WETLAND MITIGATION PLAN

Salmon Meadows Mitigation Bank

Adams County, Idaho

Prepared for

United States Army Corps of Engineers

Prepared by

The Wetlands Group, LLC
100 S Star Rd, Suite 112

Star, Idaho 83669

August 18, 2014

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1. EXECUTIVE SUMMARY

This mitigation plan for the Salmon Meadows Mitigation Bank (Bank) site will create 16 acres of wetlands. 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 and approved by the U.S. Army Corps of Engineers (Corps).

The Bank site is located in a Hydraulic Unit Code (HUC 17060210 Little Salmon) that contains historical wetland impacts. The Bank site will be able to successfully replace wetland acres to compensate for future permitted impacts to wetlands in the primary service area which includes HUC 17060210 (Little Salmon), HUC 17050124 (Weiser), HUC 17050123 (North Fork Payette) and the Lower Salmon HUC 17060209 as well as the secondary service areas which include HUC 17050122 (Payette), HUC 17050121 (Middle Fork of Payette), HUC 17060208 (South Fork Salmon), HUC 17060207 (Middle Fork of Salmon-Chamberlain), HUC 17060101 (Hells Canyon) and HUC 17050201 (Brownlee Reservoir).

High-quality ecological characteristics of the created wetlands will provide excellent functions and services 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 along the Little Salmon River and Big Creek can create broadened ecological value. 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 focuses on locations with previously drained or degraded wetlands, disturbed areas, wetlands and floodplains that have been converted to agricultural uses. This watershed approach considers how the type and location of the compensatory mitigation project will provide desired aquatic resources and will continue to function over time in a changing landscape.

2. INTRODUCTION/PROJECT DESCRIPTION

The Salmon Meadows Mitigation Bank will provide wetland credits to compensate for the loss of aquatic resources and wetland habitat. The Bank site is located in west central Idaho, 0.3 miles southwest of New Meadows, Idaho, and encompasses the confluence of the Little Salmon River and Big Creek, in Adams County, Idaho (Figures 1 and 2). The site is bounded on the north by abandoned railroad track, on the east by the South End Road roadway, on the south by pastureland, and on the west by agricultural land. There are no structures present on the site.

The Salmon Meadows Mitigation Bank project area is 16 acres of heavily grazed pastureland which abuts the Little Salmon River and Big Creek riparian zone. This mitigation plan consists of creating 10 acres of palustrine scrub shrub community (PSS) and 6 acres of palustrine forest overstory (PFO) on the bank areas. Existing wetlands in the project area will not be impacted.

The Little Salmon River flows through the project area south to north and Big Creek flows into the Little Salmon River in the central portion of the site. These streams provide for close proximity to groundwater and diffuse surface hydrology for the site. The site slopes slightly towards the river with an elevation ranging from 3862 ft above sea level at the confluence of the Little Salmon River and Big Creek to 3868 ft at the road to the east and 3871 ft on the western edge of the site. Due to the site's potential to successfully create self-sustaining riparian wetland complexes and its location in the watershed, it was selected for this project.

Project location information:

0.3 miles southwest of New Meadows, in Adams County, Idaho

T 19 N, R 1 E, Section 23

Hydrologic unit 17060210 (Little Salmon)

Latitude/Longitude 44.964083 N and 116.293825 W

UTM: Zone 11 555692E 4979203N (WGS84/NAD83)

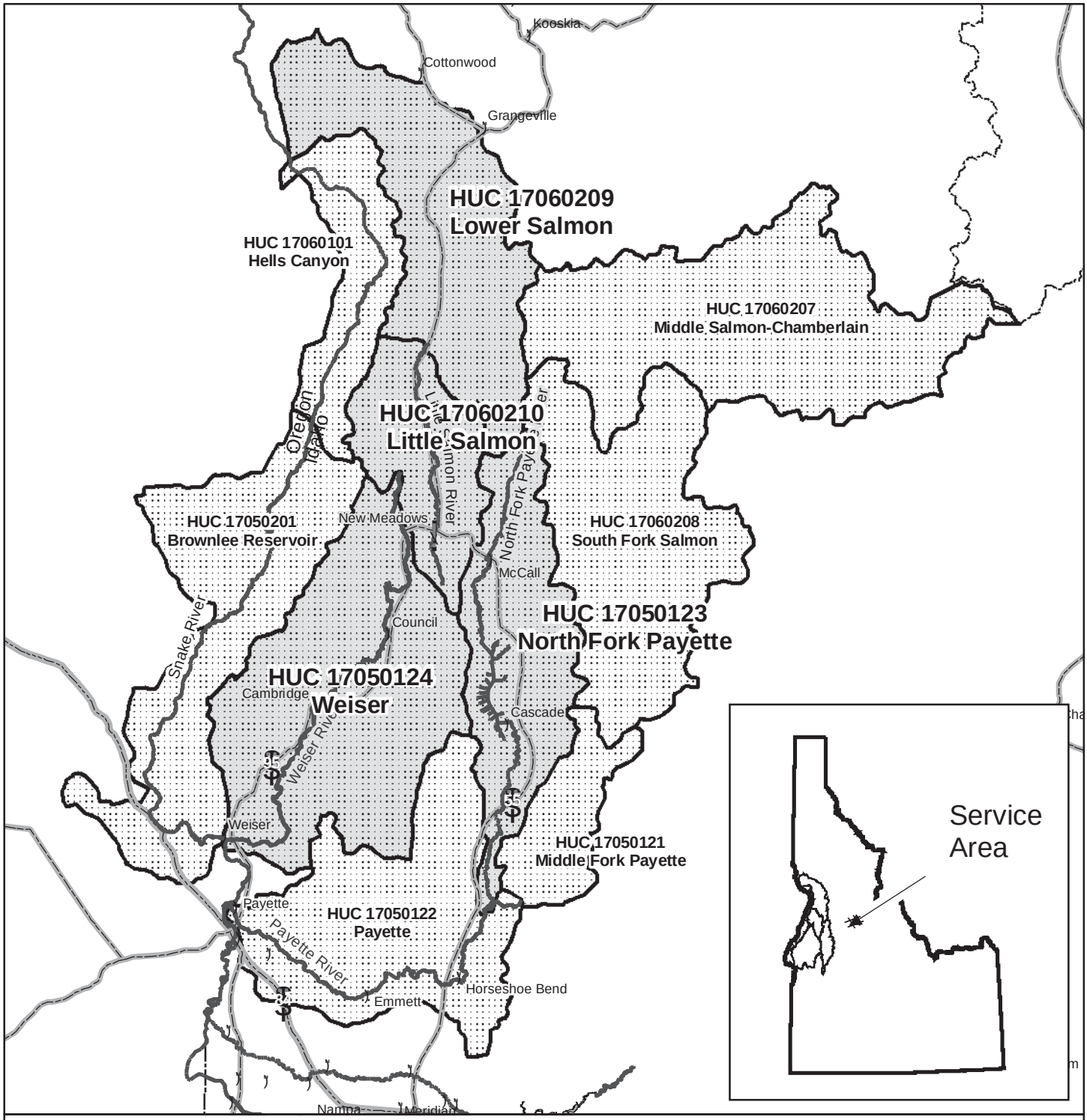

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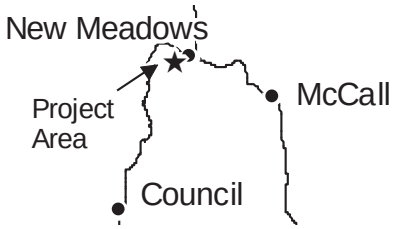
Figure 1
Service Area Map

Salmon Meadows
Mitigation Bank

Project Name:
Waterbody: Weiser River
River Mile:
Location: Adams County, Idaho
Applicant: The Wetlands Group, LLC.
Data:
Sheet:

CITY, COUNTY, STATE,
LOCATED IN SECTION 23,
T.19.N., R.01.E.



U.S. Geological Survey
New Meadows NE
Quadrangle

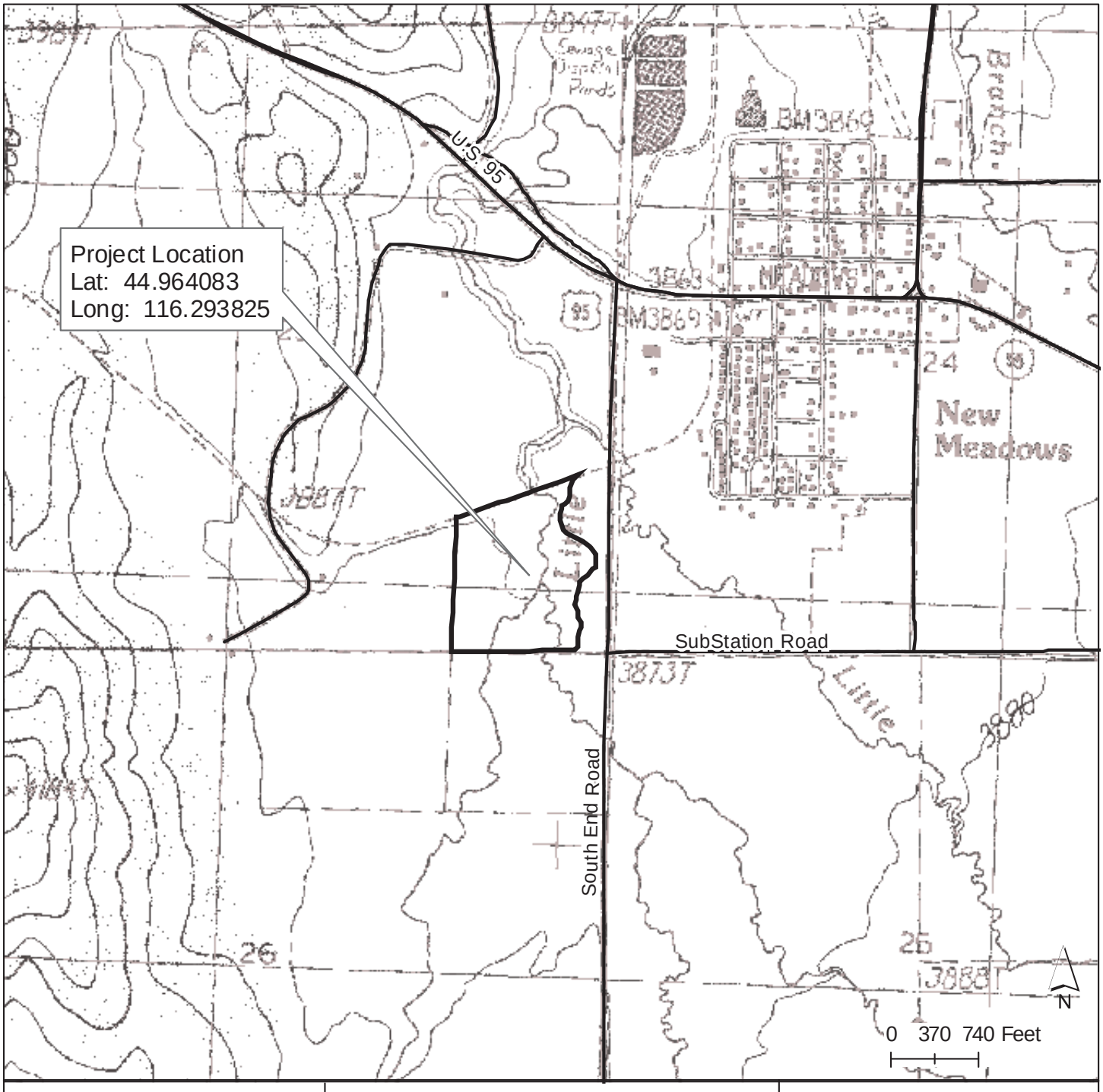


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Figure 2: Site Location Map

Salmon Meadows
Mitigation Bank

NNW No:
Waterbody: Little Salmon River
River Mile:
Location: New Meadows, Idaho
Applicant: The Wetlands Group
Sheet
Date:

3. MITIGATION GOALS AND OBJECTIVES

3.1 Total Wetland Acreage

The overall mitigation bank plan goal is to construct a 16 acre wetland bank by creating wetland areas from uplands as shown in Figure 3. This will be accomplished by constructing PSS and PFO wetlands. The constructed site will ultimately have a greater diversity of habitat and plant species than the existing pastureland. The new wetland areas will blend with the existing wetlands abutting the Little Salmon River and Big Creek and produce a biologically diverse site. The newly established wetland community will add riparian habitat that was historically along the Little Salmon River corridor.

3.2 Goals for Hydrologic Conditions

The goal is to create areas at an elevation that establishes wetlands adjacent to the Little Salmon River and Big Creek in the project area. The grading plan will lower ground surface elevations closer to the groundwater table and allow diffused surface water and floodwater to enter the site. This increase in hydrology will allow for the establishment of self-sustaining, high-value riparian wetlands.

4. SERVICE AREA

The service area of a bank is the designated area wherein a bank can be reasonably 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 8-digit Hydrologic Unit Code (HUC) 17060210, HUC 17050123, HUC 17050124 and HUC 17060209.

The Little Salmon watershed, HUC 17060210, is located in central Idaho (Figure 1). Elevations in the 576 square mile drainage vary from less than 1800 feet near the town of Riggins, to 6280 feet off BlueBunch Ridge, and consists primarily of forested land and rangeland, with a small portion of pastureland. The Little Salmon River flows north for 50 miles through both Adams and Idaho counties, starting 10 miles south of New Meadows and ending at its confluence with the Main Salmon River at Riggins. Several major tributaries enter the Little Salmon River at the southern end of the basin including Mud Creek, Big Creek and Goose Creek.

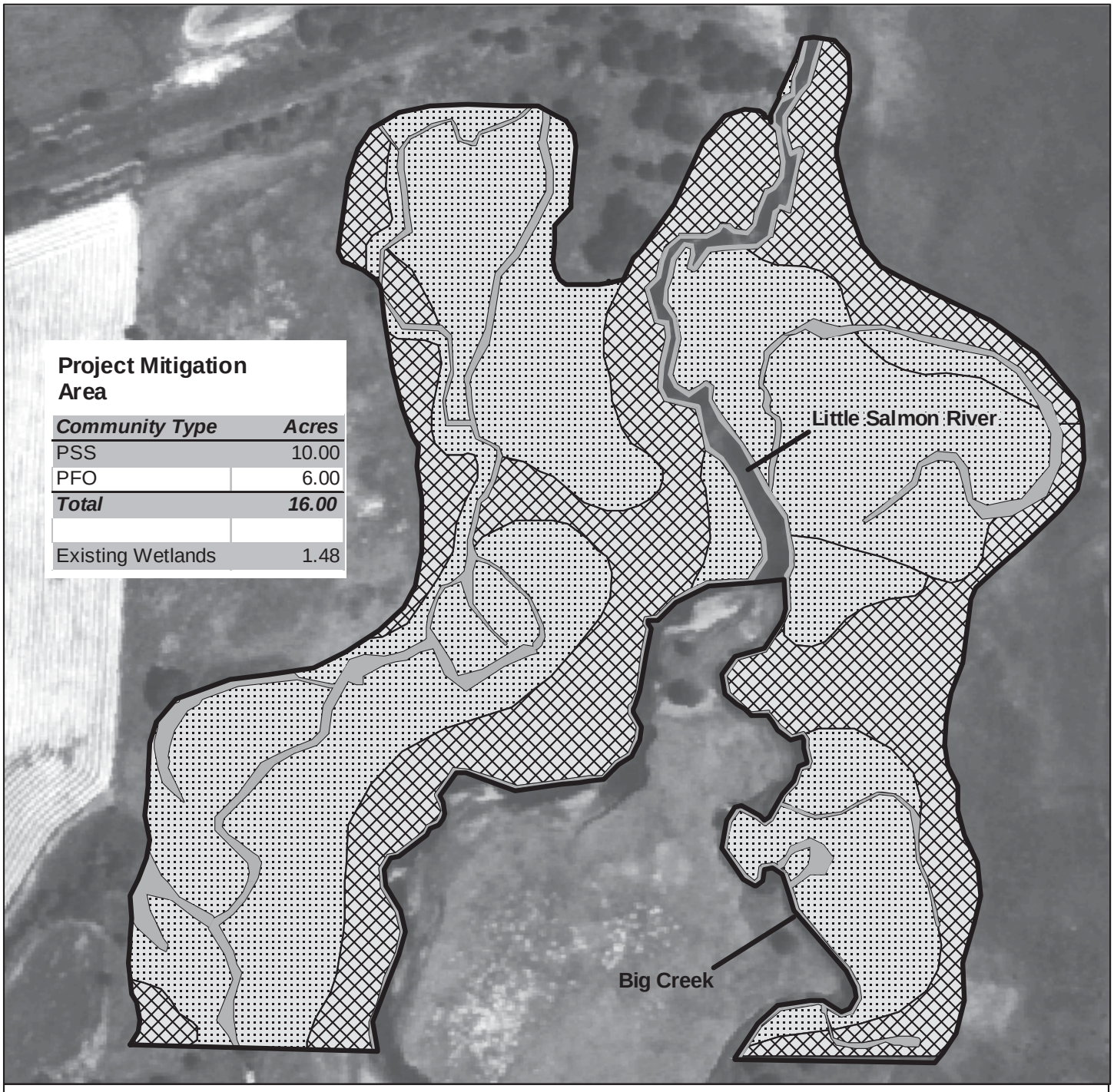
The Weiser watershed, HUC 17050124, is located in southwestern Idaho (Figure 1). Although elevations in the 1660 square mile drainage vary from 8000 feet to as low as 2090 feet, the watershed primarily consists of low rolling foothills that are dissected by many small streams. The Weiser River flows for 112 miles through Adams and Washington counties including the cities of Council and Weiser, Idaho. The watershed also drains portions of Gem, Payette and Boise counties. The river flows in a southwesterly direction from upper Adams County to its confluence with the Snake River near Weiser, Idaho. Major tributaries include (but are not limited to) Crane Creek, Little

Weiser River, Middle Fork Weiser River, East Fork Weiser River, Mann Creek, Keithly Creek, Pine Creek, Rush Creek, Hornet Creek, and the West Fork Weiser River.

The North Fork Payette, HUC 17050123, is located in south-central Idaho in both Valley and Boise counties. (Figure 1). The watershed drains approximately 914 square miles dominated by forested land, scrub/shrub, and grasslands. The HUC includes all 34 miles of North Fork Payette River including Cascade Reservoir and Payette Lake as well as Upper Payette Lake, and runs by the towns of Smiths Ferry, Cascade, and McCall. The North Fork Payette River flows in a southerly direction from the mountains above Upper Payette Lake to its confluence with the South Fork Payette River near Banks, Idaho where it turns into the Main Payette River. Major tributaries include (but are not limited to) Lake Fork, Gold Fork River, Big Creek, and Clear Creek.

The Lower Salmon, HUC 17060209, is located in west-central Idaho in Idaho County (Figure 1). The Lower Salmon River Subbasin is comprised of 65 water bodies located in west central Idaho and includes the Salmon River from its mouth to French Creek. The subbasin encompasses approximately 794,000 acres, draining into the Snake River at river mile 188.2. Private lands comprise the majority of the subbasin, followed by the United States Forest Service (USFS), Bureau of Land Management (BLM), Idaho Department of Fish and Game (IDFG), and Idaho Department of Lands (IDL). Nine tributaries to the lower Salmon River Subbasin were listed as not meeting state water quality standards in Section 5 of Idaho's 2008 Integrated Report. They are Billy Creek, Cottonwood Creek, Allison Creek, Rice Creek, Rock Creek, Graves Creek, Johns Creek, Deep Creek, and Deer Creek.

The secondary service areas HUC include; Payette HUC 17050122, Middle Fork of Payette HUC 17050121, South Fork Salmon HUC 17060208, Middle Fork of Salmon-Chamberlain HUC 17060207, Hells Canyon HUC 17060101and Brownlee Reservoir HUC 17050201 as shown in Figure 1.



Legend

Mitigation Area
Existing Wetlands
PFO
PSS

N

0 70 140 Feet

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Figure 3: Mitigation Site Plan Map

Salmon Meadows Mitigation Bank

NNW No:
Waterbody: Little Salmon River
River Mile:
Location: New Meadows, Idaho
Applicant: The Wetlands Group
Sheet
Date:

5. BANK SITE SELECTION

The factors, which are considered in the site selection process, include the upper Little Salmon River watershed needs and the practicality of establishing ecologically self-sustaining aquatic resources at the Salmon Meadows Wetland Mitigation Bank.

5.1 Watershed Approach

The Little Salmon River from Big Creek to Round Valley Creek was found to have beneficial uses impaired by temperature, nutrients, and bacteria. TMDLs were developed for these pollutants. Potential natural vegetation (shade) was used as a surrogate for temperature because this would achieve natural background conditions. The Little Salmon River from Vicks Creek to Big Creek was found to have beneficial uses impaired by temperature. A TMDL was developed for temperature (IDEQ 2014).

The riparian vegetation along the Little Salmon River is generally dominated by black cottonwood (*Populus trichocarpa*), willows (*Salix sp*.), red-osier dogwood (*Cornus stolonifera*), syringa (*Philadelphus lewisii*), horsetail (*Equisetum sp.),* black hawthorne (*Crataegus douglasii*), and alder (*Alnus sp.).* Along the lower reaches of the Little Salmon River, willow, Douglas hackberry (*Celtis douglasii*), and poison ivy (*Rhus radicans*) are common. The meadow riparian areas associated with the upper valley are commonly dominated by willows and sedges (*Carex sp*.). Many of the tributary streams have a narrow riparian vegetation zone confined by steep canyon walls. Common riparian species include red-osier dogwood, syringa, willows, alder, water birch, ocean spray, and blue elderberry. It is often common for conifer species to occur in the riparian areas, the higher elevation riparian areas may have grand fir, Engelmann spruce, subalpine fir, and lodgepole pine. The lower elevation riparian areas may have Douglas fir, ponderosa pine and grand fir (IDEQ 2014).

The current Meadows Valley (New Meadows area) riparian vegetation differs from what was there historically. The streams were originally shaded by large cottonwoods and willows. Government farm programs in the 1950s and 1960s encouraged the reduction of shrubs and willows to increase cattle grazing capacity. Sinuous sections were channelized to expedite water movement and drainage. These channel alterations were common, and the cost of alteration was at times subsidized by the government, to reduce wetlands unsuitable for grazing and also for flood control. Some remnants of historic riparian vegetation do exist and a Wetlands Reserve Program is reclaiming some wetland areas IDEQ 2014).

Creation of PSS and PFO communities on the bank site will improve the local watershed by providing shade and reducing erosion and nutrient input to the Little Salmon River and Big Creek.

5.2 Site Selection

The Bank site was selected to provide valuable aquatic resources that are being lost in the Little Salmon River and adjacent watersheds. Besides the availability of the land adjacent to the river, the presence of existing wetlands and riparian communities makes mitigation site ecologically suitable for the creation of wetland communities. Creating wetland communities can greatly increase the wetland function and services on a reach and watershed scale. The following site-specific criteria were used to select this site as a mitigation bank:

- 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 and riparian plants.
- There is a potential for converting less desirable cover types and bare ground to those that provide higher quality vegetation, riparian cover, and wildlife habitat.
- The proposed area will be undeveloped and will not be directly or indirectly affected by its proximity to roads or development.
- There is potential for preserving and protecting valuable open space along the Little Salmon River riparian corridor.

Following the initial review by the Interagency Review Team, the site was determined to meet the selection criteria for compensatory mitigation because it is ecologically suitable to provide the desired wetland and aquatic resource functions.

6. BASELINE INFORMATION

The Salmon Meadows Mitigation Bank project area is 31.3 acres predominantly covered by pastureland and the riparian communities along the Little Salmon River and Big Creek. The wetlands will be constructed in upland areas and will provide open space and habitat features including shrub and forested riparian wetland areas.

It's possible that uplands in the project area were once considered wetlands, because the government historically encouraged channel alteration and wetland reduction as seen throughout the valley (see Section 5.1). Some of these current upland areas are areas that could be considered for wetland restoration. But due to the lack of detailed information on historic wetlands in the area, this report will consider all constructed wetlands in the project area as created wetlands. The existing wetlands on site will not be enhanced.

6.1 Existing Wetlands

Five wetlands, 4 PEM wetland communities and 1 PSS community were identified in the project area. W-1 is the PEM wetland located on the banks of the Little Salmon and Big Creek, W-2, W-3 and W-4 are located along a slough and a drainage swale complex on the west side of the Little Salmon River. W-2 and W-3 are PEM wetlands and W-4 is a

PSS community. W-5 is a PEM community located in an area where irrigation runoff water periodically collects during the summer months.

The emergent wetland communities are dominated by sedges (*Carex sp*) and reed canarygrass *(Phalaris arundinacea*). The PSS community is dominated by willows (*Salix sp*). Adjacent upland communities in the project area are on benches above the wetland areas. The upland communities are generally dominated by pasture grasses and white clover (*Trifolium repens*). The shrub overstory, when present includes a black hawthorne (*Crataegus douglasii*). All areas of the bank site have been heavily grazed. The wetland communities and areas investigated as possible wetlands are described further in the wetland delineation provided in Appendix A.

The Montana Department of Transportation's (MDT) Wetland Assessment Method (Berglund 2008) was used to assess existing and created wetland functions and values for wetlands in the Bank. Because this assessment method uses the term "values" instead of "services", when discussing the assessment method the term "values" will be used. Throughout the remainder of this document the term "services" will be used as defined in *Compensatory Mitigation for Losses of Aquatic Resources; Final Rule* (33 CFR Parts 325 and 332 and 40 CFR Part 230), April 10, 2008. The assessment method considers 12 functions and values variables, it rates each variable as low, moderate, or high and gives an overall rating from Category I to Category IV. Category I wetlands have the highest function and value and Category IV the lowest. The MDT assessment rated the existing project area wetlands associated with the riparian zone of the Little Salmon River and Big Creek as, Wetland 1, as Category III wetlands and the remaining Wetlands 2, 3, 4 and 5 as Category IV wetlands. The functions and values assessments for existing wetlands are presented in Appendix B.

The functions and values of the existing wetlands onsite are limited by disturbed habitat, lack of structural diversity and low flood retention, water storage and sediment retention. These wetlands provide low wildlife habitat due to nearby agricultural practices and limited size and structural diversity. The wetlands store some seasonal and intermittent runoff. (See Appendix B).

6.2 Topography

The site consists of a pasture that is relatively flat, sloping towards the Little Salmon River and Big Creek in the center of the site. Elevations on site range from 3871 to 3866 feet above mean sea level.

6.3 Hydrology

The Bank site is located in the Little Salmon River watershed. Both the Little Salmon River and Big Creek flow through this area unchecked by dams and are subject to fluctuations resulting from heavy rains and spring runoff. The bank site is located within the Little Salmon River and Big Creek floodplains (IDWR 2013).

The primary sources of hydrology in the project area are the high groundwater table associated with the Little Salmon River and Big Creek, seasonal flooding and irrigation used in the project area. The Little Salmon River flows south to north through the site and exits the north end of the site under the old railroad bridge. Big Creeks enters the site

from the south and flows north until its confluence with the Little Salmon River in the central portion of the site (Figure 2).

The Bank site is located adjacent to the Little Salmon River and Big Creek and is influenced by their surface and subsurface flows. Portions of the existing wetlands in the project area flood during high flows. The wetlands are located in the topographic depressions on site and are supported by a high groundwater table associated with the Little Salmon River during the spring months.

6.4 Soils

The soils in the project area are primarily very deep, poorly drained soils that formed in alluvium from glacial outwash located on stream bottoms of outwash terraces and alluvial fans. Soils at the bank site have been mapped and are recorded in the NRCS *Web Soil Survey of Adams-Washington Area, Parts of Adams and Washington Counties, Idaho* (NRCS 2013) and include Melton loam, 0-2% slope, Blackwell clay loam 0-5% slope and Sudpeak loam, 3-20% slope. All three soils are listed on the local hydric soils list.

Wetland soil characteristics identified in the project area during the field survey include; mucky soils, gleyed soils and a hydrogen sulfide odor. Erosion was evident throughout the site along Big Creek and the Little Salmon River. This was evidenced by steep banks that are slumping into the river (see Photographs in Wetland Delineation, Appendix A).

6.5 Vegetation

The vegetation on the Salmon Meadows Mitigation Bank site includes upland pasture, riparian wetlands along the Little Salmon River and Big Creek and wetlands associated with drainages and irrigation ditches and swales. The entire bank site is presently used for pasture and has been heavily grazed. The upland herbaceous communities are located on the benches above the riparian and wetland areas, and are generally dominated by pasture grasses and white clover (*Trifolium repens*). The shrub overstory, when present includes black hawthorne (*Crataegus douglasii*). Upland communities identified during the project survey are described in the wetlands delineation report in Appendix A.

The emergent wetland areas in the project area are dominated by sedges (*Carex sp*) and reed canarygrass *(Phalaris arundinacea*). The shrub strata, when present, include willows (Salix sp.). Wetland areas and wetland communities are described in the wetlands delineation report in Appendix A.

6.6 Proximity to Roads/Human Activity

This bank site is generally located away from public roads and human activity. The land is privately owned and surrounded by other privately owned agricultural parcels. South End Road provides access to the property. There are no buildings on the site.

6.7 Wildlife and Fish

The existing habitat in the Bank site is pasture land adjacent to the Little Salmon River and Big Creek riparian zones. During the site visit minimal wildlife was observed in the Bank site.

The Bank site is likely used as food source and incidental cover, it lacks high quality wildlife habitat provided by the riparian forests and wetlands nearby. Some fish habitat is present in the Little Salmon River and Big Creek, but most is degraded as exhibited by eroding banks and little instream structure.

6.8 Threatened and Endangered Species

Seven species are listed as proposed Threatened, Endangered, or Candidate Species by the U. S. Fish and Wildlife Service (USFWS) for Adams County: Greater sage grouse (*Centrocercus americanus*), Lynx (*Lynx Canadensis*), bull trout (*Salvelinus confluentus*), Northern Idaho Ground Squirrel (*Spermophilus brunneus brunneus*) Southern Idaho Ground Squirrel (*Spermophilus brunneus enemicus*), Wolverine(*Gulo gulo*) and white bark pine (Pinus *albicaulis*) (USFWS 2013). The Bank site has no documented species observations or existing habitat that would be used by any of the listed species. The project is anticipated to have no effect on any of the Threatened, Endangered, or Candidate Species listed by USFWS for Adams County.

6.9 Cultural Resources

There has been no cultural survey completed for this site. If any cultural or historic items are encountered during the development of the bank a cultural professional will be consulted prior to resuming the process.

6.10 Site Protection

A Compensatory Mitigation Easement will be obtained for site protection in perpetuity. The easement will be in place prior to release of credits. Additional details on long-term site protection are provided in Section 13. An affidavit of legal interest is included in Appendix D.

7. DETERMINATION OF CREDITS

The Bank will create approximately 16 acres, 10 acres of PSS wetlands and 6 acres of PFO wetlands. For created wetlands, 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 Salmon Meadows Mitigation Bank are shown in Table 1.

Table 1. Anticipated Credits for the Salmon Meadows Mitigation Bank.

Wetland Type	Acreage	Credits
PSS	10	10
PFO	6	6
Total		16

The actual credits generated by creation will be determined by calculating the wetland mitigation acreage that meets the parameters identified in the 1987 Corps of Engineers Wetlands Delineation Manual and the 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast Region (Version 2.0) and that meets the terms performance standards identified for the project. Credits will be released for sale as specified under credit release schedule (Section 5.2) in the umbrella mitigation banking instrument. A bank-specific crediting ledger has been included as Appendix E.

8. MITIGATION WORK PLAN

The mitigation work plan, described below, includes the construction of wetlands from areas that are currently uplands. No existing wetlands will be filled.

8.1 Proposed Mitigation Design

The design will include creating 16 acres of wetlands within the boundaries of the grading limits at the mitigation site (Figure 4). This will include constructing 10 acres of PSS and 6 acres of PFO (Figure 3). These wetland types represent the majority of those that historically occurred locally and within the ecoregion. The Bank site will be developed to provide greater vegetation diversity, and ultimately, greater overall wildlife species diversity throughout the site. Establishing the mitigation site will enhance the narrow wildlife corridor along the Little Salmon River and Big Creek.

The MDT wetland assessment method estimates that wetland construction in the Bank site will create Category II wetlands providing greater structural diversity and areas for cottonwood forests along the Little Salmon River and Big Creek. These created Category II wetlands are rated higher than the existing wetlands in the project area due to increased wildlife habitat, flood attenuation, short and long term surface water storage, shoreline stabilization and food chain support. See Appendix B for a summary of the functions and services analyses for the proposed wetlands.

8.2 Targeted Hydrology

Hydrology is essential for successful establishment of wetlands on the bank site. Lowering the elevation on site will take advantage of the diffused surface water flows and provide floodplain storage areas. In addition, lowering the elevation will increase the duration of inundation resulting from the high groundwater table in the area. These areas will have rise incrementally in elevation from the existing emergent wetlands to the shrub wetlands to the forested wetlands as shown in Figure 5.

The Bank Sponsor proposes to excavate the site to an elevation above the groundwater table where groundwater will saturate the soils and create conditions for a self-sustaining wetland. The proposed surface elevations are shown in the Grading Plan (Figure 4). Elevations shown in the grading plan are based on groundwater observations taken from the two existing shallow wells at locations shown in Appendix C, USGS streamflow data, topography data, aerial photographs, surface water observations and hydrophytic vegetation elevations from wetlands on and adjacent to the site. Proposed surface elevations are designed to take advantage of the existing topography at the Bank site.

No Water right for the establishment of wetlands at this site is required as diffused surface water will be utilized to sustain the wetlands (IDWR 2001 and 2003).

Legend

Project Area | PFO | PEM Elevations

Existing PEM | PSS

0 70 140 Feet

The Wetlands Group, LLC. 100 South Star Rd., Suite 112 Star, Idaho 83669 Office: (208) 375-5373	**Figure 4: Grading Plan Map** Salmon Meadows Mitigation Bank	NNW No: Waterbody: Little Salmon River River Mile: Location: New Meadows, Idaho Applicant: The Wetlands Group Sheet Date:

8.3 Targeted Soils

The soils in the project area are primarily very deep, poorly drained soils that formed in alluvium from glacial outwash located on stream bottoms of outwash terraces and alluvial fans. Wetland soils were identified in the project during the field survey in low areas that are subjected to high groundwater and flooding. Top soil and soils with high organic matter content that are encountered during site excavation will be stockpiled and used in the re-establishment of the site. These soils will be placed in areas where the grade has been reduced to provide hydrology from diffuse surface water and the high groundwater table. 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 approved SWPPP. The Bank site will be covered under the National Pollution Discharge Elimination System (NPDES) General Construction Permit approved for construction.

8.4 Planting Plans

The Bank will feature PSS and PFO wetlands. PSS wetlands will be dominated by native shrub species in areas that receive seasonal flooding or 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 wetlands communities are shown in Figure 3. A typical cross section of the mitigation bank site is shown in Figure 5.

Native wetland species typically found in wetlands along the Little Salmon River will be planted in the mitigation bank. Trees will be supplied as balled and burlapped, in containers, bare root or black cottonwoods as stakes. Shrubs will be supplied in containers or as bare-root plants. Willows and dogwood may be planted as stakes. Emergent wetland plants will be planted from containers, plugs, or seeded. Trees will typically be planted on 15-foot centers. Shrubs will be planted at a distance ranging from 3 to 5 feet apart. Herbaceous ground cover will be planted from 1 to 3 feet apart or broadcast seeded. 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.

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

Common Name	*Scientific Name*	Comments
Herbaceous Groundcover		
Tufted hairgrass	*Deschampsia cespitosa*	Seasonal flooding, FACW
Redtop	*Agrostis alba*	Seasonally saturated, FAC
Meadow foxtail	*Alopecurus pratensis*	Seasonal flooding, FACW
Meadow barley	*Hordeum jubatum*	Seasonally saturated, FAC
Nebraska sedge	*Carex nebrascensis*	Seasonally saturated, OBL
Beaked sedge	*Carex utriculata*	Seasonally saturated, OBL
Baltic rush	*Juncus balticus*	Seasonally saturated, FACW
PSS Community		
Alder	*Alnus incana*	Seasonal flooding, FACW
Red-osier dogwood	*Cornus stolonifera*	Seasonal flooding, FACW
Black cottonwood	*Populus trichocarpa*	Seasonal flooding, FAC
Pacific willow	*Salix lasiandra*	Seasonal flooding, FACW
Coyote willow	*Salix exigua*	Seasonal flooding , OBL
Yellow willow	*Salix lutea*	Seasonal flooding ,OBL
Willow sp.	*Salix sp*	Seasonal flooding, FACW
PFO Community		
Douglas hawthorne	*Crataegus douglasii*	Seasonally saturated to upland, FAC
Black cottonwood	*Populus trichocarpa*	Seasonal flooding, FAC
Golden Currant	*Ribes aureum*	Seasonally saturated to upland, FAC
Woods Rose	*Rosa woodsii*	Seasonally saturated to upland, FACU
Willows	*Salix spp*	Seasonal flooding ,OBL
Red-osier dogwood	*Cornus stolonifera*	Seasonal flooding, FACW
Pacific willow	*Salix lasiandra*	Seasonal flooding ,FACW

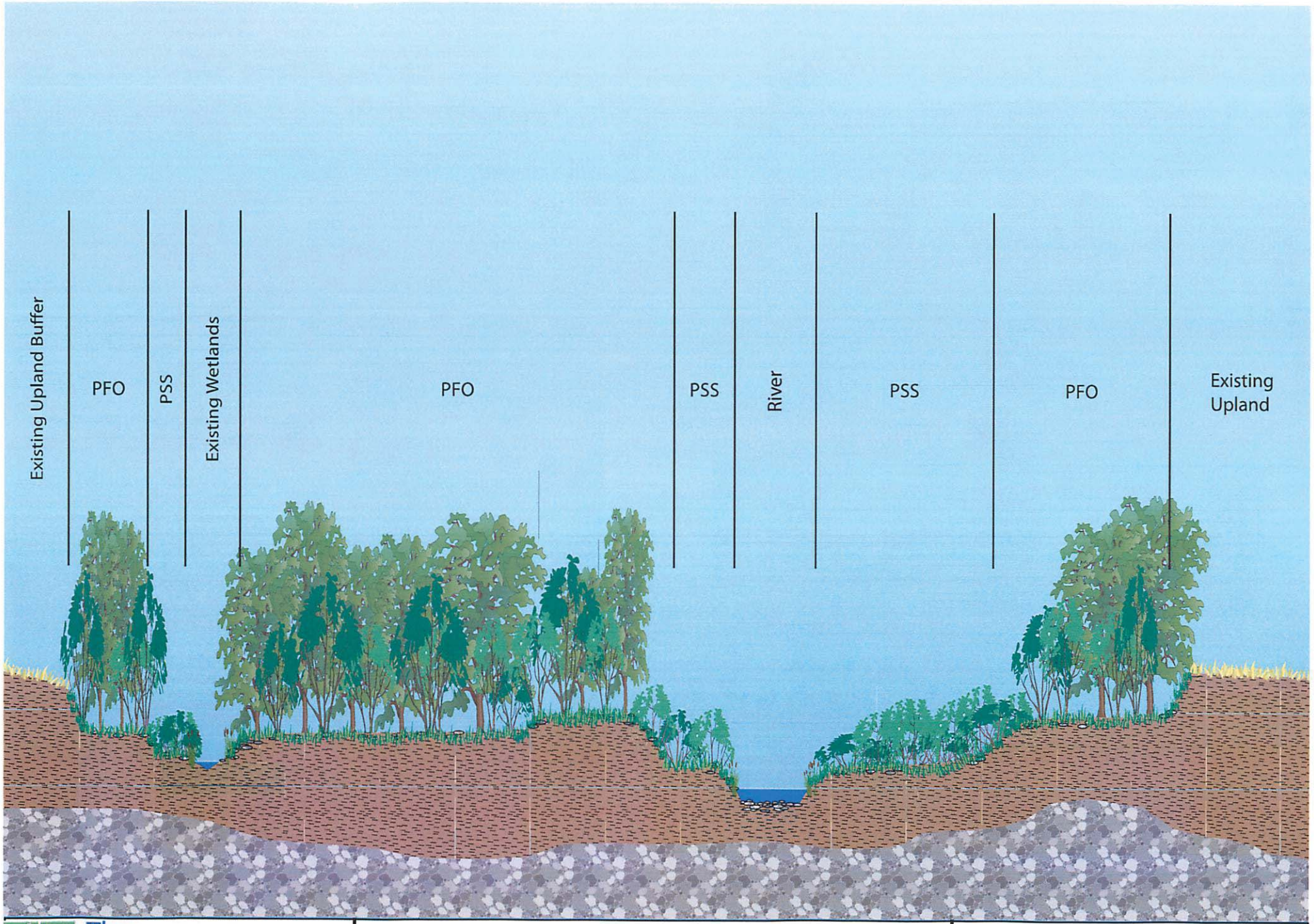

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Figure 5: Typical Cross Section
Salmon Meadows Mitigation Bank

After site construction is completed, a fence will be constructed and cattle will be excluded from the mitigation bank. Grazing will be not allowed in the project area to protect the establishing wetland plant communities. Non-native, volunteer wetland species will not comprise more than 20 percent of the total cover. Noxious weeds shall cover less than 10 percent of the 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, and construction entrance. The Bank Sponsor will also locate utilities, file the Notice of Intent for coverage under the NPDES General Construction Permit, and identify Retain and Protect areas (i.e., existing wetlands). Permits required by The Department of Army Corps of Engineers (Corps), Idaho Department of Water Resources (IDWR), and Idaho Department of Lands (IDL) will be acquired prior to construction.

Construction
During construction, the Bank Sponsor will clear the construction site, stockpile usable top soil and excavate according to the grading plan, reduce the grade using tracked excavators, scrapers, and dump trucks to blend new wetlands with existing wetlands. The Bank Sponsor will plant the newly constructed wetland areas as described in the planting plan.

Access for construction to the bank site will be via a construction entrance off of Substation Lane and South End Road on site. The heavy equipment staging area will be on the gravel pad located in the upland area adjacent to South End Road. There will be a temporary bridge installed to cross the river located just below the confluence of Big Creek and the Little Salmon River.

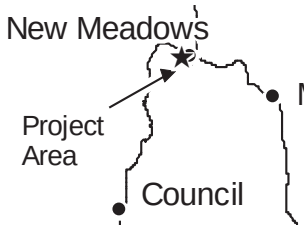
Post-construction
The Bank Sponsor will remove all construction fencing and temporary erosion control materials, clean the job site, and re-grade and seed impacted areas outside of the construction site.

The Bank Sponsor will install permanent erosion and sedimentation control measures and standard BMPs to ensure no sediment from 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 Wetland

The riparian area adjacent to the Little Salmon River 3 miles north of the project area was selected as a reference wetland. The area was identified as a reference wetland area because it includes established wetland characteristics (NWI 2014). Areas within the reference wetland site contain scrub-shrub and riparian forest communities that may be used as the vegetation performance standards if adaptive management is required. The location of the reference wetland is shown on Figure 6.

CITY, COUNTY, STATE
LOCATED IN SECTION 23,
T.19.N, R.01.W



U.S. Geological Survey
New Meadows NE
Quadrangle

REFERENCE
WETLANDS

Project Location
Lat: 44.637892
Long: 116.575975

U.S. 95

U.S. 95

Norris Ave.

S.H. 95

Substation Road

New Meadows

0 850 1,700 Feet

N

The Wetlands Group, LLC.
100 South Star Road, Suite 112
Star, Idaho 83669
Office: (208) 375-5373

Figure 6: Reference Wetland Map

Salmon Meadows
Mitigation Bank

NNW No:
Waterbody: Little Salmon River
River Mile:
Location: New Meadows, Idaho
Applicant: The Wetlands Group
Sheet
Date:

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 be 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 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast Region (Version 2.0). 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. 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 percent of the total cover. Noxious weeds shall cover less than 10 percent of the 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.

- Created PSS wetlands shall achieve at least 80 percent total areal cover, shall achieve at least 30 percent areal cover from shrubs (with any trees providing less than 20 percent areal 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 the Classification of Wetlands and Deepwater Habitats of the United States by Cowardin et al (1979).

- Created PFO wetlands shall achieve at least 80 percent total areal cover; shall achieve at least 30 percent areal 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 et al (1979).

- *Soils:* Evidence of an aquatic 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 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 Salmon Meadows Mitigation Bank site are sold. Monitoring reports will be submitted to the IRT by December 31 following the growing season evaluated. 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 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. Bank Sponsor can ensure long-term protection for the Salmon Meadows Mitigation Site by executing a Compensatory Mitigation Easement. Idaho Foundation for Parks and Lands will assume responsibility for the Bank site 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 Bank 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 Construction

The Bank Sponsor will obtain a performance bond or irrevocable letter of credit (ILOC) to ensure completion of the mitigation bank. The amount of the bond or ILOC shall be based on a written construction estimate, provided by the Bank Sponsor and approved by the IRT. The following requirements shall apply to the bond/ILOC as stated in section 230.93 (n) of the final mitigation rule:

- The bond or ILOC must state that the Corps stands as the sole third-party beneficiary, with full and final authority to determine if the principal has defaulted (in whole or in part) during construction of the mitigation areas;

- The Surety must be a company or financial institution that is in the business of issuing construction bonds or ILOCs and approved by the Corps;
- The bond or ILOC shall not be revoked or terminated without approval of the Corps; and
- The Corps shall have authority to allow the Surety to complete construction (as directed by the Corps) or require payment of construction funds by the Surety to a third party designated by the Corps to complete construction.

In the event of default by the Bank Sponsor during construction, the Corps, in coordination with the IRT, shall work with the Surety to determine the best way to complete construction.

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 percent of the value received will be deposited into the account. The 25 percent 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 Bank 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 Bank 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.

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