

MITIGATION PLAN

Grove Creek Mitigation Bank

Blaine County, Idaho

Prepared for

United States Army Corps of Engineers

Prepared by

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September 30, 2010

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EXECUTIVE SUMMARY

This mitigation plan is for the Grove Creek Mitigation Bank (the Bank) site that will establish wetlands on approximately 14.12 acres of the O'Gara Family Trust property. The Bank site will provide wetland mitigation credits for impacts to aquatic resources authorized by Nationwide, General, and Individual permits, including after the fact permits granted under Section 404 of the Clean Water Act at a ratio of 1 acre of mitigation credit for 1 acre of impact. Ultimately, compensatory mitigation purchasing from the Bank will contribute positively toward achieving the Federal Wetland Program's "no net loss" goal. The approval of this mitigation plan will fall under the terms agreed to in The Wetlands Bank of Idaho Umbrella Banking Instrument dated January 30, 2009.

The Bank site is located in Hydraulic Unit Code (HUC) 17040221 which contains a high degree of historical wetland impacts. The Bank site will be able to successfully replace wetland acres and subsequently, functions and services to compensate for future impacts to wetlands in the primary service area (HUC's 17040221, 17040209, 17040220 and 17040219) at the Grove Creek Mitigation Bank site.

High-quality ecological characteristics of the created aquatic resources will provide excellent functions and values as compensatory mitigation. In addition, the location of the Bank and its regional proximity to other existing high quality habitat and natural resources of importance will create broadened ecological value. The created aquatic resources will be designed as self-sustaining, functional systems typical of the local and regional aquatic resource ecotypes.

During the site selection process, a high priority is placed on selecting the Bank site based on how it fits within the watershed and how it contributes to the overall watershed function. For this reason, site selection focused on locations with wetlands that have been converted for agricultural uses, and areas that have the greatest potential for functional lift once restored to wetlands.

1. INTRODUCTION/PROJECT DESCRIPTION

The Grove Creek Mitigation Bank (the Bank) site will be used to establish (create) wetlands to compensate for the loss of aquatic resources and wetland habitat. The Bank site is on a 4500 acre ranch owned by the O'Gara Family Trust, located on the northside of US Highway 20 (US 20), approximately 3.0 miles east Timmerman Junction, the intersection of Idaho State Highway 75 and US 20 in Blaine County, Idaho as shown in Figures 1 and 2.

This mitigation plan will create 14.12 acres of wetlands from uplands and include palustrine forest (PFO), palustrine scrub-shrub (PSS) and palustrine emergent (PEM) communities. This establishment of aquatic resources work is part of the O'Gara Family Trust property commitment to create and conserve wetlands and wildlife habitat in the developing Wood River Valley. The Bank site will add functions and services provided by wetlands, increase the overall wildlife habitat on the ranch and improve habitat connectivity between the Picabo and Timmerman Hills and the foothills east of Gannett (Figure 3).

Project location information:

Blaine County, Idaho

T 1 S, R 19 E, Section 9, 10, 15, and 16

Hydrologic unit 17040221

Latitude/Longitude 43° 20' 34" N and 114° 11' 96" W

2. WETLAND MITIGATION GOALS AND OBJECTIVES

2.1 Total Wetland Acreage

The overall mitigation bank plan goal is to establish 14.12 acres of wetlands. This will be accomplished by constructing 0.75 acres of PEM, 12.01 acres of PSS, and 1.36 acres of PFO habitat. The constructed site will ultimately have a greater diversity of habitat and plant species than the existing upland community. The created wetland acreage is designed to blend with the existing mosaic of natural wetlands and uplands in the vicinity and produce a biologically diverse site with highly functioning habitats. Based on the mitigation site size and potential for vegetation communities, the wetlands would create a sustainable and productive wetland system.

2.2 Goals for Hydrologic Conditions

The goal is to create wetland areas at an elevation that allows for the establishment of wetland complexes. The grading plan will lower the ground surface closer to the groundwater table and allow diffused surface water, snow melt and surface water runoff to access the site. This increased hydrology will establish wetlands that are self sustaining.

LOCATION:
BLAINE COUNTY, IDAHO,
T 1 S, R 19 E, Sections 9,10,15

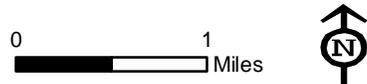
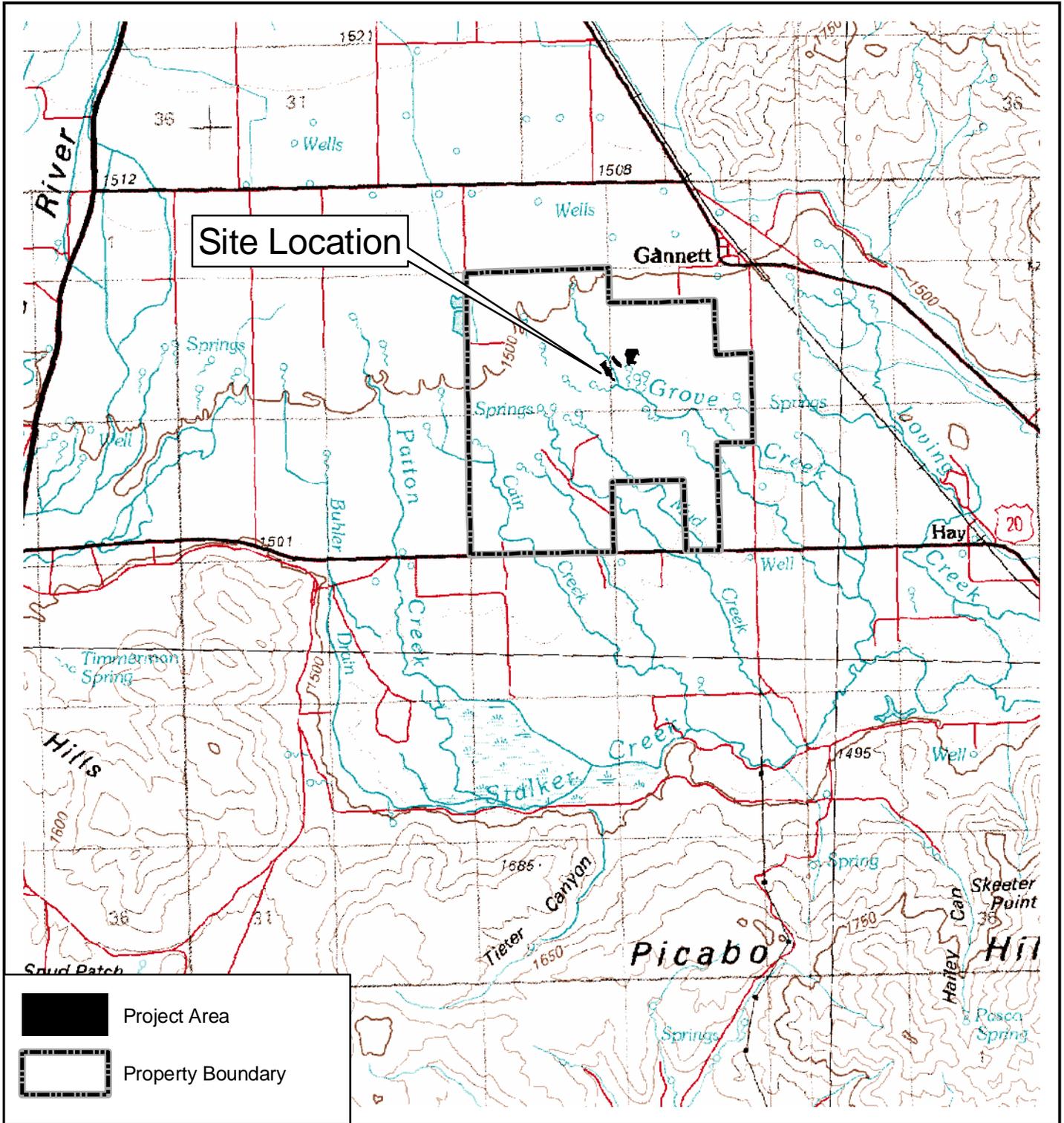
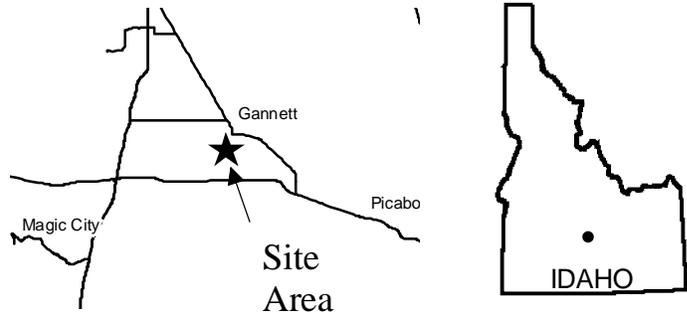
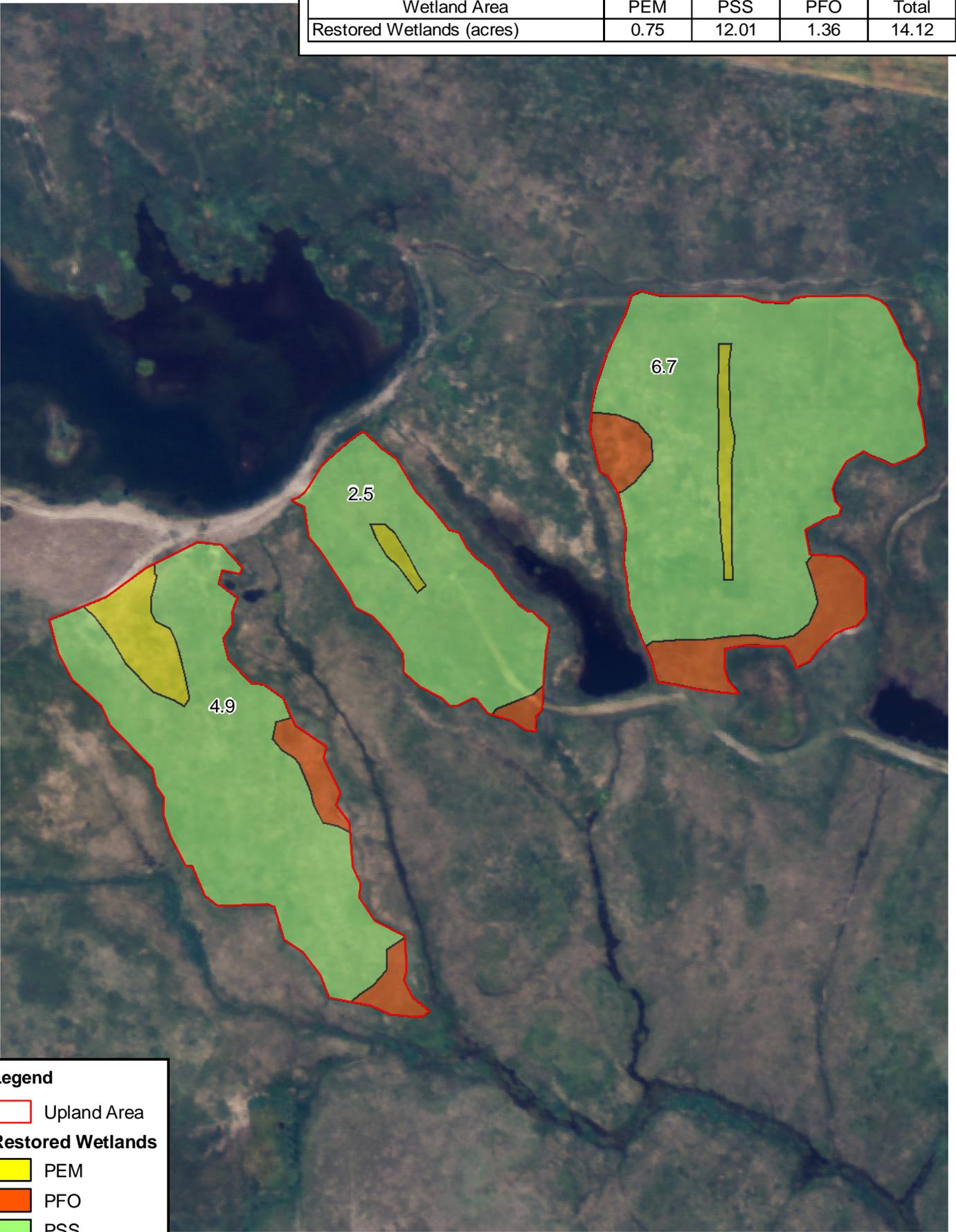


Figure 2: Site Location Map
Grove Creek Mitigation Bank

Wetland Area	PEM	PSS	PFO	Total
Restored Wetlands (acres)	0.75	12.01	1.36	14.12



Legend

Upland Area

Restored Wetlands

- PEM
- PFO
- PSS

0 75 150 300 Feet



Figure 3: Mitigation Site Plan
Grove Creek Mitigation Bank

3. SERVICE AREA

The service area of a bank is the designated area wherein a bank can reasonably be expected to provide appropriate compensation for impacts to wetlands or other aquatic resources. The service area takes into account the sustainability or improvement of aquatic resources in a watershed when determining compensatory mitigation requirements. Accordingly, the primary service area for the Bank is the immediate and 3 adjacent 8-digit Hydrologic Unit Codes 17040221, 17040209, 17040220 and 17040219 (see Figure 1)

Establishment of the wetlands in the Bank site as described in the mitigation plan will provide many of the functions and services to meet the compensatory mitigation needs in the service area.

4. BANK SITE SELECTION AND EXISTING CONDITIONS

The factors, which are considered in the site selection process, included the Little Wood River watershed needs and the practicality of establishing ecologically self-sustaining aquatic resources at the Grove Creek Mitigation Bank.

4.1 Watershed

The Little Wood River watershed, Hydrologic Unit Code (HUC) 17040221, is located in southwest Idaho and is the immediate HUC the Bank is located in. The watershed drains 1120 square miles of rangeland, forests, agricultural lands, and urban areas. The Little Wood HUC subbasin is 724,700 acres. Approximately 59 percent of the subbasin is in Blaine County, 37 percent in Lincoln County and the remainder in Gooding and Jerome Counties. Thirty-seven percent of the basin is privately owned. Eighty four percent of the basin is in shrubland, rangeland, grass, pasture or hayland. Eight percent is cropland, and the remaining eight percent is in forest, water, wetlands, developed or barren (NRCS 2005). Nutrients, sediment, temperature and bacteria contribute to non-support of beneficial uses in the watershed. A TMDL for the Little Wood River subbasin addressing temperature, sediment, nutrients and bacteria for five impacted water bodies was approved September 2005. Stream road crossings, mines, septic systems and the activities associated with agricultural, range and forest land uses are sources of pollutants within the watershed.

The adjoining HUCs 17040219 (Big Wood River), 17040220 (Camas), and 17040209 (Lake Walcot) support similar land use and cover types as the Little Wood River HUC. The Bank site was chosen based on how it will contribute to ecosystem function and its ability to compensate for impacts to aquatic resources in the adjoining HUCs'.

The needs for protection and restoration of the Little Wood River Watershed and adjoining HUCs have been identified in the development of Total Maximum Daily Loads (TMDL) for this reach of the watershed, in local jurisdiction regulations to further protect the resources, and by watershed advisory groups taking active roles in addressing watershed concerns.

The Big and Little Wood River watersheds are the focus of regional environmental concerns that center on the loss and degradation of riparian wetlands and associated aquatic resources due to development stressors. In the primary service area agriculture and urbanization account for wetland losses. The service area and its watersheds have experienced rapid population growth which has changed the functions and services remaining in the watershed. Drainage, land clearing, and conversion to agricultural land qualify as permanent loss. Development pressure on wetlands will continue to increase in rapidly urbanizing areas due to less availability of buildable land. Wetland meadows and shrublands in broad low elevation valleys of Camas Creek, Big Wood River, and Silver Creek have been converted to agricultural land. Wetlands which remain are restricted to streamside bands of vegetation and occasional patches of wetlands which have been too wet to convert. Road construction, home building, and creation of amenities such as golf courses account for losses in the watersheds and may surpass losses to agriculture as development pressure, particularly in the Big Wood River Valley is high. (Jankowsky-Jones 1997)

The service area for the Bank has been targeted by stakeholders, resource agencies, and wetland experts as a key resource to protect, maintain, and where possible, restore aquatic resource functions and services. As available land around the Big and Little Wood River Valleys and its surrounding populations centers continue to develop, the riparian and aquatic resources will likely be encroached upon. A landscape perspective has been used to identify this Bank site which will benefit the watershed and offset the losses of aquatic resource functions and services caused by activities authorized by U S Army Corps of Engineers (Corps) permits. The Bank site is centered in the HUC that experiences much of this development and provides a spatially close location to replace functions and services lost due to future development impacts.

4.2 Site Selection

The Bank site was selected to provide valuable aquatic resources that are being lost in the Big and Little Wood River, Camas and Lake Walcot watersheds. The creation of wetlands on the Bank site will create valuable wildlife habitat that has historically been lost over the years to agricultural practices, increase habitat connectivity between the foothills surrounding the Bellevue triangle and increase species richness and ecological function in the project vicinity. The site-specific criteria listed below were also met by the Bank. The presence of a high groundwater table and existing wetland communities in the vicinity, indicate excellent potential to successfully establish wetlands and their associated functions and services.

These criteria were used to select this mitigation Bank site:

- There is adequate water to provide sufficient hydrology to the mitigation bank.
 - Diffused surface water
 - Proximity to groundwater
- Soils are available that will support wetland plants
- There is a potential for converting less desirable cover types to those that provide higher quality vegetation structure and wildlife habitat
- Is there undesirable vegetation that is difficult to eliminate
- Is the proposed area directly or indirectly affected by its proximity to roads and human activity

Following the initial screening and selection of the Bank site an on-site review was attended by the Interagency Review Team (IRT) on October 22, 2009. After review of the Bank site the TWG determined that the site met the selection criteria for compensatory mitigation. The IRT appeared satisfied that the site is ecologically suitable and will provide desired wetland and aquatic resource functions for a Bank site.

5. BASELINE INFORMATION

The Grove Creek Mitigation Bank site is situated on the O’Gara Family Trust property located in the Little Wood River watershed. The ranch has successfully completed restoration on sections of the West Fork of Grove Creek and adjacent wetlands.

5.1 Existing Wetlands

A field survey was conducted in June 2010 to identify any wetlands present on the Bank site. There were no wetlands identified on the Bank site or within a minimum of 25 foot from the boundary of the Bank site. The site conditions were documented in a technical memorandum and confirmed by the USCOE (USCOE 2010). PEM wetlands are located adjacent to or abutting the buffer area in some locations, but will not be impacted by this project.

5.2 Topography

The site is relatively flat, sloping gently towards the southeast with elevations ranging from 4,910 to 4,890 feet above mean sea level. The Bank site is approximately 2 to 4 feet in elevation above wetlands located adjacent to the Bank sites 25 foot upland buffer.

5.3 Hydrology

The relationships between ground water and surface water have been the focus of many studies in the watershed. In general, the ground water under confined conditions moves in response to gravity from higher elevations to areas of lower elevation. The rate of movement depends on the material through which the groundwater moves in response to the head pressure. In general the deeper ground water flow direction is at right angles to the contour lines. In the shallow system, groundwater movement generally follows the surface water on the site and flows southeastward toward Picabo. As the shallow ground water moves southward, it overrides the fine-grained confining beds. Higher percentages of fined-grained material in the south part of the valley and at the site cause a rapid decrease in transmissivity of the shallow sediments and the ground water is forced to the surface. This is the spring discharge that feeds the creeks on the O'Gara Family Trust property.

Surface water hydrology in the Bank site vicinity is from two basic sources- overland runoff and ground water discharging at the surface as springs and seeps from the shallow aquifer at the edge of the confining beds. Drainages and depressions in the areas surrounding the Bank site are fed by seeps, springs and a high groundwater table. Soil pits and field observations during the June 2010 field survey show a high groundwater table in the Bank site, ranging from 2 to 4 feet below the ground surface.

5.4 Soils

Soils at the Bank site have been mapped and are recorded in the *Soil Survey for the Blaine County Area Idaho* (SCS 1980). The soils are silt loams associated with floodplains and stream terraces. The Hapur-Picabo silt loam and the Picabo silt loam typically have depths to groundwater that range from 6 inches to 4 feet. These soil types experience frequent flooding and are considered hydric in depression areas.

Soils identified in the Bank site were predominately silt, with organics, clay or gravel. These upland soils from 0 to 6 inches are generally composed of silt with organic materials ranging in color from 10YR2/2 to 10YR3/2 on the Munsell soil color chart. Soils in the 6-24 inch range are composed of silts with clay or gravel ranging in color from 10 YR 3/1 to 10 YR3/2. Soil pits at the Bank sites identified groundwater at a depth of greater than 2 feet. Soils in the nearby wetlands showed hydric characteristics including mottled and depleted soils (10YR5/1) within 12 inches the soil surface. Check pits in the soils directly adjacent to surface water showed the mottled depleted soils closer to the surface.

5.5 Vegetation

The Bank site appears to have been used for some agricultural practices in the past as these sites are relatively level. They are presently dominated by grasses and creeping thistle (*Cirsium arvense*), with sedges interspersed. The wetland communities in the natural drainages and depressions adjacent to the Bank site are dominated by dense communities of sedges (*Carex species*), rushes (*Scirpus species* and *Juncus species*) and cattail (*Typha latifolia*) in the emergent wetlands and with willows (*Salix species*), sedges, rushes and grassed in the scrub shrub wetlands.

5.6 Proximity to Roads/Human Activity

This Bank site is isolated from roads and human activity. The O'Gara Family Trust property has removed nearly all of the interior roads on the ranch. Limited access to the site is provided by two track lanes, walking or all terrain vehicles. Farming practices are present on portions of the ranch.

5.7 Wildlife and Fish

The Bank site is absent of trees or shrubs and provides very little structural diversity for wildlife. Riparian areas and recently restored areas on the ranch proved much better wildlife and fish habitat on several of the creeks. In addition to providing habitat for a number of wildlife species, the ranch provides a link between the public lands surrounding the Bellevue triangle for species such as mule deer (*Odocoileus hemionus*), elk (*Cervus elaphus*), moose (*Alces alces*), gray wolf (*Canis lupus*) and mountain lions (*Felis concolor*). Birds found on the ranch include songbirds, bald eagles (*Haliaeetus leucocephalus*), trumpeter swans (*Cygnus buccinator*) and sandhill cranes (*Grus canadensis*). Bald Eagles have been documented near the Bank site. If construction takes place in the winter, bald eagles will be monitored to ensure no adverse effects occur as defined by the Bald and Golden Eagle Protection Act (1962).

5.8 Threatened and Endangered species

The Bank site has no documented occurrences or existing habitat that would be used by any of the Proposed Threatened, Endangered, or Candidate Species as listed by the USFWS for Blaine County. Therefore the project is anticipated to have no effect on any of the Proposed, Threatened, Endangered, or Candidate Species listed by USFWS for Blaine County (USFWS 2008). The Bank site contains no habitat for Canada Lynx (*Lynx Canadensis*), bull trout (*Salvelinus confluentus*), Sockeye Salmon (*Oncorhynchus nerka*), Spring/summer Chinook salmon (*Oncorhynchus tshawytscha*), Steelhead (*Oncorhynchus mykiss*), or the Utah Valvata snail (*Valvata utahensis*) or yellow-billed cuckoo (*Coccyzus americanus*).

6. SITE PROTECTION

A Compensatory Mitigation Easement will be obtained for site protection in perpetuity. Additional details on long-term site protection are provided in Section 13. The O’Gara Family Trust property has legal interest over the site and an affidavit to this effect is included in Appendix A.

7. DETERMINATION OF CREDITS

The Bank will establish a total of 14.12 wetland acres, including 1.36 acres of forested wetlands, 12.01 acres of scrub-shrub wetlands, and 0.75 acres of emergent wetlands. For wetlands established, one credit will be equal to one acre of created wetland that is fully functioning and meets the performance standards defined by the Umbrella Mitigation Banking Instrument (Instrument). Credits anticipated for the Grove Creek Mitigation Bank are shown in Table 1.

Table 1. Anticipated Credits for the Grove Creek Mitigation Bank.

Wetland Type	Created Acreage	Credits
PEM	0.75	0.75
PSS	12.01	12.01
PFO	1.36	1.36
Subtotal	14.12	14.12

The actual credits generated by establishment of wetlands will be determined by calculating the wetland mitigation acreage that meets the parameters identified in the 1987 Corps of Engineers Wetlands

Delineation Manual and meeting the terms of the credit release schedule. A bank specific crediting ledger has been included as Appendix B.

8. MITIGATION WORK PLAN

The mitigation work plan is described below. The established wetlands will increase functions and services on-site by creating Category II wetlands. See Appendix C for a summary of the functions and values analyses.

8.1 Proposed Mitigation

Wetland Construction

Wetland construction will include establishing 14.12 acres of wetlands within the boundaries of the grading limits at the mitigation site, including 0.75 acres of PEM wetlands, 12.01 acres of PSS wetlands and 1.36 acres of PFO wetlands (Figure 3 and 4). These wetland types represent the significant majority of those that occur locally and within the ecoregion. The resulting Bank site will provide greater vegetation structure and diversity, and ultimately, greater overall wildlife species richness throughout the site.

8.2 Targeted Hydrology

Hydrology is essential for successful establishment of wetlands on the Bank site. Lowering the elevation and creating a basin will increase the duration of saturation and inundation resulting from the high groundwater table in the area and take advantage of any diffused surface water runoff.

The Bank Sponsor proposes to excavate the site to an elevation above the shallow groundwater table where groundwater will saturate the soils and create conditions for a self-sustaining wetland. The proposed surface cuts are shown in the Grading Plan (Figure 4).

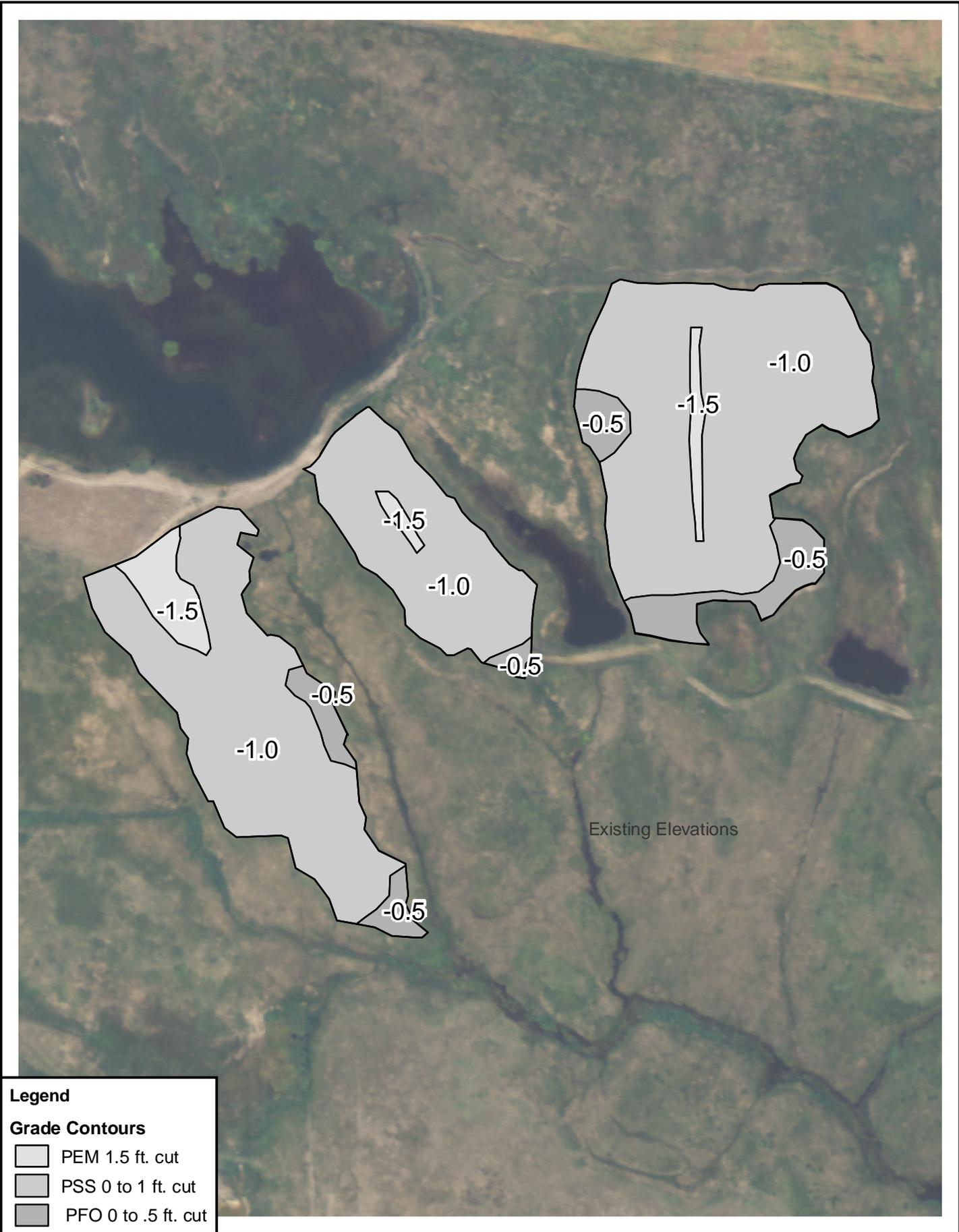
8.3 Targeted Soils

Soils mapped in the Bank site, Hapur-Picabo silt loam and the Picabo silt, are considered hydric in depression areas. Soils characterized from pits on site were predominately silt, with organics, clay or gravel. Wetland communities have been observed growing in these soils in wetlands areas located near the Bank site. Consequently, the top 6 to 12 inches of soils from the Bank site will be removed, stockpiled and reused as top soil in the re-establishment of the wetland site. Soils will not be stockpiled in or adjacent to wetlands or environmentally sensitive areas.

A Stormwater Pollution Prevention Plan (SWPPP) will be prepared for the mitigation construction activities. Appropriate erosion and sediment control best management practices (BMPs) will be installed according to the SWPPP. The Bank site will also be covered under the National Pollution Discharge Elimination System (NPDES) General Construction Permit approved for construction.

8.4 Planting Plans

The Bank will feature PEM wetlands with herbaceous plant species in areas that will be seasonally flooded from 0-6" of water depth or seasonally saturated. The PSS wetlands will be dominated by shrub species in areas that receive seasonal flooding or that will remain saturated most if not all of the year. The PFO wetlands will be dominated by tree species and will demonstrate seasonal flooding and saturation. The Bank's wetland communities are shown in Figure 3. A typical cross section of the mitigation Bank site is shown in Figure 5.



Legend

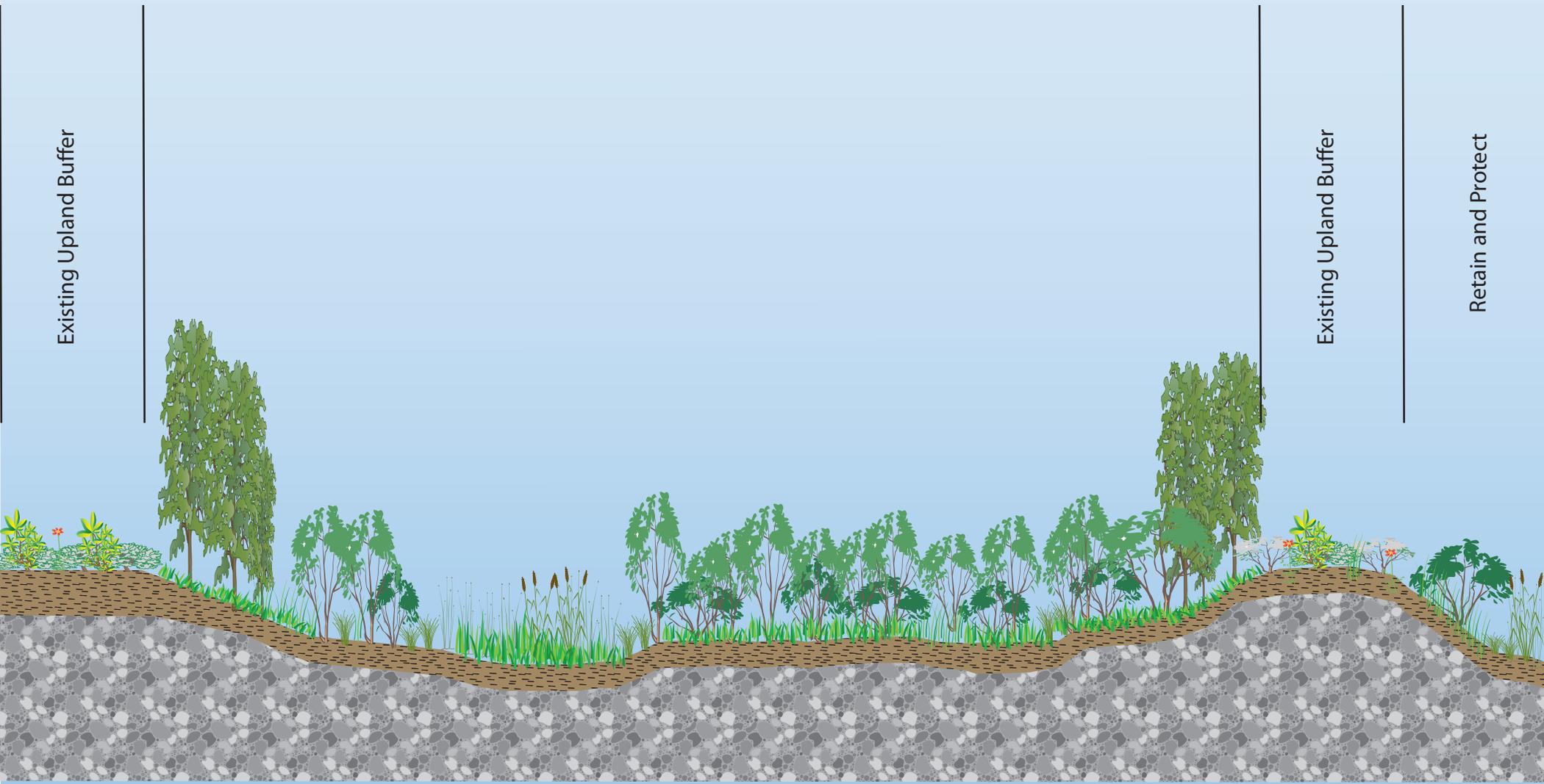
Grade Contours

- PEM 1.5 ft. cut
- PSS 0 to 1 ft. cut
- PFO 0 to .5 ft. cut

0 115 230 460 Feet



Figure 4: Grading Plan
Grove Creek Mitigation Bank



Existing Upland Buffer

Existing Upland Buffer

Retain and Protect

Figure 5: Typical Cross Section
Grove Creek Mitigation Bank

Native wetland species typically found in wetlands on the O’Gara Family Trust property will be planted in the mitigation bank. Black cottonwood, willows, and dogwood may be planted as stakes. Additional tree and shrub species may be supplied in containers, live stakes or as bare-root plants. Emergent wetland plants will be planted from containers, plugs, or seed. Trees will typically be planted on 15-foot centers and shrubs on 5 feet centers. Herbaceous ground cover will be planted from 1 to 3 feet apart. Plants will be grouped in copses (thicket/groups) of odd numbers. Wetland plants for this Bank site will be selected from those listed in Table 2 depending on availability.

Table 2: Plant Species and Planting Zones in the Mitigation Site

Common Name	Scientific Name	Comments
PEM, PSS and PFO Groundcover		
Redtop	<i>Agrostis alba</i>	Seasonally saturated, FAC
Water sedge	<i>Carex aquatilis</i>	Up to 6’ water depth, OBL
Nebraska sedge	<i>Carex nebrascensis</i>	Seasonally saturated, OBL
Beaked sedge	<i>Carex utriculata</i>	Seasonally saturated, OBL
Tufted hairgrass	<i>Deschampsia caespitosa</i>	Seasonally flooded, FACW
Spikerush	<i>Eleocharis palustris</i>	Up to 6” water depth, OBL
Jointed rush	<i>Juncus articulatus</i>	Seasonally saturated, OBL
Baltic rush	<i>Juncus balticus</i>	Seasonally saturated, FACW
Hard-stem bulrush	<i>Scirpus acutus</i>	Up to 36” water depth, OBL
PSS Community Shrubs		
Alder	<i>Alnus incana</i>	Seasonally saturated, FACW
Pacific willow	<i>Salix lasiandra</i>	Seasonally saturated
Booth’s willow	<i>Salix boothii</i>	Seasonally saturated
Coyote willow	<i>Salix exigua</i>	Seasonal flooding , OBL
Yellow willow	<i>Salix lutea</i>	Seasonal flooding ,OBL
Geyer’s willow	<i>Salix geyeriana</i>	Seasonal flooding, FACW
Drummond’s willow	<i>Salix drummondiani</i>	Seasonal flooding, FACW
Willows	<i>Salix sp.</i>	Seasonal flooding, FACW
Bog birch	<i>Betula pumila</i>	Seasonal flooding, OBL
Red-osier dogwood	<i>Cornus stolonifera</i>	Seasonal flooding, FACW
Serviceberry	<i>Amelanchier alnifolia</i>	Seasonally saturated to upland, FACU
Woods Rose	<i>Rosa woodsii</i>	Seasonally saturated to upland, FACU
Golden Currant	<i>Ribes aureum</i>	Seasonally saturated to upland, FAC
PFO Community Trees		
Black cottonwood	<i>Populus trichocarpa</i>	Seasonal flooding, FAC
Narrow-leaf cotton-wood	<i>Populus angustifolia</i>	Seasonal flooding, FACW
Quaking aspen	<i>Populus tremuloides</i>	Seasonally saturated, FAC+

Non-native, volunteer wetland species will not comprise more than 20% of the total cover. Noxious weeds shall cover less than 10% of the established Bank site in the third year following completion of construction and planting activities.

8.5 Construction Activity Description

Pre-Construction

The Bank Sponsor will install and maintain the following: orange construction fencing as needed to provide safety during the construction process, BMPs for erosion control, construction entrance, locate utilities, file the Notice of Intent for coverage under the NPDES General Construction Permit, and identify Retain and Protect areas. Local jurisdiction approvals will also be obtained prior to construction. A minimum 25-foot of buffer will be left in place to minimize any effects of the construction on existing wetlands in the area (Figure 3).

A Stormwater Pollution and Prevention Plan (SWPPP) will be prepared for the mitigation construction activities. Appropriate erosion and sediment control best management practices (BMPs) will be installed according to the SWPPP. The Bank site will also be covered under the National Pollution Discharge Elimination System (NPDES) General Construction Permit approved for construction.

Construction

During construction, the Bank Sponsor will clear the construction site, stockpile usable top soil on-site, excavate and haul overburden off-site according to the grading plan, reduce the grade using tracked excavators, scrapers and dump trucks. The Bank Sponsor will plant the newly constructed wetland areas as described in the planting plan. No fill material will be discharged into waters of the US; therefore a Department of the Army permit will not be required to construct the mitigation Bank.

Access for construction will be via established roads on the perimeter of the site.

Post Construction

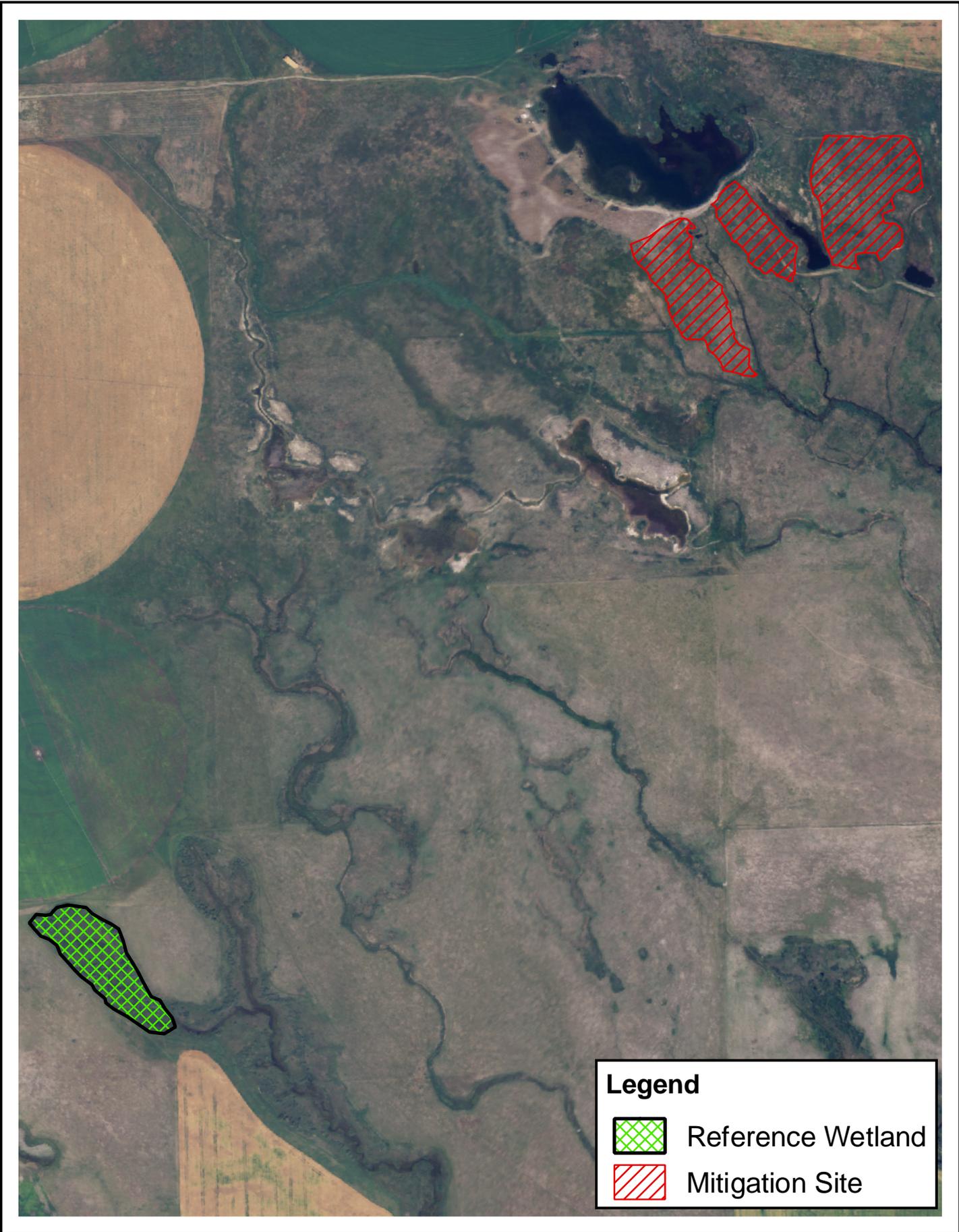
The Bank Sponsor will remove all construction fencing and temporary erosion control materials, clean the job site, and regrade and seed impacted areas outside of construction site.

The Bank Sponsor will install permanent erosion and sedimentation control measures and standard BMPs to ensure no stormwater runoff leaves the site.

The Bank Sponsor will install post construction signage and appropriate post construction fencing to protect the Bank site.

8.6 Reference Wetlands

A reference site will be used to provide information for vegetation performance standards if adaptive management is needed. The reference site has been selected from an area in the near vicinity of the Bank site that contains emergent and scrub shrub wetland communities. The reference wetland is shown in Figure 6.



Legend

-  Reference Wetland
-  Mitigation Site

0 320 640 1,280 Feet 

Figure 6: Reference Wetland Area
Grove Creek Mitigation Bank

9. MAINTENANCE PLAN

The Bank Sponsor will determine and implement maintenance activities annually. The maintenance period for each phase of improvements will extend from the completion of construction through four full growing seasons. Typical maintenance activities may include, but not limited to, the following:

- Weeding
- Pruning
- Fertilization
- Corrective grading
- Fence repair
- Installation of wildlife exclusion structures
- Replanting or reseeding of vegetation

The annual monitoring report will notify the Interagency Review Team (IRT) of annual maintenance activities at the Bank site.

10. PERFORMANCE STANDARDS

The following performance standards will be used to assess whether the mitigation bank is achieving its objectives.

- *Wetland Delineation*: The mitigation site shall meet the wetland parameters described in the 1987 Corps of Engineers Wetlands Delineation Manual and the Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region. Actual credits available will be determined by the acreage of wetland that meets the wetland parameters. One acre equals one credit.
- *Hydrology*: The wetland community type will exhibit a self-sustaining wetland hydrology, which meets the minimum requirements for saturation, within 12 inches of the ground surface for at least 14 consecutive days during the growing season. The PEM wetland hydrology will likely be seasonally flooded and will remain saturated nearly year-round. Both the PSS and PFO wetland hydrology will likely be seasonally flooded. Evidence of wetland hydrology must be demonstrated through direct observation of inundation and/or saturated soils during the growing season or through observation of indicators of soil saturation and/or inundation during the growing season.
- *Vegetation*:
 - Non-native, volunteer wetland species will not comprise more than 20% of the total cover. Noxious weeds listed on *Idaho's 64 Noxious Weeds List* (Idaho Department of Agriculture 2010), shall cover less than 10% of the established Bank sites in the third year following completion of construction and planting activities. As part of project implementation the Bank sponsor shall develop a noxious weed control plan and seek approval from the IRT.
 - Established PEM wetlands shall achieve at least 80 percent total aerial cover (of which no more than 30 percent shall be from shrubs and trees combined), shall contain at least five native emergent wetland species, and shall not have any application of supplemental water for at least 3 years. PEM wetlands shall meet the criteria described in the *Classification of Wetlands and Deepwater Habitats of the United States* by Mr. Lewis M. Cowardin, 1979, Washington, D.C. 20240, 131 pages (Cowardin).

- Established PSS wetlands shall achieve at least 80 percent total aerial cover, shall achieve at least 30 percent aerial cover from shrubs (with any trees providing less than 20 percent aerial cover), shall contain at least two native emergent wetland species and two native shrub wetland species, and shall not have any application of supplemental water for at least 3 years. PSS wetlands shall meet the criteria described in Cowardin 1979.
- Established PFO wetlands shall achieve at least 80 percent total aerial cover; shall achieve at least 30 percent aerial cover of trees; shall contain at least two native emergent wetland species, two native shrub wetland species, and one native tree wetland species; and shall not have any application of supplemental water for at least 5 years. PFO wetlands shall meet the criteria described in Cowardin 1979.
- *Soils*: Evidence of an aquic moisture regime, inferred through the presence of surface or near-surface groundwater.

Any modifications to these performance standards shall be approved by the IRT.

11. MONITORING REQUIREMENTS

Annual wetland mitigation monitoring will be conducted by the Bank Sponsor beginning in the first full growing season following planting. Monitoring will continue through the fifth full growing season for emergent and scrub-shrub wetlands and the tenth full growing season for forested wetlands or until performance standards are met whichever is later. Once performance standards are met, monitoring will continue until all credits for the Grove Creek Mitigation Bank site are sold. Monitoring reports will be submitted to the IRT by December 31 following the evaluated growing season. Monitoring reports will:

- Document actual construction activities conducted (first season report only)
- Document mitigation measures completed during the monitoring period
- Document the hydrology and vegetative plantings and conditions
- Document compliance with the mitigation performance standards
- Document the pre-established, baseline reference points with a photographic record
- Map permanent photograph and sampling points
- Identify any failures of mitigation performance standards and describe measure(s) necessary to bring the site into compliance with the mitigation plan.
- Document the maintenance activities conducted.
- Include photographs taken at fixed reference points. (These will be submitted to the IRT in both digital and hard copy formats.)

Monitoring reports conducted after performance standards are met will consist of a brief summary to document site conditions, continued compliance with performance standards, and any problems and proposed adaptive management solutions.

12. LONG-TERM MANAGEMENT PLAN

Idaho Foundation for Parks and Lands will act as the long-term steward of the Bank site after it has reached performance standards. The O’Gara Family Trust property will ensure long-term protection for the Grove Creek Bank Site by executing a Compensatory Mitigation Easement. Idaho Foundation for Parks and Lands will assume responsibility for the Bank and will protect, monitor, and maintain the improved sites once performance standards are met and certified by the Corps.

13. ADAPTIVE MANAGEMENT PLAN

During the maintenance/monitoring period, the Bank Sponsor will implement adaptive management strategies to ensure that the Bank site meets all of the milestone achievements. If the Bank Sponsor is not adequately addressing corrective actions through the annual maintenance work, the IRT can request in writing that the Bank Sponsor prepare a remedial plan. The Bank Sponsor shall prepare the remedial plan, submit it to the IRT for their review, and implement the plan according to a schedule agreed to with the IRT.

It is appropriate for adaptive management plans to consider potential natural disasters that may occur, to the extent they can be reasonably foreseen. The Banks Sponsor will provide alternative compensatory mitigation if the mitigation project fails as a result of a natural disaster that occurs before the performance standards have been met. The extent of the replacement will be determined by the IRT in the event alternative compensatory mitigation is required.

After performance standards are met, the Bank Sponsor will not be responsible for remediating damages that occur at the individual bank sites that are attributable to natural catastrophes such as flood, drought, disease, regional pest infestation, etc. that are beyond the design parameters and or control of the Bank Sponsor.

14. FINANCIAL ASSURANCES

14.1 Planting Bond

Bank sponsor will provide the IRT team with a replanting estimate. A planting bond for that estimate will be held by the Idaho Foundation of Parks for one year.

14.2 Performance

The Bank Sponsor will set up an account, at a federally insured financial institution, dedicated solely to fund routine maintenance and adaptive management. The account shall be funded from credits sold from the Initial Credit milestone. Upon execution of the sale of those pre-construction credits, 25% of the value received will be deposited into the account. The 25% is based on the recent cost of implementing adaptive management on existing wetland mitigation projects. This percentage has been demonstrated to allow for sufficient resources to implement a successful project in the event adaptive management is required. The Sponsor shall not close the account until the Corps determines performance standards have been met.

In the event of default by the Bank Sponsor during performance monitoring and maintenance, the Corps shall identify a third party to assume the remaining performance monitoring and maintenance responsibilities. Upon designation of a third party by the Corps, the Sponsor shall transfer the remaining balance in the account created under this section to the third party. The Bank Sponsor, however, shall remain liable for their responsibilities under this mitigation plan until released of liability. Any funds remaining with a third party after performance objectives are met shall be returned to the Bank Sponsor.

14.3 Long Term Maintenance

The Bank Sponsor will, after approval by the IRT, transfer the long term maintenance to Idaho Foundation for Parks and Lands once all performance standards are met and certified by the Corps. Idaho Foundation for Parks and Lands will provide long term maintenance for the mitigation bank. An agreement between Idaho Foundation for Parks and Lands Sponsor regarding transfer of long term maintenance responsibilities will be provided to the IRT.

The Bank Sponsor remains responsible for all long-term management of Bank site, unless and until the Bank site has been transferred as authorized in this section. Where all performance standards have been met, credit sales are complete, and transfer of long-term management has been effected, the District

Engineer, or his/her designee, shall issue written certification to the Bank Sponsor releasing it from further obligation/liability under this mitigation plan.

15. REFERENCES

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Appendix A

Affidavit of Legal Interest

The affidavit of legal interest document will be provided at a later date

Appendix B

Bank Specific Ledger

TheBank Specific Ledger will be provided at a later date

Appendix C

Functions and Values Analyses

Table 1. Functions and Values Analyses for Proposed Wetlands in the Grove Creek Mitigation Bank Site

	Rating (L,M,H)	Functional	Possible Functional
		Points	Points
Listed / Proposed T&E Species	L	0.3	1
ID National Heritage Program Species Habitat	L	0.3	1
General Wildlife Habitat	E	1	1
General Fish Aquatic Habitat	NA	0	NA
Flood Attenuation	NA	0	NA
Short and Long term Surface Water Storage	NA	0	NA
Sediment / Nutrient / Toxicant Removal	NA	0	NA
Sediment / Shoreline Stabilization	NA	0	NA
Production Export / Food Chain Support	M	0.6	1
Groundwater Discharge / Recharge	M	0.7	1
Uniqueness	L	0.3	1
Recreation / Education Potential	NA	0	NA
Total		3.2	6
Percentage		53.3	
Wetland Category		II	

Table 2. Summary of Proposed Functions and Values Grove Creek Mitigation Bank Site

Variable	Rating	Comment
Listed/proposed threatened and endangered species habitat	L	Observed incidental habitat for wolf, suspected that incidental habitat for yellow-billed cuckoo may exist but no documentation of the cuckoo exist.
Species of concern	L	No identified species of concern
General wildlife habitat	E	Wetlands will provide high structural diversity and with low disturbance.
General fish/aquatic habitat	NA	No fish habitat is present on-site.
Flood attenuation	NA	These wetlands are subject to overbank flooding and has no or restricted outlet.
Short- and long-term water storage	NA	These wetlands will not flood or pond from overbank flows.
Sediment/nutrient/ Toxicant removal	NA	The wetlands will not subject to sediments, nutrients or toxicants via surface water or groundwater.
Sediment/shoreline stabilization	NA	The wetlands will not occur on or within the banks of a stream or other drainages.
Production export/food chain support	M	The wetland will be 14.12 acres and will provide biomass production for food/nutrient sources to the food chain.
Groundwater discharge/recharge	M	Seasonal water will be present, recharge will occur during the wet seasons.
Uniqueness	L	Although the site is relatively common, but has a high structural diversity.
Recreational and educational potential	NA	Little to no education or recreation potential in the existing area.
Overall Rating	Category II	
Notes: PEM = palustrine emergent; PSS = palustrine scrub-shrub; PFO = palustrine forested.		