a particular project or impact (i.e., “good will” purchases), purchases made by natural resource stewards resulting from expenditures from in-lieu-fees (or similar type funds), and other conservation purposes.
- E. The Sponsor may use the Bank site to provide compensatory mitigation to offset impacts to environmental elements other than aquatic resources. Such use shall result in no physical changes to the bank site unless approved by the Corps and Ecology, in consultation with the IRT. The Sponsor must obtain approval from the Corps and Ecology, following consultation with the IRT, prior to establishing currencies for any portion of the Bank other than the wetland mitigation credits that are established by Appendix D of this Instrument. Use of the Bank for compensatory mitigation for other environmental elements shall not conflict with the provisions of this Instrument.

E.1.4 Accounting Procedures

- A. The Sponsor shall establish and maintain for inspection and reporting purposes a ledger of all credits that are awarded through the achievement of specified performance standards, as well as credits that are sold, used, or transferred. The Sponsor will record each credit withdrawal transaction that receives a permit with the Skagit County Auditor, and submit a copy of the recorded transaction to the IRT within 30 days from stamped registration date.
- B. The ledger must follow the current ledger template approved by the Corps and Ecology. The following information, at a minimum, will be recorded in the ledger for each transaction:
 - (1) Date of transaction.
 - (2) Number of credits transacted.
 - (3) For credits awarded, reference the performance standard(s) to which the awarded credits correspond.
 - (4) For credit sales/use/transfers, include the name, address, and telephone number of purchaser/user/transferee; and include all of the following information that applies: permit number(s), permit issuance date, and name of the regulatory agency(ies) issuing permits; location of the project for which the credits are being purchased/used/transferred; the size of the impacts; and a brief description of the project impacts requiring compensatory mitigation (e.g., nature and quality of aquatic resources affected).
 - (5) For credits withdrawn from the ledger for reasons other than credit sale/use/transfer, include the specific reason for withdrawal.

- (6) Bank credit balance after the award or transaction.
- C. The Sponsor will provide an updated Bank ledger to the IRT each time credits are awarded, sold, used, transferred, or otherwise withdrawn. This must be provided within 30 days of any credit transaction. The Sponsor will also submit an annual ledger by February 1 of each year. The annual ledger must show a cumulative tabulation of all credit transactions at the Bank through December 31. This ledger will be submitted in conjunction with the monitoring reports until (1) all credits have been awarded and sold, used, or otherwise transferred; or (2) until the IRT has accepted the Sponsor's written certification that it has terminated all banking activity.

APPENDIX F: ESTABLISHMENT PERIOD MONITORING, REPORTING, MAINTENANCE, AND REMEDIAL ACTION

APPENDIX F.1: All Phases

F.1.1. Establishment Period Monitoring, Reporting, Maintenance, and Remedial Action

During the establishment period, the Sponsor shall monitor and report on the progress of the Bank toward achieving the goals, objectives, and performance standards established by these Appendices and take all actions directed by the Corps and/or Ecology, following consultation with the IRT, to remediate any consideration that prevents a component of the Bank from achieving the goals, objectives and performance standards of the Bank. In addition to the reporting requirements detailed below, the IRT may require regular construction update reports be submitted to document progression of the construction and any approved changes to project design.

F.1.1.1 As-Built Reports:

As-built reports will be submitted to each member of the IRT for construction, upon the completion of grading and planting activities to verify topography, hydrology, construction and planting. As-built reports will be submitted to each member of the IRT within 90 days of completing construction of each phase of the Bank, and must demonstrate compliance with Appendix B and any modifications to the Bank development plan and design, approved by the Corps and Ecology prior to their construction or implementation, following consultation with the other members of the IRT. The as-built reports will also establish baseline conditions for future monitoring.

At a minimum, the following list of components should be included in the as-built reports:

- Name and contact information for the parties responsible for the Bank construction site including the Bank Sponsor, engineers, and wetland professional on site during construction.
- Ecology, Corps, and Local permit numbers.
- Dates when activities began and ended such as grading, removal of invasive plants, installing plants, and installing habitat features
- Photographs of the site at as-built conditions taken from photo stations (panoramic photos are recommended)
- Description of any problems encountered and solutions implemented (with reasons for changes) during construction of the Bank site
- List of any follow-up actions needed with a schedule
- 11x17 detail drawings and plan sheets showing ELJ installation details

- 11x17 maps of the Bank site showing:
 - Topography with one-foot contours, include a description of how elevations were determined
 - Installed planting scheme – quantities, densities, sizes, approximate locations, and the sources of plant material
 - Locations of monitoring wells and staff gauges that remain after construction
 - Locations of habitat features
 - Locations of permanent photo stations
 - Date when the maps were produced and, if applicable, when information was collected”.

F.1.1.2 Monitoring Plan

A performance monitoring program will be implemented to determine the degree of success of the mitigation effort during the establishment period. Monitoring will include periodic surveys and site evaluations to establish the foundation on which the Bank can demonstrate to the IRT that pertinent performance standards have been achieved and continue to be maintained. This plan describes the performance standards as certified in this mitigation bank instrument, the field methods and procedures that will track attainment of the performance standards, and the procedures for attaining quality assurance and quality control. The monitoring plan is designed to be as simple and quantitative as possible. The monitoring efforts will evaluate and document the success of the performance standards the performance standards dictate the data collection and analysis procedures defined in this plan. All monitoring will be conducted by qualified personnel.

Additional monitoring will be conducted as part of the (1) seed and live stake harvesting, (2) off-site groundwater monitoring, and (3) sediment monitoring. The details of these monitoring efforts are discussed in Sections F.2, F.3, and F.4 of this document, respectively.

Monitoring Methods

Some populations to be monitored are small enough to sample in their entirety. In other words, statistically valid sampling techniques are useful where the population is too large to assess in its entirety. Therefore, the monitoring techniques will vary according to the size of the population being monitored and the particular variable being monitored. Table F-1 shows the monitoring events according to the Phase and year they will be completed.

TABLE F-1. Performance Standard Monitoring Schedule

Phase and Year	Method	Phase	Year(s)	Time of Year
PHASE 1				
Year 0 Performance Standard:				
Establish photo monitoring stations. As-build grading plan. Note the elevations of the lowest gradients and the highest gradients.	Field Visit Total Assessment. Establish permanent photo monitoring stations immediately after phase 1 construction and take first photo's.	1	0	Immediately after phase one construction
Year 2 Performance Standard:				
3C. Establish wetland hydrology over a minimum of 30% of the bank site excluding buffers by 2 years following completion of installation of ELJs and ditch filling. Wetland hydrology is defined as saturation to the soil surface or free water in soil pits at 12 inches or less below the soil surface for at least 10% of the growing season.	Field Visit Total Assessment. Well data will be collected over the first three months of the growing season and a hydrologic map of the ground water levels, at their highest point for at least 10% of the growing season, will be created. Total area of wetland hydrology will be calculated off of the map.	1	2	First three months in the growing season
4B. Areal cover of Himalayan blackberry, Canadian thistle, and reed canary grass will not exceed 40% of the mitigation bank site areas (including buffers) by 2 years following ELJ installation and filling of the ditches.	Field Visit Total Assessment. The site will be assessed for stands of Himalayan blackberry, Canadian thistle, and reed canary grass. Each zone area will be delineated by area to determine total coverage of all three species.	1	2	June or July
Year 7 Performance Standard:				
3B. A minimum of three ELJs will be present 7 years following installation.	Field Visit Total Assessment. A field visit will be made to identify the status of the ELJs.	1	7	Early spring
PHASE 2				
Year 1 Performance Standard:				
7C. Areal cover by native hydrophytic herbaceous plant species in areas targeted as emergent wetland will be at least 40% by 1 year following Phase 2 initial planting.	Transect Intercept Sampling. Areal cover will be determined using random sampling along transects through the planting zones.	2	1	June or July
7H. Native hydrophytic shrub species will have a density of at least 90% of the original planting density in areas targeted as scrub-shrub wetland 1 year following Phase 2 initial planting.	Field Visit Total Assessment. Each scrub-shrub planting zone will be evaluated to assess stem density of plantings.	2	1	June or July
7O. Native hydrophytic woody species will have a density of at least 90% of the original planting density in areas targeted as forested wetland by 1 year following Phase 2 initial planting. (Woody species refers to non-herbaceous trees and shrubs.)	Field Visit Total Assessment. Each tree planting zone will be evaluated to assess stem density of plantings.	2	1	June or July
8A. Native woody species will have a density of at least 90% of the original planting density in areas targeted as upland 1 year following Phase 2 initial planting.	Field Visit Total Assessment. Each upland zone planted as scrub-shrub or forested will be evaluated to assess stem density of plantings.	2	1	June or July
9D. Maintain zero tolerance of Japanese knotweed, purple loosestrife, and English ivy colonization Map any specimens and eradicate during growing season of same year.	Monitor annually	2	1	June or July

Phase and Year	Method	Phase	Year(s)	Time of Year
PHASE 2 (continued)				
Year 2 Performance Standard				
6B. Wetland hydrology will be present over a minimum of 65% of the bank site 2 years following completion of Phase 2 grading and initial planting. Wetland hydrology is defined as saturation to the soil surface or free water in soil pits at 12 inches or less below the soil surface for at least 10% of the growing season.	Field Visit Total Assessment. Well data will be collected over the first three months of the growing season and a hydrologic map of the ground water levels, at their highest point for at least 10% of the growing season, will be created. Total area of wetland hydrology will be calculated off of the map.	2	2	First three months in growing season
6C. No more than 3% of the bank site outside of the existing stream channels will be permanently inundated and un-vegetated 2 years after completion of Phase 2 grading and initial planting.	Field Visit Total Assessment. Field visit will be made to assess the presence of permanent inundation. The total area will be calculated.	2	2	August or September
Year 3 Performance Standard				
7D. Areal cover by native hydrophytic herbaceous plant species in areas targeted as emergent wetland will be at least 50% by 3 years following Phase 2 initial planting.	Transect Intercept Sampling. Areal cover will be determined using random sampling along transects through the planting zones.	2	3	June or July
7F. At least 3 native hydrophytic herbaceous species will have at least 8% areal coverage each in areas targeted as emergent wetland 3 years following Phase 2 initial planting. .	Transect Intercept Sampling. Areal cover will be determined using random sampling along transects through the planting zones.	2	3	June or July
7I. Native hydrophytic shrub species will have at least 35% areal cover in areas targeted as scrub-shrub wetland by 3 years following Phase 2 initial planting.	Transect Intercept Sampling. Areal cover will be determined using random sampling along transects through the planting zones.	2	3	June or July
7L. At least 3 native hydrophytic shrub species will have at least 6% areal cover each in areas targeted as scrub-shrub wetland 3 years following Phase 2 initial planting.	Transect Intercept Sampling. Areal cover will be determined using random sampling along transects through the planting zones.	2	3	June or July
7P. Native hydrophytic woody species will have at least 35% areal cover in areas targeted as forested wetland by 3 years following Phase 2 initial planting.	Transect Intercept Sampling. Areal cover will be determined using random sampling along transects through the planting zones.	2	3	June or July
7S. At least 3 native hydrophytic woody species will have at least 6% areal cover each in areas targeted as forested wetland by 3 years following Phase 2 initial planting.	Transect Intercept Sampling. Areal cover will be determined using random sampling along transects through the planting zones.	2	3	June or July
8B. Native woody species will have at least 20% areal cover in areas targeted as upland by 3 years following Phase 2 initial planting.	Field Visit Total Assessment. All upland islands will be assessed in field.	2	3	June or July
8E. At least 3 native woody species will have at least 4% areal cover each in areas targeted as upland by 3 years following Phase 2 initial planting.	Field Visit Total Assessment. All upland islands will be assessed in field.	2	3	June or July
9A. Areal cover of Himalayan blackberry, Canadian thistle, and reed canary grass species total cover will not exceed 30% of the total area of the site outside the 19 acres of existing reed canary grass by 3 years following Phase 2 initial planting.	Field Visit Total Assessment. The site will be assessed for stands of Himalayan blackberry, Canadian thistle, and reed canary grass. Each zone area will be delineated by area to determine total coverage of all three species.	2	3	June or July

Phase and Year	Method	Phase	Year(s)	Time of Year
PHASE 2 (continued)				
Year 4 Performance Standard				
7B. Wetland will be present on a minimum of 65% of the bank site 4 years following completion of Phase 2 initial planting.	Field Visit Total Assessment. Full site delineation. Delineation will be conducted and documented according to the 1987 Corps of Engineers Delineation Manual and appropriate supplements, as well as the current Washington State Wetlands Identification and Delineation Manual.	2	4	June or July
Year 5 Performance Standard				
7E. Areal cover by native hydrophytic herbaceous plant species in areas targeted as emergent wetland will be at least 70% by 5 years following Phase 2 initial planting.	Transect Intercept Sampling. Areal cover will be determined using random sampling along transects through the planting zones.	2	5	June or July
7G. At least 3 native hydrophytic herbaceous species will have at least 10% areal coverage each in areas targeted as emergent wetland 5 years following Phase 2 initial planting.	Transect Intercept Sampling. Areal cover will be determined using random sampling along transects through the planting zones.	2	5	June or July
7J. Native hydrophytic shrub species will have at least 50% areal cover in areas targeted as scrub-shrub wetland by 5 years following Phase 2 initial planting.	Transect Intercept Sampling. Areal cover will be determined using random sampling along transects through the herbaceous planting zones.	2	5	June or July
7M. At least 3 native hydrophytic shrub species will have at least 8% areal cover each in areas targeted as scrub-shrub wetland by 5 years following Phase 2 initial planting.	Transect Intercept Sampling. Areal cover will be determined using random sampling along transects through the planting zones.	2	5	June or July
7Q. Native hydrophytic woody species will have at least 50% areal cover in areas targeted as forested wetland by 5 years following Phase 2 initial planting.	Transect Intercept Sampling. Areal cover will be determined using random sampling along transects through the planting zones.	2	5	June or July
7T. At least 3 native hydrophytic woody species will have at least 8% areal cover each in areas targeted as forested wetland by 5 years following Phase 2 initial planting.	Transect Intercept Sampling. Areal cover will be determined using random sampling along transects through the planting zones.	2	5	June or July
8C. Native woody species will have at least 35% areal cover in areas targeted as upland by 5 years following Phase 2 initial planting.	Field Visit Total Assessment. All upland islands will be assessed in field.	2	5	June or July
8F. At least 3 native woody species will have at least 6% areal cover each in areas targeted as upland by 5 years following Phase 2 initial planting.	Field Visit Total Assessment. All upland islands will be assessed in field.	2	5	June or July
9B. Areal cover of Himalayan blackberry, Canadian thistle, and reed canary grass will not exceed 25% of the mitigation bank site areas (including buffers) by 5 years following Phase 2 initial planting.	Field Visit Total Assessment. The site will be assessed for stands of Himalayan blackberry, Canadian thistle, and reed canary grass. Each zone area will be delineated by area to determine total coverage of all three species.	2	5	June or July

Phase and Year	Method	Phase	Year(s)	Time of Year
PHASE 2 (continued)				
Year 8 Performance Standard				
7K. Native hydrophytic shrub species will have at least 70% areal cover in areas targeted as scrub-shrub wetland by 8 years following Phase 2 initial planting.	Transect Intercept Sampling. Areal cover will be determined using random sampling along transects through the planting zones.	2	8	June or July
7N. At least 3 native hydrophytic shrub species will have at least 10% areal cover each in areas targeted as scrub-shrub wetland by 8 years following Phase 2 initial planting.	Transect Intercept Sampling. Areal cover will be determined using random sampling along transects through the planting zones.	2	8	June or July
7R. Native hydrophytic woody species will have at least 65% areal cover in areas targeted as forested wetland by 8 years following Phase 2 initial planting.	Transect Intercept Sampling. Areal cover will be determined using random sampling along transects through the planting zones.	2	8	June or July
7U. At least 3 native hydrophytic woody species will have at least 10% areal cover each in areas targeted as forested wetland by 8 years following Phase 2 initial planting.	Transect Intercept Sampling. Areal cover will be determined using random sampling along transects through the planting zones.	2	8	June or July
8D. Native woody species will have at least 50% areal cover in areas targeted as upland by 8 years following Phase 2 initial planting.	Field Visit Total Assessment. All upland islands will be assessed in field.	2	8	June or July
8G. At least 3 native woody species will have at least 10% areal cover each in areas targeted as upland by 8 years following Phase 2 initial planting.	Field Visit Total Assessment. All upland islands will be assessed in field.	2	8	June or July
9C. Areal cover of Himalayan blackberry, Canadian thistle, and reed canary grass will not exceed 20% of the mitigation bank site areas (including buffers) by 8 years following Phase 2 initial planting.	Field Visit Total Assessment. The site will be assessed for stands of Himalayan blackberry, Canadian thistle, and reed canary grass. Each zone area will be delineated by area to determine total coverage of all three species.	2	8	June or July
PHASE 3				
Year 1 Performance Standard				
13B. Native woody species will have a density of at least 90% of the original planting density in areas targeted as forested wetland by 1 year following Phase 3 initial planting activities.	Field Visit Total Assessment. Each scrub-shrub or tree planting zone will be evaluated to assess stem density of plantings.	3	1	June or July
14B. Maintain zero tolerance of Japanese knotweed, purple loosestrife, and English ivy colonization. Map any specimens and eradicate during growing season of same year.	Monitor annually	3	1	June or July
15A. Native woody species will have a density of at least 90% of the original planting density in areas targeted as upland 1 year following Phase 3 initial planting.	Field Visit Total Assessment. Each scrub-shrub or tree planting zone will be evaluated to assess stem density of plantings.	3	1	June or July

Phase and Year	Method	Phase	Year(s)	Time of Year
PHASE 3 (continued)				
Year 2 Performance Standard				
12B. Wetland hydrology will be present over a minimum of 81% of the bank site 2 years following completion of Phase 3 grading and planting. Wetland hydrology is defined as saturation to the soil surface or free water in soil pits at 12 inches or less below the soil surface for at least 10% of the growing season.	Field Visit Total Assessment. Well data will be collected over the first three months of the growing season and a hydrologic map of the ground water levels, at their highest point for at least 10% of the growing season, will be created. Total area of wetland hydrology will be calculated off of the map.	3	2	Early in growing season
12D. No more than 3% of the bank site outside of the existing stream channels will be permanently inundated and un-vegetated 2 years after completion of Phase 3 grading and initial planting.	Field Visit Total Assessment. Field visit will be made to assess the presence of permanent inundation. The total area will be calculated.	3	2	August of September
Year 3 Performance Standard				
13C. Native woody species will have at least 35% areal cover in areas targeted as forested wetland by 3 years following completion of Phase 3 initial planting.	Field Visit Total Assessment. Each tree planting zone will be evaluated in the field.	3	3	June or July
13F. At least 3 native woody species will have at least 6% areal cover each in areas targeted as forested wetland by 3 years following Phase 3 initial planting.	Transect Intercept Sampling. Areal cover will be determined using random sampling along transects through the planting zones.	3	3	June or July
15B. Native woody species will have at least 20% areal cover in areas targeted as upland by 3 years following Phase 3 initial planting.	Field Visit Total Assessment. Each scrub-shrub or tree planting zone will be evaluated in the field.	3	3	June or July
15E. At least 3 native woody species will have at least 4% areal cover each in areas targeted as upland by 3 years following Phase 3 initial planting.	Field Visit Total Assessment. Each scrub-shrub or tree planting zone will be evaluated in the field.	3	3	June or July
Year 5 Performance Standard				
13D. Native woody species will have at least 50% areal cover in areas targeted as forested wetland by 5 years following completion of Phase 3 initial planting.	Field Visit Total Assessment. Each scrub-shrub or tree planting zone will be evaluated in the field.	3	5	June or July
13G. At least 3 native woody species will have at least 8% areal cover each in areas targeted as forested wetland by 5 years following Phase 3 initial planting.	Field Visit Total Assessment. Each scrub-shrub or tree planting zone will be evaluated in the field.	3	5	June or July
14A. Areal cover of Himalayan blackberry, Canadian thistle, and reed canary grass will not exceed 20% of the mitigation bank site areas (including buffers) by 5 and 8 years following Phase 3 planting.	Field Visit Total Assessment. The site will be assessed for stands of Himalayan blackberry, Canadian thistle, and reed canary grass. Each zone area will be delineated by area to determine total coverage of all three species.	3	5	June or July
15C. Native woody species will have at least 35% areal cover in areas targeted as upland by 5 years following Phase 3 initial planting.	Field Visit Total Assessment. Each scrub-shrub or tree planting zone will be evaluated in the field.	3	5	June or July
15F. At least 3 native woody species will have at least 6% areal cover each in areas targeted as upland by 5 years following Phase 3 initial planting.	Field Visit Total Assessment. Each scrub-shrub or tree planting zone will be evaluated in the field.	3	5	June or July

Phase and Year	Method	Phase	Year(s)	Time of Year
PHASE 3 (continued)				
Year 8 Performance Standard				
12C. Wetland will be present on a minimum of 81% of the bank site 8 years following completion of Phase 3 grading.	Field Visit Total Assessment. Full site delineation. Delineation will be conducted and documented according to the 1987 Corps of Engineers Delineation Manual and appropriate supplements, as well as the current Washington State Wetlands Identification and Delineation Manual.	3	8	June or July
13E. Native woody species will have at least 65% areal cover in areas targeted as forested wetland by 8 years following completion of Phase 3 initial planting.	Field Visit Total Assessment. Each scrub-shrub or tree planting zone will be evaluated in the field.	3	8	June or July
13H. At least 3 native woody species will have at least 10% areal cover each in areas targeted as forested wetland by 8 years following Phase 3 initial planting.	Field Visit Total Assessment. Each scrub-shrub or tree planting zone will be evaluated in the field.	3	8	June or July
14A. Areal cover of Himalayan blackberry, Canadian thistle, and reed canary grass will not exceed 20% of the mitigation bank site areas (including buffers) by 5 and 8 years following Phase 3 planting.	Field Visit Total Assessment. The site will be assessed for stands of Himalayan blackberry, Canadian thistle, and reed canary grass. Each zone area will be delineated by area to determine total coverage of all three species.	3	8	June or July
15D. Native woody species will have at least 50% areal cover in areas targeted as upland by 8 years following Phase 3 initial planting.	Field Visit Total Assessment. Each scrub-shrub or tree planting zone will be evaluated in the field.	3	8	June or July
15G. At least 3 native woody species will have at least 10% areal cover each in areas targeted as upland by 8 years following Phase 3 initial planting.	Field Visit Total Assessment. Each scrub-shrub or tree planting zone will be evaluated in the field.	3	8	June or July
16B. A minimum of 50 perch poles or snags will occur on the site 8 years following Phase 3 installation.	Field Visit Total Assessment. Site visit to document locations of habitat structures. Naturally recruiting structures can be counted toward this total.	3	8	June or July

There will be at least 10 monitoring events spread over at least 13 years, depending on when each phase of the bank is implemented. Permanent photo points will be established after Phase 1 construction to support the monitoring effort. There will be 2 field sampling methods employed over the entire monitoring period: Field Visit Total Assessment and Transect Intercept Sampling. Table F-1 lists the performance standards per event and the type of field sampling method that will be employed to assess data to determine the status of each performance standard.

Field Visit Total Assessment

The first type of method we call Field Visit Total Assessment. This procedure will be used where the entire population we are monitoring can be done without sampling. Specifically, we will employ the Field Visit Total Assessment for the following:

- To collect well data to allow us to map the near surface saturation elevations during the early growing season. Five continuous collection well data receivers will be placed among the entire network of wells, and data will be collected every week for the first three months of the growing season. The continuous data collection wells will allow us to extrapolate across the entire set of wells to determine how long an area remains hydric (ground water within 12 inches of the surface). A hydrologic map of the ground water levels, at their highest point for at least 10% of the growing season, will be created. Total area of wetland hydrology will be calculated off of the map.
- To satisfy the Skagit County Planning Department's request to assess the amount of soil redistribution on the site over time via the Sediment Monitoring Plan (as described in Section F.4). During the monitoring period we will survey the elevations at several of the lowest points on the bank site, the highest points on the bank site, and some reference points on adjacent property. This will allow us to evaluate the soil movement on the site.
- To assess the entire site for stands of Himalayan blackberry, Canadian thistle, and reed canary grass. Each stand of the non-native will be delineated by area using GPS to determine total coverage of all three species.
- To document the status of the ELJs.
- To determine the stem density of trees and shrubs in scrub-shrub and forested wetlands, and in upland areas, during the year 1 monitoring event after each of the three phases. The field staff will use transects to assess the stem density of the planted woody species.
- To determine the areal cover and species composition of trees and shrubs in scrub-shrub and forested wetlands and uplands during the 3, 5, and 8-years-after-Phase 3 monitoring events. The field staff will use transects to assess the areal cover of the planted woody species.

- To assess permanent inundation. Any areas of total inundation will be mapped using GPS and the total area will be calculated.
- To determine the percent cover of trees and shrubs on upland islands. Because the upland planting zone polygons will be mapped and relatively small in area, the field staff will make a visual assessment of the survival on randomly selected islands totaling 20 percent of the total island area, and the changes in areal cover in subsequent years, of the planted woody species.
- To complete full site delineations. Delineations will be conducted and documented according to the 1987 Corps of Engineers Delineation Manual and appropriate supplements, as well as the current Washington State Wetlands Identification and Delineation Manual.
- To identify the presence of Japanese knotweed, purple loosestrife, and English ivy. Any plants found will be pulled or otherwise eradicated.
- To document locations of perch-pole habitat structures. Naturally recruiting structures can be counted toward this total. The field crew will visit the location of each perch pole as GPS'd during the as-build survey.

Transect Intercept Sampling

The size of some of the large vegetation areas will not allow anyone to assess their entire populations representative samples must be taken. This will require that species composition and cover be sampled using a standard field method called Transect Intercept Sampling. This method will be employed in both upland and wetland plant communities.

We will employ the Transect Intercept Sampling Method for the following:

- To assess a representative sample of the cover and species composition in herbaceous plant communities.
- To assess a representative sample of the woody species cover and species composition. Once the survival of woody species is determined in the first year following the planting in each phase using the Field Visit Total Assessment method, the polygon areas will have to be sampled using the Transect Intercept Sampling Method to determine species composition and cover.

Permanent line transects will be located through the various polygons that are defined as either herbaceous, scrub-shrub, forested wetlands, or uplands. The direction and length of the transects will be chosen in order to acquire samples across the hydrologic gradient within each polygon. The number of transects will depend on the configuration of the vegetation polygons and the topographic gradient. They will typically be placed approximately 1,000 feet apart. A sample area will be evaluated initially to determine the actual species composition and cover for comparison with the composition and area determined for the same area sampled with transects.

According to Bonham (1989, *Measurements for Terrestrial Vegetation*, John Wiley and Sons publishers) measuring randomly placed sample plots along transects is the most common method of determining cover and species composition. The size of the plot unit for frequency and cover measurement is basically a function of plant size and species richness in a unit area. Sampling plot sizes will be 1-square-meter plots to measure herbaceous plants, 10-square-meter plots to measure shrubs, and 100-square-meter plots to measure trees.

The number of plots necessary to determine the species composition and cover will be determined by the addition of new species along the transect. Once two consecutive plots show no more than 2 new species, then three additional plots will be added to the total along each transect. For determining species composition and cover, there can be no less than 5 plot samples per transect.

Each plot will be photographed as a backup to the field estimation.

F.1.1.3 Reports

The Sponsor will prepare and submit to the Corps and Ecology, in consultation with the IRT monitoring reports that will inform the IRT of the status of Bank establishment and operation. These reports will document Bank conditions and provide the supporting information required to document the attainment of goals, objectives, and performance standards, as a basis for a decision whether to award credits. These reports will also include results from seed and live stake harvest monitoring, off-site groundwater well monitoring, and sediment monitoring. Monitoring reports will be submitted by February 1 of the following year, with a copy for each member of the IRT. Each monitoring report will contain the following information:

- A. An overview of the current ecological condition of the Bank, including a survey of the vegetative and wildlife communities, effectiveness of the restoration and enhancement activities accomplished to date, and progress of the Bank in achieving the specific performance standards of the Bank. To provide data for evaluating progress towards achievement of performance standards, vegetation transects will be established at selected locations within each phase of the Bank. Standard IRT-approved vegetation measures and techniques will be used to demonstrate whether performance standards are being met. Experience in the field may indicate that other performance monitoring methods would provide more useful information; the Corps and Ecology, in consultation with the IRT, must approve in advance any changes in the means of gathering or reporting performance data. All monitoring will be conducted by qualified personnel.
- B. A detailed discussion about the likely cause and impact of any setback or failure that occurred and recommendations for future actions and strategies that might resolve those problems.
- C. Pertinent additional information on such aspects of the Bank as hydrology, soils, vegetation, fish and wildlife use of the area, recreational and scientific use of the Bank, and natural events such as disease, wildfire, and flooding that occurred.
- D. Explanations of the need for any contingency or remedial measures, and detailed proposals for their implementation.

- E. Photographs of the Bank taken from permanent locations that are accurately identified on the as-built drawings. The photographs are intended to document the progress of each component of the Bank, as well as the Bank in general, toward achieving the objectives and performance standards of the Bank. Such photo-monitoring will include general vantage points around the margin of the Bank, vantage points within the Bank, and at specific monitoring locations such as transects and/or sampling points.
- F. Map showing where Field Visit Total Assessment and Transect Intercept Sampling Methods have been applied on the site.
- G. Seed and Live Stake Harvest Report with map showing where seed harvest and cutting monitoring occurred. The Harvest Plans will be submitted separately to the IRT (see Section F.2.4 for details).
- H. Results of off-site well monitoring (described in Appendix F.3)
- I. Results of sediment monitoring (described in Appendix F.4)

F.1.1.4 Remedial Action during the Establishment Period of the Bank

In the event that one or more components of the Bank do not achieve performance standards or comply with any other requirement of this Instrument, the following sequence of remedial actions will be taken.

- A. If the monitoring reports, or inspection by representatives of the IRT agencies, indicate persistent failure to achieve and maintain the prescribed performance standards, the Sponsor will propose adaptive management actions to correct the shortcomings. A thorough analysis of wetland monitoring data and/or stream channel assessments may result in the identification of other factors, not identified in the performance standards or monitoring data, causing the project to fall short of its objectives. The Corps and/or Ecology, following consultation with the IRT and the Sponsor, may also direct adaptive management actions, if the Corps and/or Ecology identify a need for corrective action and no adaptive management plan acceptable to the IRT has been submitted within a reasonable period of time. The adaptive management plan shall specify the nature of further examination of areas for potential causes of failure and/or corrective action to be conducted, the schedule of completion for those activities, and a monitoring plan for assessing the effectiveness of the corrective action. The objective of the adaptive management plan shall be to attain the originally prescribed project objectives, either through achieving the original performance standards or through new standards subsequently developed based on evaluation of the site as it matures and it is assessed. The Sponsor shall also implement all mitigation that the Corps and/or Ecology, following consultation with the IRT, determine is reasonably necessary to compensate for those authorized impacts to the aquatic environment that have not been successfully redressed by the Bank pursuant to the requirements of this Instrument. If modified or replacement performance standards are proposed, the Sponsor may not initiate activities designed to achieve those replacement standards until those performance standards are approved by the IRT. During the period that a specific component of the Bank is out of compliance,

the Corps and/or Ecology, following consultation with the IRT, may direct that credits generated by that Bank component may not be sold, used, or otherwise transferred.

- B. If remedial actions taken by the Sponsor under the provisions of the preceding paragraph do not bring that performance standard of the Bank into compliance with the requirements of this Instrument, including any approved changes to the Instrument, the Sponsor may request approval to discontinue efforts to achieve one or more performance standards for the Bank. If the Corps and Ecology, following consultation with the IRT, approve of the proposal to discontinue efforts to achieve one or more performance standards, they need not be accomplished but no additional credits may be awarded for those performance standard(s). At the discretion of the Corps and Ecology, following consultation with the IRT, the Sponsor may also be released from future maintenance and monitoring obligations for those performance standard(s), provided that releasing the Sponsor from those obligations does not adversely affect the remainder of the Bank, or affect credits already sold, used, or transferred to date.
- C. If the Corps and Ecology, following consultation with the IRT, determine that the failure of one or more performance standards of the Bank to comply with the requirements of this Instrument adversely affects the ability of the Bank to achieve its goals or objectives, or if the Sponsor does not make a reasonable effort to bring the Bank into compliance with this Instrument, the Corps and Ecology, after consultation with the IRT, may terminate this Instrument and the operation of the Bank pursuant to Article IV.J.
- D. If the Corps and/or Ecology, following consultation with the IRT, direct remedial or adaptive management action pursuant to Section F.1.1.4.A. and compliance with the performance standards is not restored within a further reasonable period of time, and the Sponsor does not obtain approval of any request to discontinue efforts pursuant to Section F.1.1.4.B., the Corps and/or Ecology may alternatively implement remedial action on their own initiative, acting through a Third Party Designee, by accessing the financial assurance instrument pursuant to Article III.C.1. and Section H.1.1 of Appendix H in this Instrument.

F.1.1.5 Maintenance during the Establishment Period of the Bank

General maintenance will be performed throughout the year to address conditions that may limit the success of the Bank and attainment of performance standards and objectives. The Sponsor is responsible for all site maintenance activities throughout the establishment period of the Bank. Maintenance activities will include, but are not limited to, vegetative maintenance (including replanting, repair of any areas subject to erosion, weed control around plantings, mowing, control of invasive species, control and discouragement of voles, beaver and deer foraging on plants) and general maintenance (including fence repair, road and trail maintenance as necessary, clean-out of culverts, monitoring of the water control structures, and clean-up of trash).

APPENDIX F.2: SEED AND LIVE STAKE HARVEST PLAN

The harvest of seed and stake cuttings are an allowed activity on the Bank site with the contingency that it does not negatively affect bank performance standards and the overall health of the wetland and upland vegetation communities on the Bank site. Seed collection will be strictly monitored and approved by the Corps and Ecology, in consultation with the IRT, on an annual basis and collections methods (by hand) will be minimally invasive to prevent the creation of large areas of disturbance, pathways, or other noticeable anthropogenic impacts. Seed and stake harvest will be used to supplement planting efforts within the Bank as well as sold commercially to support restoration projects within the Puget Sound lowlands.

F.2.1 Guidelines for Monitoring and Harvest

Guidelines for monitoring and harvest of seed and live stakes have been developed to ensure that plant material collection is accomplished in a sustainable manner that does not affect the success of revegetation efforts and overall ecosystem health at the Bank.

All harvesting activities will be completed by hand: no mechanical equipment of any kind will be used. Harvesting will be scheduled during periods of dry weather to prevent any damage to the structure of wetland soils and plant roots. Routes to harvesting areas will not be established and collectors will be instructed to spread out during travel to and from collection areas to prevent plant and soil damage through repeated trampling.

The following sections comprise a description of the harvesting schedule and monitoring techniques that will be employed to ensure the sustainable collection of plant material at the Bank as part of the proposed native seed and live stake harvest.

Seed crop abundance was chosen as the main metric for monitoring because (1) it serves as an representation of overall population vigor (i.e., if plant community productivity decreases, it is likely that seed crop production will also decrease), (2) it serves as a gauge of population reproductive success, and (3) it is the primary plant material being collected.

F.2.2 Seed Harvest Protocols

Target species for seed harvest will be composed of trees, shrubs, and emergents currently on-site, in addition to those that will be planted. See Section F.2.2.3 below for a species list. [Note: the bank site is currently characterized by low emergent diversity (although abundance of these species is relatively high) and project objectives include increasing species diversity in all vegetation strata.]

F.2.2.1 Emergents

- A pool of potential reference areas will be identified (both on- and off-site) that are characterized by healthy stands of the target species. These areas will be marked using GPS and their locations will be displayed on a GIS map to be submitted to the Corps and Ecology for approval, following consultation with the IRT.

- Reference areas for a given year will be randomly selected from the pool, and the sampling scheme for these areas will involve the harvesting of the entire mature/ripe seed crop within randomly selected 1m² plots.
- The seed collected from the reference areas will be weighed, reported in grams, and averaged. These results will serve as the standard level of seed production (on a 1m² basis) for the target species for that particular year. Reference site data will be collected for three years prior to any seed harvesting from planted emergents to obtain adequate baseline data. The seed collected from the reference plots will then be redistributed at their respective locations, ensuring no net loss of plant reproductive material in reference areas.
- The seed crop at a proposed collection site within the Bank boundaries will be sampled in the same manner (randomly selected 1m² plot; harvesting of entire mature/ripe seed crop in plot) to determine if seed production meets the abundance standard set by the reference sites. Only mature/ripe seeds will be collected. If the seed crop within the 1m² sample plot meets the abundance standard, the stand of emergent species represented by the sample plot may be selected for collection in that particular year. Seeds will be collected when they are considered mature/ripe for the individual species and will be no more than 30 percent of the visible seeds. Harvesting will be suspended in years of low seed production. Low seed production is defined as less than 50 percent of the average seed crop produced in previous years. Collection will be conducted by hand stripping seed from the ripe heads. There will be no cutting of vegetation involved. It will be very difficult to visually notice any disturbance from seed collection. A positive impact of harvesting of seed in this manner is that seed will be released from the plants and pressed into the soil by foot traffic. This will result in a buildup of the emergent plant seed bank in the soil and help ensure the sustainability of the plant community. [Note: In areas exhibiting particularly decadent and robust existing stands of target species, it may be beneficial to commence harvesting immediately (see discussion in Section F.2.4 below).]
- Sampling results in subsequent years will be compared to both reference site data and past Bank collection site data to detect any potential trend toward decline in seed production. If reference site averages indicate a decline in seed production, corresponding Bank collection site declines in production can likely be attributed to yearly climatic variation affecting regional seed crops. However, if seed crops in Bank collection areas display a downward trend in production that is not reflected in reference site data, it is likely that harvesting is causing a negative effect on plant community reproduction and corrective measures will be taken. If harvesting is suspected of causing a negative effect on plant community reproduction, seed harvesting will be suspended until the Corps and Ecology, in consultation with the IRT, approve further harvesting.

F.2.2.2 Shrubs and Trees

- A pool of potential reference areas will be identified (both on- and off-site) that are characterized by healthy stands of the target species. These areas will be marked using GPS and their locations will be displayed on a GIS map to be submitted to the Corps and Ecology for approval, following consultation with the IRT.
- Reference areas for a given year will be randomly selected from the pool, and the sampling scheme for these areas will involve the harvesting of the entire mature/ripe seed crop from three selected individual trees or shrubs within each reference area (they should all be the same size).
- The seed collected from each sampling individual in each reference area will be weighed, reported in grams, and averaged. These results will serve as the standard level of seed production for the target species (of corresponding size) for that particular year. The seed collected from the reference areas will then be redistributed at their respective locations, ensuring no net loss of plant reproductive material in reference areas.
- The seed crop at a proposed collection site within the Bank boundaries will be sampled in the same manner (three randomly selected individual trees or shrubs with size corresponding to the reference individuals; harvesting of entire mature/ripe seed crop on individual plants) to determine if seed production meets the abundance standard set by the reference sites. If so, this area may be selected for collection the following year. Seeds will be collected when they are considered mature/ripe for the individual species and will be no more than 30 percent of the visible seeds. There will be no repeat collection on sample sites. Harvesting will be suspended in years of low seed production. Low seed production is defined as less than 50 percent of the average seed crop produced in previous years. [Note: In areas exhibiting particularly decadent and robust existing stands of target species, it may be beneficial to commence harvesting immediately (see discussion in monitoring section below).]
- Sampling results in subsequent years will be compared to both reference site data and past Bank collection site data to detect any potential trend toward decline in seed production. If reference site averages indicate a decline in seed production, corresponding Bank collection site declines in production can likely be attributed to yearly climatic variation affecting regional seed crops. However, if seed crops in Bank collection areas display a downward trend in production that is not reflected in reference site data, it is likely that harvesting is causing a negative effect on plant community reproduction and corrective measures will be required. If harvesting is suspected of causing a negative effect on plant community reproduction, seed harvesting will be suspended until the Corps and Ecology, in consultation with the IRT, approve further harvesting.

F.2.2.3 Seed Collection Schedule

The schedule below identifies the three cluster dates for the collection of seed from various species. Some flexibility must be provided since the timing of seed maturation for the different target species varies throughout the growing season.

Late May 20th – May 30th

Populus balsamifera ssp. trichocarpa/Black Cottonwood
Salix lucida/Pacific Willow
Salix sitchensis/Sitka Willow
Salix hookeriana/Hooker's Willow

July 10th – 20th

Sagittaria latifolia /Wapato
Rhamnus purshiana/Cascara
Lonicera involucrata/Black Twinberry
Alopecurus aequalis/Short-awn Foxtail
Eleocharis palustris/Common Spikerush
Deschampsia cespitosa/Tufted Hairgrass
Eleocharis palustris/Common Spikerush
Carex obnupta/Slough Sedge
Juncus ensifolius/Daggerleaf Rush
Juncus effuses/Soft Rush
Juncus ensifolius/Daggerleaf Rush
Juncus balticus/Baltic Rush
Scirpus americanus/Three-square Bulrush
Scirpus microcarpus/Small-fruited Bulrush

Late August 20th –September 10th

Alnus rubra/Red Alder
Picea sitchensis/Sitka Spruce
Thuja plicata/Western Red Cedar
Malus fusca/Pacific Crabapple
Physocarpus malvaceus/Pacific Ninebark
Rosa nutkana/Nootka Rose
Rosa pisocarpa/Swamp Rose
Aster subspicatus/ Douglas aster
Cornus stolonifera/Red Osier Dogwood
Crataegus douglasii/Douglas Hawthorn

F.2.3 Cuttings

Cuttings will be collected during the winter (January-February) from the willows on the Bank site. The first harvest will begin with the existing established willows and dogwoods that abundantly line the waterways on-site. For the first five years following Bank Certification,

cuttings will be harvested from existing willows and dogwoods by thinning up to 30% of existing plants to increase vigor and habitat value. Shrubs in areas of dense reed canary grass and on immediate stream banks will not be harvested. This will avoid reducing shade on the stream and stimulating the growth of the reed canary grass.

Collection of cuttings in areas to be planted in Phase 2 will occur over a 10 year period after Phase 2 as-built approval with 10% of the total area occupied by willows (measured at the time of harvest using high resolution GPS) on the site designated for harvesting each year with no areas receiving repeat harvests. The harvest of cuttings from planted willows and dogwood will be conducted only on the most vigorous and robust individuals in the population: no cuttings will be collected from individual plants less than 2 meters in height. The cutting harvest operation of planted willows will remove no more than four branches from each plant. Cuttings will be approximately 1 meter in length, 1-2.5 centimeter in diameter at the base, straight, and disease-free.

F.2.4 Harvest Monitoring and Reporting Strategy and Timeline

The harvesting of material will be focused in two specific areas; (1) abundant, robust existing vegetation and (2) well-established vegetation that develops from Phase 2 planting activities.

Harvest of seed and stakes will be an allowed activity with the contingency that it does not negatively affect bank performance standards and the overall health of the wetland and upland vegetation communities. It is anticipated that collection from planted species may not be started for up to three years following the initial planting. The Sponsor will submit a written request to the IRT to begin collection of seed and/or stake material. The request will contain specific harvest plans and information to insure protection of ecological functions. The Sponsor must receive approval of the material harvesting plan by the Corps and Ecology, in consultation with the IRT prior to commencement of activities.

Seed and stake collection will be strictly monitored and approved on an annual basis and collection methods (by hand) will be minimally invasive to prevent the creation of large areas of disturbance, pathways, or other noticeable anthropogenic impacts. Seed and stake harvest will be used to supplement planting efforts within the mitigation bank and will be sold commercially to support restoration and other projects within and outside of the Puget Sound lowlands.

As described, there is currently abundant existing plant stock found in some areas within the bank site. Harvesting of plant material in these areas would provide an exceptional opportunity for revitalization of on-site vegetation communities through establishment of a surrogate for natural disturbance mechanisms that have been lost due to human modification. Browsing historically played a significant role in development of Skagit floodplain vegetation communities. With the conversion of these areas to farmland, habitat loss has greatly reduced the ability of these systems to support large herbivores, resulting in a significant shift in plant community dynamics in remnant floodplain habitat due to significantly lower browsing pressure. Selective thinning serves as a surrogate for this natural process, facilitating restoration of historic ecosystem function. Selective thinning serves the additional purpose of reintroducing an element of disturbance previously caused by a high-frequency flooding regime (i.e. branch loss and dieback due to inundation and physical perturbation). With the potential provision of these

benefits in overgrown areas within the bank site, it stands to reason that selective thinning of decadent, robust stands of existing vegetation (willow, dogwood, and some emergent species) would be a logical first step toward restoration of ecosystem function. For this reason, it is recommended that harvesting in these areas commence immediately, with follow-up monitoring being used to ensure adherence to bank Performance Standards.

Additionally, the conservation easement defines the requirement of the land trustee to accept the responsibility of overseeing continued harvesting activities. Monitoring and reporting will continue annually until all Performance Standards are met prior to turning this activity over to the long-term manager/land trustee. A plant material monitoring and harvest plan will be submitted by early spring of the year for which harvest is intended so that the Corps and Ecology, in consultation with the IRT, can review it in time for May seed harvest. Therefore, each year's harvest plan would be based on the monitoring results from the previous year of seed production (presented to the IRT in the form of an annual report). Seed production will be monitored for three years prior to the first harvest. The annual reports will be submitted in the fall of each year.

Timeline for monitoring and documentation submission to the IRT:

- Summer [beginning in May] (1st, 2nd, and 3rd years) – reference site sampling and harvest plan for existing vegetation communities.
- Fall (1st and 2nd years) – annual report
- Fall (3rd year) – Summary report (will address results from three years of monitoring and implications for first harvest plan)
- March (4th and subsequent years) – Harvest plan submission to IRT (based on IRT comments on previous year's report)
- March-April (4th and subsequent years) – Harvest plan revisions (based on IRT comments)
- April (4th and subsequent years) – Harvest Plan finalized and approved by Corps and Ecology, in consultation with the IRT.
- Summer (4th and subsequent years) – Harvest and sampling
- Fall (4th and subsequent years) – Annual report submitted to IRT

The Annual Reports will:

- Present findings from reference area and collection area sampling activities.
- Present overall plant material collection results and provide comparisons to reference area data and previous years' data

- Discuss any unsatisfactory results and provide protocol adjustments required to improve plant material reproductive success and overall ecosystem health at the Bank.

The Harvest Plans will:

- Clearly define species to be collected, location where seed will be collected (including GIS maps), and amounts of seed/cuttings to be collected based on annual report from previous year
- Clearly describe harvesting, storage, and plant material tracking methods
- Address safety considerations for harvesters

As mentioned, reference area results will be tracked over time. Any downward trend in seed production in collection areas as compared to reference area data will result in corrective measures involving reduction or suspension until production has recovered to reference standard levels. It should be reemphasized that climatic variability will lead to fluctuation in seed abundance which will affect harvest goals.

In summary, plant material collection will be accomplished in a sustainable manner conducive to the achievement of restoration performance standards and the overall goals of the Bank. The harvesting techniques, collection schedule, and monitoring protocols discussed in this Instrument represent the specific elements of the proposed plant material collection plan that ensures consistency with this objective.

Appendix F.3: Off-site Groundwater Monitoring

As mentioned in Appendix B.1.2.1, a total of eight off-site groundwater monitoring wells will be used to monitor the proximal groundwater table.

Five of these wells shall be maintained north and east of the wetland mitigation site at or near existing monitoring well numbers 35, 36, 37, 38 and 39 as shown on Sheet R-1 in Exhibit 2. These wells are adjacent to or on the boundary of the Project site. Three additional groundwater monitoring wells shall be maintained offsite. This first well will be located in the Verdoes Site (the "Verdoes Well"), upstream of the Bank site along the East Fork Nookachamps Creek (Figure F-1). The second well will be at a location between the Project site and the Skagit River at a comparable elevation to the five wells mentioned above but more than two miles from the Project site to be used as a "control" location (the "Control Well") (Figure F-1). The third well (the "Beaver Lake Road Well") will be installed along the East Fork

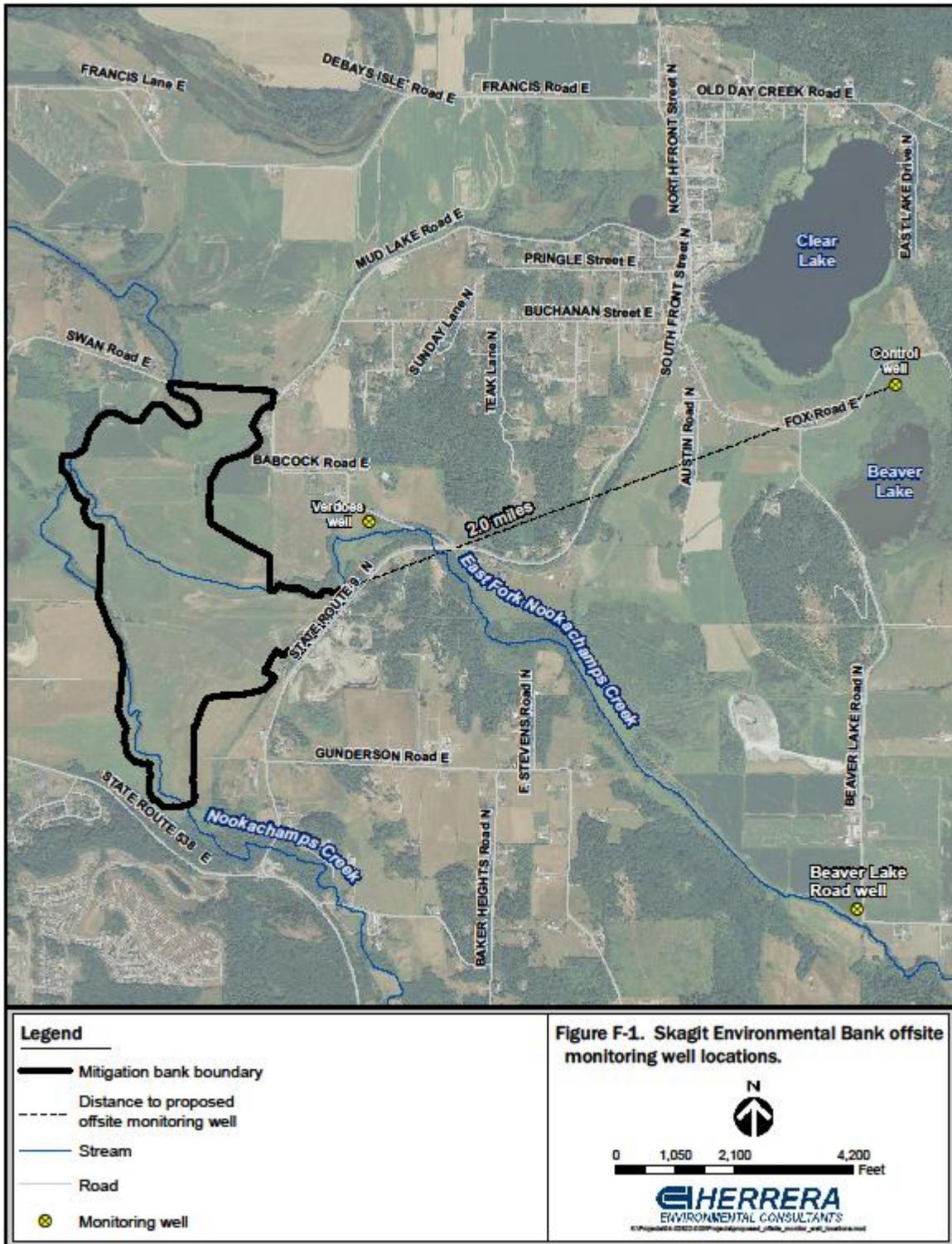


Figure F-1. Skagit Environmental Bank offsite monitoring well locations.

Nookachamps 2 miles upstream of the bank boundary (Figure F-1). Each of the wells shall be monitored each year for groundwater once per month during the months of April through October (the "Growing Season") (Table F-2). Groundwater monitoring data shall be reported annually to the Skagit County Department of Planning and Development Services before the end of the calendar year. The annual groundwater monitoring report shall include a same month comparison (i.e., comparing monitoring levels for each April in each monitoring year) and a year-to-year comparison (i.e., comparing the mean groundwater levels in each monitoring year's Growing Season). The annual groundwater monitoring report shall note any monitoring data taken within 72 hours after a significant rainfall event (cumulative rainfall totaling more than one inch in the period) or taken within 72 hours of the Skagit River being at flood stage at Mount Vernon ("Excluded Monitoring Data"). The information in the annual groundwater monitoring report will also be submitted to the Corps and Ecology, including the IRT, as a section of the overall project monitoring report submitted annually each February.

TABLE F-2. Offsite Well and Sediment Monitoring Schedule

	Method	Time of the Year	Duration
Offsite Groundwater Hydrology	Well data will be collected over the growing season and compared annually to onsite groundwater wells,	April - October	30 years
Sedimentation Rates	Elevations measurements of four fixed points at three Sediment Accumulation Areas (SAA)s within the Bank site and survey of two cross sections along the East Fork Nookachamps Creek.	August or September	Ending 10 years as of date of as-built drawings

In the event that the monitoring data shows a statistically significant increase in groundwater levels for any of the Adjacent Wells over any two consecutive years (in the same month comparison or the year-to-year comparison), not considering Excluded Monitoring Data, the annual report shall include an assessment of the likely causes of this increase, taking into account changes in groundwater level at the Control Well and, if the increase is likely caused by the Project, a list of proposed mitigation measures. After receiving the annual report, the County shall make a determination whether the increase is caused by the Project and, if it is, require all necessary mitigation measures be implemented to restore groundwater levels.

Groundwater monitoring of the Adjacent Wells began in 2006 to establish baseline conditions. Monitoring shall continue in perpetuity unless, 30 years after installation of the Engineered Log Jams on the Project site, no statistically significant increase in groundwater levels is found.

Appendix F.4: Sediment Monitoring

The monitoring of sedimentation rates on the Bank site and in the East Fork Nookachamps Creek will be conducted to detect whether grade control structures, grading, and vegetation planting will accelerate the rate of onsite sedimentation (Table F-2). Results of this monitoring will be incorporated into the annual monitoring report due each February to each member of the IRT and Skagit County.

- A. Onsite sediment aggradation monitoring will detect local long-term aggradation rates at the Skagit Environmental Bank resulting specifically from Skagit River flood deposition and review these rates within the context of regional wetland floodplain aggradation. If sampling shows an accretion of more than 1 foot of soil and plant communities transition from wetland to upland composition (as defined in the wetland plant section of the 1987 *Wetland Delineation Manual*, US Army Corps of Engineers) after the start of the monitoring and within the 10-year monitoring period, and if the data does not show that the soil accretion and plant community changes are a regional trend, then the Sponsor will submit a list of proposed mitigation measures. Further details on sediment monitoring are provided in the Sediment Monitoring Plan provided in Section B of the Resource Folder.
- B. Sediment monitoring on the East Fork of Nookachamps Creek at two locations -- one at the eastern Project site boundary and one at the SR 9 Bridge (the "Stream Sediment Monitoring Locations"). Sediment monitoring shall consist of surveying the cross section of the creek bed at the same locations and comparing these results with baseline conditions. In order to account for natural longitudinal bed form movement, monitoring at the eastern Project site boundary shall consist of cross section surveys at three consistent locations within 100 feet of the Project site boundary and one average cross section shall be established from these three surveys. Because longitudinal bed form movement is less likely to occur at the SR 9 Bridge location, only one cross section is needed there.

In the event that sediment monitoring shows, at either Stream Sediment Monitoring Location, a six inch (6") or greater average sediment increase along the cross section, as compared with baseline conditions, Clear Valley shall assess the causes of this increase and, if the increase is caused by the Project, provide a list of proposed mitigation measures. The County shall make a determination whether the sediment increase is caused by the Project and, if it is, shall require all necessary mitigation measures be implemented, such as lowering the elevations of the engineered log jams."

APPENDIX G: LONG-TERM PROTECTION AND MANAGEMENT

APPENDIX G.1: All Phases

Justification or supporting data under the title Protective Covenant, and Long Term management and maintenance are in the Section G of the Resource Folder.

G.1.1 Conservation Easement: Assignment of Reserved Easement

- A. The Sponsor will ensure, pursuant to Article III.D (Real Estate Provisions) of this Instrument, that (i) an appropriate conservation easement is granted in perpetuity and recorded against the TIC Property, and (ii) the Assignment of the Reserved Easement to the conservation easement holder is recorded against the Easement Property, both properties constituting the Bank. Both the conservation easement and the Assignment must be approved by the Corps and Ecology, in consultation with the IRT, and shall be recorded with Skagit County. A copy of the recorded conservation easement and Assignment shall be provided to all members of the IRT. The conservation easement and the Assignment shall each reflect that it may not be removed, modified, or transferred without written approval of the Corps and Ecology, in consultation with the IRT. The Corps and Ecology may consider any alteration or rescission of any conservation easement, or the rights granted under the Assignment, a default of the Sponsor's obligations under this Instrument and may institute appropriate action pursuant to Article IV.J. The Sponsor shall provide no less than 60 days' written notice to the IRT of any transfer of (i) fee title or any portion of the ownership interest in the TIC Property or the Easement Property to another party, or (ii) any transfer of all or partial rights in the Reserved Easement to another party. Conveyance of any interest in the TIC Property shall be subject to this conservation easement, and transfer of any rights in the Reserved Easement shall be subject to the terms and conditions as set forth in the Assignment. Use prohibitions reflected in the conservation easement and the Assignment will preclude the site from being used for activities that would be incompatible with the establishment and operation of the Bank. All restrictions shall be granted in perpetuity without encumbrances or other reservations, except those encumbrances or reservations (e.g., retention of recreation and privileges by the landowners and their guests) approved by the Corps and Ecology, in consultation with the IRT, and not adversely affecting the ecological viability of the Bank. Any portion of the site not encumbered by either the conservation easement or the Reserved Easement will not be credited for use in the Bank.
- B. Each of the conservation easement and the Reserved Easement shall provide that all structures, facilities, and improvements within the Bank, including roads, trails and fences, that are merely incidental to the functionality of the mitigation site but are necessary to the Bank management and maintenance activities, shall be maintained by the Sponsor for as long as it is necessary to serve the needs of long-term management and maintenance. All structures, facilities and improvements that directly and substantially contribute to the functionality of the mitigation site will be included within the responsibilities delineated in the Long-Term Management and Maintenance Plan.

G.1.2 Long-Term Management and Maintenance Plan:

- A. The Sponsor is responsible for ensuring that a Long-Term Management and Maintenance Plan is developed and implemented to protect and maintain in perpetuity the aquatic functions and values of the Bank site. This plan must be approved by the Corps and Ecology, following consultation with the IRT, prior to the termination of the establishment period of the Bank. As an obligation independent of this Instrument, Skagit County must also approve the Long-Term Management and Maintenance Plan. Once the establishment period of the Bank has terminated pursuant to Article IV.K. of this Instrument, the Sponsor will assume responsibility for implementing that Plan, as provided in Article IV.M. of this Instrument, unless the Sponsor assigns this responsibility pursuant to the provisions of Article IV.M. and Section G.1.2.E. of this Appendix.

- B. To gain IRT approval, the Long-Term Management and Maintenance Plan will consist of enumerated objectives. The Bank will document that it is achieving each guideline or objective by submitting status reports to the IRT on a schedule approved by the IRT. A primary goal of the Bank is to create a self-sustaining natural aquatic system that achieves the intended level of aquatic ecosystem functionality with minimal human intervention, including long-term site maintenance. As such, natural changes to the vegetative community, other than changes caused by noxious weeds, that occur after all Bank performance standards have been met are not expected to require remediation.

- C. The Long-Term Management and Maintenance Plan will include those elements necessary to provide long-term protection for the aquatic ecosystem and habitat resources of the Bank site. The specific elements of the Plan must be tailored to meet the specific protection needs of the site. At minimum, the IRT will likely find the following core elements to be necessary for inclusion in the Long-Term Management and Maintenance Plan. The particular characteristics of the Bank site at the end of the establishment period may necessitate including other elements not specified below, that are needed to protect the ecosystem resources present at the Bank.
 - (1) Periodically patrol the Bank site for signs of trespass and vandalism. Maintenance will include reasonable actions to deter trespass and repair vandalized Bank features.

 - (2) Monitor the condition of structural elements and facilities of the Bank site such as signage, fencing, roads, and trails. The Long-Term Management and Maintenance Plan will include provisions to maintain and repair these improvements as necessary to achieve the objectives and functional performance goals of the Bank and comply with the provisions of the conservation easement. Improvements that are no longer needed to facilitate or protect the ecological function of the Bank site may be removed or abandoned if consistent with the terms and conditions of the conservation easement.

 - (3)) Off-site Groundwater Well Monitoring (see Section F.3 for details on methods for monitoring)

In the event that the monitoring data shows a statistically significant increase in groundwater levels for any of the Adjacent Wells over any two consecutive years (in the same month comparison or the year-to-year comparison), not considering Excluded Monitoring Data, the annual report shall include an assessment of the likely causes of this increase, taking into account changes in groundwater level at the Control Well and, if the increase is likely caused by the Bank, a list of proposed mitigation measures. After receiving the annual report, the County shall make a determination whether the increase is caused by the Bank and, if it is, require all necessary mitigation measures be implemented to restore groundwater levels.

(4) Sediment Monitoring (see Section F.4 for details on methods for monitoring)

In the event that the sediment monitoring shows, at either Stream Sediment Monitoring Location, a six inch or greater average sediment increase along the cross section, as compared with baseline conditions, the Sponsor shall assess the causes of this increase and, if the increase is caused by the Bank, provide a list of proposed mitigation measures. The County shall make a determination whether the sediment increase is caused by the Bank and, if it is, shall require all necessary mitigation measures be implemented, such as lowering the elevations of the engineered log jams.

(5) Inspect the Bank site at least twice annually to locate any noxious weeds, knotweed, purple loosestrife, and English ivy. Any plant of these species discovered on the Bank site must be eradicated. The IRT anticipates that this long-term control will involve identifying and eradicating a relatively small number of recurrences each year. In the event the Corps and Ecology, in consultation with the IRT, determine that the watershed within which the Bank is located becomes infested with these species in the future, so that their effective control on the Bank site is either no longer practicable or unreasonably expensive, the IRT will consider appropriate changes to the Long-Term Management Plan.

D. If the Sponsor elects to request the approval of the IRT to assign long-term management and maintenance to a Long-Term Steward pursuant to Article IV.M.2., the long-term management and maintenance assignment agreement will reflect that the assignee has assumed (1) the obligation, owed to the IRT, of accomplishing the Long-Term Management and Maintenance Plan; as well as (2) the legal responsibility for accomplishment and maintenance of the compensatory mitigation requirements associated with all impacting projects that satisfied their mitigation requirements through the application of Bank credits. The Corps and Ecology will also execute this assignment agreement. In exchange for the assignee's promise to achieve the Long-Term Management and Maintenance Plan, contemporaneously with the assignment of long-term management and maintenance responsibilities the Corps and Ecology will direct disbursement of the "full funding" amount specified in Article III.C.2.c. of this Instrument from the Long-Term Management and Maintenance Endowment Fund escrow account, pursuant to Article III.C.2.e. of this Instrument. In the event the responsibility for executing the Long-Term Management and Maintenance Plan is not assigned to a

third-party assignee, at the termination of the establishment period of the Bank the “full funding” amount specified in Article III.C.2.c. of this Instrument will be disbursed from the Long-Term Management and Maintenance Endowment Fund escrow account to the Sponsor.

APPENDIX H: FINANCIAL ASSURANCES

APPENDIX H.1: All Phases

The Sponsor will institute and maintain financial assurances in accordance with the subsections immediately below. The Sponsor will provide a Letter of Credit for each phase of the Bank to provide financial assurance underlying the establishment and initial functionality of the Bank. Background on financial assurances is found in Section H of the Resource Folder.

H.1.1 Letter of Credit

- A. The Irrevocable Letter of Credit prescribed in Article III.C.1. of this Instrument, underlying the establishment and functionality of the Bank, will adhere to the following form and contents.
- B. Each Letter of Credit will be irrevocable and without condition other than those specifically authorized in this Instrument. The Phase 1 Letter of Credit may not be withdrawn or canceled by the issuing financial institution prior to the designated expiration date, which may be no earlier than 9 years from the date of issuance. The Phase 2 and Phase 3 Letters of Credit may not be withdrawn or canceled by the issuing financial institution prior to the designated expiration date, which in each case may be no earlier than 10 years from the date of issuance. In lieu of a Letter of Credit with an effective period of 9 or 10 years, as applicable, the Sponsor may elect to submit a Letter of Credit with an initial expiration date that is a minimum period of one year from the date of issuance. Such a Letter of Credit shall further provide that, unless the issuer provides the Beneficiaries written notice of non-renewal at least 60 days in advance of the current expiration date, the Letter of Credit is automatically extended without amendment for one year from the expiration date, or any future expiration date, until a period of 9 years for Phase 1 or 10 years for each of Phase 2 and 3 commencing with the date of first issuance is completed. Each Letter of Credit will provide that the issuing financial institution shall honor the credit engagement and pay to the Third Party Designee the directed sum without inquiring whether the directing Beneficiary agency or the receiving Third Party Designee has a right to make such a demand. The Letter of Credit must further specify that the financial institution expressly waives the right to legally challenge, or require any justification for, such a demand for payment.
- C. Each Letter of Credit will be issued to, and will designate, the Corps and Ecology as distinct and independent Beneficiaries. If the IRT has informed the Sponsor that one has been so designated, each Letter of Credit shall identify and designate the Third Party Designee. Upon presentation of a sight draft by either the Corps or Ecology, in writing on agency letterhead, accompanied by no other documentation, certification, or justification other than a reproduction of the Letter of Credit, the issuing financial institution shall disburse from the credit funds account to the Third Party Designee the amount specified by the Corps or Ecology, up to a maximum cumulative amount as reflected in the Letter of Credit. The Corps or Ecology shall be authorized to direct or make partial drawings, and multiple successive drawings, upon the credit account. The Corps and Ecology shall have the exclusive authority to direct disbursement of funds

from the credit funds account, and the direction of only one of these two agencies is required in order to accomplish a disbursement.

- D. Upon request of the Sponsor, the Corps and Ecology, in consultation with the IRT, may authorize reductions in the required credit account limits of each of the Letters of Credit when the Corps and Ecology have determined, in consultation with the other members of the IRT and the Sponsor, that the Bank objectives and performance standards reflected in Appendix C are being timely met. Each Letter of Credit shall acknowledge that, from time to time, the Beneficiary agencies may authorize a reduction in the required level of credit during the effective period of the Letter of Credit. Any such reduction must be authorized by both the Corps and Ecology, as Beneficiary agencies. Upon receipt of both authorizations, in writing on agency letterhead, the issuing financial institution will be authorized to reduce the level of maximum extended credit, and it may, as arranged between the Sponsor and the issuing financial institution, reissue or amend the applicable Letter of Credit accordingly to reflect that change.
- E. Each Letter of Credit shall acknowledge that the Beneficiary agencies may authorize cancellation of the Letter of Credit applicable to a designated phase prior to the scheduled expiration date reflected therein. Any such cancellation must be authorized by both the Corps and Ecology, as Beneficiary agencies. Upon receipt of both authorizations, in writing on agency letterhead, the issuing financial institution will be authorized to withdraw or rescind, as arranged between the Sponsor and the issuing financial institution, the applicable Letter of Credit.
- F. If so directed by the Corps and Ecology, the Sponsor agrees to substitute the identification of the Third Party Designee with a replacement entity for each applicable Letter of Credit. The Sponsor agrees that it shall execute either an amendment or replacement of each applicable Letter of Credit in order to effect such a substitution. If substitution of the Third Party Designee is directed, all other terms and conditions of the applicable Letter of Credit shall remain unchanged, particularly including the credit amount and the expiration date.
- G. The Sponsor is solely responsible for any costs, fees, or premiums associated with the issuance, modification, continuation in force, or termination of each Letter of Credit. Any such costs may not be deducted from the principal of the Letter of Credit.

H.1.2 Long-Term Management and Maintenance Endowment Fund:

- A. In order to implement the Long-Term Management and Maintenance Endowment Fund, prescribed in Article III.C.2. of this Instrument and underlying management and maintenance actions to be taken following completion of the establishment period of the Bank, the Sponsor will establish an escrow account in an accredited and Federally insured financial institution, as follows.
- B. The Long-Term Management and Maintenance Endowment Fund escrow account will be incrementally funded until it is fully funded, as prescribed in Articles III.C.2.b. and III.C.2.c. of this Instrument. Once the Long-Term Management and Maintenance

Endowment Fund is fully funded, the Sponsor will be released from any further obligation to deposit a designated sum corresponding to each sale or transfer of credits, or use of credits by the Sponsor as compensatory mitigation for its own activities causing adverse impacts to the aquatic environment. The Sponsor will be permitted to accelerate contributions to the Long-Term Management and Maintenance Endowment Fund, and by doing so the Sponsor may defer subsequent contributions until the balance in the Endowment Fund no longer matches or exceeds the balance required by the computation in Article III.C.2.b. The Sponsor will provide the IRT an annual account statement displaying a cumulative tabulation of all deposits into the Long-Term Management and Maintenance Endowment Fund escrow account, with each deposit referencing the associated sale/use/transfer transaction, as well as the principal balance and total account balance, as of December 31 of the previous calendar year, by February 1 of each year. This statement will be submitted until (1) the Long-Term Management and Maintenance Endowment Fund is fully funded, or (2) until the Corps and Ecology, in consultation with the IRT, have approved the Sponsor's written request to permanently cease all banking activities.

- C. The Long-Term Management and Maintenance Endowment Fund escrow account may bear interest or other earnings. Any earnings generated by the escrow funds shall remain deposited with other escrow account funds. Earnings in excess of the full funding amount specified in Article III.C.2.c. of this Instrument will be returned to the Sponsor at the time that the full funding amount is disbursed to the Long-Term Steward. The Long-Term Management and Maintenance Fund account contents may be invested only in the following: an interest-bearing savings or passbook account, savings certificate, or certificate of deposit, held in each case by an institution that is insured by the Federal Deposit Insurance Corporation; alternatively, the Fund principal and earnings may be invested in direct obligations of the Government of the United States of America, in obligations of agencies or insurers that are guaranteed by the Government of the United States of America, or in a money market mutual fund consisting solely of such obligations.
- D. The Sponsor will be responsible for all escrow agency and associated account fees, including account termination and final reconciliation costs, which may not be paid out of escrow account funds, or out of the interest or earnings generated thereon.
- E. The terms of the escrow instructions will permit regular recurring deposits to the escrow principal as sales, use, or transfers of credits are made and designated sums corresponding to those sales, use, or transfers are deposited to the escrow account.

EXHIBIT 1 TO APPENDIX A.1.2

LEGAL DESCRIPTION OF BANK SITE AREA

Tract "A" (TIC PROPERTY):

That portion of Sections 10, 11, 14 and 15 Township 34 North, Range 4 East, WM, described as follows: Commencing at the Southwest corner of said Section 11, Thence South 88° 32' 07" East, along the South line of said Section 11 a distance of 1168.41 feet; Thence North 1° 06' 44" East 1024.71 feet to the TRUE POINT OF BEGINNING, said true point of beginning is the same true point of beginning as described in that certain document recorded under Auditors File No. 200710110106, records of Skagit County Washington titled parcel "B" after adjustment; Thence the following courses along said Parcel "B" boundary, North 65° 38' 15" West 89.27 feet; Thence North 60° 12' 24" West 578.82 feet; Thence North 58° 52' 21" West 337.35 feet; Thence North 43° 09' 09" West 68.08 feet; Thence North 0° 43' 05" West 371.65 feet; Thence North 3° 01' 13" East 349.79 feet; Thence North 28° 03' 28" East 282.53 feet; Thence North 39° 46' 02" East 128.04 feet; Thence North 73° 15' 44" East 458.76 feet; Thence North 49° 28' 04" East 210.47 feet; Thence along a curve to the left having a radius of 148.75 feet through a central angle of 87° 56' 43" an arc distance of 228.33 feet; Thence North 38° 28' 39" West 106.10 feet; Thence North 29° 08' 06" West 48.98 feet; Thence North 5° 45' 31" West 28.47 feet; Thence North 27° 57' 37" East 255.36 feet; Thence North 38° 57' 10" East 102.81 feet; Thence North 76° 29' 57" East 62.91 feet; Thence North 60° 00' 00" East 58.53 feet; Thence South 44° 26' 23" East 49.42 feet, more or less to the Westerly margin of Babcock Road; Thence leaving said boundary of Parcel "B" Northerly along the West margin of Babcock Road, North 3° 26' 55" East 41.07 feet; Thence continuing along said West margin the following courses, North 11° 45' 40" East 40.64 feet; Thence North 27° 27' 02" East 32.32 feet; Thence North 32° 48' 39" East 35.96 feet, more or less to the East line of the Southwest Quarter of the Northwest Quarter of said Section 11; Thence North 1° 36' 43" East, along said East line, 139.16 feet to the Southerly margin of Swan Road; Thence the following courses along said Southerly margin, Northwesterly along a non-tangent curve concave to the Southwest whose radius point bears South 10° 04' 23" West a distance of 2834.79 feet through a central angle of 6° 32' 59" an arc distance of 324.06 feet; Thence North 86° 28' 36" West 1027.43 feet, more or less to the West line of said Section 11; Thence North 1° 29' 48" East, along said West line, 15.22 feet; Thence continuing along said right of way North 86° 40' 21" West 59.18 feet; Thence North 86° 44' 13" West 105.52 feet; Thence North 85° 17' 44" West 96.36 feet; Thence North 82° 50' 22" West 76.89 feet; Thence North 81° 18' 27" West 146.29 feet to the centerline of Nookachamps creek; Thence the following meandered courses along the centerline of said Nookachamps creek, South 14° 59' 44" West 44.48 feet; Thence South 1° 39' 17" East 70.61 feet; Thence South 28° 20' 12" East 86.67 feet; Thence South 63° 39' 24" East 100.51 feet; Thence South 75° 45' 56" East 110.95 feet; Thence South 66° 37' 29" East 133.10 feet; Thence South 50° 39' 38" East 53.86 feet; Thence South 36° 57' 59" East 46.09 feet; Thence South 31° 38' 29" East 105.02 feet; Thence South 19° 37' 45" East 78.67 feet; Thence South 6° 28' 20" East 36.00 feet; Thence South 1° 15' 55" East 48.25 feet; Thence South 21° 57' 10" West 65.40 feet; Thence South 52° 42' 41" West 71.75 feet; Thence South 87° 55' 04" West 50.91 feet; Thence South 70° 43' 30" West 73.77 feet; Thence North 83° 33' 13" West

37.27 feet; Thence North 67° 12' 20" West 51.36 feet; Thence North 46° 14' 06" West 152.66 feet; Thence North 55° 38' 38" West 50.63 feet; Thence North 41° 51' 17" West 255.39 feet; Thence North 62° 11' 43" West 53.08 feet; Thence North 79° 35' 00" West 58.48 feet; Thence South 82° 24' 56" West 86.84 feet; Thence South 54° 57' 47" West 88.04 feet; Thence South 36° 22' 07" West 58.88 feet; Thence South 33° 34' 34" West 198.18 feet; Thence South 55° 01' 33" West 58.93 feet; Thence North 89° 28' 26" West 79.74 feet; Thence North 80° 41' 38" West 63.98 feet; Thence North 65° 20' 23" West 91.10 feet; Thence North 56° 36' 34" West 115.20 feet; Thence North 70° 29' 45" West 114.29 feet; Thence South 89° 35' 10" West 129.32 feet; Thence South 64° 49' 30" West 116.57 feet; Thence South 42° 00' 02" West 51.82 feet; Thence South 31° 47' 58" West 50.90 feet; Thence South 36° 03' 58" West 97.32 feet; Thence South 40° 28' 29" West 111.76 feet; Thence South 27° 08' 00" West 48.46 feet; Thence South 13° 48' 27" West 146.66 feet; Thence South 20° 24' 58" West 163.42 feet; Thence South 50° 47' 36" West 107.26 feet; Thence South 57° 39' 24" West 85.65 feet, more or less to the North line of the Northwest Quarter of the Southeast Quarter of said Section 10; Thence leaving said creek centerline North 88° 44' 43" West, along said North line, 196.82 feet; Thence leaving said North line South 31° 56' 05" West 31.48 feet; Thence South 22° 29' 52" West 15.99 feet; Thence South 34° 40' 55" West 51.25 feet; Thence South 5° 54' 54" East 100.00 feet; Thence South 7° 21' 13" West 80.73 feet; Thence South 49° 27' 34" East 158.12 feet; Thence South 33° 46' 25" East 6.19 feet; Thence South 23° 32' 55" East 28.75 feet; Thence South 14° 56' 18" East 62.19 feet; Thence South 31° 17' 40" East 62.18 feet;

Thence South 21° 43' 52" East 44.19 feet; Thence South 26° 20' 27" East 50.67 feet; Thence South 21° 18' 30" East 50.11 feet; Thence South 26° 08' 06" East 87.41 feet; Thence South 49° 19' 42" East 101.36 feet; Thence South 74° 28' 53" East 68.57 feet; Thence South 61° 47' 09" East 24.61 feet; Thence South 60° 00' 49" East 21.17 feet; Thence South 35° 59' 34" West 60.63 feet; Thence South 16° 40' 14" West 121.02 feet; Thence South 19° 08' 12" East 132.43 feet; Thence South 12° 29' 58" East 52.68 feet; Thence South 46° 52' 30" East 48.87 feet; Thence South 60° 03' 05" East 103.02 feet; Thence South 69° 30' 09" East 48.21 feet; Thence South 85° 54' 15" East 100.84 feet; Thence South 13° 32' 45" West 57.27 feet; Thence South 2° 03' 06" East 172.92 feet; Thence South 2° 06' 02" West 912.30 feet; Thence South 27° 26' 09" West 80.39 feet; Thence South 25° 10' 53" East 33.79 feet; Thence South 22° 11' 09" East 134.93 feet; Thence South 22° 14' 46" East 135.27 feet; Thence South 19° 27' 00" East 152.21 feet; Thence South 19° 27' 02" East 154.76 feet; Thence South 30° 22' 07" East 160.09 feet; Thence South 31° 44' 17" East 165.70 feet; Thence South 8° 25' 19" East 88.89 feet; Thence South 9° 23' 50" East 153.52 feet; Thence South 13° 53' 40" East 127.17 feet; Thence South 5° 13' 09" West 703.31 feet; Thence South 16° 31' 19" West 90.60 feet; Thence South 13° 16' 59" East 93.08 feet; Thence South 15° 26' 09" East 27.73 feet; Thence South 26° 42' 33" East 216.31 feet; Thence South 53° 03' 24" East 45.81 feet; Thence South 21° 00' 54" West 115.42 feet; Thence South 7° 01' 24" West 143.10 feet; Thence South 29° 48' 00" East 59.82 feet; Thence South 1° 34' 02" East 49.36 feet; Thence South 13° 38' 32" East 64.62 feet; Thence South 23° 58' 35" East 65.67 feet; Thence South 40° 38' 15" East 90.57 feet; Thence South 50° 23' 19" East 102.63 feet; Thence South 79° 51' 55" East 166.09 feet; Thence North 70° 45' 13" East 43.22 feet; Thence South 79° 25' 18" East 20.49 feet; Thence South 81° 40' 02" East 29.44 feet; Thence South 11° 49' 18" West 92.65 feet; Thence South 12° 29' 54" East 123.98 feet; Thence South 28° 39' 56" West 29.14 feet; Thence South 14° 37' 34" West 75.63 feet; Thence South 0° 20' 45" East 111.73 feet; Thence South 48° 25' 28" East 11.36 feet; Thence South 5° 04' 40" East 65.41 feet; Thence South 19° 53' 20" East 63.44 feet; Thence South 28° 19' 19" East 94.72 feet; Thence

South 70° 31' 51" East 89.84 feet; Thence South 43° 33' 29" East 155.07 feet; Thence North 70° 24' 51" East 83.00 feet; Thence South 54° 50' 52" East 21.37 feet; Thence North 79° 28' 23" East 71.92 feet; Thence South 62° 24' 17" East 18.77 feet; Thence South 72° 29' 08" East 30.68 feet; Thence North 78° 29' 56" East 189.47 feet; Thence North 76° 52' 30" East 48.87 feet; Thence North 60° 00' 00" East 39.16 feet; Thence North 45° 00' 00" East 39.16 feet; Thence North 30° 00' 00" East 39.16 feet; Thence North 15° 00' 00" East 39.16 feet; Thence North 2° 40' 41" East 25.22 feet; Thence North 2° 26' 49" West 123.92 feet; Thence North 11° 11' 06" West 151.99 feet; Thence North 4° 52' 22" East 217.56 feet; Thence North 3° 26' 51" East 166.51 feet; Thence North 3° 54' 05" West 38.37 feet; Thence North 16° 28' 47" West 55.73 feet; Thence North 2° 38' 24" East 488.36 feet; Thence North 33° 46' 25" East 91.41 feet; Thence North 15° 15' 23" East 159.46 feet; Thence North 23° 57' 12" East 230.05 feet; Thence North 42° 19' 28" East 83.47 feet; Thence North 76° 34' 08" East 85.59 feet; Thence North 81° 15' 14" East 140.92 feet; Thence North 89° 24' 51" East 314.01 feet; Thence North 79° 23' 17" East 227.38 feet; Thence North 70° 05' 05" East 99.42 feet; Thence North 79° 18' 54" East 95.41 feet; Thence North 73° 24' 27" East 30.88 feet; Thence North 62° 30' 16" East 39.83 feet;

Thence North 39° 52' 39" East 258.14 feet more or less to the Southwesterly line of that certain parcel described as Parcel "A" after BLA, recorded under Auditors File No. 200708090007, records of Skagit County Washington; Thence North 60° 07' 16" West along said Southwesterly line of said Parcel "A" a distance of 218.28 feet; Thence North 29° 52' 18" East 422.07 feet to a point on the Northeasterly line of said Parcel "A"; Thence the following courses along the boundary of said Parcel "A" South 56° 41' 17" East 148.65 feet; Thence North 46° 15' 53" East 126.54 feet; Thence South 53° 55' 39" East 185.22 feet to the Northeasterly corner of said Parcel "A", being on the centerline of that certain 100 foot wide right of way to Seattle Lake Shore and Eastern Railway Company right of way as conveyed by Deed dated April 4, 1890 and recorded July 13, 1890 in Volume 10 of Deeds, page 651, records of Skagit County Washington;

Thence along the centerline of said right of way, North 36° 04' 21" East 104.06 feet; Thence along a curve to the right having a radius of 5613.62 feet through a central angle of 4° 10' 36" and arc distance of 409.21 feet; Thence North 40° 14' 58" East 804.87 feet to a point on the East line of the Southwest Quarter of Section 11; Thence North 1° 43' 48" East along said line, 140.29 feet to the Northeast corner of that certain parcel described as Parcel "D" described in that certain document recorded under Auditors File No. 200805080061, records of Skagit County Washington; Thence North 45° 00' 00" West along the Easterly line of said Parcel "D" a distance of 58.96 feet to the Southerly bank of the East Fork of Nookachamps Creek; Thence along the Southerly bank of the East Fork of Nookachamps Creek the following courses South 33° 37' 57" West 6.52 feet; Thence South 51° 31' 50" West 116.03 feet; Thence South 85° 47' 33" West 62.12 feet; Thence North 64° 43' 28" West 53.38 feet; Thence North 71° 22' 26" West 66.45 feet; Thence South 77° 07' 20" West 47.84 feet; Thence South 60° 57' 09" West 28.25 feet; Thence South 47° 36' 06" West 26.30 feet; Thence South 37° 13' 16" West 30.25 feet; Thence South 50° 03' 57" West 29.00 feet; Thence South 71° 14' 40" West 40.28 feet; Thence North 83° 04' 06" West 51.29 feet; Thence North 69° 25' 17" West 94.54 feet; Thence North 58° 31' 50" West 104.07 feet; Thence North 50° 26' 04" West 48.54 feet; Thence North 59° 32' 38" West 24.74 feet; Thence South 89° 03' 02" West 213.66 feet; Thence North 74° 35' 08" West 54.54 feet; Thence North 68° 35' 12" West 132.92 feet; Thence South 37° 17' 52" West 92.81 feet; Thence South 52° 15' 52" West 29.33 feet; Thence South 72° 35' 27" West 56.67 feet; Thence North 85° 25' 43" West 33.79 feet to the East line of the Southwest Quarter of the Southwest

Quarter of said Section 11; Thence North 1° 06' 44" East along the East line thereof, 614.85 feet more or less to a point which lies South 65° 38' 15" East from the true point of beginning; Thence North 65° 38' 15" West 163.26 feet to the TRUE POINT OF BEGINNING.

EXCEPT the fee ownership underlying those Easement rights AND EXCEPT those Easement rights reserved by Clear Valley Environmental Farm, LLC, a Washington limited liability company, et al, on that certain Statutory Warranty Deed recorded November 20, 2007 as Auditor's File No. 200711200139; being a portion of the North 1/2 of the Northwest 1/4 of Section 14, Township 34 North, Range 4 East, W.M..

Tract "B" (EASEMENT PROPERTY):

Those Easement rights reserved by Clear Valley Environmental Farm, LLC, a Washington limited liability company, et al, on that certain Statutory Warranty Deed recorded November 20, 2007 as Auditor's File No. 200711200139; being a portion of the North 1/2 of the Northwest 1/4 of Section 14, Township 34 North, Range 4 East, W.M., EXCEPT the following described property:

That portion of the below described Parcel "A" being a portion of the Northwest 1/4 of Section 14, Township 34 North, Range 4 East, WM described as follows, being a portion of Parcel "A", after Boundary Line Adjustment, as recorded under Auditors File No. 200708090007:

Beginning at the most Southerly corner of the below described Parcel "A"; Thence North 60° 07' 16" West along the Southwesterly line thereof, 30.00 feet; Thence North 29° 52' 44" East 423.87 feet to a point on the Northeasterly line of the below Parcel A"; Thence South 56° 41' 17" East along said line, 30.00 feet; Thence South 29° 52' 18" West 422.07 feet to the point of beginning.

Parcel "A":

Commencing at the North Quarter corner of Section 14, Township 34 North, Range 4 East, W.M.; thence West, along the North line of said Section 14, a distance of 275.88 feet to an intersection with the Westerly right of way line of the Northern Pacific Railway Company; thence Southwesterly, along said right of way line, 1086.24 feet to a point hereinafter referred to as Point "A"; thence continue Southwesterly along said right of way, 408.00 feet; thence North 60° 07' 16" West in a straight line, 1691.33 feet, more or less, to a point 396.00 feet South of the Northwest corner of said Section 14 and on the West line of said Section 14 to the TRUE POINT OF

BEGINNING; thence North, along the West line thereof a distance of 396.00 feet; thence East, along the North line of said Section 14, a distance of 329.30 feet; thence South 56° 41' 17" East, along a line that would connect to the aforementioned Point "A", a distance of 1363.83 feet; thence South 29° 52' 18" West 422.07 feet, to a point which lies South 60° 07' 16" East from the true point of beginning; thence North 60° 07' 16" West 1460.34 feet to the TRUE POINT OF BEGINNING

