

APPENDIX D

DELINEATION OF WETLANDS AND OTHER WATERS

*Delineation of Wetlands and Other Waters for
McCall Airport Environmental Assessment*

Prepared for

City of McCall, Idaho

January 13, 2009

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A PROJECT PURPOSE AND DESCRIPTION

The purpose of the wetland study is to delineate potentially jurisdictional wetlands and waters that might be affected by an eastward shift of the taxiway to meet FAA standards for separation. For the purposes of this study, we assumed the alternative with the greatest shift (400 feet for Class C-III aircraft). The study area extends onto private pasture land beyond the boundary fence. Wetlands and waters on this private parcel were previously delineated by Secesh Engineering (Airport East Wetland Delineation, October 2007). The U.S. Army Corps of Engineers concurred with the findings of this report in a letter dated February 28, 2008. The mapping for the previously delineated wetlands has been incorporated into Figure 5, Wetland Map.

See Figure 1 (Vicinity Map) for an overview of the surrounding area. The study area is located in Township 18N, Range 3E, Section 21, Boise Meridian.

B DESCRIPTION OF STUDY AREA

The study area consists of the eastern portion of McCall Airport, from a line midway between the runway and taxiway to a point about 500 feet east of the runway centerline that includes a strip of the adjacent pasture.

The study area occupies a level, low-terrace landscape position within the North Fork Payette River valley. The river is to the west. A higher terrace lies to the east. The land on either side of the southern half of the airport is in grazing use.

The 16-34 runway and taxiway occupy the center of the airport property. An area of hangars and other light industrial buildings is located east of the taxiway. The main apron and base facilities are in the northeast corner of the airport. A Forest Service smoke-jumper base lies to the west of the runway.

The developed area of the City of McCall lies mostly to the north of the airport.

Irrigation ditches cross the airport from east to west in culverts, fed by the Stringer Ditch Irrigation Canal. Drainage is generally to the west-southwest toward the river. A small natural intermittent stream runs east to west just to the south of the hangar area. It enters a culvert and runs under the airport toward the river. A snow storage basin is located south of the main apron area. It is used to detain snowmelt. Excess water drains out of a stand pipe. A major drainage ditch runs along the length of the study area from just south of the hangar area, parallel to the taxiway. Culverts at various points drain excess water under the airport and toward the west. Parts of the irrigation system in the field to the east intersect with this drainage ditch. See Figure 5 for these connections and direction of flow.

Vegetation on the airport consists mainly of introduced grasses and weedy forbs, except in the drainage ditches, where vegetation is predominantly hydrophytic and consists of

sedges, rushes, a mixture of native and non-native grasses, and willows (see below for a more detailed description).

The Soil Survey of Valley County Area, Idaho (Natural Resources Conservation Service, 1981) maps and describes soils in the study area. The soils formed in coarse glacial outwash materials. Out of the 6 soil series found in the general area, Melton loam, which is likely to occur in channels, seeps and on low terraces, is a hydric soil. Gestrin loam and Donnel sandy loam are both hydric soils which are found as inclusions in other map units.

C PRECIPITATION DATA AND ANALYSIS

Daily precipitation totals were obtained from the National Weather Service's McCall, ID weather station. We accessed the Preliminary Local Climatology Data (F6) for the period from October 1 2007 to October 8, 2008, 2008 for daily and monthly precipitation totals. The table below presents these data.

Table 1-Monthly Precipitation Data for 2007-2008 Water Year Prior to Site Visit				
Month	Actual (in.)	Departure from Average (in.)	Cumulative Rainfall (in.)	Cumulative Departure from Average (in.)
October 2007	1.61	-0.11	1.61	-0.11
November 2007	2.71	-0.50	4.32	-0.61
December 2007	2.03	-1.42	6.35	-2.03
January 2008	3.16	-0.13	9.51	-2.16
February 2008	2.08	-0.84	11.59	-3.00
March 2008	1.79	-0.77	13.38	-3.77
April 2008	1.23	-0.84	14.61	-4.61
May 2008	1.29	-1.01	15.90	-5.62
June 2008	1.55	-0.48	17.45	-6.10
July 2008	0.21	-0.82	17.66	-6.92
August 2008	0.47	-0.58	18.13	-7.50
September 2008	0.87	-0.58	19.00	-8.08
October 2008 *	0.27	-0.18	19.27	-8.26
TOTALS	19.27 in.	-8.26 in.		

* Through end of site investigation, October 8. Departure from average is pro-rated.

Rainfall for the 2007-2008 water year, plus the week of October 1-8, 2008 had been 19.27 inches, or 8.26 inches below average, which was 70% of average for that period, according to the WETS table for the McCall weather station. Also according to the WETS table, there is a 30 percent chance that the period from October 1 through September 30 would receive less than 23.78 inches of rain or more than 29.36 inches. Thus, total rainfall for the water year to date had been well below the "normal range". Each month had experienced below average rainfall. The rainfall for the three months prior to the site investigation had been 0.21 inch for July (20.4% of normal), 0.47 inch for August (44.8% of normal), and 0.87 inch for September (60% of normal). Rainfall for

the 14 days prior to starting the site investigation had been 0.27 inch, of which 0.26 inch fell on October 4. There was no rainfall during the period of the field investigation.

D METHODS

Upon receiving a request to perform the work, we examined information provided by the City of McCall.

- Airport East Wetland Delineation Report, and Corps of Engineers letter of concurrence (February 27, 2008)
- Airport Layout Plan (Toothman-Orton Engineering Co., 2007) showing an earlier wetland delineation, verified by Corps of Engineers letter March 25, 1996, which is no longer valid (older than 5 years), and
- Maps showing three alternative alignments for the new taxiway in relation to the 2007 delineated wetlands.

The Airport East report included the following information:

- A vicinity map,
- The wetland map, and
- Data forms.

We also called Greg Martinez (U.S. Army Corps of Engineers Regulatory Project Manager, Boise) to discuss the previous delineation on February 15, 2008. The report was being reviewed at that time. He explained that all wetlands in that report are linked to the North Fork Payette River, and are therefore under Corps jurisdiction.

We conducted our site investigation on October 6-8, 2008. Data collected on-site at sample plots by WHPacific were recorded on the Routine Wetland Determination Data Form provided by the Corps of Engineers Western Mountains, Valleys and Coast Regional Supplement to the 1987 Wetland Delineation Manual. A total of 13 sample plots were examined within the study area (see Figure 5). See Appendix B for copies of the data forms.

We began by walking the site and establishing the direction and path of water drainage on the site, including the portion of the adjacent pasture that is included in the study area. We noted the location of culverts, and any irrigation ditches and streams flowing into the study area.

We established plots within likely wetland features, and where wetland conditions were found, we established additional plots to characterize adjacent uplands. We marked the plot locations with wire flags.

We made the following observations at the plots.

- Where there was standing water, we noted the depth.
- Where standing water was absent, we dug soil pits to a depth of 18 inches to look for direct and indirect indicators of a water table or soil saturation, such as oxidized rhizospheres.
- We performed a visual observation of the soil surface to determine the presence of other primary and secondary indicators of wetland hydrology.

This information was recorded on the field sheets.

At each plot, we also observed soil characteristics. Soil color and texture characteristics were observed to a depth of 18 inches by removing and opening a slice of soil representing the soil profile

We established vegetation sample plots around each soil pit. Generally, unless otherwise noted on the data sheet, the herb layer was sampled within a 5-foot radius around the soil pit and the tree and shrub layers were sampled within a 15-foot diameter around the pit.

We marked the wetland boundary with wire flags, based on the findings in the plots. We dug informal soil pits in places to check soil and hydrology conditions, and fix the wetland boundary location, based on what we had seen in documented plots.

Where we identified sections of drainage ditch, streams or other features that clearly drain toward the river, but do not have wetland characteristics, we flagged the estimated elevation of Ordinary High Water.

Finally, we documented the main features with photographs (Appendix C). The wetland boundaries were surveyed by a WHPacific survey crew, and a map of wetlands was prepared. See Figure 5, Wetland Map.

E DESCRIPTION OF ALL WETLANDS AND OTHER NON-WETLAND WATERS

The field investigation identified seven areas that met wetland criteria in the study area, a reach of a small channelized intermittent stream, four non-wetland drainage ditches, and a non-wetland snow storage basin, totaling approximately 229,850 square feet (5.27 acres). See Table 2 for a summary of wetlands and waters in the study area. The wetland areas and boundaries and sample plot locations are shown on Figure 5. Descriptions of areas and the basis of delineation are given below. Features are numbered from south to north, starting on Figure 5, Sheet 4.

Areas 1 and 6A: Airport Drainage Ditch Wetlands: These features are emergent wetland areas with a few patches of shrub-scrub. They are constructed linear drainage ditches that capture stormwater runoff from the taxiway. Irrigation ditches in the adjacent pasture also contribute water. Due to irrigation practices, the ditches are subject to

shallow inundation or saturation year throughout the growing season. Water in the ditches flows gradually toward two culverts. These culverts convey excess water under the runway, and toward a drainage system that eventually discharges into the North Fork Payette River.

Conditions in the ditches are characterized by Plots A1, D1, and E1. Vegetation is a mixture of sedges, especially Nebraska sedge (*Carex nebrascensis*, OBL), water sedge (*Carex aquatilis*, OBL), and inflated sedge *C. utriculata* (*vesicaria*), OBL), rushes, especially Baltic rush (*Juncus balticus*, FACW) and grasses, especially bluejoint (*Calamagrostis canadensis*, FACW). Also common is large-leaved avens (*Geum macrophyllum*, FACW). Soils are mainly low-chroma sandy loam with or without redox concentrations. Hydrogen sulfide odor is commonly present, indicating reducing conditions. We observed shallow inundation at Plot D1, and in many other parts of the ditch. Plot E1 marks the northerly extent of this area. At that point, there was saturation at a depth of 12 inches, and soils met the sandy redox indicator. There were also indicators of seasonal inundation nearby (drift material caught in vegetation shown in photos 7 and 8). There was also dominance by hydrophytes.

The delineation was based for the most part on the abrupt change in hydrology and soils near the base of the side slopes. The northerly extent of the wetland area was delineated between Plots E1 and E3. Due to the gradual slope of the ditch bottom, Plot E3 differed from Plot E1. It lacked indicators of hydric soils and wetland hydrology.

Areas 2, 3, 4, 5A, 5B, and 7: Irrigation Ditches and Associated Wetlands: These features are irrigation ditches that cross the pasture to the east and adjacent wetlands. All except Area 7 intersect with the airport drainage ditch. At the time of the investigation, a little water was still present in some of the ditches (see Photo 1). Area 2 enters a culvert and flows around the end of the taxiway and runway, draining ultimately to the river via a series of irrigation ditches to the west. There was a small amount of flow in this ditch. Area 7 flows under the airport through a culvert and also drains ultimately to the river.

The water in the irrigation ditches spreads out into the adjacent pasture in some places, and also into the flat area along the airport fence, before flowing down the bank into the airport drainage ditch, causing saturated conditions and allowing hydrophytes to become well established.

Conditions in the ditches are characterized by Plot B1 and in the associated wetlands by Plots A1 and C1. In addition, Transect 9, Plot 1 in the Airport East Delineation Report documents conditions in the extension of Area 3 to the east.

The dominant plant in Area 2 irrigation ditch is inflated sedge with lesser amounts of bluejoint and water hemlock (*Cicuta douglasii*, OBL). Dominant plant species in the associated wetlands include inflated sedge, bluejoint, and Nebraska sedge. Also dominant

in many areas, especially in the pasture, is Baltic rush, which is documented in Transect 9, Plot 1.

Soils are again typically sandy loam with some clay content, which meet either redox dark surface or sandy redox hydric soils indicators. Saturation to the surface was present at Plots A1 and B1. Plot C1 had water stained leaves with a channel leading from the pasture nearby.

With the exception of Areas 4, 5A and 5B, all wetlands shown east of the airport property line were delineated by Secesh Engineering. We identified Areas 4, 5A and 5B in the pasture in addition. These areas were not shown on the Airport East wetland maps, but they have the same characteristics as the other irrigation ditches and associated wetlands.

We delineated the boundaries of Areas 4, 5A and 5B based on characteristic vegetation patterns (dominance of sedges and rushes versus pasture grasses), topographic features (slight depressions), and defined ditch features. These areas were added to the delineation based on a phone conversation with Greg Martinez (October 7, 2008).

All these irrigation ditches and associated wetlands are ultimately connected to the North Fork Payette River via culverts under the airport.

Areas 6B: Non-Wetland Drainage Ditch: Area 6B is a constructed airport drainage ditch, a continuation of Area 6A. As noted above, conditions in the non-wetland part of this ditch are characterized by Plot E3, which lacked indicators of hydric soils and wetland hydrology. The part of the ditch closest to Plot E3 still had some hydrophytes such as Baltic rush. However, further to the north even broadly-distributed hydrophytes like Baltic rush dropped out of the plant community to be replaced by grasses and weedy forbs. See Photo 9 for a view of this ditch from the northern end.

This ditch is ultimately connected, via Areas 1 and 6A and culverts under the airport, to the North Fork Payette River.

Area 8: Airport Drainage Ditch Wetland: Area 8 is a short section of drainage ditch that connects to Area 9, an intermittent stream. According to the airport maintenance manager ("AJ", pers. comm., October 6, 2008) during high flows that exceed the capacity of the culvert under the airport, water from the stream backs up into this ditch, causing seasonal inundation. The duration of inundation and saturation is unknown, but is probably more than 14 days.

Conditions in the ditch are characterized by Plot F1. The main indicator of wetland hydrology was a thin algal crust (see Photo 16). Besides Baltic rush, we identified patches of small annual hydrophytes such as cudweed (*Gnaphalium* sp., FAC) and purslane speedwell (*Veronica peregrina*, OBL) which are typical of seasonally saturated conditions (see Photo 15). The plot lacks indicators of hydric soil, but if inundation and

saturation exceed 14 days, as seems likely, this area meets the definition of hydric soil even in the absence of visible indicators.

Area 8 is ultimately connected to the North Fork Payette River via the intermittent stream and the culvert under the airport.

Area 9: Intermittent Stream: This stream flows in from the east and continues through a culvert to the western side of the airport, which discharges into a natural channel. The stream reach in the study area has been channelized along the airport property line (see Photo 13). The stream bed consists of cobble and gravel, and is thinly vegetated. There was no indication of recent flow. According to the airport maintenance manager ("AJ", pers. comm. October 7, 2008), this stream flows strongly in the winter, and during the spring snowmelt season.

As noted above, it connects directly to the North Fork Payette River.

Areas 10, 11, and 12: Snow Storage Basin and Non-Wetland Drainage Ditches: The snow storage basin (see Photos 17 and 18) was constructed in an upland location to store snow plowed off the runway and taxiway, and detain snowmelt. It also captures stormwater runoff from three culverts. The basin is non-wetland. It is largely unvegetated and there were no indicators of wetland hydrology. It has been excavated to the subsoil, which consists of gravel and cobble.

A standpipe (Photo 17) allows water to be detained. During extreme rainfall or snowmelt events, excess water flows through a culvert, then discharges to an area between the taxiway and the runway, infiltrating into the ground ("AJ", pers. comm. 12/9/08). Area 11 is therefore isolated from the river or other parts of the natural drainage system.

Drainage ditches Areas 10 and 12 capture local stormwater runoff (see Photo 19). They lack hydrophytic vegetation, the substrate is gravel or cobble subsoil. There is no indication of prolonged flow in them, such as a drift line, or other indicator of ordinary high water elevation. Area 10 connects to the intermittent stream and ultimately to the North Fork Payette River. Area 12 connects to the snow storage basin, and is thus isolated.

F MAPPING METHOD AND ACCURACY STATEMENT

Wetland boundaries and sample plot flags were tied by a WHPacific survey crew using total station equipment. The level of accuracy was to within 0.1 foot.

An aerial photograph (see Figure 4) of the airport was developed from a flight by 3Di West, dated October 2008. A topographic base map was developed from this aerial, with contour interval of 1 foot. This topographic base map was added to the surveyed wetland boundaries and sample plot locations to create Figure 5.

G NATIONAL WETLAND INVENTORY

The wetlands are identified on the National Wetland Inventory (see Figure 3). The intermittent stream is not identified on the NWI map. There is currently no Local Wetland Inventory for this area.

H RESULTS AND CONCLUSIONS

We identified the following features in the study area:

- Nine (9) discrete areas of wetland, including drainage and irrigation ditches, and associated wetlands,
- Four (4) discrete non-wetland “waters” (three drainage ditches and a snow storage basin), and
- One intermittent stream (“water”).

Based on our conversations with Greg Martinez (pers. comm., October 7, 2008), the Corps of Engineers takes jurisdiction over any wetlands or waters that are connected to the North Fork of the Payette River. The intermittent stream and non-wetland drainage ditches (except Area 12), irrespective of whether an Ordinary High Water line is visible, are normally considered jurisdictional, and are classified as “tributaries”. Any areas that meet wetland criteria and are connected to the river by tributaries are considered jurisdictional “adjacent wetlands” or “abutting wetlands”. According to Greg, the Corps may in some circumstances determine that duration of flow is insufficient for a channel to be considered a tributary, but the default assumption is that all connected channels are “tributaries” and are under Corps jurisdiction.

The snow storage basin (Area 11) and its associated drainage ditch (Area 12) are not connected to the river, and are considered “isolated” by the Corps, and not under their jurisdiction.

Summary:

Total area of wetlands and waters in the study area: 5.27 acres.

Total area of jurisdictional wetlands and waters in the study area: 2.26 acres.

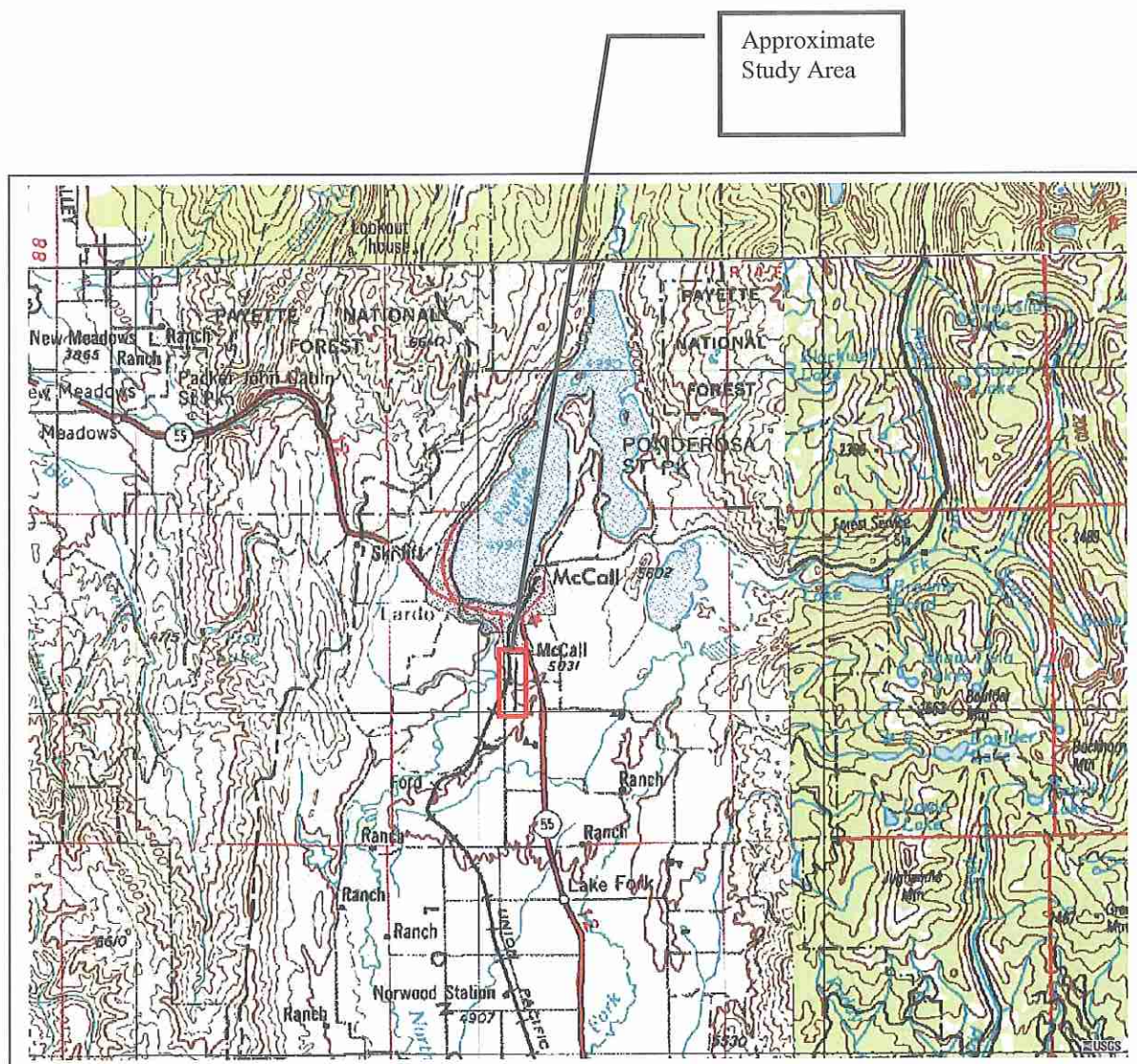
Total area of non-jurisdictional (isolated) waters in the study area: 3.01 acres.

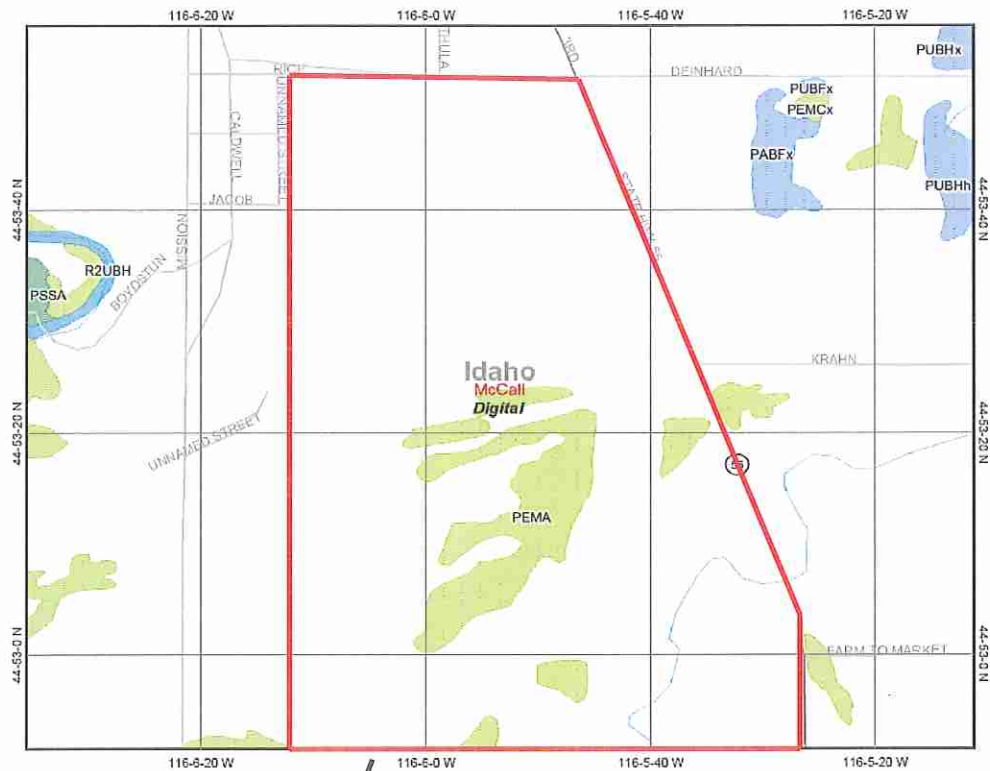
I DISCLAIMER

This report documents the investigation, best professional judgment and conclusions of the investigators. It is correct and complete to the best of our knowledge. It should be considered a Preliminary Jurisdictional Determination of wetlands and other waters and used at your own risk unless it has been reviewed and approved in writing by the Corps of Engineers under their jurisdictional standards.

APPENDIX A

MAPS





Approximate
Location of
Study Area

WHPacific

National Wetland Inventory Map

McCall Airport
McCall, Idaho

Figure
2



116° 5' 32"



Map Scale: 1:10,800 if printed on A size (8.5" x 11") sheet.



116° 5' 16"

USDA
Natural Resources
Conservation Service

Web Soil Survey 2.1
National Cooperative Soil Survey

12/4/2008
Page 1 of 3

Legend:

- 2, 3 – Archebald Loam
- 1, 17 – Donnel Sandy Loam
- 22, 23 – Gestin Loam
- 31 – McCall complex
- 34 – Melton Loam
- 40 Pits, gravel

WHPacific

County Soil Map

McCall Airport
McCall, ID

Figure

3

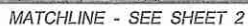


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CITY OF McCALL, IDAHO ~ ENVIRONMENTAL ASSESSMENT
 DELINEATION OF WETLANDS & OTHER WATERS
FIGURE 4
AERIAL PHOTOGRAPH

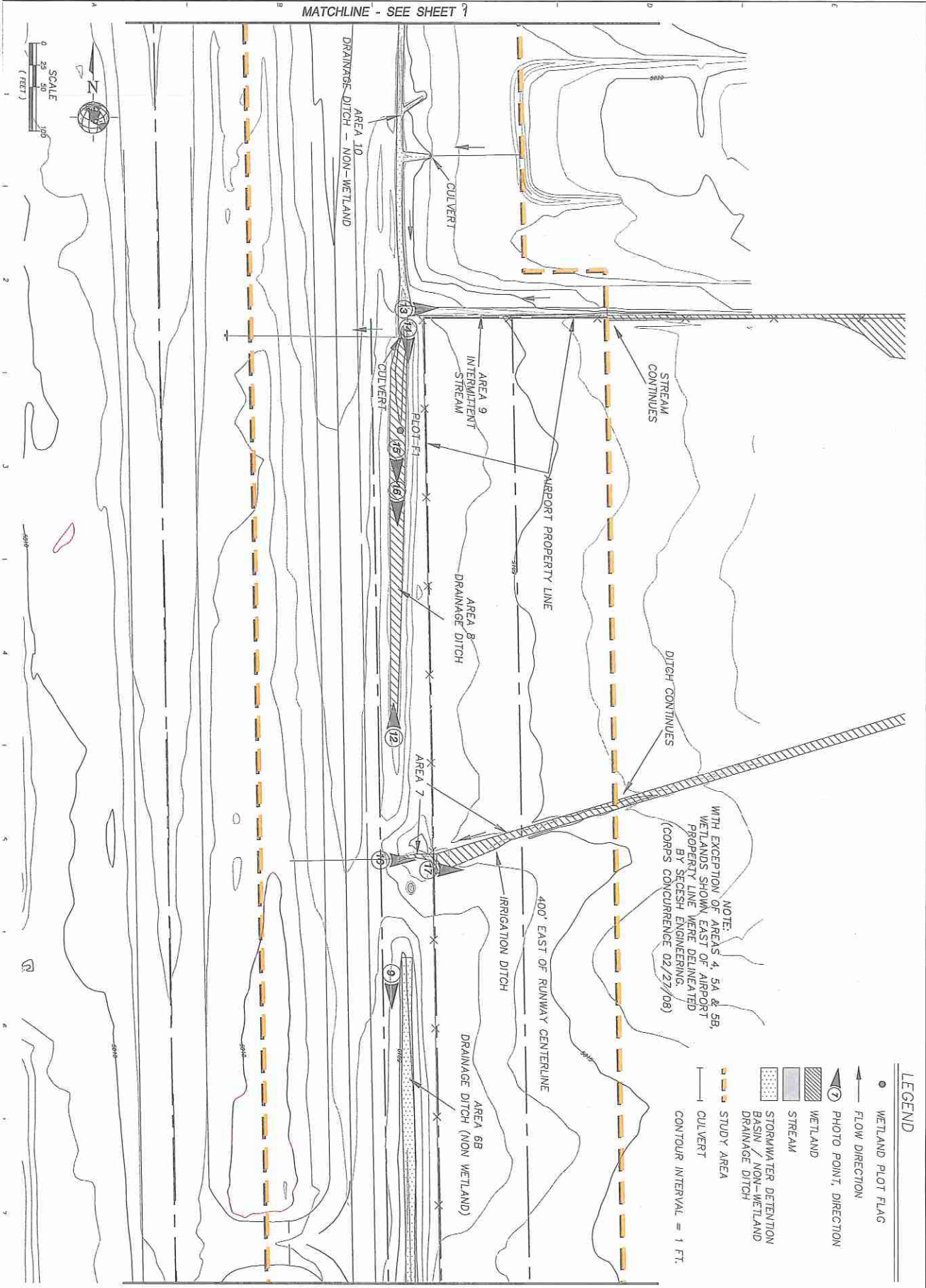
McCALL IDAHO
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MATCHLINE - SEE SHEET 2



MATCHLINE - SEE SHEET 3

LEGEND

- WETLAND PLOT FLAG
- FLOW DIRECTION
- ⊙ PHOTO POINT, DIRECTION
- ▨ WETLAND
- ▨ STREAM
- ▨ STORMWATER DETENTION BASIN / NON-WETLAND DRAINAGE DITCH
- ▨ STUDY AREA
- ▨ CULVERT
- ▨ CONTOUR INTERVAL = 1 FT.

CITY OF McALL, IDAHO ~ ENVIRONMENTAL ASSESSMENT
DELINEATION OF WETLANDS & OTHER WATERS

**FIGURE 5
WETLAND MAP**

McALL IDAHO

SCALE: AS SHOWN PROJECT NO. 034256 DRAWING FILE NAME: 34256-Surv-wetl-wt1.0_2

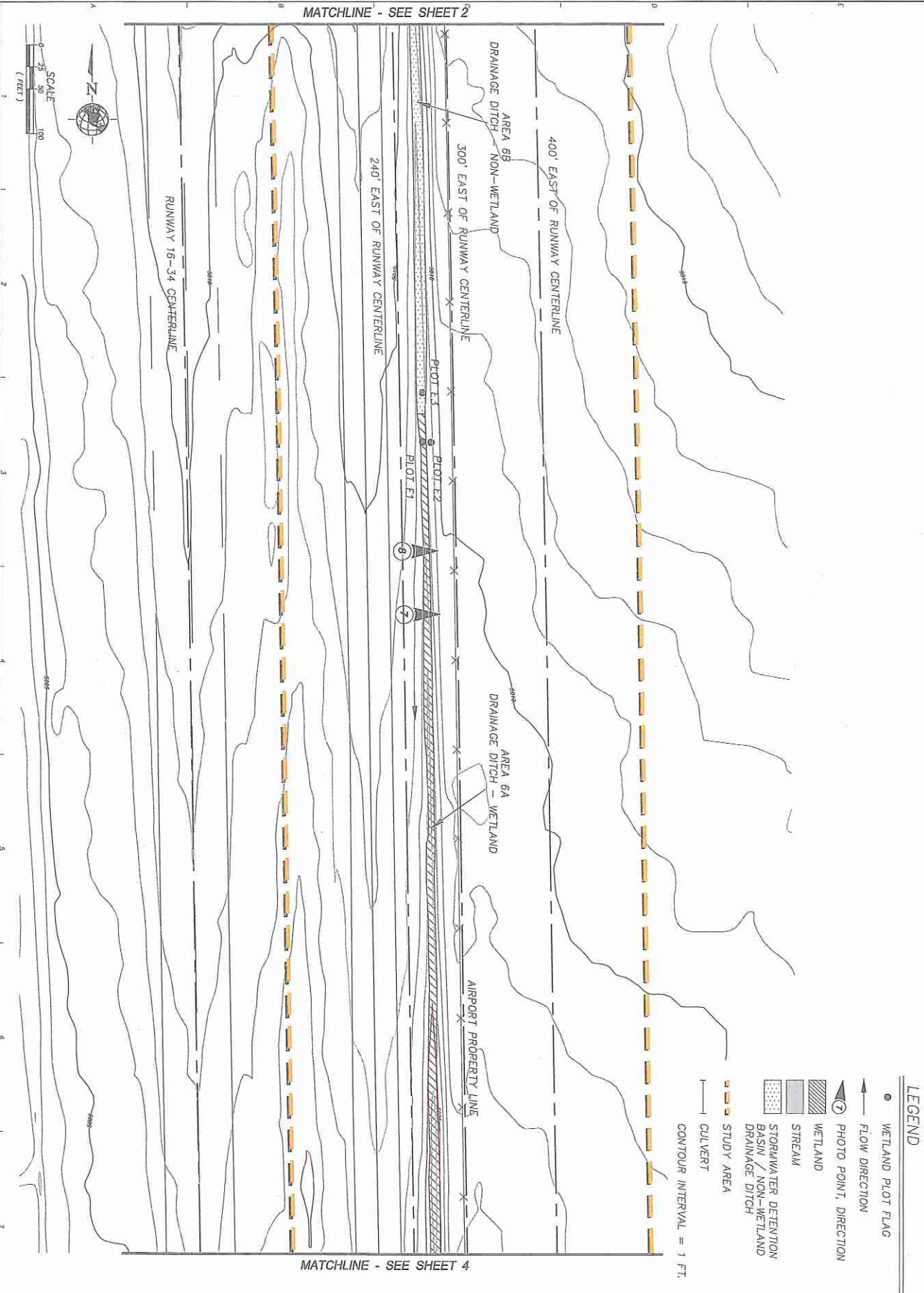
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DATE	BY	REVISION	CK'D/APP'D

MATCHLINE - SEE SHEET 2

MATCHLINE - SEE SHEET 4



LEGEND

- WETLAND PLOT FLAG
- FLOW DIRECTION
- ⑦ PHOTO POINT, DIRECTION
- ▨ WETLAND
- ▨ STREAM
- ▨ STORMWATER DETENTION BASIN / NON-WETLAND
- ▨ DRAINAGE DITCH
- ▨ STUDY AREA
- CULVERT
- CONTOUR INTERVAL = 1 FT.

CITY OF McCall, IDAHO ~ ENVIRONMENTAL ASSESSMENT
DELINEATION OF WETLANDS & OTHER WATERS

FIGURE 5
WETLAND MAP

McCall
SCALE:
AS SHOWN

PROJECT NO.
034256

DRAWING FILE NAME:
34256-Surv-wetl-wt1.0_2

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MATCHLINE - SEE SHEET 3



NOTE:
WITH EXCEPTION OF AREAS 4, 5A & 5B,
WETLANDS SHOWN EAST OF AIRPORT
PROPERTY LINE WERE DELINEATED
BY SECECH ENGINEERING
(CORPS CONCURRENCE 02/27/08)

- LEGEND**
- WETLAND PLOT FLAG
 - FLOW DIRECTION
 - ⑦ PHOTO POINT, DIRECTION
 - ▨ WETLAND
 - ▨ STREAM
 - ▨ STORMWATER DETENTION BASIN / NON-WETLAND DRAINAGE DITCH
 - ▨ STUDY AREA
 - ▨ CULVERT
 - CONTOUR INTERVAL = 1 FT.

CITY OF McCall, IDAHO ~ ENVIRONMENTAL ASSESSMENT
DELINEATION OF WETLANDS & OTHER WATERS

**FIGURE 5
WETLAND MAP**

McCall
SCALE: AS SHOWN

PROJECT NO.
034256

IDAHO
DRAWING FILE NAME:
34256-Surv-wetl-wt1.0_2

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01/13/09			CK'D/APPR

APPENDIX B

DATA FORMS

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region (DRAFT)

Project/Site: McCauley AP City/County: McCauley (Valley) Sampling Date: 10/6/08
 Applicant/Owner: Airport State: ID Sampling Point: A1
 Investigator(s): PR/LT Section, Township, Range: T18 N R3E, S21 (RM)
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): FLAT Slope (%): 0
 Subregion (LRR): LRR E Lat: 44° 53' 20" N Long: 116° 6' N Datum: N/A
 Soil Map Unit Name: Gustin loam NWI classification: PGMA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>N/A</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____				Prevalence Index worksheet:
Total Cover: _____				Total % Cover of: _____ Multiply by: _____
Sapling/Shrub Stratum				OBL species _____ x 1 = _____
1. <u>N/A</u>				FACW species _____ x 2 = _____
2. _____				FAC species _____ x 3 = _____
3. _____				FACU species _____ x 4 = _____
4. _____				UPL species _____ x 5 = _____
5. _____				Column Totals: _____ (A) _____ (B)
Total Cover: _____				Prevalence Index = B/A = _____
Herb Stratum				Hydrophytic Vegetation Indicators:
1. <u>Carex utriculata</u>	<u>60</u>	<u>Y</u>	<u>OBL</u>	<input checked="" type="checkbox"/> Dominance Test is >50%
2. <u>Calamagrostis canadensis</u>	<u>35</u>	<u>Y</u>	<u>FACW</u>	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹
3. <u>Carex aquatilis</u>	<u>T</u>	<u>N</u>	<u>OBL</u>	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. <u>Carex macrophyllum</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	<input type="checkbox"/> Wetland Non-Vascular Plants ¹
5. <u>Rumex occidentalis</u>	<u>T</u>	<u>N</u>	<u>FACW</u>	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
6. _____				¹ Indicators of hydric soil and wetland hydrology must be present.
7. _____				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
8. _____				
Total Cover: <u>100</u>				
Woody Vine Stratum				
1. <u>N/A</u>				
2. _____				
Total Cover: _____				
% Bare Ground in Herb Stratum <u>N/A</u>				
Remarks:				

SOIL

Sampling Point: A-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-4	10YR 2/1						Sandy loam	
4-10	10YR 2/1	80	10YR 5/2	15	C	M		
			7.5YR 4/6	5	C	M, RC	Silty clay loam	
10-16+	10YR 5/1	80	7.5YR 4/6	15	C	M	Fine sandy loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | |
|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input checked="" type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- | | | |
|--|---|--|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (except NW coast) | <input type="checkbox"/> Water-Stained Leaves (B9) (NW coast) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Salt Crust (B11) | <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) | <input type="checkbox"/> Frost-Heave Hummocks (D4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | | <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) |

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____Water Table Present? Yes ☐ No ☒ Depth (inches): _____Saturation Present? Yes ☒ No ☐ Depth (inches): Surface
(includes capillary fringe)Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region (DRAFT)

Project/Site: MCCAN AP City/County: MCCAN, Valley Sampling Date: 10/6/08
 Applicant/Owner: Airport State: ID Sampling Point: A2
 Investigator(s): POILT Section, Township, Range: T18N R3E S21 (8M)
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): FLAT Slope (%): 0
 Subregion (LRR): LRR-E Lat: 44°53'20"N Long: 116°6'W Datum: N/A
 Soil Map Unit Name: Castia loam NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks:		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. <u>N/A</u>				
2. _____				
3. _____				
4. _____				
Total Cover: _____				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
Sapling/Shrub Stratum				
1. <u>N/A</u>				
2. _____				
3. _____				
Total Cover: _____				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Herb Stratum				
1. <u>Acropyrus repens</u>	<u>45</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Potentilla gracilis</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	
3. <u>Agrostis sp.</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
4. <u>Carum nebrascensis</u>	<u>20</u>	<u>Y</u>	<u>OBL</u>	
5. <u>Phleum pratense</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
6. _____				
Total Cover: <u>100</u>				
Woody Vine Stratum				Remarks:
1. <u>N/A</u>				
2. _____				
Total Cover: _____				
% Bare Ground in Herb Stratum <u>N/A</u>				

Sampling Point: A2

HYDROLOGY

Western Mountains, Valleys and Coast – DRAFT Version 9-15-2006

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region (DRAFT)

Project/Site: McCall A P City/County: McCall, Valley Sampling Date: 10/17/08
 Applicant/Owner: Aspen State: ID Sampling Point: A3
 Investigator(s): PO/LT Section, Township, Range: T18N R3E S.21 (BM)
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): convex Slope (%): 0
 Subregion (LRR): LRR-E Lat: 44° 53' 20" N Long: 116° 6' N Datum: N/A
 Soil Map Unit Name: Aspen LRR-E NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks:		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>N/A</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____				
Total Cover: _____				
Sapling/Shrub Stratum				Prevalence Index worksheet:
1. <u>N/A</u>				Total % Cover of: _____ Multiply by: _____
2. _____				OBL species _____ x 1 = _____
3. _____				FACW species _____ x 2 = _____
4. _____				FAC species _____ x 3 = _____
5. _____				FACU species _____ x 4 = _____
Total Cover: _____				UPL species _____ x 5 = _____
Herb Stratum				Column Totals: _____ (A) _____ (B)
1. <u>Asplenium platyneuron</u>	<u>90</u>	<u>Y</u>	<u>FAC</u>	Prevalence Index = B/A = _____
2. <u>Asplenium platyneuron</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators:
3. <u>Carex utriculata</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	<input checked="" type="checkbox"/> Dominance Test is >50%
4. _____				<input type="checkbox"/> Prevalence Index is ≤3.0 ¹
5. _____				<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
6. _____				<input type="checkbox"/> Wetland Non-Vascular Plants ¹
7. _____				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
8. _____				¹ Indicators of hydric soil and wetland hydrology must be present.
Total Cover: <u>100</u>				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Woody Vine Stratum				
1. <u>N/A</u>				
2. _____				
Total Cover: _____				
% Bare Ground in Herb Stratum <u>0%</u>				
Remarks:				

Sampling Point: A-3

HYDROLOGY

US Army Corps of Engineers

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region (DRAFT)

Project/Site: McCaughy AP City/County: McCaughy Valley Sampling Date: 10/7/08
 Applicant/Owner: Airport State: Id Sampling Point: B1
 Investigator(s): DAILEY Section, Township, Range: T18N R3E S21 (BM)
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Level Slope (%): 0
 Subregion (LRR): LRR E Lat: 44° 53' 20" N Long: 116° 6' N Datum: N/A
 Soil Map Unit Name: Gastin loam NWI classification: PCMA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>N/A</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____				
Total Cover: _____				
Sapling/Shrub Stratum				Prevalence Index worksheet:
1. <u>N/A</u>				Total % Cover of: _____ Multiply by: _____
2. _____				OBL species _____ x 1 = _____
3. _____				FACW species _____ x 2 = _____
4. _____				FAC species _____ x 3 = _____
5. _____				FACU species _____ x 4 = _____
Total Cover: _____				UPL species _____ x 5 = _____
Herb Stratum				Column Totals: _____ (A) _____ (B)
1. <u>Carex utriculata</u>	<u>65</u>	<u>Y</u>	<u>OBL</u>	Prevalence Index = B/A = _____
2. <u>Gianta douglasii</u>	<u>10</u>	<u>N</u>	<u>DBL</u>	Hydrophytic Vegetation Indicators:
3. <u>Groen macrophyllum</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	<input checked="" type="checkbox"/> Dominance Test is >50%
4. <u>Phleum patens</u>	<u>7</u>	<u>N</u>	<u>FAC</u>	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹
5. <u>Agrostis sp.</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
6. <u>Phalaris arundinacea</u>	<u>7</u>	<u>N</u>	<u>FACW</u>	<input type="checkbox"/> Wetland Non-Vascular Plants ¹
7. <u>Callamagrostis canadensis</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
8. <u>Carex nebrascensis</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	¹ Indicators of hydric soil and wetland hydrology must be present.
Total Cover: <u>100</u>				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Woody Vine Stratum				
1. <u>N/A</u>				
2. _____				
Total Cover: _____				
% Bare Ground in Herb Stratum <u>0</u>				
Remarks:				

SOIL

Sampling Point: B1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth (inches)	Matrix		Redox Features			Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%					
0-2	10YR 7/1	-		-				Loam Sand, loam	
2-4	7.5YR 5/1	-		-				Sandy clay loam	
4-9	10YR 2/1	25	7.5YR 4/6	45	C	M		Sandy clay loam	
9-16	10YR 5/3	60	7.5YR 4/6	45	C	M		"	"
			10YR 5/1	25	D	M			

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Other (Explain in Remarks)
<input checked="" type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except NW coast)	<input type="checkbox"/> Water-Stained Leaves (B9) (NW coast)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Frost-Heave Hummocks (D4)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
Field Observations:		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>Surface</u>	
(Includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: <u>next to irrigation ditch</u>		

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region (DRAFT)

Project/Site: McCaughy AP City/County: McCaughy Valley Sampling Date: 10/17/08
 Applicant/Owner: Airport State: ID Sampling Point: B2
 Investigator(s): PA/LT Section, Township, Range: T18N R3E S21 (CRM)
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): Flat Slope (%): 0
 Subregion (LRR): LRR E Lat: 44° 53' 20" N Long: 116° 6' N Datum: N/A
 Soil Map Unit Name: Castro 10am NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks:	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>N/A</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Total Cover: _____				
Sapling/Shrub Stratum				
1. <u>N/A</u>				
2. _____				
3. _____				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
4. _____				
5. _____				
Total Cover: _____				
Herb Stratum				
1. <u>Asperula repens</u>	<u>65</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Achillea millefolium</u>	<u>15</u>	<u>N</u>	<u>FACU</u>	
3. <u>Arcutis sp</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
4. <u>Trifolium dubius</u>	<u>T</u>	<u>N</u>	<u>NL</u>	
5. <u>Poa pratensis</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
6. <u>Linaria vulgaris</u>	<u>T</u>	<u>N</u>	<u>NL</u>	
7. _____				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
8. _____				
Total Cover: <u>100</u>				
Woody Vine Stratum				Remarks:
1. <u>N/A</u>				
2. _____				
Total Cover: _____				
% Bare Ground in Herb Stratum <u>0</u>				

Sampling Point: B2

HYDROLOGY

Western Mountains, Valleys and Coast – DRAFT Version 9-15-2006

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region (DRAFT)

Project/Site: McCall AP City/County: McCall, Valley Sampling Date: 10/7/08
 Applicant/Owner: Air port State: ID Sampling Point: 01
 Investigator(s): PA/LT Section, Township, Range: T18N R3E S21 (RM)
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Flat Slope (%): 0
 Subregion (LRR): LRR E Lat: 44° 53' 20" N Long: 116° 6' N Datum: NIA
 Soil Map Unit Name: Melton loam NWI classification: PEMA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. <u>NIA</u>				
2. _____				
3. _____				
4. _____				
Total Cover: _____				
Sapling/Shrub Stratum				
1. <u>NIA</u>				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
2. _____				
3. _____				
4. _____				
Total Cover: _____				
Herb Stratum				
1. <u>Carex utriculata</u>	<u>10</u>	<u>N</u>	<u>OBL</u>	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. <u>Epilobium ciliatum</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
3. <u>Calamagrostis canadensis</u>	<u>15</u>	<u>N</u>	<u>FACW</u>	
4. <u>C. rubrascleris</u>	<u>60</u>	<u>Y</u>	<u>OBL</u>	
5. <u>Poa palustris</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
6. _____				
7. _____				
8. _____				
Total Cover: <u>100</u>				
Woody Vine Stratum				
1. <u>NIA</u>				
2. _____				
Total Cover: _____				
% Bare Ground in Herb Stratum <u>0</u>				
Remarks: <u>Salix petrae just outside plot</u>				

Sampling Point: C1

[illegible]

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Hydric Soil Present? Yes ☒ No ☐

- ☐ Water-Stained Leaves (B9) (NW coast)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☒ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Frost-Heave Hummocks (D4)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (LRR A)

Wetland Hydrology Present? Yes No

Remarks: Nest in an old cornucopia from pasture

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region (DRAFT)

Project/Site: McCauley City/County: McCauley, Valley Sampling Date: 10/7/06
 Applicant/Owner: Airport State: SD Sampling Point: C2
 Investigator(s): PA/LT Section, Township, Range: T8N R3E S21 (BM)
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Flat Slope (%): 0
 Subregion (LRR): LRR E Lat: 44° 53' 20" N Long: 116° 6' W Datum: N/A
 Soil Map Unit Name: Melton loam NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks:		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67</u> (A/B)
1. <u>N/A</u>				
2. _____				
3. _____				
4. _____				
Total Cover: _____				
Sapling/Shrub Stratum				
1. <u>N/A</u>				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
2. _____				
3. _____				
4. _____				
Total Cover: _____				
Herb Stratum				
1. <u>Asclepias tuberosa</u>	<u>45</u>	<u>Y</u>	<u>FAC</u>	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. <u>Cirsium discolor</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	
3. <u>Eriogonum fasciculatum</u>	<u>1</u>	<u>N</u>	<u>FACW</u>	
4. <u>Galium aparine</u>	<u>30</u>	<u>Y</u>	<u>OBL</u>	
5. <u>Carex nebulosa</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	
6. _____				
7. _____				
8. _____				
Total Cover: <u>100</u>				
Woody Vine Stratum				
1. <u>N/A</u>				
2. _____				
Total Cover: _____				
% Bare Ground in Herb Stratum <u>0</u>				
Remarks:				

Sampling Point: C-2

HYDROLOGY

Western Mountains, Valleys and Coast – DRAFT Version 9-15-2006

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region (DRAFT)

Project/Site: McCall AP City/County: McCall, Valley Sampling Date: 10/2/08
 Applicant/Owner: Hyport State: _____ Sampling Point: D1
 Investigator(s): PS/LT Section, Township, Range: T18N R3E S21 (RM)
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Flat Slope (%): 0
 Subregion (LRR): LRR E Lat: 44° 53' 20" N Long: 116° 6' N Datum: N/A
 Soil Map Unit Name: Gustin loam NWI classification: P6MA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: <u>Ditch</u>	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. <u>NA</u>				
2. _____				
3. _____				
4. _____				
Total Cover: _____				
Sapling/Shrub Stratum				
1. <u>NA</u>				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% ____ Prevalence Index is ≤3.0 ¹ ____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ____ Wetland Non-Vascular Plants ¹ ____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
2. _____				
3. _____				
4. _____				
Total Cover: _____				
Herb Stratum				
1. <u>Carex utriculata</u>	<u>70</u>	<u>Y</u>	<u>OBL</u>	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
2. <u>Carex macrophylla</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
3. <u>Juncus nevadensis</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
4. <u>Juncus roemerianus</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
5. <u>Galium aparine canadensis</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
6. _____				
7. _____				
8. _____				
Total Cover: _____				
Woody Vine Stratum				
1. <u>N/A</u>				
2. _____				
Total Cover: _____				
% Bare Ground in Herb Stratum <u>0</u>				
Remarks: _____				

SOIL

Sampling Point: D1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	10YR 8/2						Coarse	Sandy loam
10+	Rock							

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|--|---|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> 2 cm Muck (A10) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input checked="" type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) | |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Rock below 10" meets hydric soil definition. Permanently inundated.

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- | | | |
|--|--|--|
| <input checked="" type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (except NW coast) | <input type="checkbox"/> Water-Stained Leaves (B9) (NW coast) |
| <input checked="" type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Salt Crust (B11) | <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) | <input type="checkbox"/> Frost-Heave Hummocks (D4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | | <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) |

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): 2"Water Table Present? Yes ☒ No ☐ Depth (inches): _____Saturation Present? Yes ☒ No ☐ Depth (inches): _____
(includes capillary fringe)Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region (DRAFT)

Project/Site: MCCOY AP City/County: MCCOY Valley Sampling Date: 01/10/08
 Applicant/Owner: Aliporv State: Sampling Point: D2
 Investigator(s): DD/IT Section, Township, Range: T18N R3E S21 (BM)
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Flat Slope (%):
 Subregion (LRR): LRR E Lat: 44° 53' 20" N Long: 116° 6' N Datum: N/A
 Soil Map Unit Name: Gastin loam NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: <u>Just above ditch on bank.</u>	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>N/A</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. <u> </u>				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. <u> </u>				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
4. <u> </u>				Prevalence Index worksheet:
Total Cover: <u> </u>				Total % Cover of: <u> </u> Multiply by: <u> </u>
Sapling/Shrub Stratum				OBL species <u> </u> x 1 = <u> </u>
1. <u>N/A</u>				FACW species <u> </u> x 2 = <u> </u>
2. <u> </u>				FAC species <u> </u> x 3 = <u> </u>
3. <u> </u>				FACU species <u> </u> x 4 = <u> </u>
4. <u> </u>				UPL species <u> </u> x 5 = <u> </u>
5. <u> </u>				Column Totals: <u> </u> (A) <u> </u> (B)
Total Cover: <u> </u>				Prevalence Index = B/A = <u> </u>
Herb Stratum				Hydrophytic Vegetation Indicators:
1. <u>Solidago canadensis</u>	<u>60</u>	<u>Y</u>	<u>FACW</u>	<input type="checkbox"/> Dominance Test is >50%
2. <u>Asarum canadense</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹
3. <u>Liriodendron tulipifera</u>	<u>1</u>	<u>N</u>	<u>NL</u>	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. <u>Carex macrophyllum</u>	<u>15</u>	<u>N</u>	<u>FACW</u>	<input type="checkbox"/> Wetland Non-Vascular Plants ¹
5. <u> </u>				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
6. <u> </u>				¹ Indicators of hydric soil and wetland hydrology must be present.
7. <u> </u>				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
8. <u> </u>				
Total Cover: <u>95</u>				
Woody Vine Stratum				
1. <u>N/A</u>				
2. <u> </u>				
Total Cover: <u> </u>				
% Bare Ground in Herb Stratum <u>5</u>				
Remarks:				

Sampling Point: D2

HYDROLOGY

US Army Corps of Engineers

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region (DRAFT)

Project/Site: McCauley City/County: McCauley, Valley Sampling Date: 10/17/08
 Applicant/Owner: Airport State: ID Sampling Point: E1
 Investigator(s): PB/LT Section, Township, Range: T18N R3E S21 (Bm)
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Flat Slope (%): 0
 Subregion (LRR): LRR E Lat: 44° 53' 20" N Long: 116° 6' N Datum: N/A
 Soil Map Unit Name: Creston loam NWI classification: PEMA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B) Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
1. <u>N/A</u>				
2. _____				
3. _____				
4. _____				
Total Cover: _____				
Sapling/Shrub Stratum				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
1. <u>N/A</u>				
2. _____				
3. _____				
4. _____				
Total Cover: _____				
Herb Stratum				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
1. <u>Poa palustris</u>	<u>T</u>	<u>N</u>	<u>FAC</u>	
2. <u>Carex nebulosensis</u>	<u>10</u>	<u>Y</u>	<u>OBL</u>	
3. <u>Carex microptera</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	
4. <u>Carex athrostaehya</u>	<u>30</u>	<u>Y</u>	<u>FACW</u>	
5. <u>Carex aquatilis</u>	<u>10</u>	<u>Y</u>	<u>OBL</u>	
6. <u>Agrostis sp.</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>	
7. <u>Phleum pratense</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>	
8. <u>Chrysanthemum leucanthemum</u>	<u>T</u>	<u>N</u>	<u>NL</u>	
9. <u>Asteraceae sp.</u>	<u>T</u>	<u>N</u>	<u>UNK.</u>	
10. <u>Agropyron repens</u>	<u>T</u>	<u>N</u>	<u>FAC</u>	
Total Cover: <u>10/100</u>				
Woody Vine Stratum				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
1. <u>N/A</u>				
2. _____				
Total Cover: _____				
% Bare Ground in Herb Stratum <u>0</u>				
Remarks: <u>Plot bottom of ditch = 5' x 10'</u>				

Sampling Point: E1

HYDROLOGY

Western Mountains, Valleys and Coast – DRAFT Version 9-15-2006

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region (DRAFT)

Project/Site: McCall AP City/County: McCall, Valley Sampling Date: 10/7/08
 Applicant/Owner: Airport State: ID Sampling Point: E2
 Investigator(s): PA/LT Section, Township, Range: T18N R3E S21 (RM)
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Flat Slope (%): 0
 Subregion (LRR): LRR E Lat: 44° 53' 20" N Long: 116° 6' N Datum: N/A
 Soil Map Unit Name: Gratin loam NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: <u>Bank above ditch</u>		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0 or 1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0 or 50</u> (A/B)
1. <u>N/A</u>				
2. _____				
3. _____				
4. _____				
Total Cover: _____				
Sapling/Shrub Stratum				
1. <u>N/A</u>				Hydrophytic Vegetation Indicators: ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0 ¹ ___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Wetland Non-Vascular Plants ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
2. _____				
3. _____				
4. _____				
Total Cover: _____				
Herb Stratum				
1. <u>Solidago canadensis</u>	<u>40</u>	<u>Y</u>	<u>FACU</u>	Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
2. <u>Quid-grass (Lunch)</u>	<u>40</u>	<u>Y</u>	<u>UNK</u>	
3. <u>Chrysanthemum leucanthemum</u>	<u>10</u>	<u>N</u>	<u>NL</u>	
4. <u>Lidaria vulgaris</u>	<u>T</u>	<u>N</u>	<u>NL</u>	
5. <u>Carex sp.</u>	<u>T</u>	<u>N</u>	<u>FAC-OB</u>	
6. <u>Agropyron repens</u>	<u>T</u>	<u>N</u>	<u>FAC</u>	
7. <u>Aster sp.</u>	<u>T</u>	<u>N</u>	<u>UNK</u>	
8. _____				
Total Cover: <u>90</u>				
Woody Vine Stratum				
1. <u>N/A</u>				
2. _____				
Total Cover: _____				
% Bare Ground in Herb Stratum <u>10</u>				
Remarks:				

Sampling Point: E2

HYDROLOGY

Western Mountains, Valleys and Coast – DRAFT Version 9-15-2006

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region (DRAFT)

Project/Site: McCall AP City/County: McCall/Valley Sampling Date: 10/17/08
 Applicant/Owner: Airport State: ID Sampling Point: E3
 Investigator(s): DR/LT Section, Township, Range: T18N R3E S21 (BM)
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): Flat Slope (%): 0
 Subregion (LRR): LRR E Lat: 44° 53' 20" N Long: 116° 6' N Datum: N/A
 Soil Map Unit Name: Gotham loam NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Remarks: <u>In ditch</u>			

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. <u>N/A</u>				
2. _____				
3. _____				
4. _____				
Total Cover: _____				
Sapling/Shrub Stratum				
1. <u>N/A</u>				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
2. _____				
3. _____				
4. _____				
Total Cover: _____				
Herb Stratum				
1. <u>Juncus balticus</u>	<u>40</u>	<u>Y</u>	<u>FACW</u>	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. <u>Actinophytum virginicum</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
3. <u>Calce microphylla</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
4. <u>Potentilla gracilis</u>	<u>7</u>	<u>N</u>	<u>FAC</u>	
5. <u>Juncus roemerianus</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	
6. <u>Poa pratensis</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
7. _____				
8. _____				
Total Cover: <u>85</u>				
Woody Vine Stratum				
1. <u>N/A</u>				
2. _____				
Total Cover: _____				
% Bare Ground in Herb Stratum <u>15</u>				
Remarks:				

SOIL

Sampling Point: 53

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)							
Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹		
0-3	10YR2/2					Sandy loam	
3-16 ⁺	10YR5/4					Coarse sand + gravel	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>
---	---

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)		<input type="checkbox"/> Water-Stained Leaves (B9) (NW coast)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except NW coast)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Frost-Heave Hummocks (D4)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		

Field Observations:	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	
Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	
Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No saturation @ 16"

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region (DRAFT)

Project/Site: MCCALL AIRPORT City/County: MCCALL, VALLEY Sampling Date: 10/07/08
 Applicant/Owner: AIRPORT State: ID Sampling Point: E1
 Investigator(s): POIT Section, Township, Range: T18N R3E S21 (CRM)
 Landform (hillslope, terrace, etc.): TERRACE Local relief (concave, convex, none): FLAT Slope (%): 0
 Subregion (LRR): LRR E Lat: 44° 53' 20" N Long: 116° 6' N Datum: N/A
 Soil Map Unit Name: Donner sandy loam NWI classification: PEMA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: <u>Swale connected to intermittent stream - water backs up during high flows</u>		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>N/A</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____				
Total Cover: _____				
Sapling/Shrub Stratum				Prevalence Index worksheet:
1. <u>N/A</u>				Total % Cover of: _____ Multiply by: _____
2. _____				OBL species _____ x 1 = _____
3. _____				FACW species _____ x 2 = _____
4. _____				FAC species _____ x 3 = _____
5. _____				FACU species _____ x 4 = _____
Total Cover: _____				UPL species _____ x 5 = _____
Herb Stratum				Column Totals: _____ (A) _____ (B)
1. <u>Gnaphalium sp.</u>	<u>15</u>	<u>N</u>	<u>FAC</u>	Prevalence Index = B/A = _____
2. <u>Taraxacum officinale</u>	<u>60</u>	<u>Y</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators:
3. <u>Potentilla gracilis</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	<input checked="" type="checkbox"/> Dominance Test is >50%
4. <u>Agropyron repens</u>	<u>T</u>	<u>N</u>	<u>FAC</u>	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹
5. <u>Veronica perigrina</u>	<u>T</u>	<u>N</u>	<u>OBL</u>	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
6. _____				<input type="checkbox"/> Wetland Non-Vascular Plants ¹
7. _____				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
8. _____				¹ Indicators of hydric soil and wetland hydrology must be present.
Total Cover: <u>25</u>				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Woody Vine Stratum				
1. <u>N/A</u>				
2. _____				
Total Cover: _____				
% Bare Ground in Herb Stratum <u>15</u>				
Remarks:				

SOIL

Sampling Point: F1

Profile Description: (Describe to the depth needed to document the Indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|--|---|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> 2 cm Muck (A10) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) | |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) | ³ Indicators of hydrophytic vegetation |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) | wetland hydrology must be present |

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: W/A

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Matrix is 4-chrom. Does not meet SS (Sandy Redox). However, based on extended period of inundation/saturation in spring, meets hydro soil definition.

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- | | | |
|--|--|--|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (except NW coast) | <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Salt Crust (B11) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input checked="" type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> Frost-Heave Hummocks (D4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) | <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | | |

Field Observations:

Surface Water Present? Yes _____ No ☒ Depth (inches): _____

Water Table Present? Yes _____ No ☒ Depth (Inches): _____

Saturation Present? Yes _____ No ☒ Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

water backs up seasonally as stream flow exceeds capacity of cutbank reaches between high flood levee mat behind agit hole, but - + annual plants

APPENDIX C

SITE PHOTOGRAPHS



Photo 1: Area 2, Wetland and Irrigation Ditch



Photo 2: Area 1, Drainage Ditch, Culvert Connecting Under Runway



Photo 3: Area 2, Irrigation Ditch at End of Runway



Photo 4: Area 1, Main Drainage Ditch



Photo 5: Area 2, Irrigation Ditch and Wetland



Photo 6: Area 1, Main Drainage Ditch



Photo 7: Area 6A, Drift from High Water in Drainage Ditch



Photo 8: Area 6A, Driftwood in Drainage Ditch



Photo 9: Area 6B, Non-Wetland Part of Drainage Ditch



Photo 10: Area 7, Irrigation Ditch, Culvert under Runway



Photo 11: Area 7, Irrigation Ditch



Photo 12: Area 8, Drainage Ditch



Photo 13: Area 9, Intermittent Stream



Photo 14: Areas 8 and 9, Stream, Drainage Ditch and Culvert



Photo 15: Area 8, Annual Hydrophytes in Drainage Ditch



Photo 16: Area 8, Algal Crust Hydrology Indicator in Drainage Ditch



Photo 17: Area 11, Snow Storage/Detention Basin Standpipe



Photo 18: Area 11, Snow Storage/Detention Basin, Stormwater Outfall



Photo 19: Area 12, Non-Wetland Drainage Ditch, Isolated

APPENDIX D

LITERATURE CITATIONS

- Cooke, Sarah Spear, Ed. 1997. A Field Guide to the Common Wetland Plants of Western Washington and Northwestern Oregon. Seattle Audubon Society, Washington Native Plant Society. 417 pp.
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- Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1, US Army Engineer Waterway Experiment Station, Vicksburg, MS.
- Hitchcock, C.L. and A. Cronquist. 1973. Flora of the Pacific Northwest. University of Washington Press. Seattle, WA 730 pp.
- Munsell Color. 1990, revised 1994. Munsell Soil Color Charts. Macbeth Division of Kollmorgen Corporation. Baltimore, MD
- National Weather Service, McCall, ID weather station. Data accessed at <http://www.wrh.noaa.gov/climate/index.php?wfo=pqr>
- Natural Resources Conservation Service. WETS data for McCall weather station. Data accessed at [ftp.wcc.nrcs.usda.gov/support/climate/wetlands/id/41035.txt](ftp:wcc.nrcs.usda.gov/support/climate/wetlands/id/41035.txt).
- Soil Conservation Service. The Soil Survey of Valley County Area, Idaho. 1981. 146 pp plus appendices.
- U.S. Army Corps of Engineers, Engineer Research and Development Center. April 9, 2007. Draft Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast Region. 114 pp.
- U.S. Department of the Interior, Fish and Wildlife Service. National List of Plant Species that Occur in Wetlands: 1988 Oregon and its supplement (1993)
- U.S. Department of the Interior, Fish and Wildlife Service. National Wetland Inventory Wetlands Mapper. Accessed at: <http://wetlandsfws.er.usgs.gov/NWI/index.html>



9755 SW Barnes Rd, Ste 300

Portland, OR 97225

503.626.0455 Fax: 503.526.0775

TRANSMITTAL

To: Greg Martinez, Project Manager
Company: U.S. Army Corps of Engineers
Phone: (208) 345-2155
Fax: _____
Address: Boise Regulatory Office, 10095 W.
Emerald Street
Boise, ID 83704

RE: Wetland Impacts
From: Phil Quarterman, PWS
Title: Sr. Wetland Scientist
Phone: (503) 372-3562
Fax: (503) 526-0775

Date: 3/20/2009

Project#: 34268

Project Name: McCall Airport Taxiway Relocation

For: ☐ Per Your Request ☒ Your Review/Comment ☐ Your Approval/Signature ☐ Your Use/Files
☐ Other _____

We Are Transmitting: ☒ Herewith ☐ Under Separate Cover

The Following:

Quantity	Description
1	Wetland delineation report
1	Set of project alternative maps showing wetland impacts
1	Alternatives report

Comments: Greg: Please review the delineation report and project alternatives. Let me know if you have any questions.

If you can provide your concurrence with the conclusions of the delineation report, including jurisdiction, that would be appreciated. As you will see, we have preliminarily concluded that all features that are connected to the Payette River are under Corps jurisdiction. The only feature not connected is the snow storage basin, which drains to the airport infield. Will you need additional documentation to provide a Jurisdictional Determination?

The question that someone on the review committee at the City had, was whether the impacts of the different alternatives have been correctly assessed. We show impacts generally out to the cut and fill

line, except one ditch which will also be filled outside that line under Alt. 2 (240 feet separation). I believe that wetlands not affected by cut and fill, e.g. the airport drainage ditch, can be maintained with a hydrologic connection, such as culverts in the appropriate places. There is one place I have highlighted where it might be hard to maintain the entire unfilled wetland, because water flow is diffuse instead of concentrated in a channel. But otherwise, it appears to me that as long as flow from the north via irrigation ditches is maintained by culverts, the existing wetlands unaffected by filling can be maintained. Your opinion on the impact maps would be appreciated.

I have also included the alternatives report. As yet, the alternatives are still being weighed. The statement about mitigation is of course, still very preliminary. Once we have a preferred alternative, I will in touch again about mitigation alternatives. Last time we spoke, the proposed mitigation bank was still some time off in the future, probably beyond our time frame. Any update on the proposed bank, or any other ideas, would be appreciated.

Phil Quarterman

cc: Rainse Anderson, Project Manager
Laura Jackson



9755 SW Barnes Rd, Ste 300

Portland, OR 97225

503.626.0455 Fax: 503.526.0775

TRANSMITTAL

To: Paul Holmquist, SEA-637

RE: McCall Airport Wetland Delineation

Company: Federal Aviation Administration, SEA ADO

From: Sarah Lucas

Phone: (425) 227-2641

Title: Aviation Planner

Fax: (425) 227-1650

Phone: (503) 372-3533

Address: 1601 Lind Avenue SW

Fax: (503) 526-0775

Renton, WA 98055

Project#: 03425

Date: 5/21/2009

Project Name: McCall Airport Environmental Assessm...

For: ☐ Per Your Request ☒ Your Review/Comment ☐ Your Approval/Signature ☐ Your Use/Files
☐ Other _____

We Are Transmitting: ☒ Herewith ☐ Under Separate Cover

The Following:

Quantity	Description
2	Delineation of Wetlands and Other Waters - McCall Airport Taxiway Relocation
1	US Army Corps of Engineers Concurrence

Comments: Paul,

Enclosed is a copy of the wetland delineation prepared for the McCall Airport EA, along with the Corps' concurrence. The file size was too large to e-mail.

Please let me know if you have any questions.

Thanks,
Sarah



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
WALLA WALLA DISTRICT, CORPS OF ENGINEERS
BOISE REGULATORY OFFICE
10095 WEST EMERALD STREET
BOISE, IDAHO 83704-9754

RECEIVED

APR 22 2009

W&H PACIFIC

April 20, 2009

Regulatory Division

SUBJECT: NWW-2009-199-B01

Mr. John Anderson, Airport Manager
City of McCall
216 E. Park Street
McCall, Idaho 83638

Dear Mr. Anderson:

Enclosed is a copy of our approved jurisdictional determination indicating the site of your proposed airport expansion project located in portions of Section 21, Township 18 North, Range 3 East, in McCall, Valley County, Idaho contains waters of the United States that are regulated under Section 404 of the Clean Water Act. We reviewed your wetland delineation map entitled Delineation of Wetlands and Other Waters for McCall Airport Environmental Assessment, dated January 13, 2009, prepared by WH Pacific, Inc., and have determined the map accurately delineates the extent of waters of the United States, including wetlands for your project. A copy of the approved map is enclosed. The map shows Areas 3 and 4 to be jurisdictional wetlands; Area 9 to be an unnamed jurisdictional stream; Areas 1, 2, 5A, 5B, 6A, 7, and 8 to be jurisdictional wetland ditches and Areas 6B and 10 to be jurisdictional ditches subject to regulation under Section 404 of the Clean Water Act. This jurisdictional determination is valid for a period of 5 years from the date of this letter unless new information warrants revision of the determination before the expiration date or the District Engineer has identified, after public notice and comment, that specific geographic areas with rapidly changing environmental conditions merit re-verification on a more frequent basis.

With regard to Areas 11 and 12, these areas are upland features which are not subject to regulation under Section 404 of the Clean Water Act.

We are enclosing an appeals form that explains the options you have if you do not agree with this approved jurisdictional determination. If you decide to appeal this determination, you need to send the form to the Division Engineer, Northwestern Division, so he receives it within 60 days of this letter. If you have new information you want us to consider, you may send it to the Regulatory Division, Walla Walla District, at the letterhead address before you file the appeal.


We have also reviewed the three future build options and the no action alternative described in the Environmental Assessment (EA). Under the Section 404 (b)(1) guidelines the applicant must consider alternatives that would avoid or minimize impacts to waters of the United States to include wetlands and yet still meet project purpose and need. Given this, it would appear that Alternatives 3 and 4 both meet the FAA standards for future ARC expansion as cited in the ALP, whereas Alternative 1 and the No Action Alternative do not. Alternative 4 has the additional advantage of also meeting the build out standard as recommended in the Master Plan and has the least amount of impact to waters of the United States (0.3 acre). We would suggest that you look at a 350 foot design option. This alternative would reduce the amount of land acquisition, meet the FAA standard for future expansion and possibly meet the build out standard as recommended in the Master Plan. The disadvantage is that impacts to waters and wetlands would increase, but it appears would still be considerably less than impacts associated with Alternative 3, and thus would be a viable option for consideration under the 404 (b)(1) guidelines.

With regard the way impacts are assessed in the EA for each build alternative, it appears that you have addressed impacts correctly out to the cut and fill line. Our authority under Section 404 of the Clean Water Act; pertains to the discharge of dredged or fill material directly into wetlands or waters of the United States. In your March 20, 2009 transmittal letter, your consultant addresses a concern that direct fill impacts may affect wetlands beyond the actual fill area. Although the area of concern is not specifically pointed out we believe it involves wetland Area 3, and Alternative 4. This wetland is a wetland swale that varies from 30 to 90 feet wide within the project area. During the spring snow melt this area is subject to sheet flow across the entire wetland instead of concentrated flow within a confined channel like most of the other wetlands and channels within the project area. The filling of a portion of this wetland for the new taxiway would leave a 50-foot reach between the new taxiway and the existing taxiway. Your consultant is concerned that not enough water would reach this area for it to be maintained. This concern we believe can be addressed by placing multiple culverts or a wider open bottom culvert under the proposed taxiway to ensure that surface water during the spring snow melt reaches this area. As your proposed project moves forward we are available to meet with you and your consultants to discuss the proposed project and permitting issues.

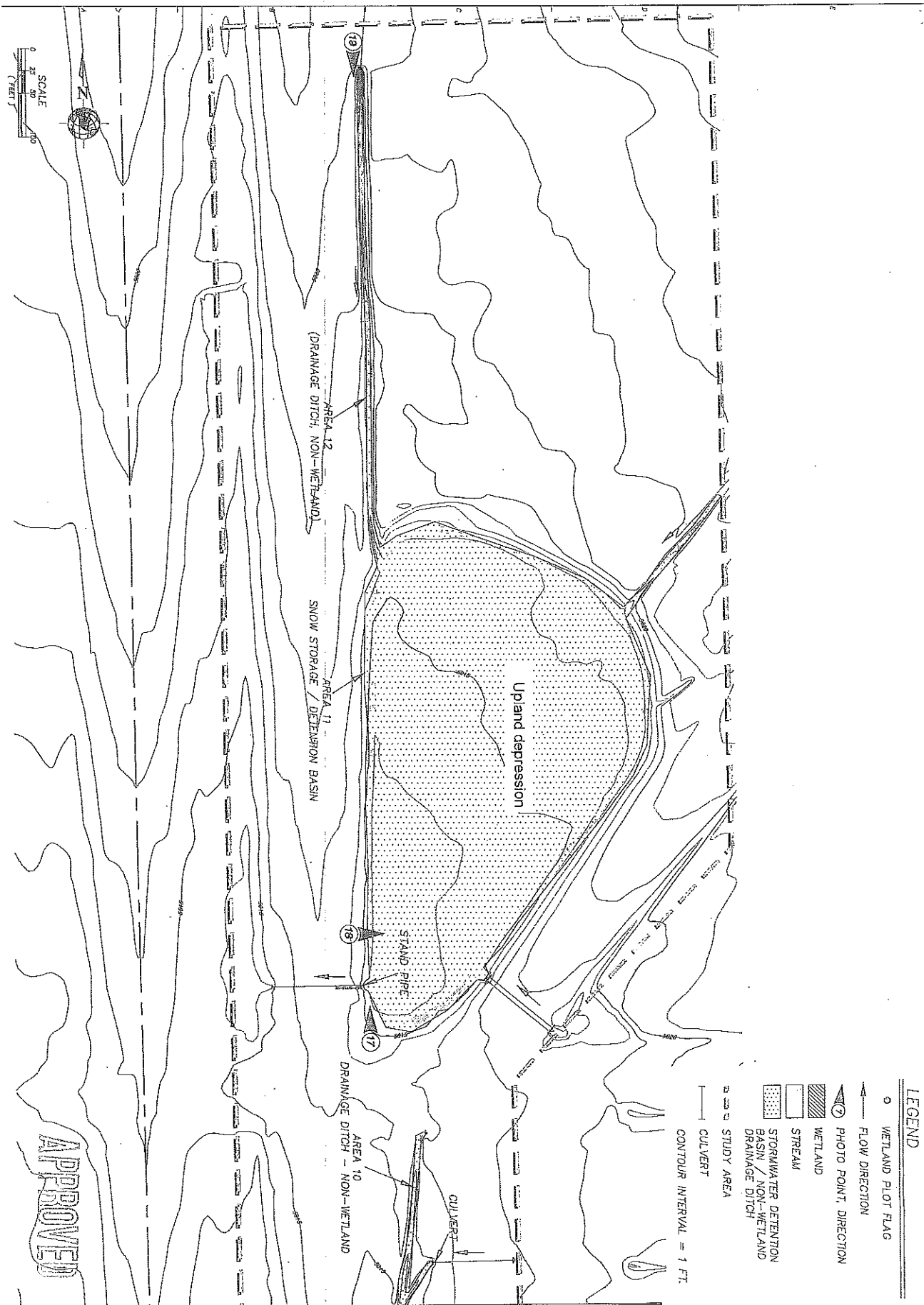
Section 404 of the Clean Water Act (33 U.S.C. 1344) requires a Department of the Army permit be obtained for the discharge of dredged or fill material into waters of the United States, including wetlands. This includes excavation activities which result in the discharge of dredged material and destroy or degrade waters of the United States. If your proposed project will involve discharging dredged or fill material into jurisdictional areas listed above, you will need to obtain a Department of the Army permit before you start work.

If you have any questions, please contact me at 208-345-2154. A copy of this letter is being sent to: Mr. John Olson, Environmental Protection Agency, 1435 North Orchard, Boise, Idaho 83706; Mr. Phil Quarterman, WH Pacific, 9755 SW Barnes Road, Suite 300, Portland, Oregon 97225.

Sincerely,


Gregory J. Martinez
Regulatory Project Manager

Enclosures



MATCHLINE - SEE SHEET 2

CITY OF McCall, IDAHO ~ ENVIRONMENTAL ASSESSMENT
DELINEATION OF WETLANDS & OTHER WATERS

FIGURE 5 WETLAND MAP

McCall
SCALE:
AS SHOWN

PROJECT NO.
034256

DRAWING FILE NAME:
34256-Surv-wetl-wt1.0

WHPacific

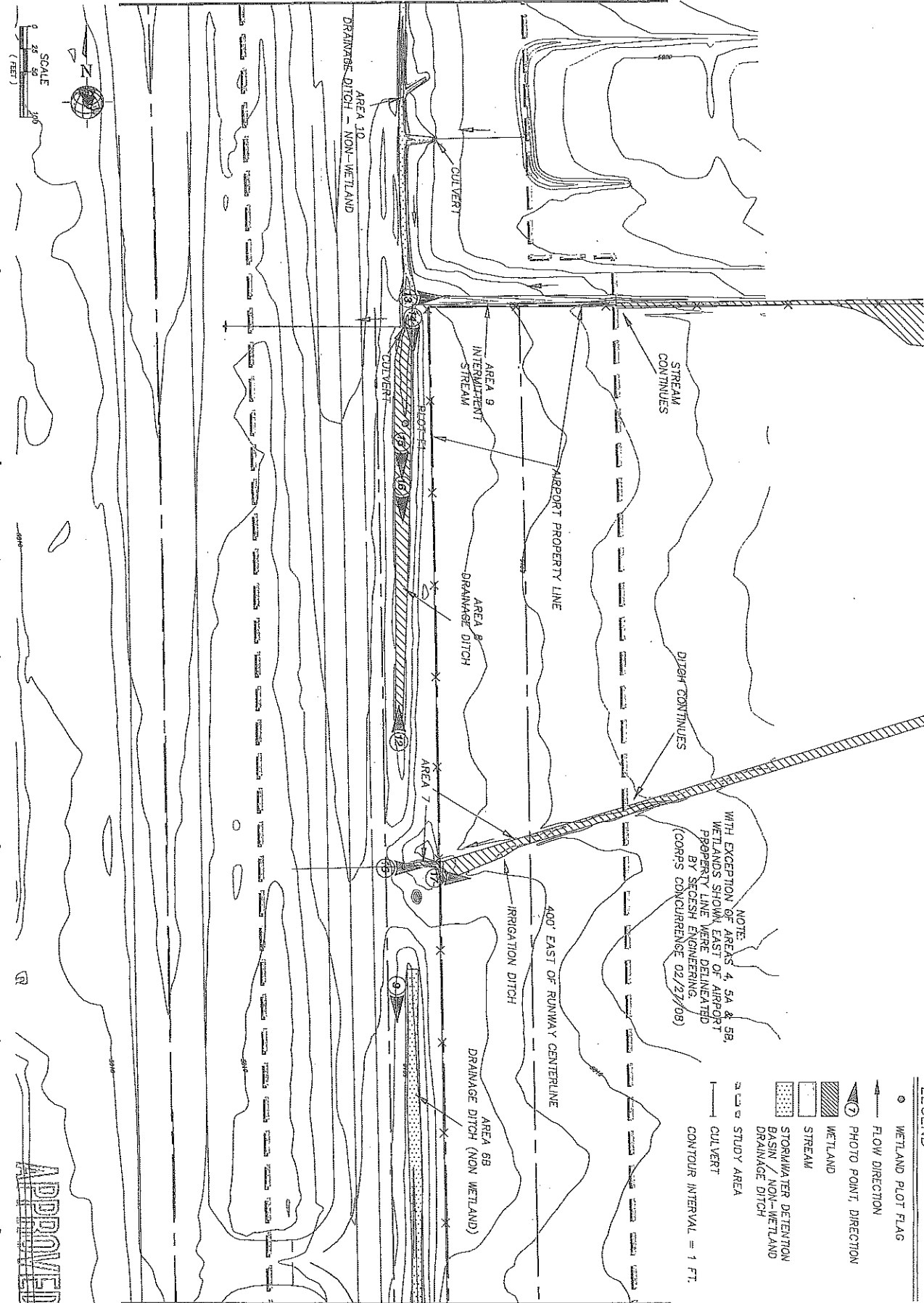
6755 SW Barrow Rd, Suite 300
Portland, OR 97225
503-628-0455 Fax 503-528-0775
www.whpacific.com

CHECKED BY: FJD
APPROVED BY: FJD
DRAIN BY: RAI
LAST EDIT: 1/13/2009
PLOT DATE: 01/13/09

DATE	BY	REV	REVISION	CK'D	APPR

MATCHLINE - SEE SHEET 1

MATCHLINE - SEE SHEET 3



CITY OF McCALL, IDAHO ~ ENVIRONMENTAL ASSESSMENT
DELINEATION OF WETLANDS & OTHER WATERS

FIGURE 5
WETLAND MAP

McCALL
SCALE: AS SHOWN

PROJECT NO. 034256

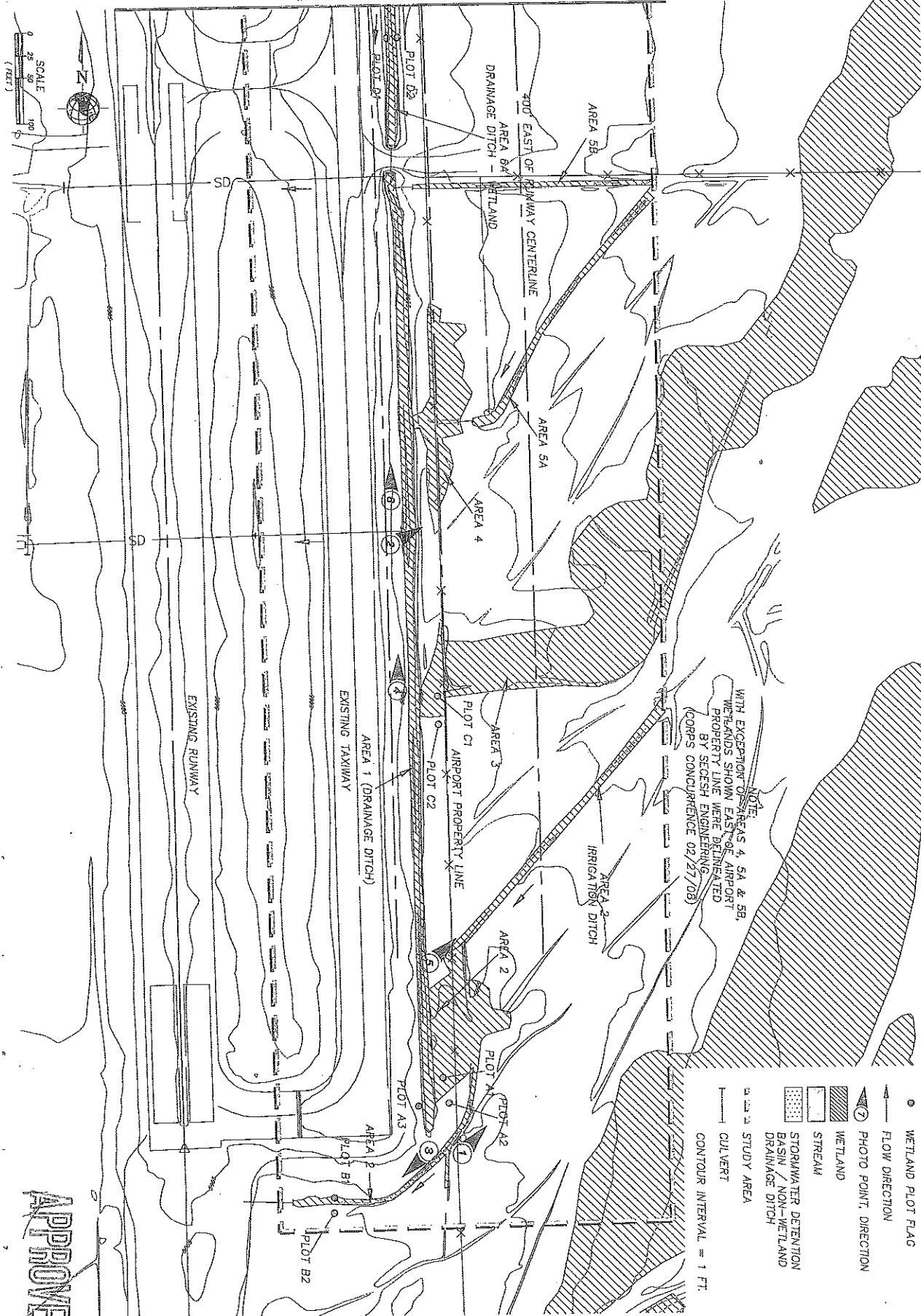
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DRAWN BY: RAI		CHECKED BY: FJG	
LAST EDIT: 1/12/2009		APPROVED BY: FJG	
DATE		PLOT DATE: 01/13/09	
DATE	BY	REVISION	CK'D APPR

APPROVED

MATCHLINE - SEE SHEET 3



LEGEND

- WETLAND PLOT FLAG
- FLOW DIRECTION
- PHOTO POINT DIRECTION
- WETLAND
- STREAM
- STORMWATER DETENTION BASIN / NON-WETLAND
- DRAINAGE DITCH
- STUDY AREA
- CULVERT
- CONTOUR INTERVAL = 1 FT.

CITY OF McCALL, IDAHO ~ ENVIRONMENTAL ASSESSMENT DELINEATION OF WETLANDS & OTHER WATERS

FIGURE 5 WETLAND MAP

McCALL

SCALE: AS SHOWN

PROJECT NO. 034256

DRAWING FILE NAME: 34256-Surv-wetl-wt1.0

WHPacific

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CHECKED BY: PJO	APPROVED BY: PJO
DRAWN BY: RAI	LAST EDIT: 1/12/2009
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APPROVED

Memorandum

To: Rainse Anderson, Project Manager
From: Phil Quarterman, Sr. Wetland Scientist
Date: November 3, 2010
Re: Wetland Mitigation for McCall Airport Taxiway Project

Phil Quarterman, Senior Wetland Scientist conducted a site visit on October 11-13, 2010 to review potential wetland mitigation sites for the McCall Airport taxiway relocation project. The project will involve 1.39 acres of impacts to jurisdictional wetlands, including ditches and adjacent wet pastures.

Contacts were made before the site visit with several individuals, and he visited five sites, as follows:

1. Proposed mitigation bank (Green Ranch at Cascade)
2. Blackhawk Enterprises mitigation site
3. City of McCall golf course
4. Payette River subdivision, and
5. John Humphries home site

Phil was able to eliminate three of the sites from further consideration. The Humphries home site had some areas with potential for wetland creation, but too little area to be used by the project. The Payette River subdivision similarly had some small areas with wetland creation or restoration potential, but not enough area to be used by the project. There were no sites suitable for wetland creation or restoration at the golf course. All available areas were already in wetland in good condition.

Green Ranch at Cascade: Phil viewed the site of this proposed mitigation bank near Lake Cascade with Jim Fronk of Secesh Engineering Inc. in McCall. The site is approximately 17 miles south of the airport (see attached photographs and location exhibits).

His client proposes to establish a mitigation bank on a 350 acre site, creating up to 148 acres of various types of mitigation credit units. A draft mitigation banking prospectus has been reviewed by the Corps of Engineers Boise office.

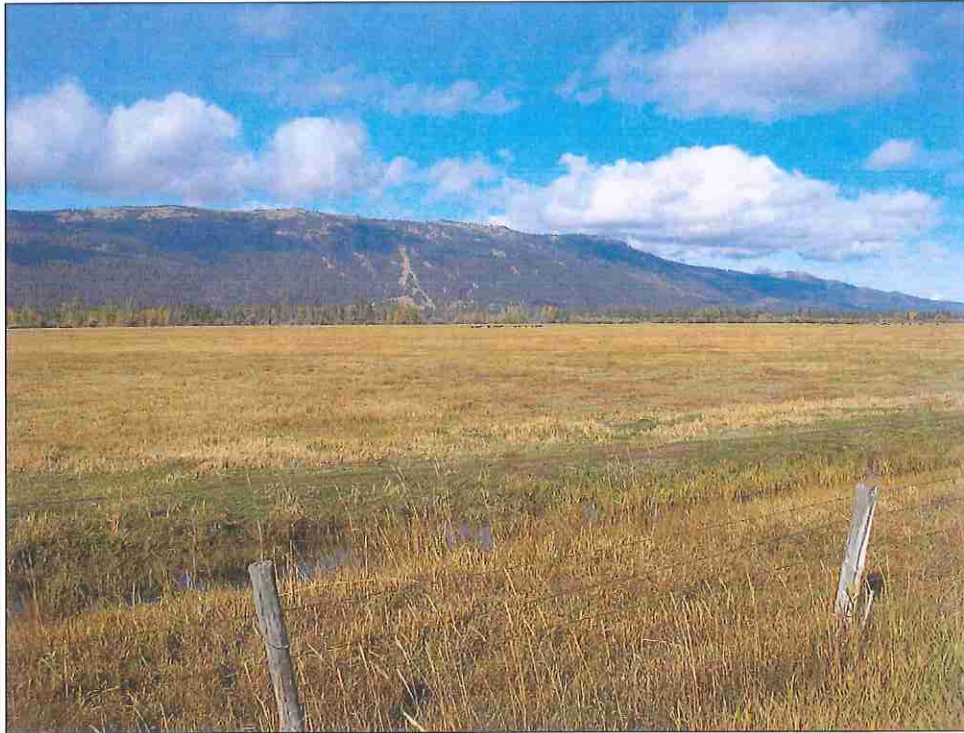
Mr. Fronk attended a meeting between his client and Greg Martinez, Regulatory Project Manager, Boise Corps office the following day. He reported to me that the meeting went well, and that his client plans to proceed to the next stage, which is to prepare a legal instrument setting up the bank and its credits. The Corps had only minor comments on the prospectus, and has agreed to the "service area" for the bank, which includes the McCall area. The Corps has also agreed to allow sale of credits immediately after the banking instrument has been signed, based on a phone conversation with Greg Martinez. His estimate is that the instrument will be finalized and credits available by about March 2011.

Blackhawk Enterprises mitigation site: Phil spoke with Blackhawk Enterprises CEO, Mr. Sima Muroff, about a mitigation site on the west side of the North Fork Payette River approximately 4.5 miles to the south of McCall airport (see attached location exhibit). The Corps has already approved a 3-acre wetland creation site for a nearby residential subdivision, and approximately 3.5 acres of additional upland are available on the site that could be converted to wetland. The uplands are irregular polygons within a matrix of emergent and shrub wetlands associated with the river floodplain (see attached photographs).

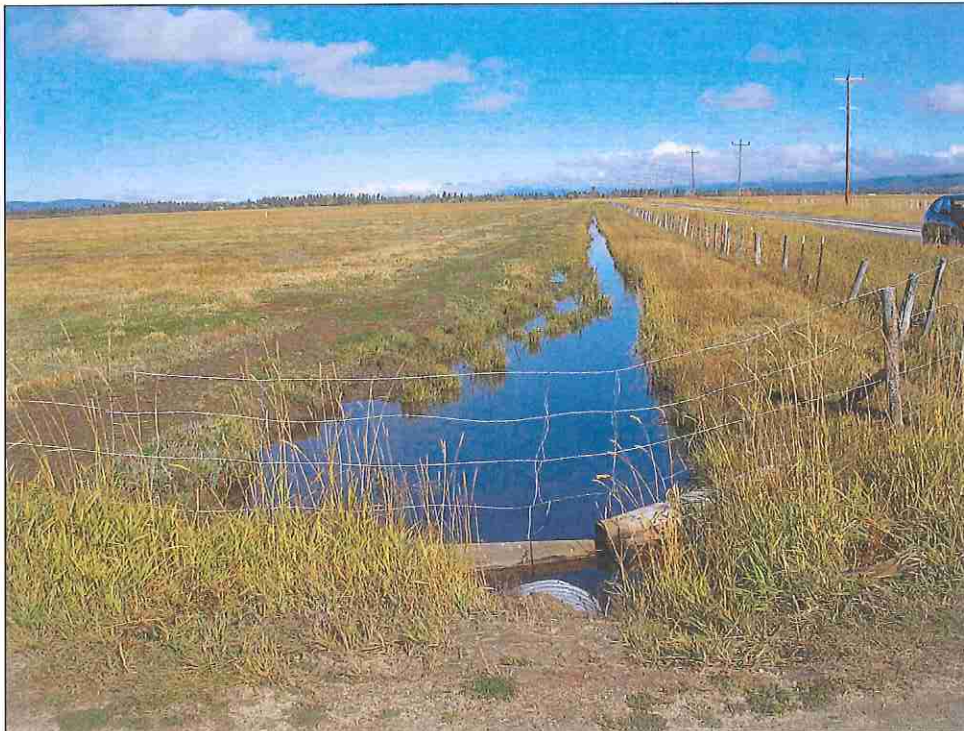
Phil viewed the site with Jim Fronk, who provides engineering, wetland and surveying services to Blackhawk. The 3-acre area (in three units) has already been graded according to the mitigation plan. Under the mitigation plan, shallow grading will be sufficient to establish wetland hydrology: near surface saturation or shallow surface ponding during the spring supported by snowmelt and spring runoff. The remaining 3.5 acres appears very similar, and is adjacent to the 3-acre area. In my opinion, conversion of the remaining area to wetland by shallow grading would be relatively easy and successful. Some form of planting plan to establish native vegetation would be necessary. At ratio of 1.5:1, approximately 2.1 acres would need to be converted.

Recommendation: Based on the conversations Phil has had with Jim Fronk and Greg Martinez, we recommend purchasing mitigation credits equivalent to the 1.39 acres of impact from the Green Ranch mitigation bank. We will stay in touch with Jim Fronk to confirm that the banking instrument process is moving forward with the Corps generally in accordance with his expectations.

If the bank does not work out in a timely fashion for any reason, we recommend the Blackhawk Enterprises site as a viable back up.



Green Ranch Wetland Mitigation Bank Site



Green Ranch Wetland Mitigation Bank Site



Blackhawk Enterprises existing mitigation site showing grading



Blackhawk Enterprises: potential wetland mitigation site, adjacent uplands



Blackhawk Enterprises mitigation site: stream provides potential water source





at Tamarack February 2008

Green River Ranch site

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