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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Project:

McCall Airport Environmental Assessment

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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 □eriod from October 1 2007 to October 8, 2008, 2008 for daily and monthly precipitation totals. The table below presents these data.

Table 1-Monthly Prec	ipitation Data for 20	07-2008 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.		J

^{*} 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

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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

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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 (seed Photo 15). The plot lacks indicators of hydric soil, but if inundation and

saturation exceed 14 days, as seems likely, this are meets the <u>definition</u> 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

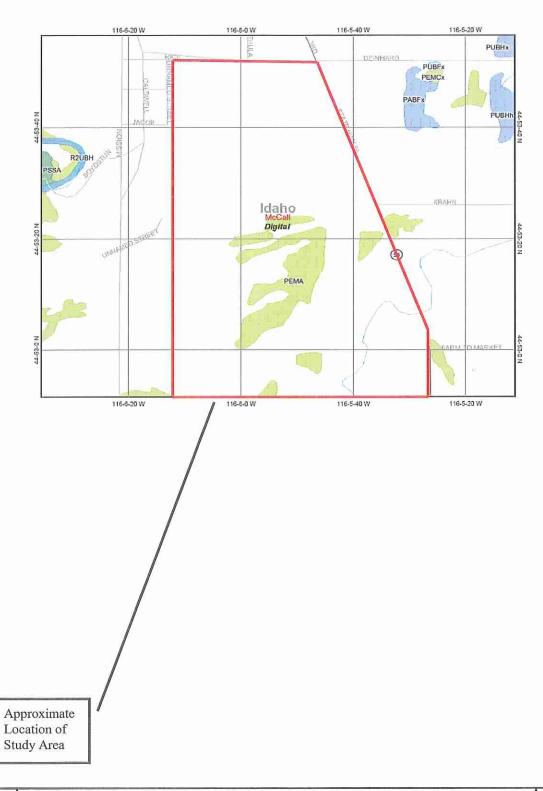
Approximate Study Area



Location Map

McCall Airport McCall, Idaho Figure

1



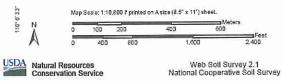
WHPacific

National Wetland Inventory Map

McCall Airport McCall, Idaho

Figure 2





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

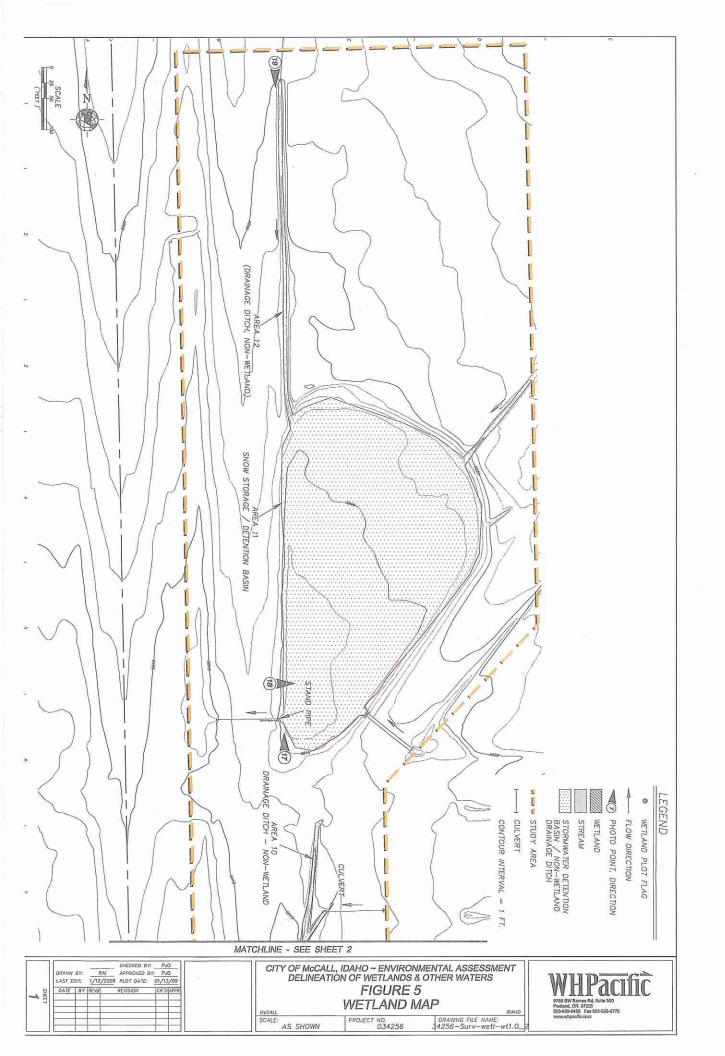


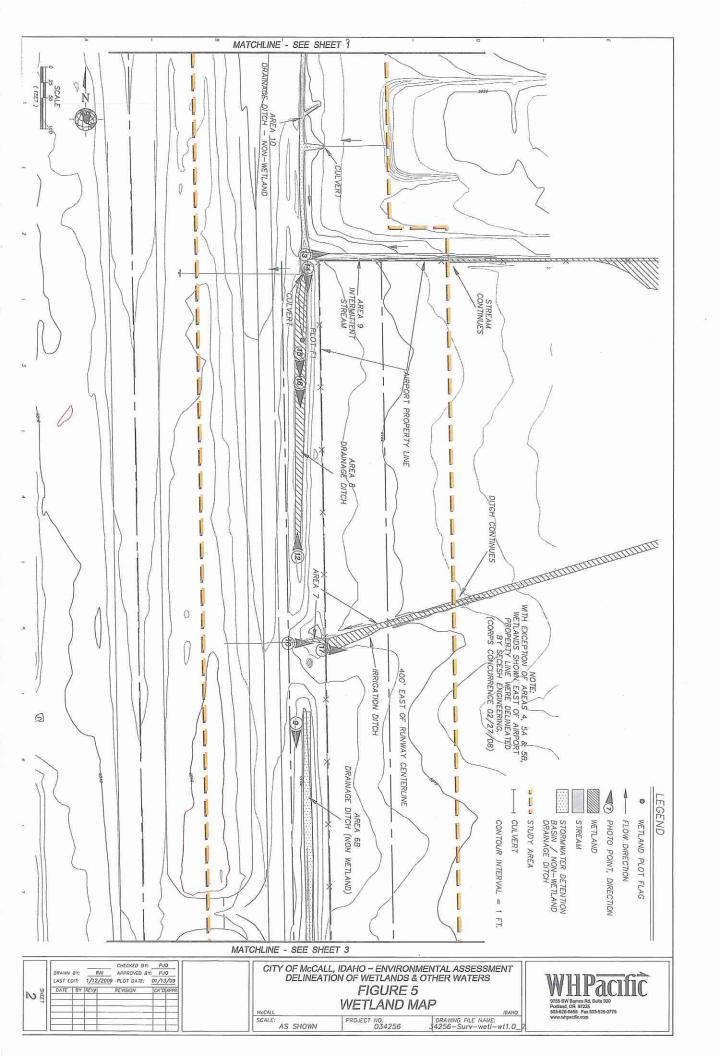


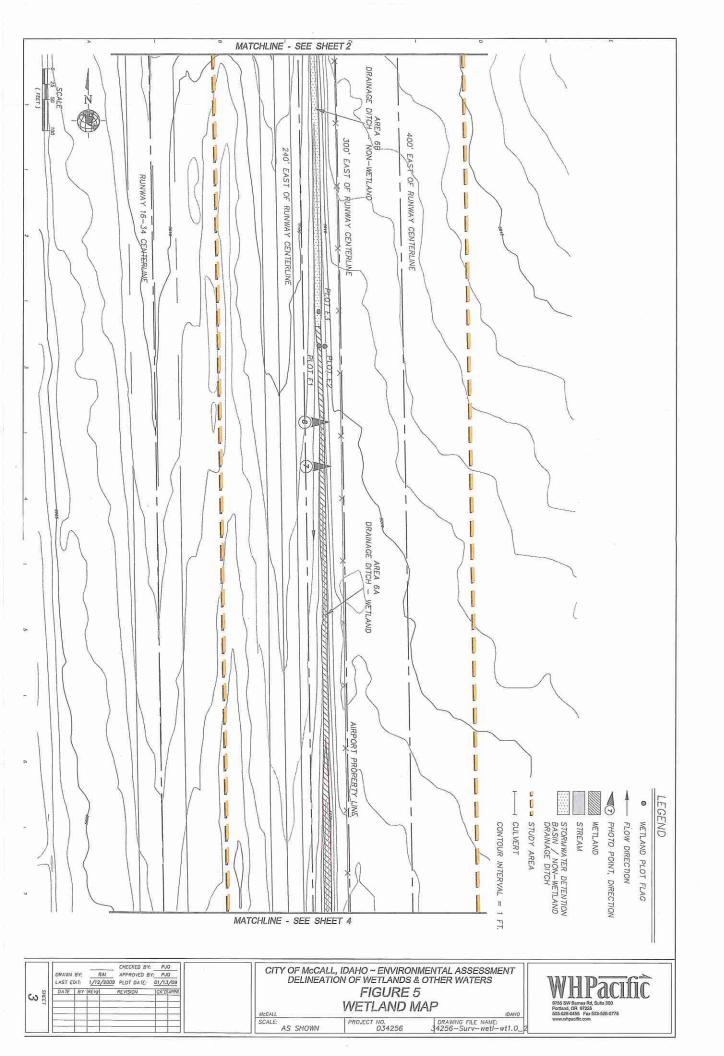
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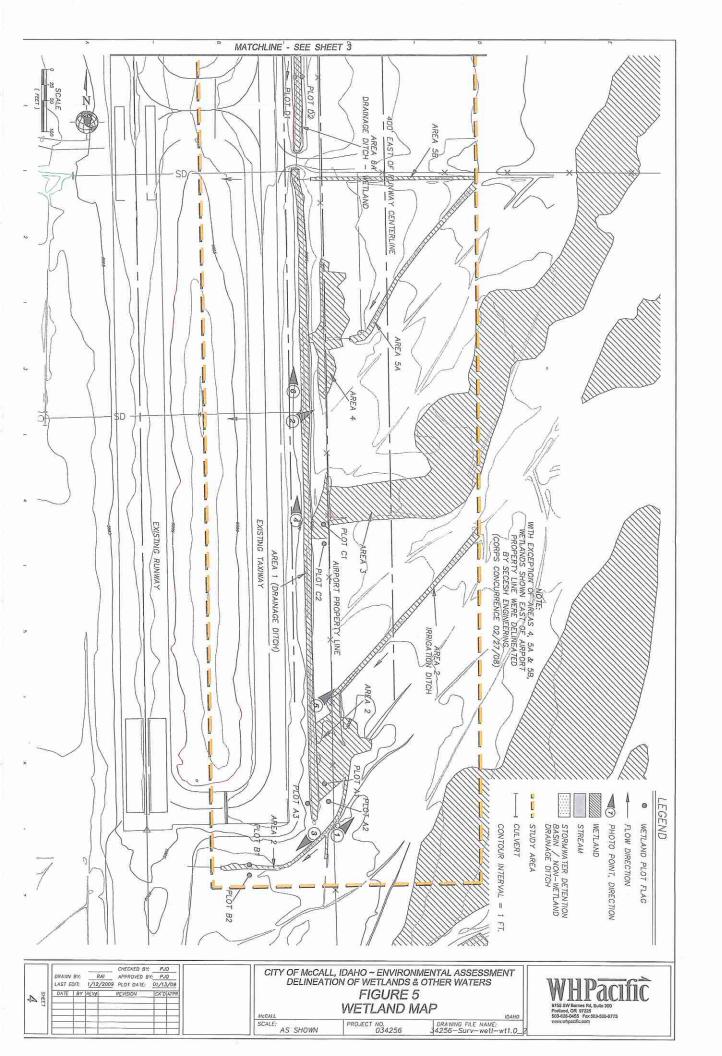
CITY OF McCALL, IDAHO ~ ENVIRONMENTAL ASSESSMENT DELINEATION OF WETLANDS & OTHER WATERS FIGURE 4 AERIAL PHOTOGRAPH











APPENDIX B

DATA FORMS

Project/Site: City/Count	y. <u>Ma</u>	Tall / Vall44 Sampling Date: 10/6/08
Applicant/Owner: Air port		State: 1D Sampling Point:A 1
Investigator(s): PR/LT Section, T	ownship, Rar	nge: TIEN N3E, 521 (B
Landform (hillslope, terrace, etc.): Taylor 44 Local relie	ef (concave, c	convex, none): Slope (%):
Subregion (LRR): LRR E Lat: 44° S3	1 20" N	Long: 116 6 W Datum: N/A
Soil Map Unit Name: Costin loans		NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes _	V No	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed?	Are "	Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally problematic?	(If ne	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing sampli	ng point lo	ocations, transects, important features, etc.
Hydria Cail Dresent?	he Sampled hin a Wetlan	Area d? Yes No
Remarks:	ii ii	
VECETATION		•
VEGETATION Absolute Dominar	nt Indicator	Dominance Test worksheet:
Tree Stratum (Use scientific names.) <u>% Cover Species</u>	? Status_	Number of Dominant Species
1. <u>MA</u>		That Are OBL, FACW, or FAC: (A)
2		Total Number of Dominant
3	5. 10-5	Species Across All Strata: (B)
4 Total Cover:		Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum 1		Prevalence Index worksheet:
2	I	Total % Cover of: Multiply by:
3	7.	OBL species x 1 =
4		FACW species x 2 =
5		FAC species x 3 =
Total Cover:		FACU species x 4 =
1. Carrie uto culata 60 Y	084	UPL species x 5 =
2. Column constit considers 38 V	FACIN	Column Totals: (A) (B)
3. Care Lanatilis T N	6BL	Prevalence Index = B/A =
4. Creum macrophyllum 5 N	FACIN	Hydrophytic Vegetation Indicators:
5. Aumara accidentalis T N	PACW	Dominance Test is >50%
6	47	Prevalence Index is ≤3.0 ¹
7		Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
8		Wetland Non-Vascular Plants ¹
Woody Vine Stratum		Problematic Hydrophytic Vegetation ¹ (Explain)
1. N/A		¹ Indicators of hydric soil and wetland hydrology must be present,
2		tons unit recommended.
Total Cover;		Hydrophytic Vegetation Present? Yes No
Remarks:		
		£
*		

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Sampling Point: A-1

Depth _	Matrix			Features		Loc ²	Table	Remarks
(inches)	Color (moist)	%	Color (moist)	%	_Type ¹ _			
0-4	104122/1						DAMALIDA	PUS
4-10	104122/1	80	10 4 R 5/2	_15_	Car	H		
			7.5 4124/6	53		M, RC	- Siliydon 1	074 164
10-16	+ 1041251	180	7.54124/1	15		H	FINE SAND	1000
Type: C=Cor	centration, D=Depl	etion, RM=	Reduced Matrix.	2 Location	: PL=Por	e Lining, R	C=Root Channel, N	//≡Matrix. or Problematic Hydric Soils³:
			RRs, unless other		2a.)			TO CONTRACTOR DO
Histosol (/		19	Sandy Redox (S Stripped Matrix				2 cm Mu	ent Material (TF2)
Black Hist	pedon (A2)	Ħ	Loamy Mucky M		i) (except	MIRA 1)		xplain in Remarks)
	Sulfide (A4)	7	Loamy Gleyed N					- 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 -
	Below Dark Surface		Depleted Matrix					
	Surface (A12)		Redox Dark Sur					
	cky Mineral (S1)		Depleted Dark S		7)			hydrophytic vegetation and
	eyed Matrix (S4)		Redox Depressi	ons (F8)			wetland hy	ydrology must be present.
	yer (if present):							
Type:	NIA		 :					apper .
Depth (inch	00%						Hydric Soil Pres	sent? Yes / No
			5				Tryanc court is	165 <u>F</u> 100
Remarks:	,							entr resno
Remarks:	Υ							
Remarks: YDROLOG Wetland Hydr	Y ology Indicators:						Secondary In	dicators (2 or more required)
Remarks: YDROLOG Wetland Hydr Primary Indica	Υ ology Indicators: tors (any one indica	tor is suffic					Secondary In	dicators (2 or more required) ained Leaves (B9) (NW coast)
YDROLOG Wetland Hydr Primary Indica Surface W	Y ology Indicators: tors (any one indica /ater (A1)	tor is suffic	Water-Stained		(B9) (exc	ept NW co	Secondary In Secondary In Water-St Sparsely	dicators (2 or more required) ained Leaves (B9) (NW coast) Vegetated Concave Surface (Bi
YDROLOG Wetland Hydr Primary Indica Surface W High Wate	Y ology Indicators: tors (any one indica /ater (A1) er Table (A2)	tor is suffic	Water-Stained Salt Crust (B1	1)		epť NW co	Secondary In Water-St ast) Sparsely Drainage	dicators (2 or more required) ained Leaves (B9) (NW coast) Vegetated Concave Surface (B Patterns (B10)
YDROLOG Wetland Hydr Surface W High Wate	Y ology Indicators: tors (any one indica /ater (A1) or Table (A2) (A3)	tor is suffic	Water-Stained Salt Crust (B1 Aquatic Invert	1) ebrates (l	B13)	ept NW co	Secondary In Water-St ast) Sparsely Drainage Dry-Seas	dicators (2 or more required) ained Leaves (B9) (NW coast) Vegetated Concave Surface (Bi Patterns (B10) son Water Table (C2)
YDROLOG Wetland Hydr Primary Indica Surface W High Wate Saturation Water Mai	Y ology Indicators: tors (any one indica /ater (A1) or Table (A2) (A3) ks (B1)	tor is suffic	Water-Stained Salt Crust (B1 Aquatic Invert Hydrogen Sul	1) ebrates (l fide Odor	B13) (C1)	#* ##?	Secondary In Water-St ast) Sparsely Drainage Dry-Seas Saturatio	dicators (2 or more required) ained Leaves (B9) (NW coast) Vegetated Concave Surface (Belle Patterns (B10) son Water Table (C2) n Visible on Aerial Imagery (C9)
YDROLOG Wetland Hydr Primary Indica Surface W High Wate Saturation Water Mai Sediment	Y ology Indicators: tors (any one indical fater (A1) or Table (A2) (A3) rks (B1) Deposits (B2)	tor is suffic	Water-Stained Salt Crust (B1 Aquatic Invert Hydrogen Sul Oxidized Rhiz	1) ebrates (l fide Odor ospheres	B13) (C1) along Liv	#* ##?	Secondary In Water-St ast) Sparsely Drainage Dry-Seas Saturatio C3) Geomore	dicators (2 or more required) ained Leaves (B9) (NW coast) Vegetated Concave Surface (Boon Water Table (C2) n Visible on Aerial Imagery (C9)
YDROLOG Wetland Hydr Primary Indica Surface W High Wate Saturation Water Mai Sediment Drift Depo	Y ology Indicators: tors (any one indicators) fater (A1) or Table (A2) (A3) rks (B1) Deposits (B2) sits (B3)	tor is suffic	Water-Stained Salt Crust (B1 Aquatic Invert Hydrogen Sul Oxidized Rhiz Presence of F	1) ebrates (l fide Odor ospheres Reduced l	B13) (C1) along Liv	ing Roots (Secondary In Water-St ast) Sparsely Drainage Dry-Seas Saturatio C3) Geomorp	dicators (2 or more required) ained Leaves (B9) (NW coast) Vegetated Concave Surface (Beterns (B10) son Water Table (C2) n Visible on Aerial Imagery (C9) chic Position (D2)
YDROLOG Wetland Hydr Primary Indica Surface W High Wate Saturation Water Mai Sediment Drift Depo Algal Mat	Y ology Indicators: tors (any one indical fater (A1) or Table (A2) (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4)	tor is suffic	Water-Stainer Salt Crust (B1 Aquatic Invert Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R	1) ebrates (I fide Odor ospheres Reduced II eduction	B13) (C1) along Liveron (C4) in Tilled S	ing Roots (Secondary In Water-St ast) Sparsely Drainage Dry-Seas Saturatio C3) Geomorp Shallow A	dicators (2 or more required) ained Leaves (B9) (NW coast) Vegetated Concave Surface (Beterns (B10) son Water Table (C2) n Visible on Aerial Imagery (C9) ohic Position (D2) Aquitard (D3) ave Hummocks (D4)
YDROLOG Wetland Hydr Primary Indica Surface W High Wate Saturation Water Mai Sediment Drift Depo Algal Mat Iron Depos	Y ology Indicators: tors (any one indical fater (A1) or Table (A2) (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5)	tor is suffic	Water-Stainer Salt Crust (B1 Aquatic Invert Hydrogen Sul Oxidized Rhiz Presence of R Recent Iron R Stunted or Str	1) rebrates (I fide Odor rospheres Reduced II reduction ressed Pla	B13) (C1) along Livion (C4) in Tilled Sants (D1)	ing Roots (Secondary In Water-St ast) Sparsely Drainage Dry-Seas Saturatio C3) Geomore Shallow / Frost-Hei	dicators (2 or more required) ained Leaves (B9) (NW coast) Vegetated Concave Surface (Beterns (B10) con Water Table (C2) n Visible on Aerial Imagery (C9) ohic Position (D2) Aquitard (D3) ave Hummocks (D4)
YDROLOG Wetland Hydr Primary Indica Surface W High Water Saturation Water Man Sediment Drift Depo Algal Mat Iron Depos	Y ology Indicators: tors (any one indical fater (A1) or Table (A2) (A3) oks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) oil Cracks (B6)		Water-Stainer Salt Crust (B1 Aquatic Invert Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Stunted or Str	1) rebrates (I fide Odor rospheres Reduced II reduction ressed Pla	B13) (C1) along Livion (C4) in Tilled Sants (D1)	ing Roots (Secondary In Water-St ast) Sparsely Drainage Dry-Seas Saturatio C3) Geomore Shallow / Frost-Hei	dicators (2 or more required) ained Leaves (B9) (NW coast) Vegetated Concave Surface (Beterns (B10) son Water Table (C2) n Visible on Aerial Imagery (C9) ohic Position (D2) Aquitard (D3) ave Hummocks (D4)
YDROLOG Wetland Hydr Primary Indica Surface W High Wate Saturation Water Mai Sediment Drift Depo Algal Mat Iron Depos Surface Si Inundation	Y clogy Indicators: tors (any one indical fater (A1) or Table (A2) (A3) cks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) oil Cracks (B6) I Visible on Aerial In		Water-Stainer Salt Crust (B1 Aquatic Invert Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Stunted or Str	1) rebrates (I fide Odor rospheres Reduced II reduction ressed Pla	B13) (C1) along Livion (C4) in Tilled Sants (D1)	ing Roots (Secondary In Water-St ast) Sparsely Drainage Dry-Seas Saturatio C3) Geomore Shallow / Frost-Hei	dicators (2 or more required) ained Leaves (B9) (NW coast) Vegetated Concave Surface (Beterns (B10) con Water Table (C2) n Visible on Aerial Imagery (C9) ohic Position (D2) Aquitard (D3) ave Hummocks (D4)
YDROLOG Wetland Hydr Primary Indica Surface W High Wate Saturation Water Mai Sediment Drift Depo Algal Mat Iron Depo: Surface Selinundation	Y ology Indicators: tors (any one indical /ater (A1) or Table (A2) (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) oil Cracks (B6) I Visible on Aerial Intions:	nagery (B7	Water-Stainer Salt Crust (B1 Aquatic Invert Hydrogen Sul Oxidized Rhiz Presence of R Recent Iron R Stunted or Str Other (Explain)	1) rebrates (I fide Odor respheres Reduced I reduction ressed Plan in Rema	B13) (C1) along Liv ron (C4) in Tilled S ants (D1) arks)	ing Roots (oils (C6) (LRR A)	Secondary In Water-St ast) Sparsely Drainage Dry-Seas Saturatio C3) Geomore Shallow / Frost-Hei	dicators (2 or more required) ained Leaves (B9) (NW coast) Vegetated Concave Surface (Beterns (B10) con Water Table (C2) n Visible on Aerial Imagery (C9) ohic Position (D2) Aquitard (D3) ave Hummocks (D4)
YDROLOG Wetland Hydr Primary Indica Surface W High Water Saturation Water Man Sediment Drift Depo Algal Mat Iron Depoi Surface So Inundation	Yology Indicators: tors (any one indicators (any one indicator (A1) or Table (A2) (A3) or (A3) or (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) oil Cracks (B6) I Visible on Aerial Intions: Present?	nagery (B7 s N	Water-Stained Salt Crust (B1 Aquatic Invert Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Stunted or Str Other (Explair	ebrates (I fide Odor cospheres Reduced II eduction ressed Plan in Rema	B13) (C1) s along Liv ron (C4) in Tilled S ants (D1) arks)	ing Roots (oils (C6) (LRR A)	Secondary In Water-St ast) Sparsely Drainage Dry-Seas Saturatio C3) Geomore Shallow / Frost-Hei	dicators (2 or more required) ained Leaves (B9) (NW coast) Vegetated Concave Surface (Beterns (B10) con Water Table (C2) n Visible on Aerial Imagery (C9) ohic Position (D2) Aquitard (D3) ave Hummocks (D4)
YDROLOG Wetland Hydr Primary Indica Surface W High Water Saturation Water Mai Sediment Drift Depo Algal Mat Iron Depoi Surface Si Inundation Field Observa Surface Water Water Table Posaturation Presincludes capill	Y cology Indicators: tors (any one indicators (any one indicator) fater (A1) er Table (A2) (A3) clks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) oil Cracks (B6) i Visible on Aerial Intions: Present? resent? Yesent? Yesent? Yesent? Yesent? Yesent? Yesent?	nagery (B7 s N s N	Water-Stained Salt Crust (B1 Aquatic Invert Hydrogen Sul Oxidized Rhiz Presence of R Recent Iron R Stunted or Str Other (Explair Depth (inc	ebrates (I fide Odor cospheres Reduced II eduction ressed Plan in Rema	B13) (C1) s along Liv ron (C4) in Tilled S ants (D1) arks)	ing Roots (coils (C6) (LRR A)	Secondary In Water-St ast) Sparsely Drainage Dry-Seas Saturatio C3) Geomorp Shallow Frost-Hei FAC-Neu Raised A	dicators (2 or more required) ained Leaves (B9) (NW coast) Vegetated Concave Surface (B Patterns (B10) son Water Table (C2) n Visible on Aerial Imagery (C9) ohic Position (D2) Aquitard (D3) ave Hummocks (D4) stral Test (D5) ant Mounds (D6) (LRR A)
YDROLOG Wetland Hydr Primary Indica Surface W High Water Saturation Water Mai Sediment Drift Depo Algal Mat Iron Depoi Surface Si Inundation Field Observa Surface Water Water Table Posaturation Presincludes capill	Y cology Indicators: tors (any one indicators (any one indicator) fater (A1) er Table (A2) (A3) clks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) oil Cracks (B6) i Visible on Aerial Intions: Present? resent? Yesent? Yesent? Yesent? Yesent? Yesent? Yesent?	nagery (B7 s N s N	Water-Stained Salt Crust (B1 Aquatic Invert Hydrogen Sul Oxidized Rhiz Presence of Recent Iron R Stunted or Str Other (Explair Depth (inc	ebrates (I fide Odor cospheres Reduced II eduction ressed Plan in Rema	B13) (C1) s along Liv ron (C4) in Tilled S ants (D1) arks)	ing Roots (coils (C6) (LRR A)	Secondary In Water-St ast) Sparsely Drainage Dry-Seas Saturatio C3) Geomorp Shallow Frost-Hei FAC-Neu Raised A	dicators (2 or more required) ained Leaves (B9) (NW coast) Vegetated Concave Surface (Beterns (B10) son Water Table (C2) n Visible on Aerial Imagery (C9) ohic Position (D2) Aquitard (D3) ave Hummocks (D4) stral Test (D5) ant Mounds (D6) (LRR A)
YDROLOG Wetland Hydr Primary Indica Surface W High Water Saturation Water Mai Sediment Drift Depo Algal Mat Iron Depoi Surface Si Inundation Field Observa Surface Water Water Table Posaturation Presincludes capill	Y cology Indicators: tors (any one indicators (any one indicator) fater (A1) er Table (A2) (A3) clks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) oil Cracks (B6) i Visible on Aerial Intions: Present? resent? Yesent? Yesent? Yesent? Yesent? Yesent? Yesent?	nagery (B7 s N s N	Water-Stained Salt Crust (B1 Aquatic Invert Hydrogen Sul Oxidized Rhiz Presence of R Recent Iron R Stunted or Str Other (Explair Depth (inc	ebrates (I fide Odor cospheres Reduced II eduction ressed Plan in Rema	B13) (C1) s along Liv ron (C4) in Tilled S ants (D1) arks)	ing Roots (coils (C6) (LRR A)	Secondary In Water-St ast) Sparsely Drainage Dry-Seas Saturatio C3) Geomorp Shallow Frost-Hei FAC-Neu Raised A	dicators (2 or more required) ained Leaves (B9) (NW coast) Vegetated Concave Surface (Beterns (B10) son Water Table (C2) n Visible on Aerial Imagery (C9) ohic Position (D2) Aquitard (D3) ave Hummocks (D4) stral Test (D5) ant Mounds (D6) (LRR A)
YDROLOG Wetland Hydre Primary Indica Surface W High Water Saturation Water Man Sediment Drift Depo Algal Mat Iron Depoi Surface Se Inundation Field Observa Surface Water Water Table Posaturation Precincludes capill Describe Reco	Y cology Indicators: tors (any one indicators (any one indicator) fater (A1) er Table (A2) (A3) clks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) oil Cracks (B6) i Visible on Aerial Intions: Present? resent? Yesent? Yesent? Yesent? Yesent? Yesent? Yesent?	nagery (B7 s N s N	Water-Stained Salt Crust (B1 Aquatic Invert Hydrogen Sul Oxidized Rhiz Presence of R Recent Iron R Stunted or Str Other (Explair Depth (inc	ebrates (I fide Odor cospheres Reduced II eduction ressed Plan in Rema	B13) (C1) s along Liv ron (C4) in Tilled S ants (D1) arks)	ing Roots (coils (C6) (LRR A)	Secondary In Water-St ast) Sparsely Drainage Dry-Seas Saturatio C3) Geomorp Shallow Frost-Hei FAC-Neu Raised A	dicators (2 or more required) ained Leaves (B9) (NW coast) Vegetated Concave Surface (Beterns (B10) con Water Table (C2) n Visible on Aerial Imagery (C9) ohic Position (D2) Aquitard (D3) ave Hummocks (D4)

Project/Site: McCanAP		City/County	MILLA	s.b.	Valley	Sampling [Date:	16/08
Applicant/Owner: Asymosty					State: 12	Sampling F	oint:/	N'2
Investigator(s): P @ L-T		Section, To	wnship, Ra	inge:_	TIEN	RIE I	7-1	(BM)
Landform (hillslope, terrace, etc.):		Local relief	f (concave,	convex	, none): F/a	is to	Slope (%	6):
Subregion (LRR):	_ Lat: _ H	4053	20"N	Long	: 116" 1	S W	Datum: _	NLA
Soil Map Unit Name: Gstin Coam					NWI class	sification:	/A	6
Are climatic / hydrologic conditions on the site typical for this	s time of yea	ar? Yes_	No _		(If no, explain i	n Remarks.)	A.A. Surray	
Are Vegetation _ N _ , Soil _ N _ , or Hydrology _ N _ s	ignificantly	disturbed?	Are "	"Norma	I Circumstance	s" present? Yo	es	No
Are Vegetation, Soil, or Hydrology n	aturally pro	blematic?	(If ne	eeded,	explain any ans	wers in Remar	ks.)	
SUMMARY OF FINDINGS - Attach site map	showing	samplin	g point l	ocatio	ons, transec	cts, importa	nt featu	res, etc.
Hydrophytic Vegetation Present? Yes N. Hydric Soil Present? Yes N. Wetland Hydrology Present? Yes N.	o_V	9	ie Sampled in a Wetlar		Yes_	No	·	
Remarks:	<u> </u>							
Nonano.								
				•				
VEGETATION								
Tree Stratum (Use scientific names.)	Absolute % Cover		Indicator		inance Test w	-37		
1. N/A					ber of Dominan Are OBL, FAC		3	(A)
2.	V.				earn n earne			_ ``
3.					I Number of Do		3	(B)
4.				Boro	ent of Dominan	t Species		
Total Cover	;			That	Are OBL, FAC	W, or FAC: _	100	(A/B)
Sapling/Shrub Stratum 1. N/A				Prev	alence Index v	vorksheet:		
2.				40.0000	Total % Cover		Multiply by:	
3				100	species			
4.					W species			
5.	-			FAC	species	хз=		
Total Cover	:	-		FAC	U species	x 4=		
Herb Stratum.			C'A		species			
1. Also Quisa Vapanas	45		FAL	Colu	mn Totals:	(A)		(B)
2. Potentilla svacilis	20		FAL		Prevalence Inc	dex = B/A =		
3. Agractis Sp. 4. Contact ne bras bensis	20	- IA	1 1712=	Hydr	rophytic Veget	start andre i		= -
5. Philum orature	Att	N	FAL	100	Dominance Tes			
6.			1 1000		Prevalence Inde			
7					Morphological A	Adaptations ¹ (Pr	ovide supp	orting
8.			÷		data in Rema	arks or on a sep	parate shee	∍t)
Total Cover	100		v 31		Wetland Non-Va		1	
Woody Vine Stratum	•				Problematic Hydric			
1. N/A			s ====3 /		cators of nydric resent.	soil and wetian	a nyarolog	y must
2				Llude	rophytic			
Total Cover % Bare Ground in Herb Stratum				Vege	etation	Yes	No	
Remarks:				1,.03	12 (178)	o 77.		
2 3								

10	~	Ħ	

Sampling Point: A2

Profile Description: (Describe to the dept	h needed to document the indicator or confi	m the absence of indicators.)
DepthMatrix	Redox Features Color (moist) % Type ¹ Loc ²	T. I. Demonto
(inches) Color (moist) %	Color (moist) % Type ¹ Loc ²	
0-7 10412/1		Fine Sunday loans
7-14 10 4R4/1 95	7.54R4/6 5 C M	11 11 11 W/ Small gra
8.0		
	70	
· <u></u>		
		-
¹ Type: C=Concentration, D=Depletion, RM=		RC=Root Channel, M=Matrix. Indicators for Problematic Hydric Soils ³ :
Hydric Soil Indicators: (Applicable to all I		
Histosol (A1)	Sandy Redox (S5) Stripped Matrix (S6)	2 cm Muck (A10) Red Parent Material (TF2)
Histic Epipedon (A2) Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA	the state of the s
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	
Thick Dark Surface (A12)	Redox Dark Surface (F6)	
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present.
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	wetland hydrology must be present.
Restrictive Layer (if present):		
Type: N/A		Hydric Soil Present? Yes No
Depth (inches):		Tryuno obiri resenti.
Remarks:	de la constitución de la constit	1 22 1 2 2 1 2 2
Loc nor m	net my of the fich	0 In-01 (= 164) 0- 440pc
21000		
21000		
21000		
. इन्हों इ HYDROLOGY		
HYDROLOGY Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
HYDROLOGY	cient)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (NW coast)
HYDROLOGY Wetland Hydrology Indicators:	cient) Water-Stained Leaves (B9) (except NW	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (NW coast) coast) Sparsely Vegetated Concave Surface (B8)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is sufficed in the sufficed in	cient) Water-Stained Leaves (B9) (except NW Salt Crust (B11)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (NW coast) coast) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is sufficed in the sufficed in	cient) Water-Stained Leaves (B9) (except NW Salt Crust (B11) Aquatic Invertebrates (B13)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (NW coast) coast) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Dry-Season Water Table (C2)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is sufficed in the sufficed in	cient) Water-Stained Leaves (B9) (except NW Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	Secondary Indicators (2 or more required) 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)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is sufficed by the sum of the	Sient) Water-Stained Leaves (B9) (except NW Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roof	Secondary Indicators (2 or more required) 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) is (C3) — Geomorphic Position (D2)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is sufficed by the surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	cient) Water-Stained Leaves (B9) (except NW Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (NW coast) coast) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) is (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is sufficed by the surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	cient) Water-Stained Leaves (B9) (except NW Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (NW coast) Coast) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) is (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Frost-Heave Hummocks (D4)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is sufficed by surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	cient) Water-Stained Leaves (B9) (except NW Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (NW coast) Coast) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) is (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Frost-Heave Hummocks (D4)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is sufficed by the surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	Sient) Water-Stained Leaves (B9) (except NW Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (NW coast) coast) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Frost-Heave Hummocks (D4) FAC-Neutral Test (D5)
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Project/Site: ML CAM: A P	_ City/Cou	inty:	Carle, Valley	Sampling Date:/_	017/01
Applicant/Owner: Applicant/Owner:			State:170 1	_ Sampling Point:A	3
Investigator(s):	_ Section,	Township, Ra	nge: 178 N	R3E 5.21	LBA
Landform (hillolone terroes etc.):	Local re	elief (concave,	convex, none):	Slope (%	6): 😷
Subregion (LRR): Lat:	44 53	1 20" N	Long: 116°	6' N Datum:	NIA
Soil Map Unit Name: Asstis Loran			NWI classi	fication:V/A	
Are climatic / hydrologic conditions on the site typical for this time of y	vear? Yes	√ No	(If no, explain in	Remarks.)	
Are Vegetation, Soil, or Hydrology significant		d? Are "	Normal Circumstances	" present? Yes	
Are Vegetation, Soil, or Hydrology naturally p	roblematic	? (If ne	eded, explain any ansv	vers in Remarks.)	
SUMMARY OF FINDINGS - Attach site map showin	ig samp	ling point l	ocations, transec	ts, important featur	res, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Yes No	- w	s the Sampled vithin a Wetlar		No	
Remarks:	a la	· .		eti.	le L
*		5	8		₫7
VEGETATION					
Tree Stratum (Use scientific names.) Absolute % Cove	er Specie	ant Indicator es? Status	Dominance Test wo Number of Dominant That Are OBL, FACW	Species	(A)
2. 3.			Total Number of Dom Species Across All St		(B)
4 Total Cover:			Percent of Dominant That Are OBL, FACW		(A/B)
Sapling/Shrub Stratum 1			Prevalence Index wo		194
2			Total % Cover of	: Multiply by:	24
3				x 1 =	
4			FACW species	x 2 =	
5.			FAC species	x 3 =	
Total Cover:			FACU species	x 4 =	
Herb Stratum.		f. Such un		x 5 =	
1. ACKAPHKAN MARKATOLINGS 5	$-\frac{\gamma}{\gamma}$	#794 421	Column Totals:	(A)	(B)
3. Cares utilizatota 5	- N	086	Prevalence Inde	ex = B/A =	
1			Hydrophytic Vegeta		. 9
5.			Dominance Test	is >50%	
6.			Prevalence Index		
7.			Morphological Ac	daptations ¹ (Provide supp rks or on a separate shee	orting
B	=		Wetland Non-Vas	scular Plants ¹	
Total Cover: 100			Problematic Hydr	rophytic Vegetation ¹ (Exp	olain)
1		- W	¹ Indicators of hydric s be present.	oil and wetland hydrology	y must
% Bare Ground in Herb Stratum	_	···	Hydrophytic Vegetation Present? Y	/es No	e. ()
Remarks:					Š ot

Profile Deceri	ption: (Describe	to the donth	needed to docu	ment the ind	icator	r confirm	the absence		mpling Point:	
	Matrix	to the depth		v Footures	59				5.7	
Depth _ (inches)	Color (moist)	%		% Teatures	Type ¹	Loc2	Texture	~	Remarks	
19-11-4	The said of		440						e da atro-	
	10 10						=- 25	7		
									# E	
			<u> </u>							
					· · · · · · · · · · · · · · · · · · ·					
							4.			
		=								
								122 228 223 223		
Type: C=Con	centration, D=Depl	letion, RM=R	educed Matrix.	² Location: F	L=Pore	Lining, RO	C=Root Chan	nel, M=Matrix	«. ematic Hydri	o Coila³,
	dicators: (Applica				.)					C SUIIS .
Histosol (A			_ Sandy Redox (n Muck (A10) Parent Mate		
Histic Epip	1 1000	-	Stripped Matrix Loamy Mucky		evcent	MIRA 1)	E. V. V. (2000 00)	er (Explain in		
Black Histi Hydrogen \$		=	_ Loamy Gleyed		except	MERCE 17	0	or (Expansis	, , , , , , , , , , , , , , , , , , , ,	
	Below Dark Surface		_ Depleted Matri							
	Surface (A12)		_ Redox Dark Su							
Sandy Mud	cky Mineral (S1)	-	_ Depleted Dark						hytic vegetation	
	yed Matrix (S4)	-	_ Redox Depres	sions (F8)			wetla	nd hydrology	must be pres	sent.
DOS - 40 W 30 W 4 - 4 - 4 - 4 - 4 - 4 - 4 - 4 - 4 - 4	yer (if present):									
Type:	N/A									
										- No. 1 1255
Depth (inche	es):				•		Hydric Soil	Present?	Yes	No 🔽
Depth (inche Remarks:				i			Hydric Soil	Present?	Yes	No V
				ī.			Hydric Soil	Present?	Yes	No V
				-			Hydric Soil	Present?	Yes	No V
				E E			Hydric Soil	Present?	Yes	No V
				ž.			Hydric Soil	Present?	Yes	No V
Remarks:	es):			ā.			Hydric Soil	Present?	Yes	No V
Remarks:	es):									
YDROLOG'	Y Dlogy Indicators:		6				Seconda	ary Indicators	s (2 or more re	equired)
YDROLOG Wetland Hydro Primary Indicate	Y plogy Indicators: ors (any one indica		ent)	- (Discussion of the control of the	0) (2000)	ant NIW co	Seconda Wat	ary Indicators er-Stained L	s (2 or more re eaves (B9) (N	equired) W coast)
YDROLOG' Vetland Hydro Primary Indicat Surface Wi	Y blogy Indicators: cors (any one indicators (A1)		ent) Water-Stain	ed Leaves (B	9) (exce	ept NW coa	Seconda Wai Spa	ary Indicators er-Stained L rsely Vegeta	s (2 or more re eaves (B9) (N ted Concave	equired) W coast)
YDROLOG` Wetland Hydro Primary Indicat Surface Wa High Watel	Y plogy Indicators: ors (any one indicators (A1) r Table (A2)		ent) Water-Stain Salt Crust (E	311)		epť NW co:	<u>Second:</u> Wai Spa Dra	ary Indicators er-Stained L rsely Vegeta inage Patterr	s (2 or more re eaves (B9) (N ited Concave ns (B10)	equired) W coast)
YDROLOG Wetland Hydro Primary Indicat Surface Wi High Watel Saturation	Y Diogy Indicators: ors (any one indicators (A1) r Table (A2) (A3)		ent) Water-Stain Salt Crust (E Aquatic Inve	311) rtebrates (B1	3)	ept NW coa	Seconda _	ary Indicators er-Stained L rsely Vegeta inage Patterr Season Wat	s (2 or more re eaves (B9) (N ted Concave ns (B10) ter Table (C2)	<u>equired)</u> IW coast) Surface (E
YDROLOG' Wetland Hydro Primary Indicat Surface Wi High Water Saturation Water Mari	Y plogy Indicators: ors (any one indicators (A1) r Table (A2) (A3) ks (B1)		ent) Water-Stain Salt Crust (E Aquatic Inve Hydrogen S	311) rtebrates (B1 ulfide Odor (C	3) >1)		Seconda Wai ast) Spa Dra Dry. Sati	ary Indicators er-Stained L rsely Vegeta inage Patterr -Season Wat uration Visibl	e (2 or more re eaves (B9) (N ited Concave ns (B10) ter Table (C2) e on Aerial Im	<u>equired)</u> IW coast) Surface (E
YDROLOG' Wetland Hydro Primary Indicat Surface Wood High Watel Saturation Water Marl	Y plogy Indicators: cors (any one indicator (A1) r Table (A2) (A3) ks (B1) Deposits (B2)		ent) Water-Stain Salt Crust (E Aquatic Inve Hydrogen S: Oxidized Rh	311) rtebrates (B1 ulfide Odor (C izospheres al	3) 3) long Livi		Seconda Wat ast) Spa Dra Dry Sati C3) Geo	ary Indicators ier-Stained L irsely Vegeta inage Patterr -Season Wat uration Visibl imorphic Pos	e (2 or more re eaves (B9) (N ted Concave ns (B10) ter Table (C2) e on Aerial Im sition (D2)	<u>equired)</u> IW coast) Surface (E
YDROLOG Wetland Hydro Primary Indicate Surface With High Water Saturation Water Marith Sediment I Drift Depos	Y plogy Indicators: ors (any one indicater (A1) r Table (A2) (A3) ks (B1) Deposits (B2) sits (B3)		ent) Water-Stain Salt Crust (E Aquatic Inve Hydrogen S Oxidized Rh Presence of	311) rtebrates (B1 ulfide Odor (C izospheres al Reduced Iror	3) 31) long Livi n (C4)	ng Roots (Seconda Wat ast) Spa Dra Dry Sati C3) Gec Sha	ary Indicators rer-Stained L rsely Vegeta inage Patterr -Season Wat uration Visibl omorphic Pos Ilow Aquitaro	e (2 or more re eaves (B9) (N ted Concave ns (B10) ter Table (C2) e on Aerial Im sition (D2)	<u>equired)</u> IW coast) Surface (E
YDROLOG Wetland Hydro Primary Indicat Surface Wi High Water Saturation Water Mark Sediment I Drift Depose Algal Mat of	Y plogy Indicators: ors (any one indicators (A1) r Table (A2) (A3) ks (B1) Deposits (B2) sits (B3) or Crust (B4)		ent) Water-Stain Salt Crust (E Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron	a11) rtebrates (B1 ulfide Odor (C izospheres al Reduced Iror Reduction in	3) 21) long Livi n (C4) Tilled S	ng Roots (Seconda Wat ast) Spa Dra Dry Sati C3) Gec Sha Fros	ary Indicators er-Stained L rsely Vegeta inage Patterr Season Wat uration Visibl omorphic Pos illow Aquitarc	e (2 or more re eaves (B9) (Noted Concave ns (B10) ter Table (C2) e on Aerial Im sition (D2) d (D3) mmocks (D4)	<u>equired)</u> IW coast) Surface (E
YDROLOG Vetland Hydro Primary Indicate Surface With High Water Saturation Water Mari Sediment I Drift Depos Algal Mat o Iron Depos	y plogy Indicators: cors (any one indicators (A1) r Table (A2) (A3) ks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5)		ent) Water-Stain Salt Crust (E Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S	s11) Intebrates (B1 Intebrates (B1 Interpretation of the second of the s	3) (1) long Livi n (C4) Tilled Si ts (D1) (ng Roots (Seconda _	ary Indicators er-Stained L rsely Vegeta inage Patterr -Season Wat uration Visibl omorphic Pos Illow Aquitaro st-Heave Hur -Neutral Tes	s (2 or more re eaves (B9) (N ted Concave ns (B10) ter Table (C2) e on Aerial Im sition (D2) d (D3) mmocks (D4)	equired) W coast) Surface (E
YDROLOG' Wetland Hydro Primary Indicate Surface With High Water Saturation Water Marl Sediment I Drift Depose Algal Mat of Iron Depose Surface So	Y plogy Indicators: ors (any one indicators (A1) r Table (A2) (A3) ks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) oil Cracks (B6)	ator is sufficie	ent) Water-Stain Salt Crust (E Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S	a11) rtebrates (B1 ulfide Odor (C izospheres al Reduced Iror Reduction in	3) (1) long Livi n (C4) Tilled Si ts (D1) (ng Roots (Seconda _	ary Indicators er-Stained L rsely Vegeta inage Patterr -Season Wat uration Visibl omorphic Pos Illow Aquitaro st-Heave Hur -Neutral Tes	e (2 or more re eaves (B9) (Noted Concave ns (B10) ter Table (C2) e on Aerial Im sition (D2) d (D3) mmocks (D4)	equired) W coast) Surface (E
YDROLOG* Wetland Hydro Primary Indicate Surface Watel Saturation Water Mari Sediment I Drift Depos Algal Mat of Iron Depos Surface So Inundation	Y Diogy Indicators: ors (any one indicators (A1) r Table (A2) (A3) ks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) oil Cracks (B6) Visible on Aerial In	ator is sufficie	ent) Water-Stain Salt Crust (E Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S	s11) Intebrates (B1 Intebrates (B1 Interpretation of the second of the s	3) (1) long Livi n (C4) Tilled Si ts (D1) (ng Roots (Seconda _	ary Indicators er-Stained L rsely Vegeta inage Patterr -Season Wat uration Visibl omorphic Pos Illow Aquitaro st-Heave Hur -Neutral Tes	s (2 or more re eaves (B9) (N ted Concave ns (B10) ter Table (C2) e on Aerial Im sition (D2) d (D3) mmocks (D4)	equired) W coast) Surface (E
YDROLOG Wetland Hydro Primary Indicate Surface With High Water Saturation Water Marith Sediment In Drift Depose Algal Mat of Iron Depose Surface So	y plogy Indicators: cors (any one indicators (any one indicator (A1) r Table (A2) (A3) ks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) oil Cracks (B6) Visible on Aerial Intions:	ator is sufficie	ent) Water-Stain Salt Crust (E Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S Other (Expla	ortebrates (B1 ulfide Odor (C izospheres al Reduced Iror Reduction in tressed Plant in in Remark	3) (1) long Livi n (C4) Tilled Si ts (D1) (ng Roots (Seconda _	ary Indicators er-Stained L rsely Vegeta inage Patterr -Season Wat uration Visibl omorphic Pos Illow Aquitaro st-Heave Hur -Neutral Tes	s (2 or more re eaves (B9) (N ted Concave ns (B10) ter Table (C2) e on Aerial Im sition (D2) d (D3) mmocks (D4)	equired) W coast) Surface (E
YDROLOG Wetland Hydro Primary Indicat Surface With High Water Saturation Water Mark Sediment I Drift Depose Algal Mat of Iron Depose Surface So Inundation Field Observate	y plogy Indicators: cors (any one indicators (any one indicator (A1) r Table (A2) (A3) ks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) oil Cracks (B6) Visible on Aerial Intions: Present?	ator is sufficie	ent) Water-Stain Salt Crust (E Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S Other (Expla	att) rtebrates (B1 ulfide Odor (C izospheres al Reduced Iror Reduction in tressed Plant in in Remark	3) c1) long Livi n (C4) Tilled Sits (D1) (ng Roots (Seconda _	ary Indicators er-Stained L rsely Vegeta inage Patterr -Season Wat uration Visibl omorphic Pos Illow Aquitaro st-Heave Hur -Neutral Tes	s (2 or more re eaves (B9) (N ted Concave ns (B10) ter Table (C2) e on Aerial Im sition (D2) d (D3) mmocks (D4)	equired) W coast) Surface (E
YDROLOG Wetland Hydro Primary Indicate Surface With High Watel Saturation Water Marit Sediment I Drift Depose Algal Mat of Iron Depose Surface So Inundation	Y plogy Indicators: ors (any one indicators (any one indicator (A1)) r Table (A2) (A3) ks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) oil Cracks (B6) Visible on Aerial Intions: Present? Yesent? Yesent?	magery (B7) es No	ent) Water-Stain Salt Crust (E Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S Other (Expla	and the state of t	3) c1) long Livi n (C4) Tilled Sits (D1) (ng Roots (Seconda — Wat ast) — Spa — Dra — Dry — Sati C3) — Gec — Sha — Froi — FAC — Raii	ary Indicators er-Stained L rsely Vegeta inage Patterr -Season Wat uration Visibl omorphic Pos Illow Aquitaro st-Heave Hur -Neutral Tes sed Ant Moun	s (2 or more re eaves (B9) (N ted Concave ns (B10) ter Table (C2) e on Aerial Im sition (D2) d (D3) mmocks (D4)	equired) W coast) Surface (E

Remarks:

Project/Site: McCaM AP	(City/County	. Me	Call Valley Sampl	ling Date:	17/09
Applicant/Owner:Air_pay				State: Sampl	ing Point:	3/
Investigator(s):		Section, To	wnship, Ra	ange: TIEN RIE	521 1	BAA)
Landform (hillslope, terrace, etc.):		Local relief	f (concave,	convex, none):	Slope (%):	m Da
Subregion (LRR): LRA E	Lat: 4	4" 53'	20 N	Long: 1/6 6 N	Datum:	MA
Soil Map Unit Name: Grafing Isan				NWI classification: _	PEMA	
Are climatic / hydrologic conditions on the site typical for this						
Are Vegetation N, Soil N, or Hydrology N s						0
Are Vegetation , Soil , or Hydrology , n				eeded, explain any answers in Re		
SUMMARY OF FINDINGS - Attach site map				Carlot Lat Wat Patrick to Et Al.		s, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Yes No	0		ie Sampleo in a Wetla	d Area nd? Yes N	lo	
Remarks:				-	4.5	
)
VEGETATION						
	Absolute			Dominance Test worksheet:		
Tree Stratum (Use scientific names.)		Species?		Number of Dominant Species That Are OBL, FACW, or FAC:	. /	(A)
1. N/A 2.						(r-v)
3				Total Number of Dominant Species Across All Strata:	/	(B)
4.					-	(-)
Total Cover				Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)
Sapling/Shrub Stratum				Prevalence Index worksheet:		
1N/A				Total % Cover of:		
2				OBL species		
3				FACW species		
5				FAC species		
Total Cover				FACU species		
Herb Stratum.				UPL species		
1. Carex utriculata				Column Totals: ((A)	_ (B)
2 Souta donnigrii	-10	N	PARW	Prevalence Index = B/A	=	
3. Greun malerophyllum		10	FAL	Hydrophytic Vegetation India		
4. Phicom patente.	-5	-6/	FAL	Dominance Test is >50%		
6. Phaland andinacca		N	FASOV	Prevalence Index is ≤3.0 ¹		
7. Corlama resolute En problemis	10	Đị	FA CW	Morphological Adaptations	1 (Provide support	ting
8. Carea nebrocensis	5	N	OBL	data in Remarks or on a	The second secon	
Total Cover:	100			Wetland Non-Vascular Pla		
Woody Vine Stratum				Problematic Hydrophytic V		
1				¹ Indicators of hydric soil and we be present.	stiand nydrology n	TUST
2Total Cover:	·			Hydrophytic		
% Bare Ground in Herb Stratum				Vegetation Present? Yes	No	
Remarks:						
¥						
	×					

rofile Dage	ription: (Describe	to the dant	h needed to door	ant the i	ndicator	or confirm	the absence of	Sampling Poin	
100		to the dept		Features		or commi	tile absence of	indicators.)	
Depth nches)	Matrix Color (moist)	%	Color (moist)	%	Type	Loc2	Texture	Remarks	
J. (20)	10 MR 7/1		0.01				Commerce	SANDE LOAN	
7 71	5154 C/:								
	-13 1 2/1		PM:					ry form	
1	1071 221	<u> 245</u> .	7.5 41 476	<u><5</u>		1-1	Stocks W	St. 1874 Jel	
- 167	104125/3	6.0	7.548 4/6	45		M	- 1,1 <u>11</u>		
			1041 5/1	25	D	10.0			
	-								
				-					
	oncentration, D=Dep					Lining, R	C=Root Channel,	M=Matrix.	
dric Soil I	ndicators: (Applica	able to all L	RRs, unless other	wise note	ed.)		Indicators	for Problematic Hyd	ric Soils*:
Histosol	(A1)	iri	Sandy Redox (S	35)				uck (A10)	
	ipedon (A2)	,	Stripped Matrix			*		rent Material (TF2)	
	stic (A3)	-	Loamy Mucky N			MLRA 1)	Other (Explain in Remarks)	
	n Sulfide (A4)		Loamy Gleyed I)				
	Below Dark Surface		 Depleted Matrix Redox Dark Sur 						
	rk Surface (A12) ucky Mineral (S1)		Depleted Dark Sui		7)		3Indicators	of hydrophytic vegeta	tion and
	leyed Matrix (S4)	-	Redox Depress		• /			hydrology must be pr	
	ayer (if present):								
	M/	14							
33 35	:hes):				98		Hydric Soil Pre	esent? Yes	No
marks:					0.00				- VA.B
iliains.			*						
	Har An								
	Se, Au	P	4						
OROLOG	GY.	p.	<u> </u>						
		75	<u> </u>				Secondary	ndicators (2 or more	required)
tland Hyc	Irology Indicators:	ator is suffic	iont					ndicators (2 or more	1000
tland Hyc	Irology Indicators: ators (any one indica	ator is suffic		d Lagyage	(P0) (even	opt NIW co	Water-9	Stained Leaves (B9) (NW coast)
tland Hyd mary Indic Surface \	irology Indicators: ators (any one indica Nater (A1)	ator is suffic	Water-Staine		(B9) (exce	ept NW co	Water-s	Stained Leaves (B9) (y Vegetated Concave	NW coast)
tland Hyd mary Indic Surface I High Wa	Irology Indicators: ators (any one indica Water (A1) ter Table (A2)	ator is suffic	Water-Staine	11)		ept NW co	Water-9 ast) Sparse Drainag	Stained Leaves (B9) (y Vegetated Concave e Patterns (B10)	(NW coast) e Surface (B
tland Hyd mary Indic Surface V High Wat Saturatio	Irology Indicators: ators (any one indica Nater (A1) ter Table (A2) n (A3)	ator is suffic	Water-Staine Salt Crust (B' Aquatic Inver	l1) tebrates (l	313)	ept NW co.	Water-sast) Sparsel Drainag	Stained Leaves (B9) (y Vegetated Concave le Patterns (B10) ason Water Table (C2	(NW coast) e Surface (E
tland Hyd mary Indic Surface V High Wa Saturatio Water Ma	Irology Indicators: ators (any one indica Nater (A1) ter Table (A2) n (A3) arks (B1)	ator is suffic	Water-Staine Salt Crust (B' Aquatic Inver	I1) tebrates (I fide Odor	313) (C1)	î lî esw	Water-sast) Water-sast) Sparsel Drainag Dry-Sea	Stained Leaves (B9) (y Vegetated Concave te Patterns (B10) tason Water Table (C2 tion Visible on Aerial I	(NW coast) e Surface (E
mary Indic Surface V High War Saturatio Water Ma Sedimen	Irology Indicators: ators (any one indica Nater (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2)	ator is suffic	Water-Staine Salt Crust (B' Aquatic Inver Hydrogen Su Oxidized Rhiz	l1) ebrates (l fide Odor ospheres	B13) (C1) along Livi	î lî esw	Water-5 ast) Water-5 Sparsel Drainag Dry-Sea Saturat C3) Geomo	Stained Leaves (B9) (y Vegetated Concave te Patterns (B10) tason Water Table (C2 tion Visible on Aerial I rphic Position (D2)	(NW coast) e Surface (E
etland Hyd mary Indic Surface V High Wa Saturatio Water Ma Sedimen Drift Dep	Irology Indicators: ators (any one indica Nater (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3)	ator is suffic	Water-Staine Salt Crust (B' Aquatic Inver Hydrogen Su Oxidized Rhiz	i1) lebrates (l fide Odor lospheres Reduced li	B13) (C1) along Livi ron (C4)	ng Roots (Water-Seast) Water-Seast) Sparsel Drainag Dry-Sea Saturat C3) Geomo Shallow	Stained Leaves (B9) (y Vegetated Concave pe Patterns (B10) ason Water Table (C2 ion Visible on Aerial I rphic Position (D2) y Aquitard (D3)	(NW coast) e Surface (B 2) magery (C9
tland Hyd mary Indic Surface V High Wa Saturatio Water Ma Sedimen Drift Dep Algal Ma	Irology Indicators: ators (any one indicators) Arater (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4)	ator is suffic	Water-Staine Salt Crust (B' Aquatic Invert Hydrogen Su Oxidized Rhiz Presence of F	itebrates (I fide Odor cospheres Reduced In teduction	313) (C1) along Livi ron (C4) in Tilled S	ng Roots (Water-Sast) Water-Sast) Sparsel Dry-See Saturat C3) Geomo Shallow Frost-H	Stained Leaves (B9) (y Vegetated Concave te Patterns (B10) ason Water Table (C2 ion Visible on Aerial I rphic Position (D2) v Aquitard (D3) eave Hummocks (D4	(NW coast) e Surface (E 2) magery (C9
tland Hyd mary Indic Surface V High Wat Saturatio Water Ma Sedimen Drift Dep Algal Material	Arology Indicators: ators (any one indicators) Arater (A1) ter Table (A2) (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5)	ator is suffic	Water-Staine Salt Crust (B' Aquatic Invert Hydrogen Sut Oxidized Rhiz Presence of F Recent Iron F Stunted or St	it) iebrates (lifide Odor cospheres Reduced lifiteduction ressed Pla	B13) (C1) along Livi ron (C4) in Tilled So ants (D1) (ng Roots (Water-Sast) Water-Sast) Sparsel Dry-See Saturat C3) Geomo Shallow Frost-H	Stained Leaves (B9) (y Vegetated Concave te Patterns (B10) ason Water Table (C2) tion Visible on Aerial I rephic Position (D2) y Aquitard (D3) teave Hummocks (D4) eutral Test (D5)	(NW coast) e Surface (E 2) magery (C9
tland Hyd mary Indic Surface I High Wat Saturatio Water Ma Sedimen Drift Dep Algal Ma Iron Dep Surface S	Arology Indicators: Ators (any one indicators (A1) Atter (A1) Atter (A2) Atter (A3) Arks (B1) Atter (B2) Atter (B2) Atter (B3) Atter (B3) Atter (B4) Atter (B4) Atter (B5) Atter (B6) Atter (B6)		Water-Staine Salt Crust (B' Aquatic Inver Hydrogen Su Oxidized Rhiz Presence of F Recent Iron F Stunted or St Other (Explain	it) iebrates (lifide Odor cospheres Reduced lifiteduction ressed Pla	B13) (C1) along Livi ron (C4) in Tilled So ants (D1) (ng Roots (Water-Sast) Water-Sast) Sparsel Dry-See Saturat C3) Geomo Shallow Frost-H	Stained Leaves (B9) (y Vegetated Concave te Patterns (B10) ason Water Table (C2 ion Visible on Aerial I rphic Position (D2) v Aquitard (D3) eave Hummocks (D4	(NW coast) a Surface (E 2) magery (C9
Mary Indic Surface V High War Saturatio Water Ma Sedimen Drift Dep Algal Ma Iron Dep Surface S Inundatio	Irology Indicators: ators (any one indicators (A1) ter (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Ir		Water-Staine Salt Crust (B' Aquatic Inver Hydrogen Su Oxidized Rhiz Presence of F Recent Iron F Stunted or St Other (Explain	it) iebrates (lifide Odor cospheres Reduced lifiteduction ressed Pla	B13) (C1) along Livi ron (C4) in Tilled So ants (D1) (ng Roots (Water-Sast) Water-Sast) Sparsel Dry-See Saturat C3) Geomo Shallow Frost-H	Stained Leaves (B9) (y Vegetated Concave te Patterns (B10) ason Water Table (C2) tion Visible on Aerial I rephic Position (D2) y Aquitard (D3) teave Hummocks (D4) eutral Test (D5)	(NW coast) e Surface (E 2) magery (C9
stland Hydromary Indic Surface V High War Saturatio Water Ma Sedimen Drift Dep Algal Mar Iron Dep Surface S Inundation Id Observ	Irology Indicators: ators (any one indicators (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Invations:	nagery (B7)	Water-Staine Salt Crust (B' Aquatic Inver Hydrogen Su Oxidized Rhiz Presence of F Recent Iron F Stunted or St Other (Explain	interpretation (Interpretation	B13) (C1) along Livi ron (C4) in Tilled So ants (D1) (ng Roots (Water-Sast) Water-Sast) Sparsel Dry-See Saturat C3) Geomo Shallow Frost-H	Stained Leaves (B9) (y Vegetated Concave te Patterns (B10) ason Water Table (C2) tion Visible on Aerial I rephic Position (D2) y Aquitard (D3) teave Hummocks (D4) eutral Test (D5)	(NW coast) e Surface (E 2) magery (C9
mary Indic Surface V High War Saturatio Water Ma Sedimen Drift Dep Algal Mar Iron Dep Surface S Inundatio	Arology Indicators: ators (any one indicators (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Invations: ar Present?	magery (B7)	Water-Staine Salt Crust (B' Aquatic Inver Hydrogen Su Oxidized Rhiz Presence of F Recent Iron F Stunted or St Other (Explain	itebrates (Infide Odor cospheres Reduced Infeduction ressed Plan in Remains):	B13) (C1) along Livi ron (C4) in Tilled So ants (D1) (ng Roots (Water-Sast) Water-Sast) Sparsel Dry-See Saturat C3) Geomo Shallow Frost-H	Stained Leaves (B9) (y Vegetated Concave te Patterns (B10) ason Water Table (C2) tion Visible on Aerial I rephic Position (D2) y Aquitard (D3) teave Hummocks (D4) eutral Test (D5)	(NW coast) a Surface (B 2) magery (C9
mary Indic Surface I High Wat Saturatio Water Ma Sedimen Drift Dep Algal Ma Iron Depo Surface S Inundatio	Arology Indicators: ators (any one indicators (A1) ter (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Invations: ar Present? Yes	magery (B7) es N	Water-Staine Salt Crust (B' Aquatic Inver Hydrogen Su Oxidized Rhiz Presence of F Recent Iron F Stunted or St Other (Explain	interpretation (interpretation (interpretation interpretation in Remains):hes):hes):hes):	B13) (C1) along Livi ron (C4) in Tilled S ants (D1) (ng Roots (Water-Sast) Water-Sast) Sparse Dry-Sea Saturat C3) Geomo Shallow Frost-H FAC-Ne	Stained Leaves (B9) (y Vegetated Concave te Patterns (B10) ason Water Table (C2) tion Visible on Aerial I rephic Position (D2) y Aquitard (D3) teave Hummocks (D4) eutral Test (D5)	(NW coast) a Surface (E 2) magery (C9)

Project/Site: Makau AP		City/County	MEG	NU VALLEY	Sampling Date:	10/7/08
Applicant/Owner: Air post				State:	Sampling Point	B 2
Investigator(s):		Section, To	wnship, Ra			
Landform (hillslone terrace etc.):		Local relief	(concave.	convex. none):	Flor SI	ope (%).
Subregion (LRR):	Lat: 44	1° 53'	20" N	Long: 115°	6 Dat	um: M/A
Soil Map Unit Name: Constitution of the Soil Map Unit Name:				NIMI clas	esification:	'A
						4 1
Are climatic / hydrologic conditions on the site typical for this				2.		∠ N-
Are Vegetation _ N _ , Soil N _ , or Hydrology N _ s				"Normal Circumstance		NO
Are Vegetation, Soil, or Hydrology n	aturally pro	blematic?	(If ne	eeded, explain any an	swers in Remarks.)	
SUMMARY OF FINDINGS - Attach site map	showing	samplin	g point l	ocations, transe	cts, important f	eatures, etc.
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No			e Sampleo			
Wetland Hydrology Present?		with	in a Wetlai	nd? Yes_	No	
Remarks:						
*						
VEGETATION						
	Absolute	Dominant	Indicator	Dominance Test v	vorksheet:	
Tree Stratum (Use scientific names.)		Species?		Number of Domina		1
1. <u>M4</u>				That Are OBL, FAC	CW, or FAC:	(A)
2,				Total Number of Do		
3				Species Across All	Strata:	(B)
4				Percent of Dominar		Ē ceme
Total Cover Sapling/Shrub Stratum	·	•		That Are OBL, FAC	cW, or FAC:	(A/B)
1				Prevalence Index	worksheet:	
2				Total % Cover	of: Multip	oly by:
3				OBL species	x 1 =	
4				FACW species	x 2 =	
5		·		W 10 10 10 10 10 10 10 10 10 10 10 10 10	x 3 =	
Total Cover	·			No. of the same of	x 4 =	
1. ASTODUSON TAPANS	65	4	FAC		x 5 =	
2. Acti Nea milletolium	15	N	FALLE	Column Totals:	(A)	(B)
3. As 105+15 SA	10	N	FAC	Prevalence In	dex = B/A =	
4. Traceroon Ohsius	7	N	NL	Hydrophytic Vege	tation Indicators:	
5. Doar prateris	10	IV.	FAL	✓ Dominance Te	st is >50%	9 0 7
6. Linana vul cavis	T	N	NI	Prevalence Ind	ex is ≤3.0 ¹	
7				Morphological	Adaptations ¹ (Provid	e supporting
8.				The state of the s	narks or on a separat	e sneet)
Total Cover:	:_/00_			Wetland Non-V		1 (5,501=1=)
Woody Vine Stratum					drophytic Vegetation soil and wetland hy	
1. <u>MM</u>				be present.	son and welland ny	urology must
2		-		Undraphytia		
Total Cover:				Hydrophytic Vegetation	ja:	
% Bare Ground in Herb Stratum				Present?	Yes No_	
Remarks:					*#:	
T W						
	G.					

		475	
Sampling	Point:	02	

Profile Description: (Describe to the depth n	eeded to document the indicator or confin	m the absence of indicators.)
Depth Matrix	Redox Features	· => 147
	Color (moist) % Type¹ Loc²	
0-16+ 10412312 -		that Saudy 100 no
		-
		·
¹ Type: C=Concentration, D=Depletion, RM=Re	duced Matrix 2 ocation: PI =Pore Lining.	RC=Root Channel, M=Matrix.
Hydric Soil Indicators: (Applicable to all LRI	Rs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1) Other (Explain in Remarks)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7) Redox Depressions (F8)	wetland hydrology must be present.
Sandy Gleyed Matrix (S4) Restrictive Layer (if present):	Redox Depressions (10)	· · · · · · · · · · · · · · · · · · ·
Type:		
Per and the second seco	*	Hydric Soil Present? Yes No
Depth (inches):	-	Thydria doi: 1. The same and th
Remarks:	**************************************	
Ę.		
	1	
HYDROLOGY	5 4	- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1
Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficier	nt)	Water-Stained Leaves (B9) (NW coast)
Surface Water (A1)	Water-Stained Leaves (B9) (except NW of	coast) Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)	Salt Crust (B11)	Drainage Patterns (B10)
Saturation (A3)	Aquatic Invertebrates (B13)	Dry-Season Water Table (C2)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Saturation Visible on Aerial Imagery (C9)
Sediment Deposits (B2)	 Oxidized Rhizospheres along Living Root 	
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Shallow Aquitard (D3)
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (C6)	
Iron Deposits (B5)	Stunted or Stressed Plants (D1) (LRR A)	FAC-Neutral Test (D5)
Surface Soil Cracks (B6)	Other (Explain in Remarks)	Raised Ant Mounds (D6) (LRR A)
Inundation Visible on Aerial Imagery (B7)		
Field Observations:	(a)	
	Depth (inches):	# · · · · · · · · · · · · · · · · · · ·
Water Table Present? Yes No	Depth (inches):	and the second
Saturation Present? Yes No	Depth (inches): We	fland Hydrology Present? Yes No/_
(includes capillary fringe) Describe Recorded Data (stream gauge, monitor	oring well aerial photos previous inspections), if available:
Describe Recorded Data (stream gauge, monitor	oring went acrial priotos, previous mapestions	V. Constant
Remarks:		
2		

T			en character	i ia lei la d
Project/Site: Mc Call AP	City/County:	P4C C	Sampling	g Date: 1917 190
Applicant/Owner: Air pow	11.54		State: Sampling	g Point:
Investigator(s): P9/LT	Section, To	wnship, Rar	nge: 118 N 7256	EST (SM)
Landform (hillslope, terrace, etc.): Terra u	_ Local relief	(concave, c	convex, none): Flad	Slope (%):
Subregion (LRR): LRR E Lat:	14 53'	20" N	Long: 1160 6 N	Datum: N A
Soil Map Unit Name: hullon loan			NWI classification:	PENH
Are climatic / hydrologic conditions on the site typical for this time of you				
Are Vegetation, Soil, or Hydrology significantly			Normal Circumstances" present?	
Are Vegetation, Soil, or Hydrology naturally pr		(If ne	eded, explain any answers in Rem	narks.)
SUMMARY OF FINDINGS - Attach site map showing		g point le	ocations, transects, impor	tant features, etc.
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No	15 111	e Sampled in a Wetlan	1.6	3
Wetland Hydrology Present? Yes No	·	iii a wedan		
Remarks:				(A) (C)
	3		34	
A PROPERTY OF THE PROPERTY OF	******			
VEGETATION	DIA	Indicator	Dominance Test worksheet:	i.fl
Absolute Tree Stratum (Use scientific names.) % Cove	e Dominant er Species?		Number of Dominant Species	Ē.
1. N/A			That Are OBL, FACW, or FAC:	(A)
2			Total Number of Dominant	1
3			Species Across All Strata:	(B)
4			Percent of Dominant Species	100
Total Cover:	=		That Are OBL, FACW, or FAC:	(A/B)
Sapling/Shrub Stratum 1			Prevalence Index worksheet:	
2		AB	Total % Cover of:	Multiply by:
3.			OBL species x	1=
4			FACW species x	2 =
5			FAC species x	
Total Cover:			FACU species x	
Herb Stratum.	We-	ne dil 1	UPL species X	
1. Carex vthe lata 10 2. Epilopium aliatum 5	<u>N</u>	Francis	Column Totals: (A	(B)
3. Galangrastys canadrass 15		FACIO	Prevalence Index = B/A =	
4 C M 6/03 CG 515 60	· ·	013L	Hydrophytic Vegetation Indica	
5. Par palastris 10	- / /	FAC	✓ Dominance Test is >50%	
6.			Prevalence Index is ≤3,0 ¹	
7			Morphological Adaptations ¹ data in Remarks or on a	(Provide supporting
8		-	Wetland Non-Vascular Plant	
Total Cover: 10 6			Problematic Hydrophytic Ve	
Woody Vine Stratum			Indicators of hydric soil and wet	
1. × 1/4			be present.	
2Total Cover:			Hydrophytic	
% Bare Ground in Herb Stratum			Vegetation	. No
Remarks: Salix Pater Just mutaix	p167	Ŷ		
5.1.1.1				
¥			20	
*/				

OIL Profile Desc	ription: (Describe to	the dep	th needed to docur	nent the	indicator o	or confirm	the absence of ind	licators.)
Depth	Matrix			x Feature	es ·			
(inches)	Color (moist)	%	Color (moist)	%	_Type1	Loc ²	Texture	Remarks
0-5	1048 2/1	ring.			- 3	. %	Sanducter	lo a ma
7.75+	10412 2/1	95	754114/6	5		[4]	Sandy loan	
								
				* 3 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -				
	oncentration, D=Deplet	ion DM-	-Deduced Matrix	2l postio	n: DI =Doro		C=Root Channel M	=Matrix
	ndicators: (Applicat					z Elilligi ix	Indicators for	Problematic Hydric Soils ³ :
_ Histosol			✓ Sandy Redox (2 cm Mucl	k (A10)
Histic Ep	ipedon (A2)		Stripped Matrix	(S6)		4		nt Material (TF2)
Black His	stic (A3)		Loamy Mucky I	Mineral (F	1) (except	MLRA 1)	Other (Exp	olain in Remarks)
Hydroger	n Sulfide (A4)		Loamy Gleyed	Matrix (F2	2)			
Depleted	Below Dark Surface ((A11)	Depleted Matrix	(F3)				

Redox Dark Surface (F6)

Redox Depressions (F8)

Depleted Dark Surface (F7)

Type: _

Remarks:

Depth (inches): _

Thick Dark Surface (A12)

_ Sandy Mucky Mineral (S1)

___ Sandy Gleyed Matrix (S4)
Restrictive Layer (if present):

HYDROLOGY	*	
Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
Primary Indicators (any one indicators	ator is sufficient)	Water-Stained Leaves (B9) (NW coast)
Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soll Cracks (B6)	Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR A Other (Explain in Remarks)	Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Frost-Heave Hummocks (D4)
Field Observations:		
Surface Water Present? Ye	es No/_ Depth (inches):	₽
A CHARLE THE MANAGE AS A CARREST	es No V Depth (inches):	Vetland Hydrology Present? Yes No
(includes capillary fringe)	507 507 5 50.5000007.50 70.	vending riyarology resemble 100
Describe Recorded Data (stream	gauge, monitoring well, aerial photos, previous inspection	ns), if available:
Remarks: N.C., f. D.	un owned coming from justs	rr d

³Indicators of hydrophytic vegetation and

wetland hydrology must be present.

Hydric Soil Present? Yes

Project/Site: McCaW + P City/County: MCC	Sampling Date: 10/7/01
Applicant/Owner:Airway/	State: 20 Sampling Point: 22
Investigator(s): Section, Township, R	ange: 778 N R 3 E S 2 1 (B M)
Local relief (concave	convex, none): Flat Slope (%):
Subregion (LRR): LR /2 E Let: H4° 53′ 20″ r	Long: 1/6° 6' W Datum: M/A
Soil Map Unit Name: Melton loans	
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No	
	"Normal Circumstances" present? Yes No
· · · · · · · · · · · · · · · · · · ·	needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling point	5 5 5
SUMMARY OF FINDINGS – Attach site map showing sampling point	locations, transects, important reatures, etc.
Hydrophytic Vegetation Present? Yes No Is the Sample	ed Area
Hydric Soil Present? Yes No within a Wetter	and? Yes No
Wetland Hydrology Present? Yes No/	V21046 S V2
Remarks:	
· ·	
*	¥
VEGETATION	
Absolute Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Use scientific names.) % Cover Species? Status	Number of Dominant Species
1	That Are OBL, FACW, or FAC: (A)
2	Total Number of Dominant
3	Species Across All Strata: (B)
4	Percent of Dominant Species
Total Cover:	That Are OBL, FACW, or FAC: (A/B)
1. N/A	Prevalence Index worksheet:
2	
3	OBL species x 1 =
4	FACW species x 2 =
5,	FAC species x 3 =
Total Cover:	FACU species x 4 =
1. Assolution (CO COS 45 4 FAX	UPL species x 5 = - Column Totals: (A) (B)
2. Cirsium aiviense 20 4 FACH	Column Totals (A) (D)
3. Epilola Lun citis hun T N FACW	Prevalence Index = B/A =
4. CALLOX utrialate 30 7 082	Hydrophytic Vegetation Indicators:
5. Canese ne buse entis 5 N OBL	✓ Dominance Test is >50%
6	Prevalence Index is ≤3.0 ¹
7	Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
8	Wetland Non-Vascular Plants ¹
Total Cover: 10 0	Problematic Hydrophytic Vegetation ¹ (Explain)
1	¹ Indicators of hydric soil and wetland hydrology must
2	be present.
Total Cover:	Hydrophytic
% Bare Ground in Herb Stratum	Vegetation Present? Yes No
Remarks:	
	Y

• 3	•	 _

			8		9	* %
						* *
OIL			€.			Sampling Point:
rofile Desci	ription: (Describe to the dep	oth needed to docu	ment the indicator	r or confirm t	he absence o	of indicators.)
Depth	Matrix		ox Features			B
(inches)	Color (moist) %		%Type ¹		A Comment of the Comm	Remarks
076.7	104122/1	-	(Ment)		Samely 1	04h4
			710			
			-			_
			_:			
	ncentration, D=Depletion, RM	-Deduced Metric	2l postion: DI -D.	ro Lining PC	=Roof Chann	el M=Matrix
ype: C=Co	ncentration, D=Depletion, Rivindicators: (Applicable to all	Reduced Matrix.	envise noted.)	ne Limig, No	Indicator	rs for Problematic Hydric Soils ³ :
		Sandy Redox				Muck (A10)
_ Histosol (ipedon (A2)	Stripped Matri				Parent Material (TF2)
Histic Epi			Mineral (F1) (excep	ot MLRA 1)		r (Explain in Remarks)
	n Sulfide (A4)	Loamy Gleyed	The second secon			
	Below Dark Surface (A11)	Depleted Matr	English and the second			
	rk Surface (A12)	Redox Dark S				*
	ucky Mineral (S1)	Depleted Dark			3Indicator	s of hydrophytic vegetation and
	eyed Matrix (S4)	Redox Depres			wetlar	nd hydrology must be present.
	ayer (if present):					
Type:	NA .					
10.0 (Victoria)	hes):				Hydric Soil I	Present? Yes No
Remarks:		**************************************				
Ciriario,						
	æ	12				
			<u> </u>			
YDROLOG	βY	*			*	
Vetland Hyd	rology Indicators:				Secondar	ry Indicators (2 or more required)
rimary Indica	ators (any one indicator is suff	icient)			Wate	er-Stained Leaves (B9) (NW coast)
Surface V	Vater (A1)	Water-Stain	ed Leaves (B9) (ex	cept NW coa	st) Spar	sely Vegetated Concave Surface (B8)
	er Table (A2)	Salt Crust (<u></u>		nage Patterns (B10)
Saturation	the Constitution of		ertebrates (B13)			Season Water Table (C2)
Water Ma	7 - 113 - 712 - 18.		sulfide Odor (C1)			ration Visible on Aerial Imagery (C9)
at the second second	t Deposits (B2)		nizospheres along L	iving Roots (C	-0490 KG-	morphic Position (D2)
- Per del allon y vicento	osits (B3)		f Reduced Iron (C4)			ow Aquitard (D3)
			Reduction in Tilled			Heave Hummocks (D4)
	or Crust (B4)	· · · · · · · · · · · · · · · · · · ·	Stressed Plants (D1)			-Neutral Test (D5)
Iron Depo	osiis (Bo)	Stunted of 8	Silessed Fidilis (DT) (LIXIX A)	1,70	1.5 (1.4

Water Marks (B1) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) Oxidized Rhizospheres along Livin Drift Deposits (B3) Presence of Reduced Iron (C4) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Sc Iron Deposits (B5) Stunted or Stressed Plants (D1) (I Surface Soil Cracks (B6) Other (Explain in Remarks) Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3) oils (C6) Frost-Heave Hummocks (D4)
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:	

Project/Site: Mc Call AP	City/0	County: Man	Call !	Valley Samplin	g Date: 10/7/08
Applicant/Owner: hv vov .			State	e: Samplin	g Point:
Investigator(s):	Sect	ion, Township, Ra	inge:T	T&N RJE	521 LRA
Landform (hillslope, terrace, etc.):	Loca	al relief (concave,	convex, non	e):	Slope (%):
Subregion (LRR): LRR E	_ Lat: 44 5	3/ 20" N	_ Long:	HLO G N	Datum: N /A
Soil Map Unit Name: Greatin loan				NWI classification:	PEMA
Are climatic / hydrologic conditions on the site typical for this					
Are Vegetation, Soil, or Hydrology s	ignificantly distu	rbed? Are	"Normal Circ	:umstances" present?	Yes/_ No
Are Vegetation _ N , Soil _ N , or Hydrology N n	aturally problem	natic? (If ne	eeded, expla	in any answers in Ren	narks.)
SUMMARY OF FINDINGS - Attach site map	showing sar	mpling point l	ocations,	transects, impo	tant features, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Yes No. 1000000000000000000000000000000000000	0	Is the Sampled within a Wetlar		Yes No	
Remarks:		74			
VEGETATION			114(1)		
VEGETATION	Absolute Do	minant Indicator	Dominano	ce Test worksheet:	
Tree Stratum (Use scientific names.) 1	% Cover Sp	ecies? Status	Number of	f Dominant Species DBL, FACW, or FAC:	(A)
2. 3.				nber of Dominant cross All Strata:	(B)
4Total Cover				f Dominant Species DBL, FACW, or FAC:	(A/B)
Sapling/Shrub Stratum				ce Index worksheet:	
1. NA			The second second	% Cover of:	Multiply by:
3			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	ies x	
4				ecies x	
5.			FAC speci	ies x	3 =
Total Cover			FACU spe	ecies x	4 =
Herb Stratum.	70 5	1 034		ies x	
1. Carca utriculata 2. Carca marcahallum		N JAW	Column To	otals: (A)(B)
3. Junguis nevadrasis	100	N FACIN	Prev	alence Index = B/A =	Pa
4. Junior reactil	5 1	V FAUN	Hydrophy	rtic Vegetation Indica	tors:
5. Calama or orter canadasis	10 1	N FAUN		nance Test is >50%	
6				lence Index is ≤3.01	
7			Morph	nological Adaptations ¹ ta in Remarks or on a	(Provide supporting separate sheet)
8,	·			nd Non-Vascular Plant	
Total Cover: Woody Vine Stratum	·		1	ematic Hydrophytic Ve	
1				of hydric soil and wet	and hydrology must
2			be present	<u>. </u>	
Total Cover: % Bare Ground in Herb Stratum	· 		Hydrophy Vegetation Present?	n ,	No
Remarks:			L		750
	9.5				

6		

	- 2	()	
Sampling	Point:	111	

	a kata	Redox Features ·	
Depth Ma (inches) Color (mo	atrix ist) % (Color (moist) % Type ¹ Loc ²	TextureRemarks
			Corpe Sandy loans
10+ 120-1h			
10000			
			* * * * * * * * * * * * * * * * * * *
<u> </u>		2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	DC-Dast Channel M-Matrix
		luced Matrix. ² Location: PL=Pore Lining, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
NAME OF TEXTS OF THE PARTY OF T		Sandy Redox (S5)	2 cm Muck (A10)
Histosol (A1) Histic Epipedon (A2)		Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)		Loamy Mucky Mineral (F1) (except MLRA 1	
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)	
Depleted Below Dark S	Surface (A11)	Depleted Matrix (F3)	
Thick Dark Surface (A		Redox Dark Surface (F6)	3
Sandy Mucky Mineral (Depleted Dark Surface (F7)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present.
Sandy Gleyed Matrix (S Restrictive Layer (if prese	· ·	Redox Depressions (F8)	wettatid flydrology flidst be present.
Type:			
Depth (inches):		a a	Hydric Soil Present? Yes No
			Hydro don't redent?
Remarks:	Hon 10"	Moreto hurbid so	of Tefinition , Demandary
		7 ***	1
inondata	ð.		
	э ж		
PANTAD NIPOSA DE 1980 EN DE 1980			
AMAZINE SONYE HAWA NO CA		*	x .
Wetland Hydrology Indica			Secondary Indicators (2 or more required)
AMAZINE SONYE HAWA NO CA	indicator is sufficient		Water-Stained Leaves (B9) (NW coast)
Wetland Hydrology Indica Primary Indicators (any one Surface Water (A1)	e indicator is sufficient	_ Water-Stained Leaves (B9) (except NW c	Water-Stained Leaves (B9) (NW coast) coast) Sparsely Vegetated Concave Surface (B8)
Wetland Hydrology Indica Primary Indicators (any one Surface Water (A1) High Water Table (A2)	indicator is sufficient	_ Water-Stained Leaves (B9) (except NW c _ Salt Crust (B11)	Water-Stained Leaves (B9) (NW coast) coast) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10)
Wetland Hydrology Indica Primary Indicators (any one Surface Water (A1) High Water Table (A2) Saturation (A3)	indicator is sufficient	Water-Stained Leaves (B9) (except NW c Salt Crust (B11) Aquatic Invertebrates (B13)	Water-Stained Leaves (B9) (NW coast) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Dry-Season Water Table (C2)
Wetland Hydrology Indica Primary Indicators (any one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	e indicator is sufficient 	Water-Stained Leaves (B9) (except NW c Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	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)
Wetland Hydrology Indica Primary Indicators (any one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	e indicator is sufficient 	Water-Stained Leaves (B9) (except NW of Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots	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) s (C3) Geomorphic Position (D2)
Wetland Hydrology Indica Primary Indicators (any one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	e indicator is sufficient	Water-Stained Leaves (B9) (except NW of Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4)	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) s (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
Primary Indicators (any one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	e indicator is sufficient	Water-Stained Leaves (B9) (except NW of Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6)	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) S (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Frost-Heave Hummocks (D4)
Wetland Hydrology Indica Primary Indicators (any one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	e indicator is sufficient	Water-Stained Leaves (B9) (except NW of Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A)	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) (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Frost-Heave Hummocks (D4) FAC-Neutral Test (D5)
Wetland Hydrology Indica Primary Indicators (any one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)	e indicator is sufficient	Water-Stained Leaves (B9) (except NW of Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6)	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) S (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Frost-Heave Hummocks (D4)
Wetland Hydrology Indica Primary Indicators (any one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on A	e indicator is sufficient	Water-Stained Leaves (B9) (except NW of Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A)	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) (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Frost-Heave Hummocks (D4) FAC-Neutral Test (D5)
Wetland Hydrology Indica Primary Indicators (any one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on A Field Observations:	e indicator is sufficient	Water-Stained Leaves (B9) (except NW of Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks)	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) (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Frost-Heave Hummocks (D4) FAC-Neutral Test (D5)
Wetland Hydrology Indica Primary Indicators (any one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on A Field Observations: Surface Water Present?	e indicator is sufficient	Water-Stained Leaves (B9) (except NW of Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks)	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) (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Frost-Heave Hummocks (D4) FAC-Neutral Test (D5)
Wetland Hydrology Indica Primary Indicators (any one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on A Field Observations: Surface Water Present? Water Table Present?	e indicator is sufficient c) 6) Yes V No Yes No No	Water-Stained Leaves (B9) (except NW of Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks)	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) (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Frost-Heave Hummocks (D4) FAC-Neutral Test (D5)
Wetland Hydrology Indica Primary Indicators (any one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (Bi Inundation Visible on A Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	e indicator is sufficient c) 6) Herial Imagery (B7) Yes V No Yes No Yes No No No	Water-Stained Leaves (B9) (except NW of Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) Depth (inches): Depth (inches): Wet	
Wetland Hydrology Indica Primary Indicators (any one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (Bi Inundation Visible on A Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	e indicator is sufficient c) 6) Herial Imagery (B7) Yes V No Yes No Yes No No No	Water-Stained Leaves (B9) (except NW of Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks)	
Wetland Hydrology Indica Primary Indicators (any one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on A Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (st	e indicator is sufficient c) 6) Herial Imagery (B7) Yes V No Yes No Yes No No No	Water-Stained Leaves (B9) (except NW of Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) Depth (inches): Depth (inches): Wet	
Wetland Hydrology Indica Primary Indicators (any one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (Bi Inundation Visible on A Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	e indicator is sufficient c) 6) Herial Imagery (B7) Yes V No Yes No Yes No No No	Water-Stained Leaves (B9) (except NW of Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) Depth (inches): Depth (inches): Wet	
Wetland Hydrology Indica Primary Indicators (any one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on A Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (st	e indicator is sufficient c) 6) Herial Imagery (B7) Yes V No Yes No Yes No No No	Water-Stained Leaves (B9) (except NW of Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) Depth (inches): Depth (inches): Wet	
Wetland Hydrology Indica Primary Indicators (any one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on A Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (st	e indicator is sufficient c) 6) Herial Imagery (B7) Yes V No Yes No Yes No No No	Water-Stained Leaves (B9) (except NW of Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) Depth (inches): Depth (inches): Wet	
Wetland Hydrology Indica Primary Indicators (any one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on A Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (st	e indicator is sufficient c) 6) Herial Imagery (B7) Yes V No Yes No Yes No No No	Water-Stained Leaves (B9) (except NW of Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) Depth (inches): Depth (inches): Wet	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)

Project/Site: No C AND A C		City/Count	ty:^_	¢ the	1 14	Samplin	g Date:	12 /01
Applicant/Owner:				St	tate:	Samplin	g Point:	2
Investigator(s):		Section, T	ownship, Ra	ange:	TIEN	R.T.E.	521	CBA
Landform (hillslope, terrace, etc.):	3	Local relie	ef (concave,	convex, r	none):	rts de	Slope (%):
Subregion (LRR): LRRE	_ Lat:	440 3	3 20"	_Nong:_	116' 6	N	Datum:	N/A-
Soil Map Unit Name: Castin John					NWI cla	assification:	N/A	
Are climatic / hydrologic conditions on the site typical for thi	s time of ye	ar? Yes_	No	(li	f no, explai	n in Remarks.)		
Are Vegetation _ N _, Soil _ N , or Hydrology _ N _ s	significantly	disturbed?	? Are "	"Normal C	Circumstan	ces" present?	Yes	No
Are VegetationN, SoilN, or HydrologyNr	naturally pro	blematic?	(If ne	eeded, ex	plain any a	nswers in Rem	narks.)	
SUMMARY OF FINDINGS - Attach site map	showing	sampli	ng point l	location	ıs, trans	ects, impor	tant featur	es, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Yes N Permarks:	0	wit	the Sampled thin a Wetlar		Yes	No		
Remarks: Just a bode ditch on	bonk	*	÷	*				
VEGETATION		*						
Tree Stratum (Use scientific names.) 1	***	Species'	nt Indicator ? Status	Numbe	er of Domin	worksheet: ant Species CVV, or FAC:	1	_ (A)
2	-			1, 10, 2000	lumber of D s Across A		2,	_ (B)
4			-			ant Species CW, or FAC:	So	_ (A/B)
1. N/A				Preval	ence Index	worksheet:		
2.				To	tal % Cove	r of:	Multiply by:	
3.	- 3			OBL sp	ecies _	x	1 =	
4		<u> </u>		0.4010 0.400		x		
5,	-					x		
Total Cover	ī	43		l.		x		
1. Solidado Candrasis	60	14	1-4-6			×		
2. Alvanian mon	2-0	4	106	Colum	i iolais	(A		(12)
3. Linavid Vulpano		N	NL			Index = B/A =		
4. Grenn marrophyllum	15	N	TANK	000 PD 000 PD		etation Indica	tors:	
5		25-				est is >50%		
6				Pro	evalence Ir	idex is ≤3.0 ¹	6	
7			-:	Mic	orphologica data in Re	l Adaptations ¹ marks or on a	(Provide suppo separate sheet	orting t)
8	20			VVe	etland Non-	Vascular Plant	ts ¹	
Total Cover	:_75			Control of the contro		lydrophytic Ve		ain)
1 \						ic soil and wet	land hydrology	must
2,				be pres	sent.			
Total Cover % Bare Ground in Herb Stratum5	:	*		Hydror Vegeta Presen	tion	Yes	No_<	
Remarks:				1				
	9							

		25	0
Sampling	Point:	1	4-

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth Matrix Redox Features										
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>		Remarks	
0.5	04K312						- March	1500		
5-/63	104R3/2	F5 -	7.594416	1.5		H	Smel	14 54	والمتعار بالأمار	
							2001	<u> </u>		
		· · · · · · · · · · · · · · · · · · ·						4.4		
	-									
								-		
								c 		
¹Type: C=C	oncentration, D=Dep	letion, RM=Re	educed Matrix.	² Location:	: PL=Pore	e Lining, Ro	C=Root Char	nnel, M=Mat	rix.	
Hydric Soil	Indicators: (Applic	able to all LR	Rs, unless other	wise note	ed.)		Indicat	ors for Prol	olematic Hydri	c Soils³:
Histosol	(A1)	3/	Sandy Redox (S	35)			-	m Muck (A1		
Histic E	pipedon (A2)	-	_ Stripped Matrix					d Parent Ma		
	istic (A3)	_	_ Loamy Mucky N			MLRA 1)	Oth	ner (Explain	in Remarks)	
	en Sulfide (A4)		_ Loamy Gleyed I)					
	d Below Dark Surfac	e (A11)	_ Depleted Matrix							
The Country of the Co	ark Surface (A12)		Redox Dark Sur Depleted Dark S		7)		3Indicat	ors of hydro	phytic vegetation	on and
	Nucky Mineral (S1) Bleyed Matrix (S4)	**************************************	Redox Depress		,,				gy must be pre	
	Layer (if present):		_ Nedox Depisor	ie ie (i -)	77					
l	of total									
	ches):	2	 x		9		Hydric So	il Present?	Yes V	No
Remarks:	cries).									
Nemans.										
	*									
HYDROLO	GY									
Wetland Hy	drology Indicators:						-		rs (2 or more re	526
Primary India	cators (any one indic	ator is sufficle							Leaves (B9) (N	
Surface	Water (A1)		Water-Staine		(B9) (exc	ept NW co			tated Concave	Surface (B8)
High Wa	ater Table (A2)		Salt Crust (B					ainage Patte		
Saturati	on (A3)		Aquatic Inver						ater Table (C2)	
Water M	larks (B1)		Hydrogen Su						ble on Aerial Im	agery (C9)
	nt Deposits (B2)		Oxidized Rhiz			ing Roots (
Drift De	posits (B3)		Presence of I					allow Aquita		
	at or Crust (B4)		Recent Iron F						ummocks (D4)	
	oosits (B5)		Stunted or St			(LRR A)	70.000	C-Neutral To		3 A)
12 may 1	Soil Cracks (B6)	0000240	Other (Explai	n in Rema	irks)		ка	ised Ant ivio	unds (D6) (LRI	(A)
	on Visible on Aerial I	magery (B7)								
Field Obser			*	9 9						
Surface Wat			Depth (inc							3
Water Table			Depth (inc				CO - Marco Development and Company			
Saturation P		es No	🗠 Depth (inc	ches):		_ Wetla	and Hydrolog	gy Present?	Yes	NO
Describe Re	oillary fringe) corded Data (stream	gauge, monif	oring well, aerial r	hotos, pre	evious ins	pections), i	favailable:			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:										
Remarks:										
Tremente,										
2										
	*									

Project/Site: McCall AP City/County: McC	all Valla Sampling Date: 10/7/08
Applicant/Owner:	State: Sampling Point:
Investigator(s): Section, Township, Ra	
Landform (hillslope, terrace, etc.):Local relief (concave,	convex, none): Slope (%):
Subregion (LRR): LR E Lat: 44° 53′ 26" N	Long: Datum:
Soil Map Unit Name:	NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _	
Are Vegetation, Soil, or Hydrology significantly disturbed? Are	"Normal Circumstances" present? Yes No
	eeded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing sampling point	locations, transects, important features, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Yes No Is the Sampled within a Wetland Hydrology Present?	75. Francisco 19. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.
Remarks:	
VEGETATION	
Absolute Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Use scientific names.) <u>% Cover Species? Status</u> 1	Number of Dominant Species That Are OBL, FACW, or FAC:(A)
2	Total Number of Dominant
3	Species Across All Strata: (B)
4 Total Cover:	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum	Prevalence Index worksheet:
1. N/A	Total % Cover of: Multiply by:
2	OBL species x 1 =
3	FACW species x 2 =
	FAC species x 3 =
Total Cover:	FACU species x 4 =
Herb Stratum. Post palustinis Total cover. T N #AC	UPL species x 5 =
1. Carex nebuscensis 10 y all	Column Totals: (A) (B)
2 Carex microstera 20 y FACW	(4)
3. Carex athrostachya 30 y FACW	Prevalence Index = B/A =
4. Cover aquatilis 10 4 08L	Hydrophytic Vegetation Indicators:
5. AAROSAIC SA. 10 M FAC	✓ Dominance Test is >50%
6. Phileum prestance 16 V FAL	Prevalence Index is ≤3.0 ¹
7. Chrysantheman leacantheman T N NL	Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
8. ASTERACEOR TO T N ONK.	Wetland Non-Vascular Plants ¹
Agropuron pepers Total Cover: 10100 FAC.	Problematic Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum	¹Indicators of hydric soil and wetland hydrology must
1. N /A	be present.
Z Total Cover:	Hydrophytic Vegetation Present? Yes No
% Bare Ground in Herb Stratum	ricocitti 165nu
Remarks: Plot Lotton of dital=5 1 10	

SOIL						Sampling Point:
Profile Description: (Describe to the	depth needed to docur	nent the in	dicator	or confirm	the absence of i	indicators.)
Depth Matrix	Redo	x Features	9	•		
(inches) Color (moist) %	Color (moist)	%	Type ¹	_ Loc ²	Texture	Remarks
0-215 10482/1					Samby 4	
2,5-16+ 104RS/2 96	275424/6	10	-	1-1	CONNE	Paul Joan Soft
						1
	_					
					<i></i>	
Type: C=Concentration, D=Depletion,	RM=Reduced Matrix.	² Location:	PL=Por	e Lining, R	C=Root Channel,	M=Matrix.
dydric Soil Indicators: (Applicable to	all LRRs, unless othe	rwise note	d.)		Indicators t	for Problematic Hydric Soils":
Histosol (A1)	Sandy Redox (2 cm M	
Histic Epipedon (A2)	Stripped Matrix					rent Material (TF2)
Black Histic (A3)	Loamy Mucky I			t MLRA 1)	Other (Explain in Remarks)
Hydrogen Sulfide (A4)	Loamy Gleyed					
Depleted Below Dark Surface (A11)	Depleted Matrix Redox Dark Su					
Thick Dark Surface (A12) Sandy Mucky Mineral (S1)	Depleted Dark		7)		3Indicators	of hydrophytic vegetation and
Sandy Middley Milleral (61) Sandy Gleyed Matrix (S4)	Redox Depress		,			hydrology must be present.
Restrictive Layer (if present):						
Type:						
Depth (inches):			2.		Hydric Soil Pre	esent? Yes No
Remarks:						
YDROLOGY	(P)	111 - 41				
Netland Hydrology Indicators:						Indicators (2 or more required)
Primary Indicators (any one indicator is	sufficient)				Water-9	Stained Leaves (B9) (NW coast)
Surface Water (A1)	Water-Stains	ed Leaves (B9) (exc	ept NW co	ast) Sparse	ly Vegetated Concave Surface (B8
✓ High Water Table (A2)	Salt Crust (B	11)				je Patterns (B10)
Saturation (A3)	Aquatic Inve	rtebrates (B	313)		* 1.0F-0.₹ 1.1 Sec.	ason Water Table (C2)
Water Marks (B1)	Hydrogen Sι	ılfide Odor ((C1)			ion Visible on Aerial Imagery (C9)
Sediment Deposits (B2)	Oxidized Rhi	zospheres	along Liv	ing Roots	7	rphic Position (D2)
Drift Deposits (B3)	Presence of					v Aquitard (D3)
Algal Mat or Crust (B4)	Recent Iron				7	leave Hummocks (D4)
Iron Deposits (B5)	Stunted or S			(LRR A)		eutral Test (D5)
Surface Soil Cracks (B6)	Other (Expla	in in Remar	rks)		Raised	Ant Mounds (D6) (LRR A)
Inundation Visible on Aerial Imagery	(B7)					
Field Observations:	***					
Surface Water Present? Yes	No Depth (in	ches):				z.
Nater Table Present? Yes	No Depth (in	ches):	13			
Saturation Present? Yes	No Depth (in	ches):	12	Wetla	nd Hydrology P	resent? Yes // No
includes capillary fringe) Describe Recorded Data (stream gauge,	, monitoring well, aerial	photos, pre	vious ins	pections), i	f available:	24
	==					
Remarks:						

Investigator(s):		Section, To	wnship, Ra	State: <u>ID</u> inge: <u>TDRN_A3</u>	Sampling Point:
Landform (hillslope, terrace, etc.):	2	Local relief	(concave,	convex, none):	Slope (%):
Subregion (LRR): LRR E	Lat: 🛶	1022,	20" N	Long: 1169 6'	N Datum: N/A
Soil Map Unit Name: Gestin long					
A P. H. A. L. L. L. L. Williams H. W. A. L. L. L. L.	AL 1- AL	-0 V	Ma.	//f == avalain in F	Pamarka \
Are climatic / hydrologic conditions on the site typical for				•	
Are Vegetation, Soil, or Hydrology			Are '	"Normal Circumstances"	present? Yes No
Are Vegetation, Soil, or Hydrology	_ naturally pro	blematic?	(If ne	eeded, explain any answe	rs in Remarks.)
SUMMARY OF FINDINGS - Attach site ma	p showing	samplin	g point l	ocations, transects	i, important features, etc.
Hydrophytic Vegetation Present? Yes		ls th	e Sampled	I Δrea	a
Hydric Soil Present? Yes	No V		- 5	72	No_
Wetland Hydrology Present? Yes	No	VVICII	iii a vvetiai	103	
Remarks: Rank above 11 tola		*			
VEGETATION					
	Absolute			Dominance Test work	csheet:
Tree Stratum (Use scientific names.)	% Cover		***	Number of Dominant S	
1. N/A				That Are OBL, FACW,	or FAC: (A)
2				Total Number of Domir	nant 2
3				Species Across All Stra	ata: (B)
4				Percent of Dominant S	pecies
	ver:			That Are OBL, FACW,	or FAC: 5 (A/B)
Sapling/Shrub Stratum				Prevalence Index wor	Irahaati
1. NA				1 2 2/ 2 2	
2					Multiply by:
3				1000 1000 1000 1000	x 1 =
4					x 2 =
5,				COLUMN TO STATE OF THE PARTY OF	x3=
Total Cov	ver:				x 4 =
Herb Stratum.	40		956 Jul		x 5 =
1. \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	40		FACU UNK.	Column Totals:	(A) (B)
3. Chrisa themen lencanther		- Ly	ML	Provalance Index	= B/A =
	aute 10		$\overline{}$	Hydrophytic Vegetation	
4. Lidayla unlearis			NL	Dominance Test is	
5. Cavila CO. V			BACOB!	Prevalence Index i	
6. A ovoryon reper	ngor.	- N	FAC.		
7. Theread Sp		N	UNK	data in Remark	ptations ¹ (Provide supporting s or on a separate sheet)
8				Wetland Non-Vasc	
Total Cov Woody Vine Stratum	/er: <u>40</u>			1.00	phytic Vegetation ¹ (Explain)
					I and wetland hydrology must
1. N/A				be present.	,
2				Hydrophytic	
% Bare Ground in Herb Stratum	/er:			Vegetation	s No
Remarks:					
6					
12					
	ī.				

Sampling Point: _	E2.

Profile Description: (Describe	as are are pro-			oommin a				
Depth Matrix (inches) Color (moist)	% C	Redox color (moist)	Features Type ¹	Loc²	Texture		Remarks	
			70 1700					120 m
0. 19					Part Contract)	1	7	
***************************************								· · · · · · · · · · · · · · · · · · ·
-								
		1			*			
			7 VW VV VV V	va voj vojako				
¹ Type: C=Concentration, D=Dep	etion, RM=Red	uced Matrix. 2	Location: PL=Pore I	_ining, RC=	Root Chann	el, M=Matr	x. Iematic Hydı	rio Spile ³ :
Hydric Soil Indicators: (Applica								ic sons.
Histosol (A1)		Sandy Redox (S5				Muck (A10	erial (TF2)	
Histic Epipedon (A2) Black Histic (A3)		Stripped Matrix (S	oo) neral (F1) (except N	IRA1)	The second secon		n Remarks)	
Hydrogen Sulfide (A4)		Loamy Gleyed M		in the ty		(=	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Depleted Below Dark Surface	The second secon	Depleted Matrix (
Thick Dark Surface (A12)		Redox Dark Surfa					50.785	
Sandy Mucky Mineral (S1)		Depleted Dark Sເ					hytic vegetat	
Sandy Gleyed Matrix (S4)		Redox Depressio	ns (F8)		wetlan	d hydrolog	y must be pre	esent.
Restrictive Layer (if present):								
Type:			74	١,	II.alala Call I	Transmé?	Voo	No.
Depth (inches):					Hydric Soil i	resent	Yes	140
Remarks: 1202-12 0 13	11							
120 % W (E 1.2)								
9			,					
if the second se			·)		- Janoer		
HYDROLOGY		£6)				
HYDROLOGY Wetland Hydrology Indicators:		8		,	Secondar	y Indicator	s (2 or more r	required)
AVENUE SERVE MEDICAL PROBLEMAN DATE	ator is sufficient)					2007	s (2 or more r eaves (B9) (I	
Wetland Hydrology Indicators: Primary Indicators (any one indicators)			Leaves (B9) (excep	t NW coas	Wate	r-Stained L	.eaves (B9) (I	NW coast)
Wetland Hydrology Indicators: Primary Indicators (any one indicators (A1)			Leaves (B9) (excep	t NW coas	Wate	r-Stained L	eaves (B9) (I ated Concave	NW coast)
Wetland Hydrology Indicators: Primary Indicators (any one indicators)	=	_ Water-Stained)	f NW coas	Wate t) Span Drain	r-Stained I sely Vegeta age Patter	eaves (B9) (I ated Concave	NW coast) Surface (B8)
Wetland Hydrology Indicators: Primary Indicators (any one indicators Surface Water (A1) High Water Table (A2) Saturation (A3)	=	_ Water-Stained _ Salt Crust (B11	brates (B13)	f NW coas	Wate t) Span Drain Dry-S	r-Stained L sely Vegeta age Patter Season Wa	eaves (B9) (I ated Concave ns (B10)	NW coast) Surface (B8)
Wetland Hydrology Indicators: Primary Indicators (any one indicators Surface Water (A1) High Water Table (A2)	=	Water-Stained Salt Crust (B11 Aquatic Inverte Hydrogen Sulfi Oxidized Rhizo	brates (B13) de Odor (C1) spheres along Livin		Wate Span Drain Dry-8 Satur 3) Geor	r-Stained I sely Vegeta age Patter Season Wa ration Visib norphic Po	eaves (B9) (lated Concave ns (B10) ter Table (C2 le on Aerial In sition (D2)	NW coast) Surface (B8)
Wetland Hydrology Indicators: Primary Indicators (any one indicators Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	=	Water-Stained Salt Crust (B11 Aquatic Inverte Hydrogen Sulfi Oxidized Rhizo Presence of Re	brates (B13) de Odor (C1) spheres along Livin educed Iron (C4)	g Roots (C:	Wate Span Drain Dry-8 Satu 3) Geor Shall	r-Stained I sely Vegeta age Patter Season Wa ration Visib norphic Po ow Aquitan	Leaves (B9) (I ated Concave ns (B10) ter Table (C2 de on Aerial In sition (D2) d (D3)	NW coast) Surface (B8) nagery (C9)
Wetland Hydrology Indicators: Primary Indicators (any one indicators) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	=	Water-Stained Salt Crust (B11 Aquatic Inverte Hydrogen Sulfi Oxidized Rhizo Presence of Re Recent Iron Re	brates (B13) de Odor (C1) spheres along Living educed Iron (C4) duction in Tilled Soi	g Roots (C:	Wate t) Span Drain Dry-5 Satun 3) Geor Shall Frost	r-Stained L sely Vegeta age Patter Season Wa ration Visib norphic Po ow Aquitan -Heave Hu	Leaves (B9) (I lated Concave ns (B10) ter Table (C2) le on Aerial In lisition (D2) d (D3) mmocks (D4)	NW coast) Surface (B8) nagery (C9)
Wetland Hydrology Indicators: Primary Indicators (any one indicators Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	=	Water-Stained Salt Crust (B11 Aquatic Inverte Hydrogen Sulfi Oxidized Rhizo Presence of Re Recent Iron Re Stunted or Stre	brates (B13) de Odor (C1) spheres along Living duced Iron (C4) duction in Tilled Soi	g Roots (C:	Wate f) Span Drain Dry-5 Satun 3) Geor Shall Frost FAC-	r-Stained L sely Vegeta lage Patter Season Wa ration Visib norphic Po low Aquitan Heave Hu Neutral Te	eaves (B9) (I ated Concave ns (B10) ter Table (C2 le on Aerial In sition (D2) d (D3) mmocks (D4) st (D5)	NW coast) Surface (B8)) nagery (C9)
Wetland Hydrology Indicators: Primary Indicators (any one indicators Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)	-	Water-Stained Salt Crust (B11 Aquatic Inverte Hydrogen Sulfi Oxidized Rhizo Presence of Re Recent Iron Re	brates (B13) de Odor (C1) spheres along Living duced Iron (C4) duction in Tilled Soi	g Roots (C:	Wate f) Span Drain Dry-5 Satun 3) Geor Shall Frost FAC-	r-Stained L sely Vegeta lage Patter Season Wa ration Visib norphic Po low Aquitan Heave Hu Neutral Te	Leaves (B9) (I lated Concave ns (B10) ter Table (C2) le on Aerial In lisition (D2) d (D3) mmocks (D4)	NW coast) Surface (B8)) nagery (C9)
Wetland Hydrology Indicators: Primary Indicators (any one indicators) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial In	-	Water-Stained Salt Crust (B11 Aquatic Inverte Hydrogen Sulfi Oxidized Rhizo Presence of Re Recent Iron Re Stunted or Stre	brates (B13) de Odor (C1) spheres along Living duced Iron (C4) duction in Tilled Soi	g Roots (C:	Wate f) Span Drain Dry-5 Satun 3) Geor Shall Frost FAC-	r-Stained L sely Vegeta lage Patter Season Wa ration Visib norphic Po low Aquitan Heave Hu Neutral Te	eaves (B9) (I ated Concave ns (B10) ter Table (C2 le on Aerial In sition (D2) d (D3) mmocks (D4) st (D5)	NW coast) Surface (B8)) nagery (C9)
Wetland Hydrology Indicators: Primary Indicators (any one indicators) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Infield Observations:	magery (B7)	Water-Stained Salt Crust (B11 Aquatic Inverte Hydrogen Sulfi Oxidized Rhizo Presence of Re Recent Iron Re Stunted or Stre Other (Explain	brates (B13) de Odor (C1) espheres along Living educed Iron (C4) eduction in Tilled Soi essed Plants (D1) (Li in Remarks)	g Roots (C: ls (C6) RR A)	Wate f) Span Drain Dry-5 Satun 3) Geor Shall Frost FAC-	r-Stained L sely Vegeta lage Patter Season Wa ration Visib norphic Po low Aquitan Heave Hu Neutral Te	eaves (B9) (I ated Concave ns (B10) ter Table (C2 le on Aerial In sition (D2) d (D3) mmocks (D4) st (D5)	NW coast) Surface (B8)) nagery (C9)
Wetland Hydrology Indicators: Primary Indicators (any one indicators Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Infield Observations: Surface Water Present?	magery (B7)	Water-Stained Salt Crust (B11 Aquatic Inverte Hydrogen Sulfi Oxidized Rhizo Presence of Re Recent Iron Re Stunted or Stre Other (Explain	brates (B13) de Odor (C1) espheres along Living educed Iron (C4) eduction in Tilled Soi essed Plants (D1) (Li in Remarks)	g Roots (C: ls (C6) RR A)	Wate f) Span Drain Dry-5 Satun 3) Geor Shall Frost FAC-	r-Stained L sely Vegeta lage Patter Season Wa ration Visib norphic Po low Aquitan Heave Hu Neutral Te	eaves (B9) (I ated Concave ns (B10) ter Table (C2 le on Aerial In sition (D2) d (D3) mmocks (D4) st (D5)	NW coast) Surface (B8)) nagery (C9)
Wetland Hydrology Indicators: Primary Indicators (any one indicators Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Infield Observations: Surface Water Present?	magery (B7)	Water-Stained Salt Crust (B11 Aquatic Inverte Hydrogen Sulfi Oxidized Rhizo Presence of Re Recent Iron Re Stunted or Stre Other (Explain Depth (inch	brates (B13) de Odor (C1) espheres along Living educed Iron (C4) eduction in Tilled Soi essed Plants (D1) (Li in Remarks) es): es):	g Roots (C: ls (C6) RR A)	Wate Mate Span Drain Dry-S Satur Geor Shall Frost Raise	r-Stained I sely Vegeta lage Patter Season Wa ration Visib norphic Po low Aquitan Heave Hu Neutral Te ed Ant Mou	Leaves (B9) (I ated Concave ns (B10) ter Table (C2) de on Aerial In sition (D2) d (D3) mmocks (D4) st (D5) nds (D6) (LR	NW coast) Surface (B8) nagery (C9) R A)
Wetland Hydrology Indicators: Primary Indicators (any one indicators Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Infield Observations: Surface Water Present? Water Table Present?	magery (B7)	Water-Stained Salt Crust (B11 Aquatic Inverte Hydrogen Sulfi Oxidized Rhizo Presence of Re Recent Iron Re Stunted or Stre Other (Explain Depth (inch	brates (B13) de Odor (C1) espheres along Living educed Iron (C4) eduction in Tilled Soi essed Plants (D1) (Li in Remarks)	g Roots (C: ls (C6) RR A)	Wate Mate Span Drain Dry-S Satur Geor Shall Frost Raise	r-Stained I sely Vegeta lage Patter Season Wa ration Visib norphic Po low Aquitan Heave Hu Neutral Te ed Ant Mou	eaves (B9) (I ated Concave ns (B10) ter Table (C2 le on Aerial In sition (D2) d (D3) mmocks (D4) st (D5)	NW coast) Surface (B8) nagery (C9) R A)
Wetland Hydrology Indicators: Primary Indicators (any one indicators (any one indicators) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Infield Observations: Surface Water Present? Water Table Present? Yet (Includes capillary fringe)	magery (B7) es No es No es No	Water-Stained Salt Crust (B11 Aquatic Inverte Hydrogen Sulfi Oxidized Rhizo Presence of Re Recent Iron Re Stunted or Stre Other (Explain Depth (inch	bbrates (B13) de Odor (C1) espheres along Living educed Iron (C4) eduction in Tilled Soi essed Plants (D1) (Lin Remarks) es): es):	g Roots (C: ls (C6) RR A) Wetland	Wafe Wafe Span Drair Dry-S Satur Shall Frost FAC- Raise	r-Stained I sely Vegeta lage Patter Season Wa ration Visib norphic Po low Aquitan Heave Hu Neutral Te ed Ant Mou	Leaves (B9) (I ated Concave ns (B10) ter Table (C2) de on Aerial In sition (D2) d (D3) mmocks (D4) st (D5) nds (D6) (LR	NW coast) Surface (B8) nagery (C9) R A)
Wetland Hydrology Indicators: Primary Indicators (any one indicators Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Infield Observations: Surface Water Present? Water Table Present?	magery (B7) es No es No es No	Water-Stained Salt Crust (B11 Aquatic Inverte Hydrogen Sulfi Oxidized Rhizo Presence of Re Recent Iron Re Stunted or Stre Other (Explain Depth (inch	bbrates (B13) de Odor (C1) espheres along Living educed Iron (C4) eduction in Tilled Soi essed Plants (D1) (Lin Remarks) es): es):	g Roots (C: ls (C6) RR A) Wetland	Wafe Wafe Span Drair Dry-S Satur Shall Frost FAC- Raise	r-Stained I sely Vegeta lage Patter Season Wa ration Visib norphic Po low Aquitan Heave Hu Neutral Te ed Ant Mou	Leaves (B9) (I ated Concave ns (B10) ter Table (C2) de on Aerial In sition (D2) d (D3) mmocks (D4) st (D5) nds (D6) (LR	NW coast) Surface (B8) nagery (C9) R A)
Wetland Hydrology Indicators: Primary Indicators (any one indicators (any one indicators) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Infield Observations: Surface Water Present? Water Table Present? Yet (Includes capillary fringe)	magery (B7) es No es No es No	Water-Stained Salt Crust (B11 Aquatic Inverte Hydrogen Sulfi Oxidized Rhizo Presence of Re Recent Iron Re Stunted or Stre Other (Explain Depth (inch	bbrates (B13) de Odor (C1) espheres along Living educed Iron (C4) eduction in Tilled Soi essed Plants (D1) (Lin Remarks) es): es):	g Roots (C: ls (C6) RR A) Wetland	Wafe Wafe Span Drair Dry-S Satur Shall Frost FAC- Raise	r-Stained I sely Vegeta lage Patter Season Wa ration Visib norphic Po low Aquitan Heave Hu Neutral Te ed Ant Mou	Leaves (B9) (I ated Concave ns (B10) ter Table (C2) de on Aerial In sition (D2) d (D3) mmocks (D4) st (D5) nds (D6) (LR	NW coast) Surface (B8) nagery (C9) R A)
Wetland Hydrology Indicators: Primary Indicators (any one indicators (any one indicators) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Infield Observations: Surface Water Present? Water Table Present? Yet (includes capillary fringe) Describe Recorded Data (stream)	magery (B7) es No es No _ es No _ gauge, monitori	Water-Stained Salt Crust (B11 Aquatic Inverte Hydrogen Sulfi Oxidized Rhizo Presence of Re Recent Iron Re Stunted or Stre Other (Explain Depth (inch Depth (inch	brates (B13) de Odor (C1) espheres along Living educed Iron (C4) eduction in Tilled Soi essed Plants (D1) (Lin Remarks) es): es): es): otos, previous inspe	g Roots (C: ls (C6) RR A) Wetland	Wafe Wafe Span Drair Dry-S Satur Shall Frost FAC- Raise	r-Stained I sely Vegeta lage Patter Season Wa ration Visib norphic Po low Aquitan Heave Hu Neutral Te ed Ant Mou	Leaves (B9) (I ated Concave ns (B10) ter Table (C2) de on Aerial In sition (D2) d (D3) mmocks (D4) st (D5) nds (D6) (LR	NW coast) Surface (B8) nagery (C9) R A)
Wetland Hydrology Indicators: Primary Indicators (any one indicators (any one indicators) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Infield Observations: Surface Water Present? Water Table Present? Yet (includes capillary fringe) Describe Recorded Data (stream)	magery (B7) es No es No _ es No _ gauge, monitori	Water-Stained Salt Crust (B11 Aquatic Inverte Hydrogen Sulfi Oxidized Rhizo Presence of Re Recent Iron Re Stunted or Stre Other (Explain Depth (inch Depth (inch	brates (B13) de Odor (C1) espheres along Living educed Iron (C4) eduction in Tilled Soi essed Plants (D1) (Lin Remarks) es): es): es): otos, previous inspe	g Roots (C: ls (C6) RR A) Wetland	Wafe Wafe Span Drair Dry-S Satur Shall Frost FAC- Raise	r-Stained I sely Vegeta lage Patter Season Wa ration Visib norphic Po low Aquitan Heave Hu Neutral Te ed Ant Mou	Leaves (B9) (I ated Concave ns (B10) ter Table (C2) de on Aerial In sition (D2) d (D3) mmocks (D4) st (D5) nds (D6) (LR	NW coast) Surface (B8) nagery (C9) R A)
Wetland Hydrology Indicators: Primary Indicators (any one indicators (any one indicators) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Infield Observations: Surface Water Present? Water Table Present? Yet (includes capillary fringe) Describe Recorded Data (stream)	magery (B7) es No es No _ es No _ gauge, monitori	Water-Stained Salt Crust (B11 Aquatic Inverte Hydrogen Sulfi Oxidized Rhizo Presence of Re Recent Iron Re Stunted or Stre Other (Explain Depth (inch Depth (inch	brates (B13) de Odor (C1) espheres along Living educed Iron (C4) eduction in Tilled Soi essed Plants (D1) (Lin Remarks) es): es): es): otos, previous inspe	g Roots (C: ls (C6) RR A) Wetland	Wafe Wafe Span Drair Dry-S Satur Shall Frost FAC- Raise	r-Stained I sely Vegeta lage Patter Season Wa ration Visib norphic Po low Aquitan Heave Hu Neutral Te ed Ant Mou	Leaves (B9) (I ated Concave ns (B10) ter Table (C2) de on Aerial In sition (D2) d (D3) mmocks (D4) st (D5) nds (D6) (LR	NW coast) Surface (B8) nagery (C9) R A)

Project/Site: Mc Cald AP	Cit	y/County:	MAR	all / Valley	Sampling	Date:	7 /05
Applicant/Owner: Aivyoov							
Investigator(s): TR /LT	Se	ection. Tov	vnship, Rai	nge: TIKN	R3E	521	(BA)
Landform (hillslope, terrace, etc.):	Lo	cal relief	(concave. d	convex. none):	lat-	Slope (%):	-0-
Subregion (LRR):	Lat: 44	°33′	20 "N	Long: 116" 6	IN	Datum:	V/A
Soil Map Unit Name: Gath Idan				NWI class	sification:	N/A	
Are climatic / hydrologic conditions on the site typical for this	time of year	Von I	No	(If no explain i	n Pomarke \		
Are Vegetation, soil, or Hydrology s						ron W N	0
Are Vegetation, Soil, or Hydrology n							
SUMMARY OF FINDINGS - Attach site map	showing s	ampling	y point l	ocations, transec	ts, import	ant feature	s, etc.
Hydrophytic Vegetation Present? Yes No	0	le the	e Sampled	Area		51	
Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No	o			id? Yes_	No	S. Salandar	
Wetland Hydrology Present? Yes No	o <u>√</u>	******					
Remarks:							
In ditch							
		32		G .	ž.		
VEGETATION				•			
	Absolute D	Dominant	Indicator	Dominance Test w	orksheet:		
Tree Stratum (Use scientific names.)	% Cover S	Species?	Status	Number of Dominan	it Species	>	
1. N /A				That Are OBL, FAC	W, or FAC: _		(A)
2				Total Number of Do		2	222
3				Species Across All S	Strata: _		(B)
4				Percent of Dominan		100	(A /D)
Total Cover Sapling/Shrub Stratum	•			That Are OBL, FAC	/V, or FAC: _	W (4	(A/B)
1N/A				Prevalence Index v			
2,				Total % Cover of			
3,				OBL species			
4				FACW species			
5,				FAC species			
Total Covers				UPL species			
1. Timens booktiens	40	4 1	FACIAL	Column Totals:			
2. Act our very Volacely &	16	N	FAC				
3. Care microstera	_5		SALLEY.	Prevalence Inc			_
4. Potentila cracilio		Pe/	TAC.	Hydrophytic Veget		ors:	
5. Turns reselis	10	7	FACH	✓ Dominance Tes Prevalence Index			
6. Pou pratinsis	10	N	FAZ.	Morphological A		Provide suppor	fina
7				data in Rema	arks or on a se	parate sheet)	9
8Total Cover:	85			Wetland Non-Va			
Woody Vine Stratum	·——	¥		Problematic Hyd			
1. MA				¹ Indicators of hydric be present.	soil and wetla	nd hydrology r	nust
2							
Total Cover:				Hydrophytic Vegetation	1		
% Bare Ground in Herb Stratum5					Yes V	No	
Remarks:				27			

Sampling Point: 53

_		to the depth i				or confirm	the absence of indicators.)
Depth	Matrix	<u></u> %	Redo Color (moist)	ox Features %	Type ¹	_Loc ²	Texture Remarks
(inches)	Color (moist)		Color (moist)		_ Type _		Shada long
0-3	104122/2				pd 18		
3-6	1047514		marie .				Coape Son + Davel
					9		
	***						The state of the s
¹ Type; C=Co	ncentration, D=Dep	letion, RM=Re	duced Matrix.	² Location:	: PL=Por	e Lining, R	C=Root Channel, M=Matrix.
Hydric Soil I	ndicators: (Applica	able to all LR			ed.)		Indicators for Problematic Hydric Soils ³ :
Histosol		·	Sandy Redox (2 cm Muck (A10)
	ipedon (A2)	-	Stripped Matrix		\		Red Parent Material (TF2) Other (Explain in Remarks)
Black His		-	Loamy Mucky Loamy Gleyed			LIVILRA I)	Other (Explain in Nemarks)
	n Sulfide (A4) I Below Dark Surface	- (Δ11)	Depleted Matri		,		
	rk Surface (A12)	- (ATT)	Redox Dark Su				
A	ucky Mineral (S1)	-	Depleted Dark		7)		³ Indicators of hydrophytic vegetation and
	leyed Matrix (S4)		Redox Depres	sions (F8)			wetland hydrology must be present.
Restrictive L	ayer (if present):						
Type:			-				
Depth (inc	:hes):		=======================================				Hydric Soil Present? Yes No
Remarks:			9				
	* 9						
HYDROLO	ЭΥ		*				
Wetland Hyd	Irology Indicators:						Secondary Indicators (2 or more required)
Primary Indic	ators (any one indica	ator is sufficier	nt)				Water-Stained Leaves (B9) (NW coast)
Surface '	Water (A1)		Water-Stain	ed Leaves	(B9) (exc	ept NW co	oast) Sparsely Vegetated Concave Surface (B8)
A TOTAL TO SERVE A	ter Table (A2)	2	Salt Crust (E	311)			Drainage Patterns (B10)
Saturatio		2	Aquatic Inve	rtebrates (E	313)		Dry-Season Water Table (C2)
Water M		-	Hydrogen S				Saturation Visible on Aerial Imagery (C9)
	t Deposits (B2)	-				ing Roots	(C3) Geomorphic Position (D2)
Drift Dep	osits (B3)		Presence of				Shallow Aquitard (D3)
Algal Ma	t or Crust (B4)	=	Recent Iron				Frost-Heave Hummocks (D4)
Iron Dep	osits (B5)	:=	Stunted or S			(LRR A)	FAC-Neutral Test (D5)
	Soil Cracks (B6)	:=	Other (Expla	ain in Rema	rks)		Raised Ant Mounds (D6) (LRR A)
West Control of the C	n Visible on Aerial Ir	magery (B7)					
Field Observ			JE				
Surface Water			✓ Depth (ir				* g
Water Table	Present? Ye	es No.	Depth (ir	nches):			
Saturation Pr		es No.	Depth (in	nches):	*	_ Wetla	and Hydrology Present? Yes No
(includes cap	illary fringe) orded Data (stream	gauge, monito	oring well, aerial	photos, pre	evious ins	pections), i	if available:
DOOG ING ING	erada cara (ondani	gg-	emi e mail n aimh	4 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -		• estamble Cl	현 1
Remarks:	A	, ,	American St	17 11			
	No Sh	17 182 1 (1)	to the Contract of	(6)			

Project/Site:		City/County	MEA	L. VALLEY Samplin	g Date: 10/07/08
Applicant/Owner:				State: Samplin	g Point:
Investigator(s):		Section, To	wnship, Ra	nge: 7787 1236	SZI CRM
Landform (hillslope, terrace, etc.):		Local relief	(concave,	convex, none): FLAT	Slope (%):
Subregion (LRR):	_ Lat: _ 🗐	JO 53	1 20 /2	VLong: 116° 6′ N	Datum: N / A
Soil Map Unit Name: Donnet Sandy	152 n			NVVI classification:	PEMA
Are climatic / hydrologic conditions on the site typical for this					
Are Vegetation, Soil, or Hydrologys	ignificantly	disturbed?	Are "	'Normal Circumstances" present?	Yes No
Are Vegetation, Soil, or Hydrology n	aturally pro	blematic?		eeded, explain any answers in Rem	
SUMMARY OF FINDINGS - Attach site map	showing	samplin	g point l	ocations, transects, impor	tant features, etc.
Hydric Soil Present? Wetland Hydrology Present? Yes No	0	with		nd? Yes No	-W
Remarks: Stander Commented to	lutzi	Hent	Sho.	one - brother longer	s typ
VEGETATION	2				
Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?		Dominance Test worksheet:	
1. N/A			Otatus	Number of Dominant Species That Are OBL, FACW, or FAC:	/ (A)
2				270	
3				Total Number of Dominant Species Across All Strata:	/(B)
4		-		Percent of Dominant Species	7.0-
Total Cover				That Are OBL, FACW, or FAC:	(A/B)
Sapling/Shrub Stratum 1				Prevalence Index worksheet:	
1				Total % Cover of:	Multiply by:
3.				OBL species x	
4.				FACW species x	
5				FAC species x	
Total Cover		73		FACU species x	4 =
Herb Stratum	y gans	N	El ^a Zh	UPL species x	5=
1. Granhaliva Sp.	7 0	EV.	FAC	Column Totals: (A))(B)
2. Juneus belficus 3. Partilla presis	10	- / N	FALL FAZ	Prevalence Index = B/A =	
4. Rereauch recent		- FV	FAL	Hydrophytic Vegetation Indicat	
5. Vermina obrania	ALCO TO	N	ORL	✓ Dominance Test is >50%	-
6.				Prevalence Index is ≤3.01	
7				Morphological Adaptations ¹ (Provide supporting
8.				data in Remarks or on a s	Same and the same and
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¹Type: C=Coi	ncentration, D=Deple idicators: (Applicat	tion, RM=Re	educed Matrix.	² Location: PL=Pore Li	ining, RC=	Root Channel, M=Ma	trix. oblematic Hydric Soils ³ :
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	ucky Mineral (S1)	1-	_ Depleted Dark				ophytic vegetation and ogy must be present.
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	er Table (A2)	9	Salt Crust (B			Drainage Patt	Vater Table (C2)
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Drift Depo				Reduced Iron (C4)		Shallow Aquita	
✓ Algal Mat		; -		Reduction in Tilled Soils	s (C6)	Frost-Heave H	
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	oil Cracks (B6)	2	Other (Explai	n in Remarks)		Raised Ant Mo	ounds (D6) (LRR A)
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Field Observa		7					п
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APPENDIX C

SITE PHOTOGRAPHS

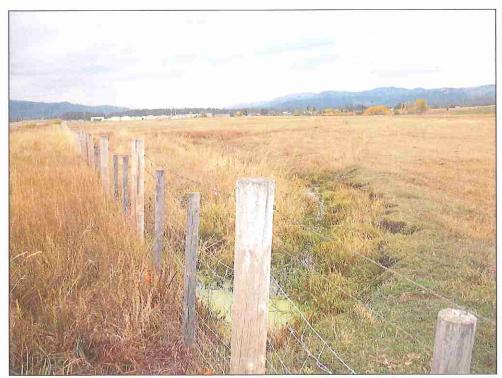


Photo 1: Area 2, Wetland and Irrigation Ditch



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



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

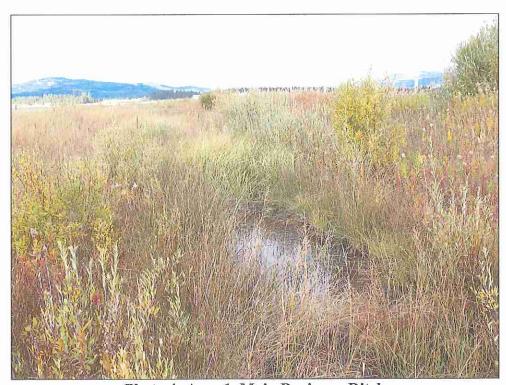


Photo 4: Area 1, Main Drainage Ditch



Photo 5: Area 2, Irrigation Ditch and Wetland

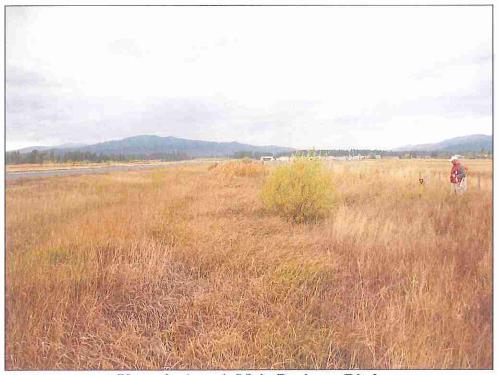


Photo 6: Area 1, Main Drainage Ditch



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

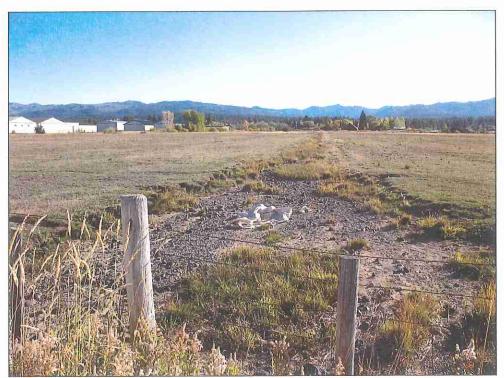


Photo 11: Area 7, Irrigation Ditch

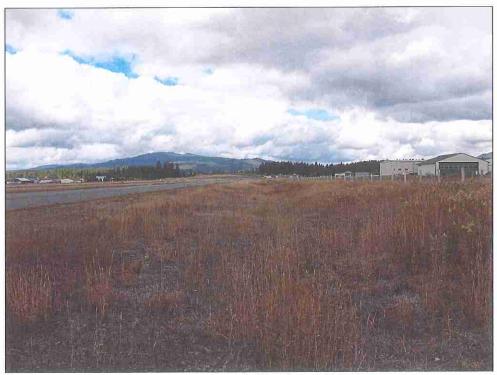


Photo 12: Area 8, Drainage Ditch

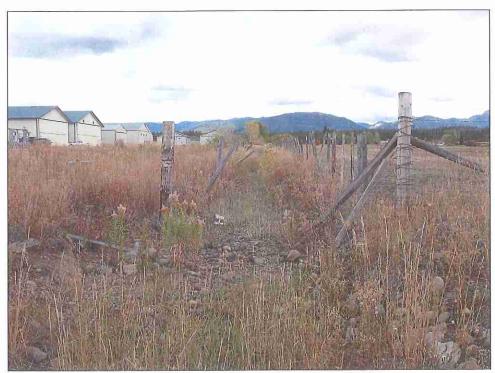


Photo 13: Area 9, Intermittent Stream



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

WHP Project 34256 20



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



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

WHP Project 34256 21



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.
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe 1979. <u>Classification of Wetlands and Deepwater Habitats of the United States</u>. U.S.D.I. Fish and Wildlife Service. FWS/OBS-79/31. 45 pp.
- Environmental Laboratory. 1987. <u>Corps of Engineers Wetlands Delineation Manual</u>. 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.
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- 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.
- Soil Conservation Service. <u>The Soil Survey of Valley County Area, Idaho.</u> 1981. 146 pp plus appendices.
- U.S. Army Corps of Engineers, Engineer Research and Development Center. April 9, 2007. <u>Draft Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast Region.</u> 114 pp.
- U.S. Department of the Interior, Fish and Wildlife Service. <u>National List of Plant Species</u> that Occur in Wetlands: 1988 Oregon and its supplement (1993)
- U.S. Department of the Interior, Fish and Wildlife Service. <u>National Wetland Inventory</u> Wetlands Mapper. Accessed at: http://wetlandsfws.er.usgs.gov/NWI/index.html

WHP Project 34256 23



9755 SW Barnes Rd, Ste 300

Portland, OR 97225

503.626.0455 Fax: 503.526.0775

TRANSMITTAL

To:	Greg Martinez, Project N	/Janager	RE: Wetland Impacts	
Company:	U.S. Army Corps of Engir	neers	From: Phil Quarterman, P	ws .
Phone:	(208) 345-2155		Title: Sr. Wetland Scienti	st
Fax:		4	Phone: (503) 372-3562	
	Boise Regulatory Office, Emerald Street	10095 W.	Fax: (503) 526-0775	
	Boise, ID 83704			
			Project#: 34268	
Date:	3/20/2009		Project Name: McCall Airport Taxi	way Relocation
	·		u u	
For:	C Per Your Request C Other	Your Review/Commer	nt C Your Approval/Signature	← Your Use/Files
We	Are Transmitting:	Herewith	C 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			
he Follow	ing:			
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			



DEPARTMENT OF THE ARMY

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

RECEIVED

APR 2 2 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.

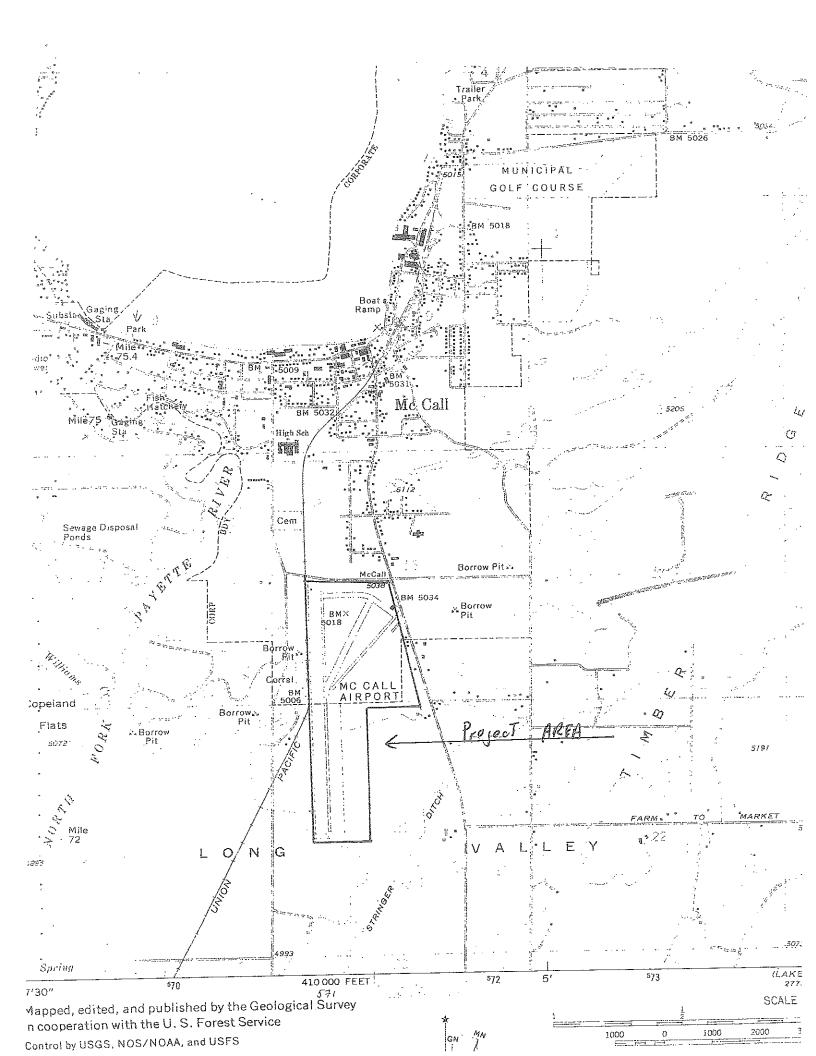
If you have any questions, please contact me at 208-345-2154. A copy of this letter is being sent to: Mr. John Olson, Environmental Protection Agency, 1435 North Orchard, Boise, Idaho 83706; Mr. Phil Quarterman, WH Pacific, 9755 SW Barnes Road, Suite 300, Portland, Oregon 97225.

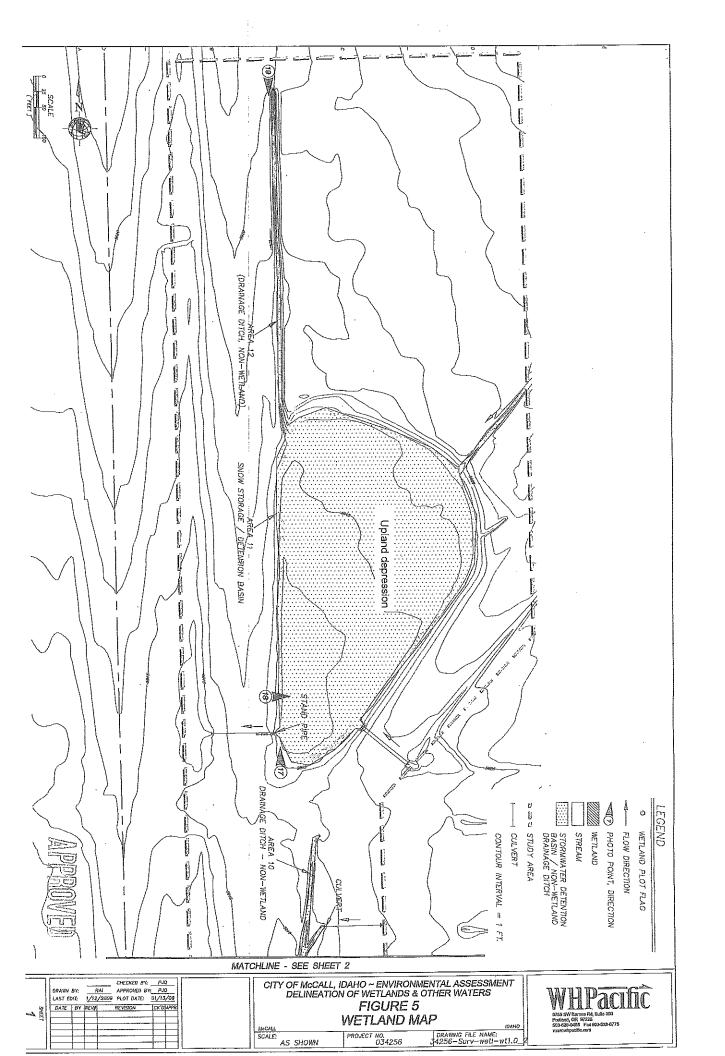
Sincerely,

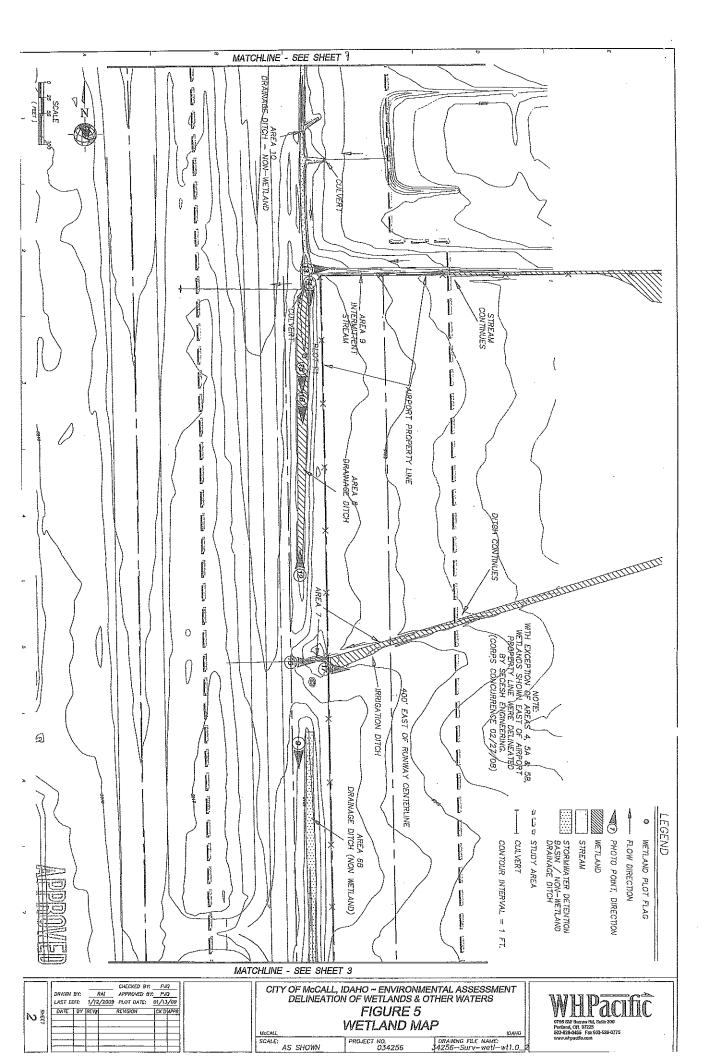
Gregory J. Martinez

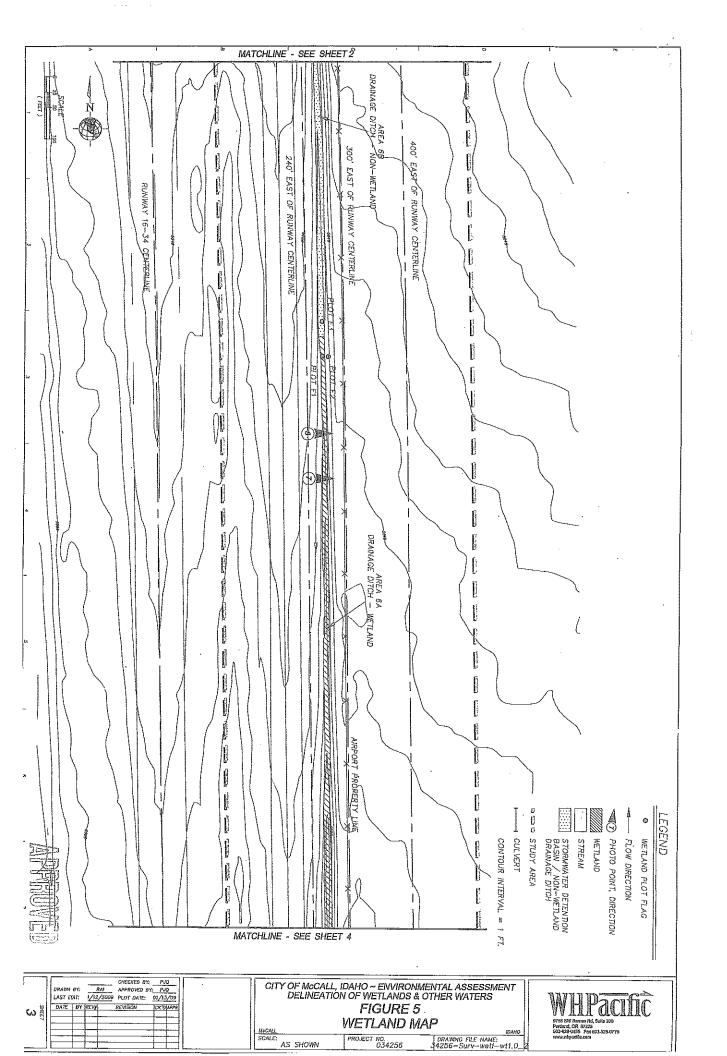
Regulatory Project Manager

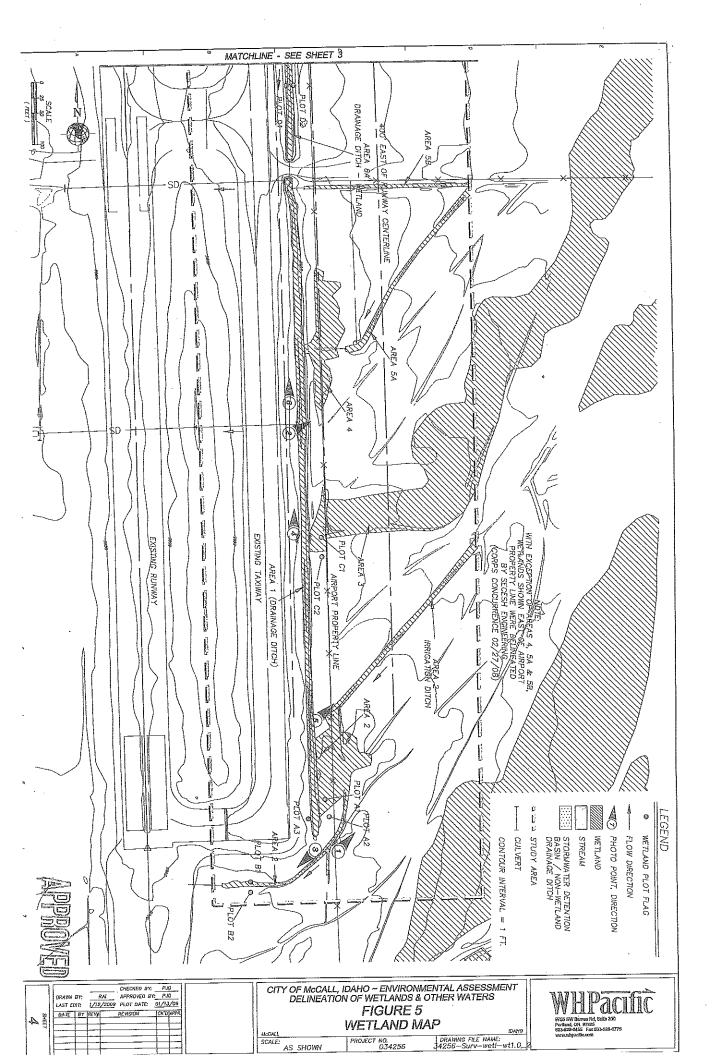
Enclosures















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.

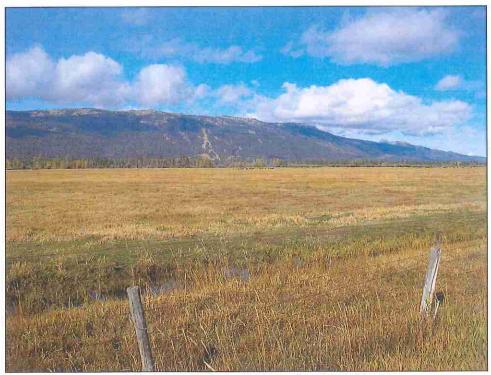
Mr. Fronk attended a meeting between his client and Greg Martinez, Regulatory Project Manager, Boise Corps office the following day. He reported to me that the meeting went well, and that his client plans to proceed to the next stage, which is to prepare a legal instrument setting up the bank and its 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.

<u>Blackhawk Enterprises mitigation site</u>: 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, conversation 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.

<u>Recommendation</u>: 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.

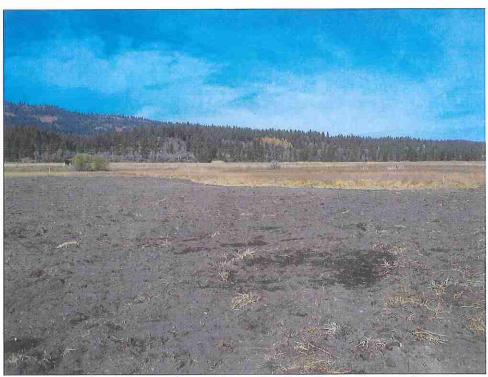
If the bank does not work out in a timely fashion for any reason, we recommend the Blackhawk Enterprises site as a viable back up.



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

