

# Biological Resource Report / Preliminary Biological Assessment

**Taft - West** IM 90-1(227)0

UPN 9487000

Mineral County, Montana November 5, 2021

## **FINAL REPORT**

Prepared for:



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#### 1 Introduction

#### 1.1 **Project Description and Location**

The Montana Department of Transportation (MDT) is proposing to reconstruct Interstate 90 (I-90) to current MDT design standards and replace the existing plant mix bituminous surface with Portland Cement Concrete Pavement (PCCP). The project will also include drainage, traffic, and safety improvements. The project will investigate whether realigning the Lookout Pass Interchange ramps is feasible and will also look at the possibility of installing new wildlife crossings.

The project is located in Mineral County on I-90 from the Idaho border at reference post (RP) 0.0 to the Taft Interchange at RP 5.7. The project is located within the Lolo National Forest. The project area is within Protracted Block 49 of Township 20 North, Range 32 West and Sections 2, 3, 4, 5, 11, and 12 of Township 19 North, Range 32 West, Montana Principal Meridian. The project area is approximately 323 acres encompassing a 200-foot buffer extending beyond either side of the highway centerline. The project area is shown in Figure 1-1.

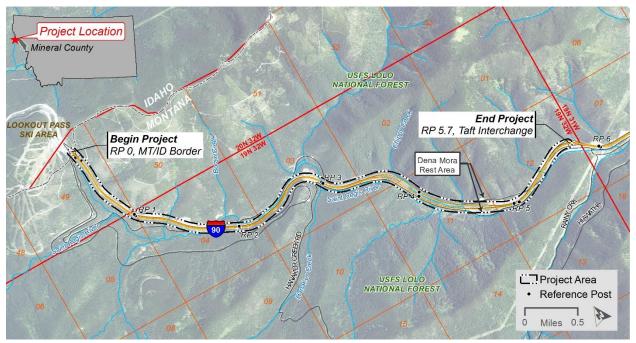


Figure 1-1. Project Area and Vicinity

#### 1.2 **Ecological Setting and General Area Description**

#### 1.2.1 **Ecoregion**

The project area is located predominantly within the Northern Rockies level 3 ecoregion and the Coeur d'Alene Metasedimentary Zone level 4 ecoregion (Woods et al. 2002, USEPA 2012). The Coeur d'Alene Metasedimentary Zone ecoregion physiography is paraphrased by the following excerpt:

"The mountainous, forested Coeur d'Alene Metasedimentary Zone is mantled by thick volcanic ash and underlain by fractured quartzite and argillaceous rock. It is lithologically unlike Ecoregions 15i and 15p. Pacific influence is stronger than to the south and Douglasfir, grand fir, western redcedar, and western hemlock occur. Acid drainage from mine tailings and historic mining practices have left some streams nearly devoid of aquatic life. Smelter emissions have denuded hillslopes. Massive restoration efforts are now underway."

Climate in the vicinity of the project area is characterized by precipitation that averages 37.96 inches annually, with the wettest months occurring in November and December (US Climate Data 2021). Wintertime average low temperatures typically fall well below freezing (average low temperature in January is 24 degrees Fahrenheit), and summertime average temperatures peak in the low 80s.

#### 1.2.2 Land Cover

The Montana Natural Heritage Program (MTNHP) provided a custom Environmental Summary report for the project area and vicinity that included a review of the MTNHP Land Cover framework layer. Land cover types are grouped into general ecological systems that represent groups of biological communities that are found in similar physical environments and are influenced by similar ecological processes. The project area vicinity is predominantly mapped as "Rocky Mountain Mesic Montane Mixed Conifer Forest" (MTNHP 2021a). Additional land cover types located in the project area vicinity include "Rocky Mountain Subalpine Mesic Spruce-Fir Forest and Woodland", "Rocky Mountain Dry-Mesic Montane Mixed Conifer Forest", and "Rocky Mountain Subalpine Dry-Mesic Spruce-Fir Forest and Woodland".

## 1.2.3 Land Use and Land Ownership

Land use in the project area vicinity is predominantly undeveloped National Forest land. Within the immediate project area, transportation land uses include the interstate right-of-way (ROW), as well as some frontage roads and logging roads. The Lookout Pass Ski Area is located at the west end of the project area at the Idaho border, near RP 0.0. The Dena Mora Rest Area is located within the project area on both the eastbound and westbound directions at approximately RP 4.7 (see Figure 1-1). There is an MDT maintenance facility located at RP 5.7 at the east end of the project area. There are no residential or commercial land uses or structures in the project area.

The project is located within the Lolo National Forest and land ownership adjacent to MDT ROW is under the jurisdiction of the U.S. Forest Service (USFS). No private land exists within or adjacent to the project area. Interstate ROW is owned by MDT and no new ROW is anticipated to construct the project.

# 2 Terrestrial Resources

# 2.1 General Habitat and Vegetation Communities

## 2.1.1 Methods

Information reported within this section was obtained from a combination of literature and database searches and on-site field investigation. HDR environmental staff conducted a field investigation on June 19-20, 2021. General vegetative cover in the project area was documented during the site visit. Representative project area photos are provided in Appendix A. In general, vegetation nomenclature within this report follows Lesica (2012); however, vegetation nomenclature identified in the wetland

data forms (Appendix B) may differ slightly because the built-in drop-down list utilizes the National Wetland Plant List (Lichvar et al. 2016).

#### 2.1.2 Species Presence and Distribution

Typical roadside vegetation consisted of several common grasses, forbs, and weeds. Grasses documented in the project area typically included a mix of meadow timothy (*Phleum pratense*), orchard grass (Dactylis glomerata), and western wheatgrass (Elymus smithii). Common forbs observed included yellow sweet-clover (Melilotus officinalis), common yarrow (Achillea millefolium), and Virginia strawberry (Fragaria virginiana). Common weeds observed included spotted knapweed (Centaurea stoebe), Canada thistle (Cirsium arvense), leafy spurge (Euphorbia virgata), oxeye daisy (Leucanthemum vulgare), and common tansy (Tanacetum vulgare) (note that noxious weeds are discussed in Section 2.2). Shrubs noted in the project area include common snowberry (Symphoricarpos albus), Douglas's hawthorn (Crataegus douglasii), red-osier dogwood (Cornus sericea), willow (Salix spp.), alderleaf buckthorn (Rhamnus alnifolia), Saskatoon serviceberry (Amelanchier alnifolia), common huckleberry (Vaccinium membranaceum), and speckled alder (Alnus incana). Forested habitat in the project area is predominantly lodgepole pine (Pinus contorta) dominated stands but also includes mixed stands of western larch (Larix occidentalis), Engelmann spruce (Picea engelmannii), western white pine (Pinus monticola), and Douglas-fir (Pseudotsuga menziesii). Wetland plant species are discussed in greater detail in Section 3.3.

#### 2.1.3 Potential Impacts

Impact on project area vegetation is anticipated to be minor and primarily occur immediately adjacent to the roadway where grading within the shoulders will occur to complete drainage improvements. Work is anticipated to occur entirely within the existing ROW and impacts would be limited primarily to grasses, forbs, and weeds growing within the project ROW. Shrub and tree removal is anticipated to be relatively minor. Temporary impacts to vegetation are likely to occur during construction due to the moving and staging of equipment and materials within the project limits.

#### 2.1.4 Avoidance and Minimization Recommendations

The following measures are proposed to minimize project impacts on general vegetation:

- Temporary clearing outside the construction limits but within the ROW of the project should be minimized and restored as soon as practicable following construction.
- Tree and large shrub removal should be minimized to the greatest extent practicable.
- Riparian areas affected during construction should be re-vegetated with appropriate species.

#### 2.2 Noxious Weeds/Regulated Plants

Executive Order (EO) 13112 (February 3, 1999) was established to prevent the introduction of invasive species and to control and minimize the economic, ecological, and human health impacts caused by invasive species. As a partially federally funded action, the proposed project is subject to the provisions of EO 13112.

#### 2.2.1 Methods

Information reported within this section was obtained from a combination of literature and database searches and on-site field investigation. The following documents and websites pertaining to noxious weeds were reviewed:

- Mineral County Weed District Noxious Weeds
- Montana Department of Agriculture Noxious Weed List

HDR staff qualitatively documented noxious weed occurrence within the project area during the June 19-20, 2021, site visit.

## 2.2.2 Species Presence and Distribution

The Mineral County Weed District website provides a list of noxious weeds categorized by their priority status. The county weed list is lengthy and includes many of the noxious weeds listed on the state designated noxious weed list. Common weed species observed within the project area included spotted knapweed, Canada thistle, leafy spurge, oxeye daisy, and common tansy. Of these species, Mineral County identifies Canada thistle, leafy spurge, spotted knapweed, oxeye daisy, and common tansy as Priority 2B, which are defined as weeds that are abundant and widespread in many counties; management criteria will require eradication or containment where less abundant; and prevention, education and continued management are priorities for these weeds in Mineral County. Each of the weed species identified in the corridor are common along the interstate on disturbed cut and fill slopes, with spotted knapweed being the most prominent species.

## 2.2.3 Avoidance and Minimization Recommendations

The following conservation measures are proposed to prevent and to minimize spread of noxious weeds.

- In accordance with 7-22-2152 MCA, MDT will re-establish a permanent desirable vegetation community along areas temporarily disturbed by construction.
- All construction equipment and vehicles should be cleaned prior to their transport to the project site.

# 2.3 General Wildlife Species

#### 2.3.1 Methods

Information reported within this section was obtained from a combination of database searches and on-site field investigation. Databases maintained by the MTNHP were searched to identify general wildlife species likely to occur in the project area vicinity. The following database was reviewed:

• MTNHP Natural Heritage Map Viewer, Generalized Observations (MTNHP 2021b)

MTNHP database results are followed by observations and sites notes from the on-site field investigation.



#### 2.3.2 **Mammals**

Species observed/documented, general abundance, distribution, and habitat requirements

According to the MTNHP Generalized Observations database (MTNHP 2021b) the following mammal species are likely to be present in the project area vicinity: American black bear (Ursus americanus), mountain lion (Puma concolor), and North American porcupine (Erethizon dorsatum). Other species common in the project corridor include white-tailed deer (Odocoileus virginianus), mule deer (Odocoileus hemionus), elk (cervus canadensis), moose (Alces alces), coyote (Canis latrans), red squirrel (Tamiasciurus hudsonicus), and beaver (Castor canadensis). Deer tracks and scat were observed along the interstate roadway in numerous locations during the field survey, including substantial deer sign in the forested median between RP 3.7 to 4.7. Elk tracks were observed near RP 1.0 and beaver activity was observed where a dam had been constructed on the St. Regis River near RP 2.4 (see Appendix A photos). Generally speaking, the relatively intact forested habitat on both sides of the interstate is suitable habitat for the aforementioned species.

The cleared interstate corridor, which at times includes a frontage road running parallel to the interstate, ranges from approximately 150 feet wide up to 400 feet wide and at a minimum includes four lanes of traffic. From RP 0.0 to 3.4, the east and west bound traveling lanes are undivided and include standard concrete barrier and at times tall jersey barrier separating the directions of travel. Jersey barrier is again utilized to separate traffic from RP 4.8 to 5.7. The heavily traveled interstate roadway (approximate ADT of 7,800) combined with the intermittent concrete barriers provides a formidable challenge to mammals attempting to make north/south movements across I-90. The jersey barriers, especially the taller variety, are especially challenging for young of the year mammals that are not large enough to jump or climb over the barriers. Additional discussion on highway/wildlife interactions, potential impacts, and wildlife accommodations are provided in Section 2.4.

#### Potential Impacts

Due to the nature and scope of the proposed project, impacts on individual mammals is anticipated to be minor and without long-term effects to local populations. New disturbance from the project is anticipated to be minor as is removal of vegetation that may affect available suitable habitat. Construction of the project may result in direct mortality of individual animals; however, ground disturbance would be limited to previously disturbed areas immediately adjacent to the existing highway and impacts to individual animals from grading is anticipated to be negligible.

An increase in noise levels during construction may temporarily disrupt mammals in the vicinity of the proposed project. Noise effects would be temporary and localized and would occur only during daylight working hours. Such disturbance would be temporary and alternative habitat similar to that which would be affected is abundant in the general area.

Habitat fragmentation can be defined as the separation of previously contiguous blocks of habitat into one or more disconnected pieces (Waller and Servheen 1999). Habitat fragmentation can result in impediments to wildlife dispersal and corresponding genetic exchange among populations. The existing interstate highway, in association with median concrete barriers, has long been a contributor to habitat fragmentation in the project area. The existing infrastructure is intimidating to cross for more secretive species and a physical challenge for all species having to cross four traveling lanes and negotiate median concrete barriers. Implementation of the proposed project will not likely add to

the habitat fragmentation in the project area because roadway width, clear zones, and fencing will not be increased.

Traffic volumes are likely to increase over time, increasing the chance for wildlife-vehicle conflicts (WVCs). The average daily traffic (ADT) count along this segment of I-90 was 7,520 vehicles per day in 2017. The ADT is projected to increase to 9,890 by the design year 2040 regardless of whether the project is implemented. The Interagency Lynx Biology Team (ILBT 2000) cites highway/carnivore research in Canada that suggests highway traffic volumes of 2,000-3,000 vehicles per day are problematic with respect to wildlife habitat fragmentation and mortality. Traffic volumes exceeding 4,000 vehicles per day may result in serious habitat fragmentation and mortality impacts. By these metrics, traffic volumes are already at a level that are twice that which is thought to cause significant habitat fragmentation. WVCs, wildlife accommodation needs, and potential strategies for decreasing the level of fragmentation caused by I-90 are discussed in greater detail in Section 2.4.

#### Avoidance and Minimization Recommendations

The following conservation measures are proposed to minimize project impacts on mammals and habitat. Addition measures are presented in Section 2.4.

• It is recommended that wildlife friendly ROW fence be utilized where fencing is proposed and those areas not currently fenced be left unfenced following construction.

### 2.3.3 Birds

Species observed/documented, general abundance, distribution, and habitat requirements

The MTNHP Generalized Observations database documents dozens of bird species in the vicinity of the project area dating back to as early as 1994. For the purposes of this report, an exhaustive list of these species is not presented; however, species documented multiple times (n > 10) over the past 10 years within the project area vicinity include: American Robin (*Turdus migratorius*), Chipping Sparrow (*Spizella passerina*), Dark-eyed Junco (*Junco hyemalis*), Golden-crowned Kinglet (*Regulus satrapa*), MacGillivray's Warbler (*Geothlypis tolmiei*), Olive-sided Flycatcher (*Contopus cooperi*), Orange-crowned Warbler (*Leiothlypis celata*), Pacific Wren (*Troglodytes pacificus*), Pine Siskin (*Spinus pinus*), Ruby-crowned Kinglet (*Regulus calendula*), Swainson's Thrush (*Catharus ustulatus*), Townsend's Warbler (*Setophaga townsendi*), Warbling Vireo (*Vireo gilvus*), White-crowned Sparrow (*Zonotrichia leucophrys*), Wilson's Warbler (*Cardellina pusilla*), and Yellow-rumped Warbler (*Setophaga coronata*). Species observed during the field surveys include the American Dipper (*Cinclus mexicanus*), Black-capped Chickadee (*Poecile atricapillus*), Common Raven (*Corvus corax*), and American Robin.

#### Potential Impacts

The proposed project is not anticipated to result in long-term negative impacts on any bird populations. Minimal impact on vegetation that may provide nesting, perching, and foraging habitat is expected to occur. Special provisions will be included as conservation measures to minimize impact on migratory birds by ensuring that tree and shrub removal occurs outside of the nesting period. Construction-related noise may temporarily disrupt birds in the vicinity of the project during construction activity.

#### Avoidance and Minimization Recommendations

The following conservation measures are proposed to minimize project impacts on bird species and habitat.

- Standard Specification 208.03.4(A)(2) includes the following construction requirements:
  - Perform required cutting of trees or shrubs between August 16 and April 15 and when no active nests are present;
  - Remove only those trees and shrubs in direct conflict with the permanent construction limits; and
  - Where possible, do not remove, but trim trees and shrubs as necessary for equipment access and construction activities.

## 2.3.4 Reptiles and Amphibians

Species observed/documented, general abundance, distribution, and habitat requirements

Reptiles documented in the project vicinity by MTNHP include common gartersnake (*Thamnophis sirtalis*) and terrestrial gartersnake (*Thamnophis elegans*) (MTNHP 2021b). Amphibians documented by the MTNHP include the Columbia spotted frog (*Rana luteiventris*) and Rocky Mountain tailed frog (*Ascaphus montanus*) (MTNHP 2021b). No amphibians were observed during the field investigation.

## Potential Impacts

The proposed project is not anticipated to adversely affect any reptile or amphibian populations. The proposed project's potential effects on suitable habitat for reptiles and amphibians is anticipated to be minor. Potential impacts to wetlands and riparian areas are anticipated to be minor and negligible and therefore potential impacts on amphibian habitat is expected to be negligible.

#### Avoidance and Minimization Recommendations

No additional avoidance and minimization measures are recommended at this time.

# 2.4 Wildlife Accommodation Needs and Opportunities

# 2.4.1 Needs Analysis

Interstate 90 from Missoula to Lookout Pass at the Idaho state line has long been considered an important wildlife linkage zone for several species including grizzly bears and lynx. Servheen et al. conducted spatial analyses of habitat fragmentation within the I-90 corridor between St. Regis and Lookout Pass, which is an optimal corridor due to minimal development and vast federal land ownership, and identified the general Taft-West project area as one of three important grizzly bear linkage zones within the corridor (Servheen 2001). Further, the Northwestern Land Office of the Montana Department of Natural Resources and Conservation (DNRC) identifies this same stretch of I-90 as a wildlife linkage zone in their 2010 Habitat Conservation Plan Final EIS (DNRC 2010). To better understand wildlife movements along the I-90 corridor and identify linkage zones, the USFWS used GPS radio collar tracking technology to track black bears captured near the interstate (Kasworm et al. 2017). Results from 2016 indicate that several black bears were documented to have crossed I-90 in the Taft-West project area (Kasworm et al. 2017). The expected and

documented use of the project area as a wildlife linkage area was also brought to MDT's attention recently through a state legislator who encouraged MDT to look for ways to reduce animal/vehicle collisions during design of the Taft-West project. One suggestion through this correspondence, which is discussed in greater detail below, is to utilize existing local access bridges as wildlife crossings.

The MDT animal carcass GIS database was reviewed for the 10-year period of 2010 to 2019 to identify any trends related to WVCs. Figure 2-1 shows the 88 WVCs recorded within the project area over the past 10 years. The WVCs include 61 white-tailed deer, 13 mule deer, five wolves, one moose, two "other" (one beaver, one porcupine), and one unknown. As seen in Figure 2-1, a cluster of WVCs is documented between RP 3.4 to 4.8, which is comprised of 45 carcasses over the 10-year period. This stretch of divided interstate includes a vegetated median and no median concrete barriers. Montana Highway Patrol records for the five years between 2012 and 2016 showed 104 total crashes within project limits but WVCs were not specifically called out in the safety analysis other than to point out a concentration of WVCs in the vicinity of RP 4.0 where the interstate is divided. During the July 2021 field investigation, a total of three deer carcasses were observed, one at RP 3.5 and two between RP 4.3 and 4.4, and a single elk carcass was observed at RP 4.75.

The MDT carcass data is not considered all inclusive, as many animals struck on the roadway are thought to leave the ROW before dying in the surrounding forest or are picked up by other entities. The data does however show that over half of all records in the database over the last 10 years are from the 1.4-mile divided highway segment, which correlates well with MDT's traffic analysis. The data may suggest that animals have adapted to the concrete barriers and are choosing to cross the interstate more frequently in the divided segment, which provides adequate cover in the forested median and does not include concrete barriers to cross. Additionally, and as illustrated in Figure 2.1, there are two large interstate bridges over local access roads near RP 1.9 and 5.2. Both bridges are in undivided segments of the interstate and both were documented to receive use by local wildlife to cross under the interstate. Game trails and deer tracks were observed under both bridges during the field survey. Both bridges are likely serving to help reduce the overall fragmentation effect of the interstate in these road segments.

During the field survey, no wildlife crossing signs were observed that would serve to warn the traveling public of the risk of encountering wildlife on the roadway. Considering the number of downed or damaged roadway signs found in the roadside ditches during the field survey, it is possible that wildlife crossings signs have been used in the corridor but are no longer standing due to the harsh weather conditions on the pass.

The level of WVCs in the project areas is expected to remain relatively constant with annual fluctuations resulting from variable wildlife population levels and other natural and anthropogenic causes.



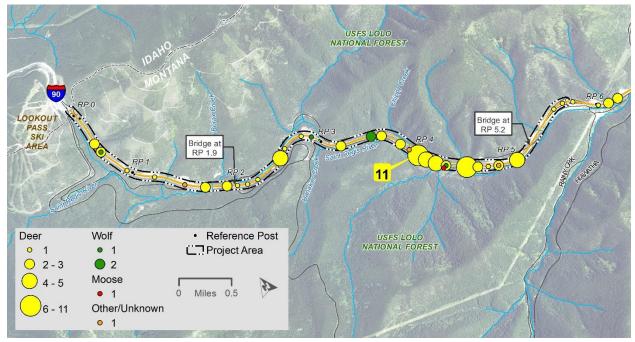


Figure 2-1. MDT Carcass Removal Data by Animal Type for 10-year Period, 2010 - 2019

#### 2.4.2 General Recommendations

The scope of the proposed project is somewhat limited and does not include full reconstruction of the roadway, or the replacement of bridges or culverts carrying the St. Regis River under the interstate. In order to make the roadway more permeable to wildlife and to reduce the number of WVCs, there are a number of wildlife accommodations that could be implemented with the current project and in the future as funding allows. Opportunities within the scope of the current project include the following accommodations:

- Construct wildlife fencing for an appropriate distance on both sides of the existing bridges at RP 1.9 and 5.2 to guide wildlife to these existing under-crossings.
- Look at alternative methods to concrete barriers, especially the taller barriers in the undivided roadway segments. Taller barriers are difficult for wildlife to negotiate.
- To accommodate smaller wildlife, upsize mainline culverts from 24-inch to 36-inch, where practicable, to allow for smaller wildlife to pass under the roadway.
- Install and upgrade wildlife crossing signs, as appropriate, especially in the vicinity of the divided highway segment (RP 3.4 to 4.8). Permanent flashing signs and/or variable message signs (VMS) could be used to warn motorists of the potential danger.

Accommodations that might be beyond the scope of the current project but that could serve to significantly reduce WVCs include:

- Construct bridges (remove existing culverts) at one or both of the St. Regis River crossings near RPs 1.75 and 3.0. Existing culverts do not likely serve to pass wildlife under I-90.
- Construct a wildlife overpass and associated fencing in the vicinity of RP 4.0. Many collisions appear to be occurring in this area of divided highway and due to grade restrictions at this location, under-crossings do not appear feasible.

A Wildlife Accommodations Recommendations Memo (WARM) will be prepared for this project to fully analyze the opportunities identified above as well as other opportunities that may be identified as the project progresses. Accommodations presented in the WARM will be reviewed by the MDT design team to determine the feasibility of each and to determine which will move forward into design.

# 3 Aquatic Resources

# 3.1 Waterways

#### 3.1.1 Methods

Information reported within this section was obtained from a combination of literature and database searches and on-site field investigation. Existing documentation reviewed for this section includes the following:

- U.S. Geological Survey National Hydrography Dataset
- Montana Department of Environmental Quality, Clean Water Act Information Center

## 3.1.2 Site Description

The St. Regis River is the most prominent surface water within the project area and generally flows southeasterly direction for nearly 39 miles before entering the Clark Fork River at St. Regis, MT. The St. Regis River originates at the St. Regis Lakes approximately 3 miles southwest of Lookout Pass and the St. Regis watershed encompasses 365 square miles of mostly federally owned land (DEQ 2008). The St. Regis River parallels I-90 throughout most of the project's 5.7-mile length and enters the project area and crosses I-90 from the south to the north side of the highway at approximately RP 1.75 through a single 108" corrugated metal pipe (CMP) culvert. The river parallels I-90 from approximately RP 2.0 to 2.7, flows outside the project area, then re-enters the project area and flows underneath I-90 at approximately RP 3.0 through two 180" CMPs and remains on the south side of I-90, intermittently passing in/out of the project area, and periodically is located directly adjacent to the highway embankment slope.

Other named creeks that pass through the project area include Chippy Creek and Mephisto Creek. Chippy Creek enters the project area from the north at approximately RP 3.9 and flows within the center median to approximately RP 4.5, then flows south under the eastbound lane and into the St. Regis River. The open channel portions of Chippy Creek were delineated as shown in Appendix B and includes fringing wetlands. Mephisto Creek flows from the north and under I-90 at approximately RP 5.35; no open channels of this creek were identified or delineated during the field investigation and this creek is likely confined to a culvert within the project limits.

Several other named creeks (i.e., Borax, Haun, Hanaker, Brimstone, Denna Mora, and Hilda) are tributaries to the St. Regis River that approach, but do not enter the project area. Numerous additional unnamed creeks and drainages were identified during the field investigation as shown by the ordinary high water mark (OHWM) delineation in the Appendix C maps.



#### 3.1.3 Total Maximum Daily Load Listing 303(d)

The St. Regis River (assessment unit ID MT76M003\_010) is listed as impaired by the Montana Department of Environmental Quality (DEQ) State's 303(d) list (DEQ 2021). Impairment information is provided in Table 3-1. The St. Regis Watershed Total Maximum Daily Loads and Framework Water Quality Restoration Assessment (DEQ 2008) was completed in September 2008 to establish total maximum daily loads (TMDLs) that address sediment and temperature and to provide an adaptive management strategy and water quality plan for the watershed. According to the 2008 DEQ report, MDT has a goal to reduce road sand and cut/fill sediment sources by ten percent along I-90 within the assessment area and explore alternatives for stabilizing key cut/fill slopes and capturing sediment (DEQ 2008).

Table 3-1. Impairment Information for St. Regis River

Probable Cause	Probable Sources	Associated Uses	TMDL Completed			
Alteration in stream-side or littoral vegetative covers	Highways, Roads, Bridges, Infrastructure (new construction), Highway-Road-Bridge Runoff (Nonconstruction Related), Loss of Riparian Habitat, Channelization, Streambank Modifications-destabilization	Aquatic Life	N/A			
Flow Regime Modification	Channelization, Highways, Roads, Bridges, Infrastructure (New Construction)	Aquatic Life	N/A			
Sedimentation-Siltation	Loss of Riparian Habitat, Highways, Roads, Bridges, Infrastructure (new construction), Channelization, Streambank Modifications-destabilization	Aquatic Life	Yes			
Temperature	Loss of Riparian Habitat	Aquatic Life	Yes			
Source: DEQ 2021						

#### 3.1.4 **Potential Impacts**

Preliminary design of the project is not yet completed and, therefore, the extent of potential impact on surface water resources is not currently known. In general, the proposed project is limited to reconstruction of the road surface and widening is not anticipated. Preliminary hydraulic recommendations include replacing or rehabilitating all cross-drain culverts throughout the length of the project. Currently, the two St. Regis River culvert crossings are recommended to be left as-is or rehabilitated and not replaced. Replacing all culverts is not practicable, however, due to many of them being within a deep fill section of the roadway, which can reach up to 60-feet deep in some locations, thus requiring excessive excavation work. In general, the project will be replacing all culverts that are approximately less than 15-feet deep, and, where deep fill situations exist, the culverts would be rehabilitated or abandoned and replaced. All existing 24-inch culverts to be replaced would be upsized to 30-inch. Existing 30- and 36-inch culverts to be replaced would be replaced with the same diameter culverts. Existing 48- and 54-inch culverts would be rehabilitated in place. Because there is no widening occurring with the project, none of the culvert lengths would be increased an appreciable amount.

Many of the existing culverts are cross drains that do not carry a surface water resource and were dry during the field investigations. Culvert improvements at these locations would have no direct impact on surface waters but could result in down gradient effects due to sedimentation. Culvert

replacement or rehabilitation of the perennial streams as identified by the OHWM delineations (see Appendix C) may require minor impacts and grading within the stream.

Options for rehabilitating the two St. Regis River culverts are still being evaluated to determine cost, environmental impacts, and effects to conveyance but may include slip lining, invert paving, or a combination. No permanent impact to the St. Regis River is anticipated; however, temporary impacts from in-stream disturbances at the inlets/outlets may occur depending on the type of rehabilitation and contractor means and methods.

The delineated OHWM will be included in the final design plans, and, once final design is complete and construction limits established, impacts on aquatic resources would be quantified and described in greater detail in the Aquatic Findings (AFR) Report and the Section 404 permit application.

Winter maintenance and application of sanding material has been an ongoing concern that is exacerbated by the proximity of the St. Regis River to the highway. The harsh climatic conditions require frequent application of sanding material to improve highway safety. Winter plowing activities can inadvertently cast snow containing sediments directly into the river or onto its banks. There is also substantial evidence of erosion and sanding material collected on shoulders and in ditches and culverts throughout the corridor (see Appendix A photos). The use of sanding material will continue to be a potential source of pollutants for project area aquatic resources.

### 3.1.5 Avoidance and Minimization Recommendations

Section 208.03.1 (Water Pollution Control) and Section 208.03.2 (Aquatic Resource Protection) of the current *MDT Standard and Supplemental Specifications for Road and Bridge Construction* specify the processes with which the contractor must comply to prevent or minimize pollution and control impacts on aquatic resources.

Water quality impacts would be substantially avoided and minimized by the use of standard best management practices (BMPs) that include erosion and sediment control(s) to minimize temporary impacts on adjacent properties and abate pollution of surface and ground water resources. Standard BMPs (e.g., silt fence, compost sock) would be installed and maintained during construction in accordance with the Montana Pollutant Discharge Elimination System (MPDES) General Permit to prevent erosion and sediment transport in the event of a runoff event. It is recommended that compost socks (with biodegradable netting) be installed near streams and be kept in place after construction and allowed to biodegrade to maximize the duration provided by this temporary sediment control measure. The contractor would be responsible for conducting routine site monitoring to ensure all pollution control measures are installed, maintained, and functioning correctly.

The proposed design will implement permanent erosion and sediment controls (PESC) where practicable. Given the harsh climatic conditions and high sediment loads both occurring naturally from erosion and from application of road sand, PESC measures would provide the greatest benefit in long-term sediment load reductions. PESC features for the project have not yet been identified and will be recommended and further developed as design progresses. Anticipated potential PESC features include seeding of disturbed areas, embankment protectors/culvert spillways or drainage chutes for steep fill slopes, lined/stabilized ditches and check dams, ditch blocks to direct flows into cross drainage culverts, and culvert outlet protection (and possibly velocity dissipation devices). To help mitigate sanding material/sediment loading into adjacent aquatic resources (e.g., St. Regis River), sediment basins will be considered where practicable based on roadside topography, in



addition to the incorporation and use of flatter natural vegetated areas and wetlands adjacent to the project.

## 3.1.6 Permitting Required

As previously noted, it is anticipated that existing culverts will be replaced with new culverts that are the same length or rehabilitated, some of which convey a perennial stream as identified by the OHWM delineations (see Appendix C maps). Due to this in-kind replacement, no permanent impacts to perennial streams are anticipated and water quality permits authorizing permanent features would not be necessary. This determination is subject to change as the design progresses and final hydraulic recommendations are made. Culvert replacement at these locations, including the St. Regis River culverts at RP 1.75 and RP 3.0, is likely to require minor grading and temporary impacts within the stream, and thus would require water quality permits obtained by the construction contractor to conduct this work. Stream mitigation requirements are not anticipated for the project.

A Stream Protection Act (SPA) 124 Notification through FWP is anticipated to be required for the project based on proposed improvements to the culverts carrying the St. Regis River and Chippy Creek. Additional permits, such as a 318 authorization for short-term water quality standard for turbidity related to construction activity, would be a contractor requirement to carry out any in-stream work.

# 3.2 General Aquatic Species

#### 3.2.1 Methods

Information reported within this section was obtained from database searches. Existing documentation reviewed for this section includes the following:

Montana Fish, Wildlife and Parks Fisheries Information System (FWP 2021)

## 3.2.2 Species documented in project area vicinity

The Montana Fish, Wildlife and Parks (FWP) MFISH database was reviewed to identify the fish species documented within the near the project area. The St. Regis River throughout the project area is documented to contain brook trout (*Salvelinus fontinalis*), westslope cutthroat trout (*Salvelinus confluentus*), longnose sucker (*Catostomus catostomus*), largescale sucker (*Catostomus macrocheilus*), and mottled sculpin (*Cottus bairdii*) (FWP 2021). Other fish bearing streams in the project vicinity include Copper Gulch, Borax Creek, Hannaker Creek, Brimstone Creek, and Dena Mora Creek, all of which contain westslope cutthroat trout. Hannaker Creek, Brimstone Creek, and Dena Mora Creek are also documented to contain brook trout. Chippy Creek and Mephisto Creek, both of which flow through the project area, are not documented to contain fish per the MFISH database. A BRR was completed by MDT on January 31, 2019 that notes MDT Environmental Resources is consulting with the FWP area fisheries biologist regarding potential effects of the project and mitigation strategies for genetically pure westslope cutthroat trout that inhabit the upper St. Regis River and its tributaries.

# 3.2.3 Potential Impacts

There is potential for temporary impacts to water quality during the culvert replacements occurring within the perennial streams identified in the project area. As noted in Section 3.1.5 above, standard

specifications included in the contract documents will ensure the contractor implements BMPs intended to reduce or eliminate temporary impacts from erosion and sedimentation. Similarly, PESC features will be implemented in the proposed design to the extent practicable. All in-stream work will be conducted in compliance with state and federal water quality regulations applicable for the project.

## 3.3 Wetlands

## 3.3.1 Methods

HDR staff conducted a field investigation in the project area on July 19 and 20, 2021, using the Routine Method as described in the *U.S. Army Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory 1987), as updated by the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast* (USACE 2010). To be considered a wetland, an area must have hydrophytic vegetation (vegetation adapted to wetland conditions), hydric soils, and wetland hydrology. Areas within the project area were investigated for wetland indicators.

Vegetation nomenclature within this section follows Lesica (2012); however, vegetation nomenclature identified in the wetland data forms (Appendix B) may differ slightly because the built-in drop-down list utilizes the National Wetland Plant List (Lichvar et al. 2016).

## 3.3.2 Description of Wetlands

Thirteen (13) distinct wetlands with a cumulative area of 5.76 acres were delineated within the project area. Representative wetland photographs are presented in Appendix A. Refer to Appendix B for the completed USACE Wetland Determination Forms and the MDT Montana Wetland Assessment Method (MWAM) forms. Appendix C shows the delineated wetlands and USACE data form collection sites within the project area. Table 3-1 provides a summary of the wetland characteristics for each delineated wetland, including information on location, Hydrogeomorphic (HGM) class, Cowardin class, wetland area within the project area, hydrology, and a brief narrative description.

The MDT MWAM was used to determine the functional value and overall category rating for project area wetlands. The MWAM assesses individual wetlands and assigns ratings (low, moderate, high, or exceptional) and scores (0.1 to 1.0) to each of the 12 functions and values as identified in Table 3-2. Functional points are totaled and calculated as a percentage of total possible points for each wetland. Each wetland is then ranked according to the percentage and other criteria as either a Category I (highest quality), Category II, Category III, or Category IV (lowest quality).

**Table 3-2. Project Area Wetland Characteristics** 

Wetland Number (WL)	Data Plot <sup>a</sup>	HGM⁵	Cowardin Code <sup>c</sup>	MDT Wetland Category <sup>d</sup>	Wetland Size <sup>e</sup> (acre)	Primary Source and Destination of Wetland Hydrology	Narrative Description
Wetland 1	WL-01	Riverine	PEM	III	0.01	Source: Perennial surface flow in narrow unnamed channel.  Destination: Water flows into a tributary of the St. Regis River, which feeds the Clark Fork River.	Narrow emergent wetland fringe along narrow channel.  Dominant vegetation: horsetail, meadow foxtail, sedge, rush.
Wetland 2	WL-02	Riverine	PEM/PSS	III	0.01	<b>Source</b> : Wetland fringe along banks of St. Regis River. Flowing water at time of survey. <b>Destination</b> : St. Regis River is a tributary of the Clark Fork River.	Narrow wetland fringe along banks of the St. Regis River <b>Dominant vegetation</b> : Drummond willow, water sedge, arrow-leaf groundsel.
Wetland 3	WL-03	Riverine	PEM/PSS	III	2.10	Source: Elevated groundwater and spring activity. Water flowing across interstate to the north.  Destination: Water flows directly into the St. Regis River north of I-90.	Low marsh area fed by groundwater and seasonal runoff. <b>Dominant vegetation</b> : Drummond willow, blue-joint reedgrass, bulrush.
Wetland 4	WL-04	Riverine	PEM	III	0.01	Source: Perennial surface flow in narrow unnamed channel in roadside ditch.  Destination: Water flows directly into the St. Regis River floodplain. Connected to WL-05.	Perennial surface flow in narrow unnamed channel in roadside ditch. <b>Dominant vegetation</b> : blue-joint reedgrass, bulrush, horsetail.
Wetland 5	WL-05	Riverine	PEM/PSS/ PFO	III	1.91	<b>Source</b> : Wetland receives surface water from the north and has elevated groundwater associated with nearby St. Regis River. <b>Destination</b> : Wetland is connected to the St. Regis River.	Large wet meadow complex in St. Regis River floodplain.  Dominant vegetation: Spruce, Drummond willow, blue-joint reedgrass, bulrush.
Wetland 6	WL-06	Riverine	PEM/PSS	III	0.53	<b>Source</b> : Wetland has elevated groundwater associated with nearby St. Regis River. <b>Destination</b> : Wetland is connected to the St. Regis River.	Riparian bench south of frontage road. Wetland is adjacent to the active St. Regis River channel Dominant vegetation: Drummond willow and bulrush.
Wetland 7	WL-07	Riverine	PEM/PSS/ PFO	Ш	0.71	<b>Source</b> : Chippy Creek and Chippy Creek tributary join in the interstate median before flowing under I-90 into the St. Regis River. <b>Destination</b> : Chippy Creek flows into St. Regis River.	Wetland along banks of Chippy Creek and tributary stream. <b>Dominant vegetation</b> : Spruce, willow, bulrush, sedge.

Wetland Number (WL)	Data Plot <sup>a</sup>	HGM⁵	Cowardin Code <sup>c</sup>	MDT Wetland Category <sup>d</sup>	Wetland Size <sup>e</sup> (acre)	Primary Source and Destination of Wetland Hydrology	Narrative Description
Wetland 8	WL-08	Riverine	PEM/PSS/ PFO	III	0.03	Source: Chippy Creek flows in the interstate median before flowing under I-90 into the St. Regis River. Stream periodically flows subsurface.  Destination: Chippy Creek flows into St. Regis River.	Wetland fringe along banks of Chippy Creek. <b>Dominant vegetation</b> : Spruce, cottonwood, willow, horsetail, sedge.
Wetland 9	WL-09	Slope	PEM/PSS	Ш	Source: Groundwater seeping out of highway cut slope.  Destination: Water does not appear to flow in the highway ditch or join up with any other nearby		Steep cutslope with seeping water and wetland vegetation. <b>Dominant vegetation</b> : Alder, cottonwood saplings, blue-joint reedgrass, sedge, and rush.
Wetland 10	WL-10	Riverine	PEM/PSS	III	0.05	Source: Chippy Creek flows in the interstate median before flowing under I-90 into the St. Regis River. Stream periodically flows subsurface.  Destination: Chippy Creek flows into St. Regis River.	Wetland fringe along banks of Chippy Creek north of the interstate. <b>Dominant vegetation</b> : Alder, cottonwood saplings, sedge, and rush.
Wetland 11	WL-11	Riverine	PEM/PSS	III	0.16	Source: Seepage from cutslope above interstate and perennial surface flow in tributary to Chippy Creek.  Destination: Direct connection to Chippy Creek, which flows into the St. Regis River.	Hillside and ditch wetland fed by springs and perennial tributary to Chippy Creek. <b>Dominant vegetation</b> : Willow, cottonwood saplings, sedge, rush, and horsetail.
Wetland 12	WL-12	Riverine	PEM	III	0.07	<b>Source</b> : Water seeping from highway cutslope. <b>Destination</b> : Culvert under I-90 carries water directly to St. Regis River.	Slope and ditch wetland adjacent to I-90 on north side. Water flows under I-90 to St. Regis River.  Dominant vegetation: Sedge and rush species.
Wetland 13	WL-13	Riverine	PEM	III	0.08	<b>Source:</b> Seasonal surface flow in roadside ditch ties into natural drainage feature <b>Destination:</b> Culvert under I-90 carries seasonal flow down to unnamed tributary of St. Regis River.	Seasonally wet roadside ditch connected to natural drainage feature. <b>Dominant vegetation</b> : Sedge and rush species.
	TOTAL				5.76		

<sup>&</sup>lt;sup>a</sup> See Appendix B for USACE Wetland Determination Forms; <sup>b</sup> MDT 2008; <sup>c</sup> Cowardin et al., 1979; <sup>d</sup> Refer to Appendix B for MDT Montana Wetland Assessment Method Forms; <sup>e</sup> Wetland size within the specific study area. Some delineated wetlands extend outside of the project area and thus are larger than reported in the table. Cumulative total area may vary based on rounding for individual wetlands.

Table 3-3. Summary of Wetland Function and Value and Overall Ratings

Function and Value Variables <sup>1</sup>	Wetlands 1, 4, 12, and 13	Wetlands 2, 3, 5, and 6	Wetland 9	Wetlands 7, 8, 10, and 11		
A. Listed/Proposed T&E Species Habitat	Low (0.0)	Low (0.1)	Low (0)	Low (0.1)		
B. MT Natural Heritage Program Species Habitat	Low (0.0)	High (0.9)	Low (0.0)	Mod (0.5)		
C. General Wildlife Habitat	Low (0.2)	Mod (0.7)	Low (0.3)	Mod (0.5)		
D. General Fish Habitat	NA	High (0.8)	NA	NA		
E. Flood Attenuation	Mod (0.4)	Low (0.2)	NA	Mod (0.6)		
F. Short and Long Term Surface Water Storage	Low (0.3)	High (0.8)	NA	High (0.8)		
G. Sediment/Nutrient/Toxicant Removal	Mod (0.4)	Mod (0.4)	High (0.8)	Mod (0.4)		
H. Sediment/Shoreline Stabilization	High (0.9)	High (1.0)	NA	High (1.0)		
I. Production Export/Food Chain Support	Mod (0.4)	High (0.9)	Mod (0.4)	Mod (0.7)		
J. Groundwater Discharge/Recharge	Mod (0.7)	NA	High (1.0)	NA		
K. Uniqueness	Low (0.2)	Low (0.2)	Low (0.2)	Low (0.2)		
L. Recreation/Education Potential (bonus points)	NA	High (0.2)	NA	High (0.2)		
ACTUAL POINTS/POSSIBLE POINTS	3.5/10	6.2/10	2.7/7	4.8/9		
PERCENT OF POSSIBLE SCORE ACHIEVED	35%	62%	39%	53%		
OVERALL CATEGORY RATING (FUNCTIONAL RATING)	III	III	Ш	111		
<sup>1</sup> Refer to Appendix B for MDT Montana Wetland Assessment Forms.						

## 3.3.3 Potential Impacts

Construction limits of the project are currently unavailable and, therefore, the potential impact on delineated wetlands is unknown. Given the location of some wetlands directly abutting the existing roadway, unavoidable impacts to wetlands are anticipated. However, given the limited scope of the project, wetland impacts are anticipated to be minor. Ground disturbance activities potentially impacting wetlands would be limited to shoulder grading for drainage improvements in areas where full reconstruction of the highway occurs and culvert replacement work in areas where wetlands are established directly at the culvert inlet/outlet. Based on this, minor impact to Wetlands 1, 4, 8, 9, 10, 11, 12, and 13 could occur. It is anticipated that impacts to Wetland 2, 3, 5, 6, and 7 can be avoided.

## 3.3.4 Avoidance and Minimization Recommendations

The project team will avoid and minimize impacts on wetlands to the greatest extent practicable as design progresses. Due to the location of some ditch wetlands immediately adjacent to the roadway, unavoidable wetland impacts are anticipated.

## 3.3.5 Required Permitting

Section 404 of the CWA requires approval prior to discharging dredged or fill material into waters of the United States, including wetlands. The project is anticipated to require a Section 404 permit. As previously noted, though, the project's impact on delineated wetlands is currently unknown. With the exception of Wetlands 9 and 12, all wetlands are adjacent to some form of stream (i.e., either the St. Regis River or a tributary) and may be considered "adjacent wetlands" and therefore jurisdictional.

Once final design is complete and construction limits established, impacts on aquatic resources would be quantified and described in greater detail in the Aquatic Resource Findings Report (AFR) and the Section 404 permit application. It is important to note that the USACE is responsible for making all final jurisdictional determinations. The proposed project is anticipated to meet the criteria for Section 404 authorization through use of a Nationwide Permit.

The proposed project is anticipated to require compliance with the MPDES General Permit administered by DEQ (see Section 10.1). A Stream Protection Act (SPA) 124 Notification through FWP is anticipated to be required for the project based on proposed improvements to the culverts carrying the St. Regis River and Chippy Creek. Additional permits, such as a 318 authorization for short-term water quality standard for turbidity related to construction activity, may be required depending on contractor methods. Stream mitigation requirements are not anticipated for the project

## 3.3.6 Proposed Compensatory Mitigation

Requirement for compensatory mitigation will be determined during final design and the permitting phase for the project. The project is located within the Lower Clark Fork watershed (#3), which contains six MDT wetland mitigation sites: Tucker Crossing, Lee Metcalf, Shammel, Lone Pine, Hoskins Landing, and Camp Creek. If the proposed project results in unavoidable loss of jurisdictional wetlands requiring compensatory mitigation, available credits at these sites would be reviewed and a mitigation plan will be developed accordingly in coordination with the USACE.

# 4 Species of Concern and Special Status Species

Montana Species of Concern (SOC) include native plants or animals considered "at risk" due to declining population trends, threats to their habitats, and/or restricted distribution. Designation of a species as a Montana SOC is not a statutory or regulatory classification. Instead, these designations provide a basis for resource managers and decision-makers to proactively direct limited resources to priority data collection needs and address conservation needs.

## 4.1 Methods

Information reported within this section was obtained from a combination of literature and database information available from the MTNHP and on-site field investigation. An Environmental Summary Report was provided by the MTNHP on March 5, 2021 for the project area vicinity that included approximately 24 square miles surrounding the project area. The report includes database information on sensitive plant and animal species documented in the vicinity of the project area. Species occurrence data is supplied to MTNHP by a variety of different wildlife and plant professionals, private, and/or government entities. Results presented in Table 4-1 are summarized

from information obtained from the MTNHP Environmental Summary Report (MTNHP 2021a) and the Montana Field Guides (MTNHP 2021c).

The July 19 and 20, 2021 field investigations included documentation of observed animals and general vegetation communities. None of the SOC listed in Table 4-1 were observed during the field investigations. In addition, the Montana Sage Grouse Habitat Conservation Map was reviewed to identify any habitat areas overlapping the project area and the proposed project is not within Greater Sage-Grouse (Centrocercus urophasianus) habitat (MSGHCP 2021).

Table 4-1. Montana Natural Heritage Program Species of Concern with Documented Occurrences in the Project Area Vicinity

	,	iou inclinity				
Species	State Rank <sup>a</sup>	General Habitat Requirements	May Affect (Yes or No)			
Vascular Plants						
Whitebark Pine (Pinus albicaulis)	S3	Subalpine forest, timberline	No			
Coville's Rush (Juncus covillei)	S2S3	Wetland/Riparian	No			
Straightbeak Buttercup (Ranunculus orthorhynchus)	S1S2	Wetland/Riparian	No			
Swamp Red Currant (Ribes triste)	S2	Forest openings (Mesic, montane/subalpine)	No			
Mammals						
Fisher (Pekania pennanti)	S3	Mixed conifer forests	No			
Wolverine (Gulo gulo)	<b>S</b> 3	Boreal Forest and Alpine Habitats	No			
Birds						
Pacific Wren (Troglodytes pacificus)	S3	Moist conifer forests	No			
Varied Thrush (Ixoreus naevius)	S3B	Moist conifer forests	No			
Pileated Woodpecker (Dryocopus pileatus)	S3	Moist conifer forests	No			
Invertebrates						
Gillette's Checkerspot (Euphydryas gillettii)	S2	Wet meadows	No			
Alberta Snowfly (Isocapnia integra)	S2	Mountain Streams to Rivers	No			
Fish						
Westslope Cutthroat Trout (Oncorhynhus clarkii lewisi)	S2	St. Regis River	Yes			
Sources: MTNHP 2021a <sup>a</sup> Refer to <a href="https://fieldguide.mt.gov/statusCodes.aspx#msrc">https://fieldguide.mt.gov/statusCodes.aspx#msrc</a> for definitions						

#### 4.2 **Plants**

#### 4.2.1 Species observed/documented, general abundance, distribution, and habitat requirements

Four plant SOC are potentially occurring in the project vicinity as identified in Table 4-1 and include: whitebark pine, Coville's rush, straightbeak buttercup, and swamp red currant. Additional information on the species is summarized below. Note that whitebark pine is a proposed species under the Endangered Species Act and is discussed further in Section 5.

**Coville's rush** is rare in Montana and currently known from approximately a half-dozen widely scattered wetland/riparian sites in the mountainous portion of the state (MTNHP 2021c). Its general distribution is limited to the central portion of the far western mountain ranges. It is typically found in moist, gravelly or sandy soil along major water courses in the valley zone.

**Straightbeak buttercup** is also rare in Montana and little information exists on its abundance and habitat requirements. It is limited to the western portion of the state based on several specimen collections; however, only one collection has been made in the past two decades (MTNHP 2021c). This species prefers streambanks and moist meadows in the montane zone.

**Swamp red current** is also rare in Montana and is known from a few collections from the western portion of the state (MTNHP 2021c). Its general distribution is like Coville's rush and limited to the central portion of the far western mountain ranges. Its habitat requirements include moist soil of forest openings in the montane to lower subalpine zones.

## 4.2.2 Potential Impacts

Given the nature of the project, minimal construction disturbance area, and general lack of species presence, no impact on any plant SOC identified in Table 4-1 is expected to occur.

#### 4.2.3 Avoidance and Minimization Recommendations

The recommendations provided in Section 2.1.4 would generally apply to and minimize potential impact on plant SOC. No specific avoidance or minimization measures are necessary.

# 4.3 Terrestrial Species

# 4.3.1 Species observed/documented, general abundance, distribution, and habitat requirements

Table 4-1 identifies seven terrestrial SOC that include two mammals (fisher and wolverine), three birds (pacific wren, varied thrush, and pileated woodpecker), and two invertebrates (Gillette's checkerspot and Alberta snowfly). Additional information on the species is summarized below.

#### Mammals

According to the MTNHP, **fisher** occur primarily in dense coniferous or mixed forests, including early successional forests with dense overhead cover (MTNHP 2021c). They commonly use hardwood stands in summer but prefer coniferous or mixed forests in winter and avoid open areas. Optimal conditions for fishers are forest tracts of 245 acres or more, interconnected with other large areas of suitable habitat. A dense understory of young conifers, shrubs, and herbaceous cover is important in summer. Fishers were extinct in Montana by the 1930's (MTNHP 2021c). Reintroduction efforts in 1959 and 1960 in Lincoln, Granite and Missoula counties resulted in the establishment of populations in those counties. More recent reintroductions were made in the Cabinet Mountains between 1988 and 1991 (MTNHP 2021c). The species is currently managed as a furbearer with a limited harvest of 7 animals.

**Wolverine** are larger (nearly 2x) than the related fisher. Wolverines in northwestern Montana are known to occupy higher elevations in summer and lower elevations in winter (MTNHP 2021c). Wolverines are limited to alpine tundra, and boreal and mountain forests (primarily coniferous) in the western mountains, especially large wilderness areas. However, dispersing individuals have been



found far outside of usual habitats. They are usually in areas with snow on the ground in winter. Riparian areas may be important winter habitat. When inactive, wolverines occupy dens in caves, rock crevices, under fallen trees, in thickets, or similar sites (MTNHP 2021c). The U.S. Fish and Wildlife Service (USFWS) released a final ruling on October 13, 2020 (85 FR 64618 64648), stating that the wolverine had been withdrawn from consideration as a threatened and endangered species, vacating its proposed status.

#### Birds

**Pacific wrens** prefer large uncut stands of old-growth and mature coniferous forests and also occur in riparian cottonwoods and aspens. In Montana they are especially common in cedar-hemlock, cedar-grand fir, and spruce-fir forests and are strongly associated with riparian areas within these forest types (MTNHP 2021c). This species generally occupies the western half of the state.

In Montana, the **varied thrush** breeds primarily in mature and old-growth mixed-coniferous forests of western Montana. Highest number of observations during the breeding season are in northwestern Montana (MTNHP 2021c). This species can travel widely during migration and winter, with observations as far east as Sheridan County. This species breeds in mixed-coniferous forests with a preference of Douglas-fir and western larch and in winter uses a wider variety of habitats, including suburban areas such as bird feeders and areas where fruits and berries are present (MTNHP 2021c). This species is more abundant in mature and old-growth forest stands than in younger forests.

The **pileated woodpecker** habitat includes late successional stages of coniferous or deciduous forest, but can also include younger forests that have scattered, large dead trees (MTNHP 2021c). In forests of northwestern Montana, this species is found predominantly in mixed coniferous forest dominated by western larch and Douglas-fir. This species distribution is limited to the western portion of the state.

#### Invertebrates

**Gillette's checkerspot** butterfly in Montana have been found in a variety of habitats: montane areas in wet meadows; marshy sites along small streams; open riparian habitat; tree canopy, predominantly lodgepole pine, Engelmann spruce, subalpine fir, and often in fire-disturbed locations (MTNHP 2021c).

Very little information exists about the ecology of the **Alberta snowfly**. This species generally inhabits small streams and large rivers. Early records reported members of this species to be found in Banff National Park and North Fork Flathead River, which are coldwater systems, but additional records have found them in transitional cold-cool water systems such as the Smith River and Missouri River (MTNHP 2021c).

## 4.3.2 Potential Impacts

Due to the lack of suitable habitat within the immediate project area and general scarcity of these species, neither the fisher nor wolverine are anticipated to be negatively impacted by the project. Impacts to vegetation will be negligible for the project and would not affect the quantity or quality of suitable habitat for any SOC species. No impacts to invertebrate SOC are anticipated.

## 4.3.3 Avoidance and Minimization Recommendations

No avoidance or minimization recommendations are provided at this time.

# 4.4 Aquatic Species

# 4.4.1 Species observed/documented, general abundance, distribution, and habitat requirements

The westslope cutthroat trout is one of two subspecies of native cutthroat found in Montana and can be found in the Kootenai watershed, the Clark Fork watershed, the headwaters of the Missouri River (MTNHP 2021c). Spawning and rearing streams tend to be cold and nutrient poor. This species seeks out gravel substrate in riffles and pool crests for spawning habitat. Cutthroat trout have long been regarded as sensitive to fine sediment (generally defined as 6.3 millimeters or less) (MTNHP 2021c). Westslope cutthroat trout tend to thrive in streams with more pool habitat and cover than uniform, simple habitat. Juvenile cutthroat trout overwinter in the interstitial spaces of large stream substrate. Adult cutthroat trout need deep, slow moving pools that do not fill with anchor ice in order to survive the winter (MTNHP 2021c). As previously discussed, the St. Regis River and most of its tributaries, except Chippy Creek and Mephisto Creek, are known to support westslope cutthroat trout in the project area.

## 4.4.2 Potential Impacts

Potential impacts to westslope cutthroat trout are anticipated to be limited to the culvert rehabilitation work occurring at the two St. Regis River crossings, which may result in short-term turbidity and sedimentation within the river due to in-stream disturbances. Culvert replacements or rehabilitations occurring at other perennial streams in the project area may affect, but likely less so, the water quality of the St. Regis River and potential effects would vary based on the distance and gradient between the culvert replacement and St. Regis River.

#### 4.4.3 Avoidance and Minimization Recommendations

The recommendations provided in Section 3.1.5 are applicable for avoiding and minimizing water quality impacts that may affect westslope cutthroat trout.

# 5 Threatened and Endangered Species Preliminary Biological Assessment

Section 7 of the ESA [16 U.S.C. 1531 *et seq.*] outlines the procedures for Federal interagency cooperation to protect federally listed species and conserve designated critical habitats. Section 7 requires Federal agencies to determine the effects of the proposed action on threatened, endangered, and proposed species and to consult with the USFWS for concurrence on the determination of effect. This section provides the Preliminary Biological Assessment (PBA) of the proposed action's effect on federally listed species and designated critical habitats.

## 5.1 Methods

Information reported within this section was obtained from a review of literature and database searches and on-site field observations. The October 1, 2021, publication of Endangered, Threatened, Proposed and Candidate Species by Montana County available through the USFWS's Montana Ecological Field Office (USFWS 2021a) was reviewed to determine the federally listed species potentially occurring in Mineral County. A list of federally listed endangered, threatened, proposed, and candidate species to be considered for this project was generated based on the USFWS data. Federally listed species potentially occurring in Mineral County are listed in Table 5-1 along with their respective federal status and presence of critical habitat in the project area.

Table 5-1. Federally Listed Species Occurring in Mineral County, MT

Common Name	Scientific Name	Status <sup>a</sup>	Critical Habitat in Action Area?
Canada Lynx	Lynx canadensis	LT	No
Grizzly Bear	Ursus arctos horribilis	LT	No
Bull Trout	Salvelinus confluentus	LT, CH	No
Whitebark Pine	Pinus albicaulis	Р	No
Monarch Butterfly	Danaus plexippus	С	No

Sources: USFWS 2021a; USFWS 2021b

<sup>a</sup> LT = Listed Threatened; CH = Critical Habitat; P = Proposed; C = Candidate

The project area was reviewed using the USFWS Information for Planning and Consultation (IPaC) tool to confirm or to augment the county list of species. The IPaC identifies Canada lynx, bull trout, whitebark pine, and monarch butterfly as potentially affected by project activities; however, IPaC does not identify grizzly bear but does include the yellow-billed cuckoo (*Coccyzus americanus*) (USFWS 2021b). Because of this, yellow-billed cuckoo is also included in the PBA below.

The monarch butterfly has recently been listed as a candidate species and IPaC identifies the monarch butterfly as potentially affected by project activities. Monarch butterfly habitat preferences include open places, native prairie, foothills, open valley bottoms, open weedy fields, roadsides, pastures, marshes, suburban areas, rarely above treeline in alpine terrain during migration (MTNHP 2021c). They have been reported in Glacier National Park in mesic montane meadows (MTNHP 2021c) but are uncommon and very infrequently documented in western Montana. Due to the slow-moving nature of the work, which will involve negligible vegetation impacts and be limited primarily to the existing paved surface, no impacts to monarch butterfly are anticipated. As such, the monarch butterfly is not evaluated in this PBA and the project is not likely to jeopardize the continued existence of the monarch butterfly

# 5.2 Action Area and Environmental Baseline

The action area for the proposed project is defined as "all areas to be affected directly or indirectly by the proposed action and not merely the immediate area directly adjacent to the action" (50 CFR §402.02). Project components that pose potential effects include potential in-stream work for culvert rehabilitation/replacement, construction noise, clearing and grading resulting from construction activities, and operation of the highway facility.

Topography and site characteristics affect the propagation of sound, and the forested mountains surrounding the project area would reduce the extent of noise. For this analysis however, a simplified uniform distance of one-half mile is used as a terrestrial action area to assess potential impacts. The aquatic action area is defined to include the same general one-half mile distance, but for only surface water resources that are adjacent to or down gradient from the project. In essence, the aquatic action area includes the St. Regis River for one-half mile downstream from the project.

# 5.3 Preliminary Biological Assessment

## 5.3.1 Canada Lynx

Species status, distribution, habitat requirements, reasons for decline

The Canada lynx (*Lynx canadensis*) was listed as threatened under the ESA in 2000 (65 FR 16053 16086), and critical habitat was designated on November 9, 2006, and revised on February 24, 2009 and again on September 12, 2014. Critical habitat includes substantial areas of boreal forests in northwestern Montana and the Greater Yellowstone Ecosystem.

In general, lynx distribution in North America is closely associated with the distribution of North American boreal forest. Canada lynx west of the Continental Divide generally occur in subalpine forests at elevations between 4,000 and 7,000 feet in stands of lodgepole pine or mixed stands of subalpine fir, lodgepole pine, Douglas-fir, grand fir, western larch and hardwoods (Ruediger et al. 2000). In nearby neighboring northern Idaho, western redcedar and western hemlock habitat types support relatively high densities of snowshoe hares, and lynx appear to regularly use these habitat types (Ruediger et al. 2000).

Among the general forest types, lynx are most likely to persist in areas that receive deep snow and have high-density populations of snowshoe hares, the principal prey of lynx. Disturbances that create early successional stages such as fire, insect infestations, and timber harvest, provide foraging habitat for lynx by creating forage and cover for snowshoe hares (Ruediger et al. 2000). Without high densities of snowshoe hares, lynx are unable to sustain populations despite utilizing a multitude of other prey when snowshoe hare numbers are low.

Reasons for decline include incompatible land uses such as timber harvest and recreation and related activities. The primary factor that caused the lynx to be listed was the lack of guidance for the conservation of lynx and snowshoe hare habitat in plans for federally managed lands (USFWS 2017).

## Occurrence in Project Area

Minimal data exists documenting lynx observations in the vicinity of the project area. The MTNHP database includes a few Canada lynx observations for Mineral County from 1991 and 1994, and several other data entries dating back to the 1980s based on furbearer harvest data. According to the MTNHP predicted habitat suitability model, the project area is moderately suitable habitat based on a few observations in the area (MTNHP 2016). Despite the lack of direct observations, the project vicinity includes substantial areas of suitable forest habitat and Canada lynx occurrence in the project area is possible.

## Potential Impact Analysis

Given the presence of suitable forest habitat, it is reasonable to assume that Canada lynx movements through the project area may at least occasionally occur. The existing I-90 acts cumulatively with other human-induced activities and features (e.g., logging, recreation) to slow movement between forested communities in the vicinity of the project. Traffic volumes are projected to increase regardless of whether the proposed project is implemented and are likely to contribute to incrementally increase habitat fragmentation.

No impact on lynx critical habitat would occur because there is none within the project vicinity. Negligible vegetation impacts are expected and no reduction of available roadside cover that may increase the difficulty associated with cross-highway movements for lynx is expected to occur.

Construction activities would result in a temporary increase of noise levels. Construction would occur during normal daytime hours and the short-term noise increase is not anticipated to reach levels that would harm Canada lynx.

#### Conservation Measures

The following conservation measures are recommended to ensure that any impacts to Canada lynx are minimized:

Clearing and grubbing should not be allowed within the ROW beyond the construction limits or required clear zone. Any temporary clearing outside the construction limits (e.g. for culvert installation, etc.) but within the ROW should be kept to the smallest area possible and reclaimed immediately following construction.

#### Determination of Effect

Due to the scope and anticipated duration of the project within suitable forest habitat, a preliminarily determination has been made that the proposed project may affect Canada lynx. A final determination of effect will be made at a later phase in project development in coordination/consultation with the USFWS.

#### 5.3.2 **Grizzly Bear**

Species status, distribution, habitat requirements, reasons for decline

The grizzly bear (Ursus arctos horribilis) was listed as threatened under the ESA in 1975 in the conterminous 48 states (40 FR 31734). Habitat loss and human encroachment are the primary reasons for decline in grizzly bear populations (Reel et al. 1989). On June 30, 2017, the Greater Yellowstone Ecosystem (GYE) population of grizzly bears was removed from the federal list of endangered and threatened species. The USFWS June 30, 2017 final rule delisting the Greater Yellowstone Ecosystem grizzly bear population was vacated and remanded by the court on September 24, 2018. Therefore, grizzly bears throughout the lower 48 states are listed as threatened except where designated as an experimental population.

Grizzly bears are wide-ranging mammals requiring large areas of undisturbed habitat. Grizzlies occupy a wide range of habitat types and elevations throughout the year and will opportunistically occupy areas that can best meet their food requirements. Grizzlies prefer habitat that is forested and provides good cover (USFWS 1993). Home ranges can vary considerably from approximately 11 to

2,000 square kilometers (7 to 1,245 sq. mi.) and are dependent upon food distribution (Reel et al. 1989). No critical habitat for grizzly bear has been designated.

According to Kendall et. al. (2009), in 1998 and 2000 an estimated mean population of 241 grizzly bears occupied what was then termed the Greater Glacier Area. An increasing trend in grizzly bear numbers continued and, in 2004, the estimated number had increased to 765 individuals (Kendall et. al. 2009). By 2016, an estimated 1,800 grizzlies resided in the lower 48 states.

Presently, there are five regions where grizzlies are known to occur: Yellowstone ecosystem, Northern Continental Divide ecosystem (NCDE), Cabinet-Yaak ecosystem, Selkirk ecosystem, and Northern Cascades ecosystem. The project area is located south and outside of the Cabinet-Yaak Ecosystem Grizzly Bear Recovery Zone. The Cabinet-Yaak grizzly bear population is estimated to be approximately 50 individuals (USFWS 2021). The project area is situated between the Cabinet-Yaak and Bitterroot recovery areas in what has been identified as the Cabinet/Yaak to Bitterroot Linkage Area (Servheen and Waller 2001). The minimal development in the vicinity of the project along I-90 and federal ownership together create an opportunity for a linkage area between the two recovery zones.

#### Occurrence in Project Area

The MTNHP database does not include any grizzly bear observations in the vicinity of the project. The project area is not included in areas of grizzly bear estimated current distribution (USFWS 2021). In reviewing the Cabinet-Yaak Grizzly Bear Recovery Area 2019 Research and Monitoring Progress Report (Kasworm et al. 2020), and specifically Figure 3 showing grizzly bear observations from 1959-2019, the project area is located at the southern limits of the study area and no grizzly bear observations are identified within the project action area.

According to the USFWS "may be present" map, the project area appears to be situated in an area where grizzly bears are not present; however, areas where grizzly bears "may be present" surround the I-90 corridor in the project vicinity. Evidence from past studies suggest grizzly bears may be generally displaced from habitats within 0.5 to 1.0 mile of the existing highway. They are, however, known to frequently cross highways. Figure A101 in Kasworm et al., for instance, shows grizzly bear 927 having crossed I-90 many miles east of the project area. Despite the lack of direct evidence of grizzly bear in the project action area, the potential for grizzly bear to be present or pass through the project area during construction exists given the ample suitable habitat in the project vicinity, the project location just on the periphery of where grizzlies may be present and increasing populations and geographic distribution of grizzly bears.

#### Potential Impact Analysis

Based on available literature and research, the likelihood of grizzly bear within the project area is low. The limits of construction will stay within areas of previously disturbed highway ROW and the proposed project is not anticipated to result in the alteration, degradation, or removal of potential grizzly habitat. The proposed project is not expected to create or increase any new or existing barriers that would affect bear mobility or movements. The proposed improvements are not anticipated to encourage or exacerbate human development in the project area.

Construction activities would result in a temporary increase of noise levels. Construction would occur during normal daytime hours and the short-term noise increase is not anticipated to reach levels that would harm grizzly bear.

#### Conservation Measures

The presence of workers and associated bear attractants, such as food, petroleum products, etc., could increase the potential for bear-human conflict to occur. To minimize and avoid impacts to grizzly bear, the following Standard Specification 208.03.4(E) Bear Habitat will be incorporated into the final contract plans:

- Promptly clean up any project related spills or debris.
- Camping is allowed in designated camping areas only (for construction workers).
- Store all food, food related items, petroleum products, antifreeze, garbage, and personal hygiene items inside a closed, hard-sided vehicle or commercially manufactured bear resistant container.
- Remove garbage from the project site daily and dispose of it in accordance with all applicable regulations.
- Notify the Project Manager of any animal carcasses found in the area.
- Notify the Project Manager of any bears observed in the vicinity of the project.

The following Special Provision will be included in the contract documents to make clear the requirements above:

#### 1. WORK IN BEAR HABITAT [208] (REVISED 9-9-21M)

This project is located within grizzly bear habitat. Conduct project-related activities outside of construction limits in a manner which will not adversely affect federally listed species and/or designated critical habitat. Follow the requirements of Subsection 208.03.4(E) for all project activities.

#### Determination of Effect

Based on available information, the possibility of grizzly bear to be present during construction cannot be fully discounted. It has been preliminarily determined that the proposed project *may affect* grizzly bear. A final determination of effect will be made at a later phase in project development in coordination/consultation with the USFWS.

#### 5.3.3 Bull Trout

Species status, distribution, habitat requirements, reasons for decline

The USFWS defined a single distinct population segment (DPS) for bull trout (*Salvelinus confluentus*) within the conterminous United States and listed them as threatened under the ESA in 1999 (64 FR 58910). This single DPS is subdivided into six biologically based recovery units, of which the Columbia headwaters recovery unit contains the Clark Fork River population (USFWS 2015).

Bull trout occur in nearly all of the Columbia River Basin in higher elevation tributaries in Washington, Oregon, Idaho, Montana, and a small part of Nevada. The historical range of bull trout includes major river basins in the Pacific Northwest at about 41 to 60 degrees North latitude, from the southern limits in the McCloud River in northern California and the Jarbidge River in Nevada to the headwaters of the Yukon River in the Northwest Territories, Canada (Cavender 1978). Although

bull trout are presently widespread within their historical range, they have declined in overall distribution and abundance during the last century. Dams, forest management practices, agriculture, roads and mining are primary land and water management activities that threaten bull trout and degrade its habitat (USFWS 1998). In addition, native bull trout have been displaced in many areas through competitive interaction with introduced brook trout. Bull trout and brook trout can interbreed and the offspring are sterile hybrids, further contributing to bull trout population decline.

Spawning areas are often in headwater streams and associated with coldwater springs, groundwater infiltration, and the coldest streams in a given watershed (Rieman and McIntyre 1993). Spawning takes place between late August and early November, principally in third and fourth order streams. Bull trout prefer spawning habitat in low-gradient stream reaches with loose, clean gravel (Fraley and Shepard 1989) and do not tolerate high sediment levels in their spawning streams.

On October 18, 2010, the USFWS issued a final rule designating critical habitat for bull trout in the conterminous United States (75 FR 63898-64070), and developed implementation plans for the final bull trout recovery plan (USFWS 2015a). In freshwater areas, bull trout critical habitat includes the stream channels within the designated stream reaches and a lateral extent as defined by the bankfull elevation on one bank to the bankfull elevation on the opposite bank, or the OHWM if bankfull elevation in not evident on either bank (USFWS 2010). The final rule (75 FR 63926) further defines critical habitat to include, "the bed and banks of waterbodies, but actions that may destroy critical habitat could occur on lands adjacent to waterbodies, and, therefore, would be subject to regulation under this rule."

## Occurrence in Project Area

The MTNHP does not document any occurrences of bull trout in the vicinity of the project (MTNHP 2021b). A review of the MTNHP *Bull Trout (Salvelinus confluentus) Predicted Suitable Habitat Modeling* report indicates that the project area suitability for bull trout is "generally unsuitable" (MTNHP 2019). The bull trout suitability model is based on species presence confirmed through direct capture or where they are believed to be present based on the professional judgement of a fisheries biologist due to confirmed presence in adjacent areas (MTNHP 2019). The USFS Rocky Mountain Research Station the Range-Wide Bull Trout eDNA Project web application was also reviewed to determine bull trout presence/absence in the project area. Extensive sampling of the St. Regis River and its tributaries yielded no positive eDNA results (USFS 2021), providing further evidence that bull trout do not occur in the vicinity of the project.

No critical habitat is designated within the vicinity of the project. The St. Regis River is designated bull trout critical habitat from the confluence of Twelvemile Creek downstream to the confluence with the Clark Fork River. The confluence of Twelvemile Creek is approximately 17.5 river miles downstream from the eastern edge of the project area.

#### Potential Impact Analysis

No impact on bull trout or bull trout critical habitat is expected to occur due to implementation of the project. Minor water quality impacts may occur during culvert rehabilitation/replacements; however, water quality effects would negligible and would not reach downstream segments of the St. Regis River (approximately 17 miles downstream from the project) where bull trout are known to exist. No impact on bull trout critical habitat would occur because there is none in the project action area.

#### Conservation Measures

No conservation measures specific to bull trout are necessary.

#### Determination of Effect

Based on information presented above, a *no effect* determination is rendered relative to bull trout and bull trout critical habitat.

#### 5.3.4 Whitebark Pine

Species status, distribution, habitat requirements, reasons for decline

Whitebark pine is a common component of subalpine forests and a dominant species of treeline and krummholtz habitats (MTNHP 2021c). It occurs in almost all major mountain ranges of western and central Montana. Populations of whitebark pine in Montana and across most of western North America have been severely impacted by past mountain pine beetle outbreaks and by the introduced pathogen, white pine blister rust. The results of which have been major declines in whitebark pine populations across large areas of its range. Additionally, negative impacts associated with encroachment and increased competition from other trees, primarily subalpine fir have occurred as a result of fire suppression in subalpine habitats.

## Occurrence in Project Area

A review of the MTNHP Pinus albicaulis (Whitebark Pine) Predicted Suitable Habitat Modeling report indicates that the project area suitability for whitebark pine to occur ranges from low to unsuitable (MTNHP 2020). Per Figure 9 of the report, no species observations are documented in the vicinity of the project area. Based on this information and general lack of suitable habitat within the action area, whitebark pine are not expected to occur in the vicinity of the project.

#### Potential Impact Analysis

Negligible vegetation impacts are anticipated as a result of the project. Disturbance is expected to be limited to areas immediately adjacent the existing highway along the previously disturbed shoulders. No mature tree clearing is necessary for the project and no impact on whitebark pine is anticipated.

#### Conservation Measures

No conservation measures specific to whitebark pine are necessary.

#### Determination of Effect

Based on information presented above, the proposed project is not likely to jeopardize the continued existence of whitebark pine.

#### Yellow-billed Cuckoo 5.3.5

Species status, distribution, habitat requirements, reasons for decline

The western population of the yellow-billed cuckoo (Coccyzus americanus occidentalis) breeds along river systems west of the Rocky Mountains, which generally separate this population from its counterpart, the eastern yellow-billed cuckoo. Yellow-billed cuckoos breed throughout much of the eastern and central U.S., winter almost entirely in South America east of the Andes and migrate

through Central America. The USFWS identifies yellow-billed cuckoos west of the Continental Divide as a distinct population segment (DPS) for conservation purposes and this DPS has been listed as threatened under the ESA since 2014 (79 FR 59991 60038). The western subspecies has disappeared over much of the western U.S. and now occurs as a rare breeder in California, Arizona, New Mexico, and west Texas.

Throughout their range, preferred breeding habitat includes open woodland with thick undergrowth, parks, and deciduous riparian woodland. In the west, they nest in tall cottonwood riparian stands with willow understory. Nests are found in trees, shrubs or vines, an average of 1 to 3 meters above ground and typically in mature willows (MTNHP 2021c). The western subspecies typically requires patches of at least 10 hectares (25 acres) of dense, riparian forest with a canopy cover of at least 50 percent in both the understory and overstory. Migration and wintering habitat needs are not well known, although they appear to include a relatively wide variety of conditions. Migrating yellow-billed cuckoos have been found in coastal scrub, second-growth forests and woodlands, hedgerows, forest edges, and in smaller riparian patches than those used for breeding. Caterpillars and other insects, as well as some frogs and lizards, comprise the main diet while fruit and seeds are also eaten, more frequently on wintering grounds.

In the west, much of the riparian habitat preferred by the yellow-billed cuckoo has been converted to farmland and housing, leading to population declines and the possible extirpation of cuckoos from British Columbia, Washington, Oregon, and Nevada. In the listing decision, the U.S. Fish and Wildlife Service noted the primary factors threatening the western distinct population segment as loss and degradation of habitat for the species from altered watercourse hydrology and natural stream processes, livestock overgrazing, encroachment from agriculture, and conversion of native habitat (MTNHP 2021c).

### Occurrence in Project Area

Only eight sightings have been reported by the MTNHP in western Montana since 1959 and zero sighting have been recorded in Mineral County. Regionally this species is considered a transient migrant in western Montana and, while suitable migratory habitat for the species does occur within the I-90 corridor along the St. Regis River near the project site, potential occurrences within the action area would be considered extremely rare. Critical habitat is proposed for this species (79 FR 48547 48652) but does not include any areas in the state of Montana and therefore does not include the project action area.

#### Potential Impact Analysis

No impact on the yellow-billed cuckoo is anticipated as a result of the proposed project. Suitable habitat of adequate size (i.e., 25-acre dense, riparian forest) does exist in the vicinity of the project; however, no impact on suitable riparian areas potentially used by migrating yellow-billed cuckoos would occur. The potential for a transient individual to be present during construction within the vicinity of the project is extremely low to non-existent due to the overall decline of species presence in western Montana and lack of suitable habitat within the immediate project limits. As such, potential impacts on the yellow-billed cuckoo due to in-air noise from construction activities are not expected to occur.

#### Conservation Measures

No specific conservation measures are recommended at this time with respect to the yellow-billed cuckoo.

#### Determination of Effect

Based on information presented above, a **no effect** determination is rendered relative to the yellow-billed cuckoo.

# 5.4 Potential Cumulative Effects Analysis

Cumulative effects include the effects of future state, tribal, local, or private actions that are reasonably certain to occur in the action area considered in this preliminary biological assessment (USFWS 1998b). Future federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to Section 7 of the ESA (USFWS 1998b). A cumulative impacts analysis examines the additive effect of the proposed action's residual impacts remaining after applying avoidance and minimization measures) in relation to the residual impacts generated by past, present, and reasonably foreseeable actions within the cumulative analysis area.

The MDT Tentative Construction Projects 2021-2025 web application was reviewed on August 30, 2021, to identify any MDT-sponsored projects occurring in the vicinity of the proposed project. A single project was identified: Dena Mora Rest Area Rehab (project ID IM 90-1(236)4) between RP 4.4 and 4.8 is a minor rehabilitation funded for fiscal year 2021. No other transportation projects are identified in the web application.

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# APPENDIX A: Representative Site Photos and Wetland Delineation Photos

# REPRESENTATIVE SITE PHOTOS





Photo 1: Near RP 0 and Lookout Pass interchange at Idaho/Montana border.

Photo 2: Near RP 0.3, looking east. Typical roadside environment with heavy sanding material, steep grades, visible erosion, and sparse vegetation.

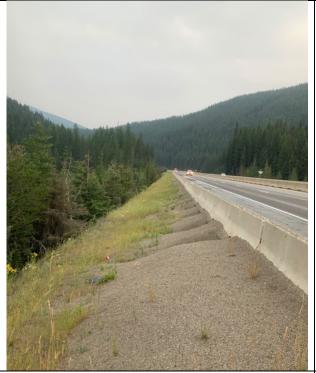


Photo 3: Near RP 1.7, looking east. Typical roadside environment with heavy sanding material, steep grades, visible erosion, and sparse vegetation.



Photo 4: Pullout near RP 1.7, looking west.



Photo 5: I-90 bridge with NORPAC road underneath, at RP 1.9.



Photo 6: St. Regis River located at tow of highway embankment, near RP 2.6.



Photo 7: St. Regis River culvert outlet at approximately RP 1.75.



Photo 8: St. Regis River double culverts outlet, near RP 3.0.





Photo 9: Overview of Chippy Creek and wetlands within divided highway section, near RP 4.3, looking east.

Photo 10: I-90 bridge with NORPAC road underneath, at RP 5.1. Note wildlife trail under bridge to right of roadway.



Photo 11: Beaver dam along St. Regis River at approximately RP 2.4.





Photo 12: Data plot WL-01 within Wetland 1.

Photo 13: Data plot UP-01, paired plot to WL-01.



Photo 14: Data plot WL-2 within Wetland 2 adjacent to St. Regis River.



Photo 15: Data plot UP-02, paired plot to WL-02.











Photo 28: Data plot WL-09 within Wetland 9.

Photo 29: Data plot UP-09, paired plot to WL-09.



Photo 30: Data plot WL-10 within Wetland 10.



Photo 31: Data plot UP-10, paired plot to WL-10.







**APPENDIX B:** USACE Wetland Determination Forms MDT Montana Wetland Assessment Methodology Forms

Project/Site: Taft - V	Vest			City/Cour	nty: Lookout	t Pass/Miner	al	Sampling Da	ate: <u>7-19</u>	9-2021
Applicant/Owner:	Montana Der	partment of Trans	sportation			State:	MT	Sampling Po	oint: W	/L-01
Investigator(s): Mark	к Traxler & Jon	ı Schick - HDR		Section, T	Township, Ra	nge: Sec. I	PB49; T20N	R32W	,	
Landform (hillside, t	errace, etc.): s	slope		Local relief (co	oncave, conv	ex, none):	concave		Slope (%)	ı: <u>5</u>
Subregion (LRR):	LRR E	Lat: <u>47</u> .	451203		Long: <u>-</u> 1	115.694164		Date	um: NA	083
Soil Map Unit Name	: Vaywood fan	nily, glacial-valley	/ floors, extreme	ely bouldery			NWI classif	ication: PEM		
Are climatic / hydrol	ogic conditions	on the site typica	al for this time o	of year?	Yes x	No	(If no, exp	lain in Remark	(s.)	
Are Vegetation	_ , Soil ,	or Hydrology	significantly	disturbed? A	Are "Normal C	Circumstance	es" present?	Yes x	No	
Are Vegetation	_ , Soil ,	or Hydrology	naturally pro	oblematic? (	If needed, ex	plain any an	swers in Re	marks.)		
SUMMARY OF	FINDINGS -	- Attach site	map showi	ng samplin	g point lo	cations, t	ransects,	important <sup>1</sup>	features	, etc.
Hydrophytic Veget	ation Present?	Yes X	No	Is the	e Sampled A	rea				
Hydric Soil Present		Yes X	No	i i	n a Wetland		Yes X	No		
Wetland Hydrology	/ Present?	Yes X	No							
Remarks:										
Near top of pass.	Culvert outlet fl	lowing water duri	ng survey. Nar	row wetland fri	nge adjacent	to channel.				
VEGETATION -	- Use scien	tific names o	f plants.							
			Absolute	Dominant	Indicator					
Tree Stratum	(Plot size: _	)	% Cover	Species?	_Status_		ce Test wor			
1. 2.							of Dominant S FACW, or F.	Species That	2	(A)
2								•		<b>–</b> (^)
						Across All		nant Species	2	(B)
-		-		=Total Cover				Species That		_` ′
Sapling/Shrub Stra	<u>ıtum</u> (Plo	ot size:	)	•			FACW, or F.	•	100.0%	_ (A/B)
1										
2							ce Index wo			
3							% Cover of		Iltiply by:	_
				·		OBL spec			10	_
5				=Total Cover		FACW spec			10	_
Herb Stratum	(Plot size:	5' )		Total Cover		FACU spec			240 0	_
1. Alopecurus aru	` _		30	Yes	FAC	UPL spec		x 5 =	25	_
2. Equisetum arve			40	Yes	FAC	Column T			285	— (B)
Carex pachysta	achya		10	No	FAC	Prevale	ence Index	= B/A =	2.85	<b>-</b> ` ′
4. Carex aquatilis			10	No	OBL					
5. Juncus torreyi			5	No	FACW	Hydrophy	ytic Vegetat	ion Indicators	s:	
6. Bromus inermis	3		5	No	UPL	1 - Ra	apid Test for	Hydrophytic V	egetation	
7							ominance Te			
							evalence Inc			
								Adaptations <sup>1</sup> (F		
10								s or on a sepa		)
11				=Total Cover				/acular Plants <sup>1</sup>		oin)
Woody Vine Stratu	ım (Dl	ot size:	100	.=Total Cover			-	ophytic Vegeta		
								oil and wetland turbed or prob		must
1. 2.								turbed or prob	icinatio.	
				=Total Cover		Hydrophy Vegetation				
% Bare Ground in	Herb Stratum	0				Present?		X No		
Remarks:										
Dominance of wetl	and vegetation	1.								

SOIL Sampling Point: WL-01

Depth	Matrix		th needed to docu Redox	k Feature					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Textu	re	Remarks
0-4	10YR 4/3	100					Loamy/C	ayey	laom with roots and gravel
4-14	10YR 4/2	95	10YR 5/6	5		PL	Loamy/C	avev	
14-20	10YR 5/1	95	10YR 5/8	5		PL	Loamy/C		
		· —— -						<del></del> , _	
		·							
17 0 0								21 (	DI D. III MANA
	ncentration, D=Dep					oated S			on: PL=Pore Lining, M=Matrix.  for Problematic Hydric Soils <sup>3</sup> :
Histosol (		able to all	Sandy Red		oteu.,		'		fuck (A10)
<u> </u>	pedon (A2)		Stripped M		3)		-		arent Material (F21)
Black His			Loamy Mu	•	,	(except	MLRA 1)		hallow Dark Surface (F22)
	Sulfide (A4)		Loamy Gle	-		(02.00)			(Explain in Remarks)
	Below Dark Surfac	e (A11)	X Depleted N	•	٠, ,		_	_	,
Thick Dar	k Surface (A12)	,	Redox Dar		-				
 Sandy Mu	ucky Mineral (S1)		Depleted D	ark Surl	face (F7)		;	Indicators	of hydrophytic vegetation and
2.5 cm M	ucky Peat or Peat (	S2) (LRR (	G) Redox Dep	oressions	s (F8)			wetlan	d hydrology must be present,
Sandy Gl	eyed Matrix (S4)							unless	disturbed or problematic.
Restrictive L	ayer (if observed):								
Type: _									
Depth (in	ches):						Hydric Soi	Present?	Yes <u>X</u> No
Remarks:									
Soil qualifies	as Depleted matrix.								
HYDROLO	 3Y								
Wetland Hyd									
-	rology Indicators:					-			
Primary Indica	rology Indicators: ators (minimum of c		red; check all that a	apply)				Secondary	Indicators (2 or more required)
			red; check all that a		ves (B9)	(excep			Indicators (2 or more required) Stained Leaves (B9) (MLRA 1, 2
	ators (minimum of c Vater (A1)		Water-Stai	ned Lea	ves (B9) <b>and 4B</b> )			Water-	
Surface V  X High Wat  X Saturation	ators (minimum of c Vater (A1) er Table (A2) n (A3)		Water-Stai	ned Lea 1, 2, 4A,	, ,		t _	Water-	Stained Leaves (B9) (MLRA 1, 2
Surface V X High Wat	ators (minimum of c Vater (A1) er Table (A2) n (A3)		Water-Stai	ned Lea <b>1, 2, 4A,</b> (B11)	and 4B)		t _	Water- 4A, X Draina Dry-Se	Stained Leaves (B9) (MLRA 1, 2 and 4B) ge Patterns (B10) eason Water Table (C2)
Surface V X High Wat X Saturation Water Ma Sediment	ators (minimum of c Vater (A1) er Table (A2) n (A3) urks (B1) : Deposits (B2)		Water-Stai MLRA Salt Crust Aquatic Inv	ned Lea  1, 2, 4A,  (B11)  /ertebrat  Sulfide (	and 4B) res (B13) Odor (C1)	)	t	Water- 4A, X Draina Dry-Se Satura	Stained Leaves (B9) (MLRA 1, 2 and 4B) ge Patterns (B10) eason Water Table (C2) tion Visible on Aerial Imagery (C9)
Surface V X High Wat X Saturation Water Ma Sediment Drift Depo	ators (minimum of c Vater (A1) er Table (A2) n (A3) arks (B1) : Deposits (B2) osits (B3)		Water-Stai  MLRA  Salt Crust  Aquatic Inv  Hydrogen S  Oxidized R	ned Lea  1, 2, 4A, (B11)  /ertebrat Sulfide C	and 4B) ses (B13) Odor (C1) eres on l	) _iving R	t	Water- 4A, X Draina Dry-Se Satura Geome	Stained Leaves (B9) (MLRA 1, 2 and 4B) ge Patterns (B10) eason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2)
Surface V X High Wat X Saturation Water Ma Sediment Drift Depo	ators (minimum of o Vater (A1) er Table (A2) n (A3) arks (B1) Deposits (B2) osits (B3) or Crust (B4)		Water-Stai  MLRA  Salt Crust  Aquatic Inv  Hydrogen 3  Oxidized R  Presence of	ned Lea  1, 2, 4A, (B11) /ertebrat Sulfide C Rhizosph of Reduc	and 4B)  ees (B13)  Odor (C1)  eres on Leed Iron (	) _iving R C4)	t	Water- 4A, X Draina Dry-Se Satura Geome Shallon	Stained Leaves (B9) (MLRA 1, 2 and 4B) ge Patterns (B10) eason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3)
Surface V X High Wat X Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo	eators (minimum of of vater (A1) er Table (A2) in (A3) erks (B1) in Deposits (B2) posits (B3) or Crust (B4) posits (B5)		Water-Stai  MLRA  Salt Crust  Aquatic Inv  Hydrogen  Oxidized R  Presence of Recent Iron	ned Lea 1, 2, 4A, (B11) /ertebrat Sulfide C Rhizosph of Reduc	and 4B)  res (B13)  Odor (C1)  reres on Led Iron (	) _iving R C4) lled Soil	t	Water- 4A, X Draina Dry-Se Satura Geome Shallov X FAC-N	Stained Leaves (B9) (MLRA 1, 2 and 4B) ge Patterns (B10) eason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5)
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Surface V X High Wat X Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely Field Observ Surface Water Water Table F Saturation Pres	ators (minimum of or Vater (A1) er Table (A2) in (A3) arks (B1) Deposits (B2) Dosits (B3) or Crust (B4) Dosits (B5) Soil Cracks (B6) in Visible on Aerial I Vegetated Concaverations: ations: r Present?	magery (B e Surface (I	Water-Stai  MLRA  Salt Crust  Aquatic Inv  Hydrogen  Oxidized R  Presence of Recent Iron Stunted or  Other (Exp  B8)	ned Lea 1, 2, 4A, (B11) vertebrat Sulfide ( Rhizosph of Reduc n Reduc Stresse blain in R	and 4B) es (B13) Ddor (C1) eres on Led Iron ( tion in Ti d Plants emarks)  nches):nches):	) Living R C4) Illed Soil (D1) ( <b>LI</b>	coots (C3)	Water- 4A, X Draina Dry-Se Satura Geome Shalloe X FAC-N Raisec Frost-H	Stained Leaves (B9) (MLRA 1, 2 and 4B) ge Patterns (B10) eason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) I Ant Mounds (D6) (LRR A)
Surface V X High Wat X Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely Field Observ Surface Water Water Table F Saturation Pro (includes capi	ators (minimum of or Vater (A1) er Table (A2) in (A3) arks (B1) Deposits (B2) Dosits (B3) or Crust (B4) Dosits (B5) Soil Cracks (B6) in Visible on Aerial I Vegetated Concaverations: ations: r Present?	magery (B e Surface (I	Water-Stai  MLRA  Salt Crust  Aquatic Inv  Hydrogen  Oxidized R  Presence of Recent Irol  Stunted or  Other (Exp  No  No  No  No  Mo  Male  Male	ned Lea  1, 2, 4A, (B11) vertebrat Sulfide C Rhizosph of Reduc n Reduc Stresse clain in R  Depth (in Depth (in	and 4B)  es (B13)  Ddor (C1) eres on Led Iron ( tion in Tild Plants demarks)  nches): nches): nches):	) Living R C4) Illed Soil (D1) ( <b>LI</b>	coots (C3) Is (C6) RR A) Wetland	Water- 4A, X Draina Dry-Se Satura Geome Shallov X FAC-N Raisec Frost-h	Stained Leaves (B9) (MLRA 1, 2 and 4B) ge Patterns (B10) eason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) I Ant Mounds (D6) (LRR A) Heave Hummocks (D7)
Surface V X High Wat X Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely Field Observ Surface Water Water Table F Saturation Pro (includes capi	ators (minimum of or Vater (A1) er Table (A2) in (A3) arks (B1) de Deposits (B2) posits (B3) or Crust (B4) posits (B5) Soil Cracks (B6) in Visible on Aerial I Vegetated Concave ations: r Present? Yes pesent? Yes ellary fringe)	magery (B e Surface (I	Water-Stai  MLRA  Salt Crust  Aquatic Inv  Hydrogen  Oxidized R  Presence of Recent Irol  Stunted or  Other (Exp  No  No  No  No  Mo  Male  Male	ned Lea  1, 2, 4A, (B11) vertebrat Sulfide C Rhizosph of Reduc n Reduc Stresse clain in R  Depth (in Depth (in	and 4B)  es (B13)  Ddor (C1) eres on Led Iron ( tion in Tild Plants demarks)  nches): nches): nches):	) Living R C4) Illed Soil (D1) ( <b>LI</b>	coots (C3) Is (C6) RR A) Wetland	Water- 4A, X Draina Dry-Se Satura Geome Shallov X FAC-N Raisec Frost-h	Stained Leaves (B9) (MLRA 1, 2 and 4B) ge Patterns (B10) eason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) I Ant Mounds (D6) (LRR A) Heave Hummocks (D7)
Surface V X High Wat X Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely Field Observ Surface Water Water Table F Saturation Pro (includes capi	ators (minimum of or Vater (A1) er Table (A2) in (A3) arks (B1) de Deposits (B2) posits (B3) or Crust (B4) posits (B5) Soil Cracks (B6) in Visible on Aerial I Vegetated Concave ations: r Present? Yes pesent? Yes ellary fringe)	magery (B e Surface (I	Water-Stai  MLRA  Salt Crust  Aquatic Inv  Hydrogen  Oxidized R  Presence of Recent Irol  Stunted or  Other (Exp  No  No  No  No  Mo  Male  Male	ned Lea  1, 2, 4A, (B11) vertebrat Sulfide C Rhizosph of Reduc n Reduc Stresse clain in R  Depth (in Depth (in	and 4B)  es (B13)  Ddor (C1) eres on Led Iron ( tion in Tild Plants demarks)  nches): nches): nches):	) Living R C4) Illed Soil (D1) ( <b>LI</b>	coots (C3) Is (C6) RR A) Wetland	Water- 4A, X Draina Dry-Se Satura Geome Shallov X FAC-N Raisec Frost-h	Stained Leaves (B9) (MLRA 1, 2 and 4B) ge Patterns (B10) eason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) I Ant Mounds (D6) (LRR A) Heave Hummocks (D7)
Surface V X High Wat X Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely Field Observ Surface Water Water Table F Saturation Pro (includes capi Describe Reco	ators (minimum of or Vater (A1) er Table (A2) in (A3) arks (B1) de Deposits (B2) posits (B3) or Crust (B4) posits (B5) Soil Cracks (B6) in Visible on Aerial I Vegetated Concave ations: r Present? Yes pesent? Yes ellary fringe)	magery (B'e Surface (I	Water-Stai  MLRA  Salt Crust  Aquatic Inv  Hydrogen is  Oxidized R  Presence of Recent Iron Stunted or  Other (Exp  No No No  Onitoring well, aerial	ned Lea  1, 2, 4A, (B11) vertebrat Sulfide C Rhizosph of Reduc n Reduc Stresse clain in R  Depth (in Depth (in	and 4B)  es (B13)  Ddor (C1) eres on Led Iron ( tion in Tild Plants demarks)  nches): nches): nches):	) Living R C4) Illed Soil (D1) ( <b>LI</b>	coots (C3) Is (C6) RR A) Wetland	Water- 4A, X Draina Dry-Se Satura Geome Shallov X FAC-N Raisec Frost-h	Stained Leaves (B9) (MLRA 1, 2 and 4B) ge Patterns (B10) eason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) I Ant Mounds (D6) (LRR A) Heave Hummocks (D7)
Surface V X High Wat X Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely Field Observ Surface Water Water Table F Saturation Pro (includes capi Describe Reco	ators (minimum of or Vater (A1) er Table (A2) in (A3) arks (B1) Deposits (B2) Desits (B3) or Crust (B4) Desits (B5) Soil Cracks (B6) in Visible on Aerial I Vegetated Concave ations: r Present? Yesesent? Yesesent? Yesesent? Yesesent?	magery (B'e Surface (I	Water-Stai  MLRA  Salt Crust  Aquatic Inv  Hydrogen is  Oxidized R  Presence of Recent Iron Stunted or  Other (Exp  No No No  Onitoring well, aerial	ned Lea  1, 2, 4A, (B11) vertebrat Sulfide C Rhizosph of Reduc n Reduc Stresse clain in R  Depth (in Depth (in	and 4B)  es (B13)  Ddor (C1) eres on Led Iron ( tion in Tild Plants demarks)  nches): nches): nches):	) Living R C4) Illed Soil (D1) ( <b>LI</b>	coots (C3) Is (C6) RR A) Wetland	Water- 4A, X Draina Dry-Se Satura Geome Shallov X FAC-N Raisec Frost-h	Stained Leaves (B9) (MLRA 1, 2 and 4B) ge Patterns (B10) eason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) I Ant Mounds (D6) (LRR A) Heave Hummocks (D7)

Project/Site: Taft - West		City/Cour	nty: Lookout I	Pass/Mineral	Sa	ampling Date:	: <u>7-19</u>	-2021
Applicant/Owner: Montana Department of Transporta	ation			State:	MT Sa	ampling Point	: <u>U</u> F	P-01
Investigator(s): Mark Traxler & Jon Schick - HDR		Section, T	ownship, Ran	ge: Sec. PB49	); T20N; R32	2W		
Landform (hillside, terrace, etc.): road fill slope		Local relief (co	oncave, conve	x, none): <u>non</u>	е	Slo	ope (%):	: 5
Subregion (LRR): LRR E Lat: 47.4512	232		Long: <u>-1</u> 1	5.694205		Datum	: NAD	083
Soil Map Unit Name: Vaywood family, glacial-valley floor	rs, extreme	ly bouldery		NW	'I classificatio	on: NA		
Are climatic / hydrologic conditions on the site typical for	this time of	f year?	Yes x	No (If	no, explain	in Remarks.)		
Are Vegetation, Soil, or Hydrologysi	gnificantly	disturbed? A	Are "Normal Ci	rcumstances" p	resent? Y	′es x I	No	
Are Vegetation, Soil, or Hydrologyna				lain any answer				_
SUMMARY OF FINDINGS – Attach site map			g point loc	ations, trans	sects, imp	oortant fea	atures	, etc.
Hydrophytic Vegetation Present? Yes No	X	Is the	Sampled Are	ea				
	Х	withi	n a Wetland?	Yes	s	No <u>X</u>		
Wetland Hydrology Present? Yes No	X							
Remarks:								
Roadside fill slope adjacent to WL-01								
VEGETATION – Use scientific names of pla	ants.							
Tree Stratum (Diet eizer	Absolute	Dominant Species?	Indicator	Daminanaa T	ant workshi			
Tree Stratum (Plot size:)  1.	% Cover	Species?	_Status_	Dominance T				
2.				Number of Do		ies inat	1	(A)
3.				Total Number		Species		_` ′
4.				Across All Stra		· _	4	_ (B)
		=Total Cover		Percent of Dor		ies That		
Sapling/Shrub Stratum (Plot size:)				Are OBL, FAC	W, or FAC:		25.0%	– <sup>(A/B)</sup>
1				Prevalence In	dox worket			
2				Total % C		Multip	alv bv	
4.				OBL species	0	x 1 =	0	_
5.	,			FACW species	s 0	x 2 =	0	_
		=Total Cover		FAC species	10	x 3 =	30	_
Herb Stratum (Plot size: 5')				FACU species	10	_ x 4 =	40	_
Centaurea stoebe	30	Yes	UPL	UPL species	40	_ x 5 =	200	_
2. Achillea millefolium	10	Yes	FACU	Column Totals		_ (A)	270	– <sup>(B)</sup>
Poa pratensis     Bromus inermis	10	Yes Yes	FAC UPL	Prevalence	Index = B/A	A =4.	50	_
		165		Hydrophytic \	Vegetation I	Indicators:		
6.					_	rophytic Vege	etation	
7.					ance Test is			
8.				3 - Prevale	ence Index is	s ≤3.0 <sup>1</sup>		
9				4 - Morpho	ological Adar	otations¹(Prov	vide sup	porting
10						on a separate	e sheet)	
11		<del></del>			nd Non-Vacu		1 /= .	
Weedy Vine Stratum (Diet size:	60	=Total Cover				tic Vegetation		-
Woody Vine Stratum (Plot size:)				<sup>1</sup> Indicators of I be present, un				must
1			<del> </del>			PIODIOII		
		=Total Cover		Hydrophytic Vegetation				
% Bare Ground in Herb Stratum 40				Present?	Yes	No _>	<u></u>	
Remarks: Sparsely vegetated road fill slope. Upland grasses, forl	bs, and we	eds.						

SOIL Sampling Point: **UP-01** Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features Loc<sup>2</sup> Color (moist) % Color (moist) Type<sup>1</sup> (inches) Texture Remarks 10YR 4/3 Sandy 0-4 100 Loam with gravel <sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils<sup>3</sup>: Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10) Histic Epipedon (A2) Stripped Matrix (S6) Red Parent Material (F21) Loamy Mucky Mineral (F1) (except MLRA 1) Black Histic (A3) Very Shallow Dark Surface (F22) Hydrogen Sulfide (A4) Other (Explain in Remarks) 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) <sup>3</sup>Indicators of hydrophytic vegetation and 2.5 cm Mucky Peat or Peat (S2) (LRR G) wetland hydrology must be present, Redox Depressions (F8) Sandy Gleyed Matrix (S4) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): 4 **Hydric Soil Present?** Yes No Х Remarks: Soil comprised of highway fill material. No hydric indicators **HYDROLOGY** Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (2 or more required) Surface Water (A1) Water-Stained Leaves (B9) (except Water-Stained Leaves (B9) (MLRA 1, 2 High Water Table (A2) MLRA 1, 2, 4A, and 4B) 4A, and 4B) Saturation (A3) Salt Crust (B11) Drainage Patterns (B10) Water Marks (B1) Aquatic Invertebrates (B13) Dry-Season Water Table (C2) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Oxidized Rhizospheres on Living Roots (C3) Geomorphic Position (D2) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Frost-Heave Hummocks (D7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Depth (inches): Yes Water Table Present? Depth (inches): Saturation Present? Depth (inches): Wetland Hydrology Present? Yes No X (includes capillary fringe)

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

Dry fill slope - no wetland hydrology indicators

Project/Site: Taft - West			City/Cou	nty: Lookou	t Pass/Mineral	Samp	oling Date:	7-19-	-2021
Applicant/Owner: Mo	ontana Department of Trans	sportation			State:M	⊡Samp	ling Point:	WL	02
Investigator(s): Mark Tra	xler & Jon Schick - HDR		Section, 1	ownship, Ra	nge: Sec. 04; T19	N; R32W			
Landform (hillside, terrac	e, etc.): floodplain		Local relief (co	oncave, conv	ex, none): conca	ve	Slop	oe (%):	2
Subregion (LRR): LR	R E Lat: <u>47</u> .	435288		Long: <u>-</u> 1	115.677683		Datum:	NAD8	83
Soil Map Unit Name: Ka	wuneeche family, stream b	ottoms			NWI c	lassification:	PEM/PSS		
Are climatic / hydrologic	conditions on the site typica	al for this time o	of year?	Yes x	No (If no	o, explain in F	Remarks.)		
Are Vegetation , S	oil, or Hydrology	significantly	disturbed? A	Are "Normal (	 Circumstances" pres	sent? Yes	x No	0	
	oil, or Hydrology				plain any answers i				-
	DINGS – Attach site			g point lo	cations, transe	cts, impoi	rtant feat	ures,	etc.
Hydrophytic Vegetation	Present? Yes X	No	Is the	Sampled A	rea				
Hydric Soil Present?	Yes X	No	1	n a Wetland		X No			
Wetland Hydrology Pre	sent? Yes X	No			_				
Remarks:									
Upstream culvert crossi	ing of St. Regis River near l	RP1.75. Data	point along stre	eambank of S	st. Regis River.				
VEGETATION - Us	se scientific names o	f plants.							
		Absolute	Dominant	Indicator					
	Plot size:)	% Cover	Species?	Status	Dominance Tes	t worksheet:			
1. 2.					Number of Domii Are OBL, FACW	•	That	3	<b>(\( \)</b>
								<u> </u>	_ (A)
					Total Number of Across All Strata		ecies	3	(B)
			=Total Cover		Percent of Domir	nant Species	That		
Sapling/Shrub Stratum	(Plot size: 10'	)			Are OBL, FACW	•		0.0%	_ (A/B
Salix drummondiana	3	50	Yes	FACW					
2.					Prevalence Inde			, b	
3					Total % Cov OBL species	50	Multiply x 1 =	лыу. 50	-
5.					FACW species			160	-
		50	=Total Cover		FAC species		x 3 =	0	-
Herb Stratum (F	Plot size: 5')		_		FACU species	0	x 4 =	0	_
Carex aquatilis		50	Yes	OBL	UPL species	0	x 5 =	0	_
2. Senecio triangularis	·	20	Yes	FACW	Column Totals:_	`	′ —	210	_ (B)
3. <u>Epilobium ciliatum</u>		10	No	FACW	Prevalence In	dex = B/A =	1.62	<u></u>	-
_					Hydrophytic Vo	actation Indi	iootoro:		
					Hydrophytic Ve	st for Hydrop		ation	
7					X 2 - Dominan	-	-	auon	
					X 3 - Prevalence				
•						gical Adaptat		de supr	porting
					data in Re	emarks or on	a separate	sheet)	
11					5 - Wetland	Non-Vacular	Plants <sup>1</sup>		
		80	=Total Cover		Problematic	Hydrophytic \	√egetation¹	(Expla	ıin)
Woody Vine Stratum	(Plot size:				<sup>1</sup> Indicators of hyd				must
1.		_			be present, unles	s disturbed o	r problema	ITIC.	
<u> </u>			=Total Cover		Hydrophytic				
% Bare Ground in Herb	Stratum20		- 13.01 30761		Vegetation Present?	Yes X	No	_	
Remarks:									
Wetland species in herb	o and shrub lavers.								

SOIL Sampling Point: WL-02 Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features Loc<sup>2</sup> Color (moist) % Color (moist) Type<sup>1</sup> (inches) Texture Remarks 0-4 10YR 3/1 100 Loamy/Clayey silt-loam with gravel <sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils<sup>3</sup>: Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10) Histic Epipedon (A2) Stripped Matrix (S6) Red Parent Material (F21) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Very Shallow Dark Surface (F22) Hydrogen Sulfide (A4) X Other (Explain in Remarks) 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) <sup>3</sup>Indicators of hydrophytic vegetation and 2.5 cm Mucky Peat or Peat (S2) (LRR G) wetland hydrology must be present, Redox Depressions (F8) Sandy Gleyed Matrix (S4) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): 4 **Hydric Soil Present?** Yes No Remarks: Shallow soil layer over river gravels and cobbles. Wetland vegetation and hydrology present. HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (2 or more required) Surface Water (A1) Water-Stained Leaves (B9) (except Water-Stained Leaves (B9) (MLRA 1, 2 X High Water Table (A2) MLRA 1, 2, 4A, and 4B) 4A, and 4B) X Saturation (A3) Salt Crust (B11) X Drainage Patterns (B10) Water Marks (B1) Aquatic Invertebrates (B13) Dry-Season Water Table (C2) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Oxidized Rhizospheres on Living Roots (C3) Geomorphic Position (D2) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Frost-Heave Hummocks (D7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Depth (inches): Yes Water Table Present? Depth (inches): Saturation Present? Depth (inches): 0 Wetland Hydrology Present? Yes X No (includes capillary fringe)

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

Plot adjacent to flowing water in St. Regis River.

Project/Site: Taft - West		City/Cou	nty: Lookout	Pass/Mineral	Sampling Date:	7-19-2021
Applicant/Owner: Montana Department of Transpo	rtation			State: MT	Sampling Point:	UP-02
Investigator(s): Mark Traxler & Jon Schick - HDR		Section, 7	ownship, Rar	nge: Sec. 04; T19N;	R32W	
Landform (hillside, terrace, etc.): hillside		Local relief (co	oncave, conve	ex, none): none	Slop	oe (%): <u>10</u>
Subregion (LRR): LRR E Lat: 47.43	5262		Long: <u>-1</u>	15.677591	Datum:	NAD83
Soil Map Unit Name: Kawuneeche family, stream botto	oms			NWI clas	sification: NA	
Are climatic / hydrologic conditions on the site typical for	or this time o	f year?	Yes x		xplain in Remarks.)	
Are Vegetation, Soil, or Hydrology	significantly	disturbed? A	Are "Normal C			0
Are Vegetation, Soil, or Hydrology				plain any answers in F		
SUMMARY OF FINDINGS – Attach site ma			·	•	•	ures, etc.
Hydrophytic Vegetation Present? Yes N	o X	Is the	Sampled A	rea		
Hydric Soil Present? Yes N	o <u>X</u>	withi	n a Wetland?	? Yes	NoX	
Wetland Hydrology Present? Yes N	o_X					
Remarks:						
St. Regis River Inlet riprap protection extends for som occurs within the riprap section.	ne distance u	pstream from	culvert. Upla	nd data point adjacent	to wetland data poin	t (WL-02)
VEGETATION – Use scientific names of p	olants.					
	Absolute	Dominant	Indicator			
Tree Stratum (Plot size: 20' )	% Cover	Species?	Status	Dominance Test w		
1. Pinus contorta 2.	5	Yes	FAC	Number of Dominar Are OBL, FACW, or	•	1 (A)
3.				Total Number of Do		``
4.				Across All Strata:		3 (B)
	5	=Total Cover		Percent of Dominan	t Species That	
Sapling/Shrub Stratum (Plot size: 10'	)			Are OBL, FACW, or	FAC: 33	3.3% (A/B)
1. Amelanchier alnifolia	5	Yes	FACU	Drevelence Index :		
2				Prevalence Index v Total % Cover		, hv.
				OBL species	0 x 1 =	0
5.				FACW species	0 x 2 =	0
	5	=Total Cover		FAC species	5 x 3 =	15
Herb Stratum (Plot size: 5' )				FACU species	5 x 4 =	20
Centaurea stoebe	5	Yes	UPL	UPL species	5 x 5 =	25
2				Column Totals:	(,	60 (B)
3				Prevalence Index	x = B/A =4.00	)
				Hydrophytic Veget	ation Indicators	
6.					or Hydrophytic Veget	ation
7.				2 - Dominance		
8.				3 - Prevalence	ndex is ≤3.0 <sup>1</sup>	
9				4 - Morphologic	al Adaptations¹(Provi	de supporting
10					arks or on a separate	sheet)
11					n-Vacular Plants <sup>1</sup>	
Manda Vina Charlesa		=Total Cover		<del></del>	drophytic Vegetation <sup>1</sup>	
Woody Vine Stratum (Plot size:1.	-				soil and wetland hyd disturbed or problema	
2.						
		=Total Cover		Hydrophytic Vegetation		
% Bare Ground in Herb Stratum95	<del></del>				s No_X	_
Remarks:  Very little vegetation growing within the riprap.						

SOIL Sampling Point: UP-02 Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features Loc<sup>2</sup> Color (moist) Color (moist) Type<sup>1</sup> (inches) Texture Remarks 0-20 <sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils<sup>3</sup>: Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10) Histic Epipedon (A2) Stripped Matrix (S6) Red Parent Material (F21) Loamy Mucky Mineral (F1) (except MLRA 1) Black Histic (A3) Very Shallow Dark Surface (F22) Hydrogen Sulfide (A4) Other (Explain in Remarks) 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) <sup>3</sup>Indicators of hydrophytic vegetation and 2.5 cm Mucky Peat or Peat (S2) (LRR G) wetland hydrology must be present, Redox Depressions (F8) Sandy Gleyed Matrix (S4) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): **Hydric Soil Present?** Yes No Х Remarks: Could not dig soil pit in riprap bank section. No Hydric indicators **HYDROLOGY** Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (2 or more required) Surface Water (A1) Water-Stained Leaves (B9) (except Water-Stained Leaves (B9) (MLRA 1, 2 High Water Table (A2) MLRA 1, 2, 4A, and 4B) 4A, and 4B) Saturation (A3) Salt Crust (B11) Drainage Patterns (B10) Water Marks (B1) Aquatic Invertebrates (B13) Dry-Season Water Table (C2) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Drift Deposits (B3) Oxidized Rhizospheres on Living Roots (C3) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Frost-Heave Hummocks (D7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Depth (inches): Yes Water Table Present? Depth (inches): Saturation Present? Depth (inches): Wetland Hydrology Present? Yes No X (includes capillary fringe)

Dry riprap slope - no wetland hydrology indicators

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

Project/Site: Taft - West	City/Coun	ity: Lookout Pass/N	Mineral	Sampling Date:	7-19-2021
Applicant/Owner: Montana Department of Transportation	on	S	State: MT :	Sampling Point:	WL-03
Investigator(s): Mark Traxler & Jon Schick - HDR	Section, T	ownship, Range: _ <u>S</u>	Sec. 03; T19N; R32	w	
Landform (hillside, terrace, etc.): Mountain Meadow	Local relief (co	ncave, convex, non	e): concave	Slop	oe (%):2
Subregion (LRR): LRR E Lat: 47.434271		Long: -115.662	293	Datum:	NAD83
Soil Map Unit Name: Kawuneeche family, stream bottoms				 ation: PEM/PSS/	PAB
Are climatic / hydrologic conditions on the site typical for thi			 (If no, explai		
Are Vegetation, Soil, or Hydrologysigni	-				)
Are Vegetation, Soil, or Hydrologynatu		f needed, explain ar			
SUMMARY OF FINDINGS – Attach site map s		•	•	•	ures, etc.
Hydrophytic Vegetation Present? Yes X No	Is the	Sampled Area			
Hydric Soil Present? Yes X No	withir	n a Wetland?	Yes X	No	
Wetland Hydrology Present? Yes X No					
Remarks:					
Wet Meadow with pockets of standing water and PAB hab wetland.	itat. Wetland approxin	nately 40% PEM, 40	% PSS, 20% PAB.	Extensive wildlife	e sign in
VEGETATION - Use scientific names of plan	ts.				
	osolute Dominant	Indicator			
·	Cover Species?		inance Test works		
1			ber of Dominant Sp DBL, FACW, or FAC		3 (A)
3.			Number of Domina		<u> </u>
4.			ss All Strata:	•	3 (B)
	=Total Cover	Perc	ent of Dominant Spe	ecies That	
Sapling/Shrub Stratum (Plot size: 10')		Are 0	OBL, FACW, or FAC	): <u>100</u>	0.0% (A/B
1. Salix drummondiana	40 Yes	FACW			
2. 3.			alence Index work		, b
1			Total % Cover of: species 50	Multiply x 1 = -	50
5.			W species 90		180
	40 =Total Cover		species 0	x 3 =	0
Herb Stratum (Plot size: 5' )		FAC	U species 0	x 4 =	0
1. Calamagrostis canadensis	50 Yes	FACW UPL	species 0	x 5 =	0
2. Schoenoplectus acutus	50 Yes		mn Totals: 140	`	230 (B)
3		Pi	revalence Index = E	B/A =1.64	<u> </u>
4			ophytic Vegetation	n Indicators:	
			I - Rapid Test for H		ation
7.			2 - Dominance Test		20011
8.		x 3	3 - Prevalence Index	x is ≤3.0 <sup>1</sup>	
9.			1 - Morphological Ad	laptations¹(Provid	de supportino
10			data in Remarks		sheet)
11			5 - Wetland Non-Va		
Was du Vina Chrahum	100 =Total Cover	I —	Problematic Hydropl		
Woody Vine Stratum (Plot size:)			cators of hydric soil resent, unless distur		
1				bed of problema	шо.
	=Total Cover		ophytic etation		
% Bare Ground in Herb Stratum 0			ent? Yes	XNo	<u>-</u>
Remarks:					
Carex also in wetland but outside plot. Spruce around per	ripnery of wet meadow.	-			

SOIL Sampling Point: WL-03 Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features Color (moist) % % Loc<sup>2</sup> (inches) Color (moist) Type<sup>1</sup> Texture Remarks 10YR 3/2 100 0-6 Loamy/Clayey 6-16 95 10YR 3/6 10YR 2/1 5 Loamy/Clayey

<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Red	duced Matrix, CS=Covered or Coated S	and Grains.	<sup>2</sup> Location: PL:	=Pore Lining, M=N	Matrix.
Hydric Soil Indicators: (Applicable to all LRR	s, unless otherwise noted.)		Indicators for Pro	blematic Hydric	Soils <sup>3</sup> :
Histosol (A1)	Sandy Redox (S5)		2 cm Muck (A <sup>2</sup>	10)	
Histic Epipedon (A2)	Stripped Matrix (S6)		Red Parent Ma	aterial (F21)	
Black Histic (A3)	Loamy Mucky Mineral (F1) (except	MLRA 1)	Very Shallow [	Dark Surface (F22	2)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)		Other (Explain	in Remarks)	
Depleted Below Dark Surface (A11)	X Depleted Matrix (F3)				
Thick Dark Surface (A12)	Redox Dark Surface (F6)				
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)		<sup>3</sup> Indicators of hydro	ophytic vegetation	and
2.5 cm Mucky Peat or Peat (S2) (LRR G)	Redox Depressions (F8)		wetland hydrol	logy must be pres	ent,
Sandy Gleyed Matrix (S4)			unless disturbe	ed or problematic.	
Restrictive Layer (if observed):					
Type:					
Depth (inches):		Hydric So	il Present?	Yes X	No
Remarks:					
Hydric Soil - meets criteria for F3					

### **HYDROLOGY**

HIDROLOGI				
Wetland Hydrology Indicato	rs:			
Primary Indicators (minimum o	of one is required	d; check all th	at apply)	Secondary Indicators (2 or more required)
Surface Water (A1)		Water-S	Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2
X High Water Table (A2)		MLF	RA 1, 2, 4A, and 4B)	<b>4A, and 4B</b> )
X Saturation (A3)		Salt Cru	ust (B11)	Drainage Patterns (B10)
Water Marks (B1)		Aquatic	Invertebrates (B13)	Dry-Season Water Table (C2)
Sediment Deposits (B2)		— Hydrog	en Sulfide Odor (C1)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)		Oxidize	d Rhizospheres on Living Ro	ots (C3) Geomorphic Position (D2)
Algal Mat or Crust (B4)		Presen	ce of Reduced Iron (C4)	Shallow Aquitard (D3)
Iron Deposits (B5)		Recent	Iron Reduction in Tilled Soils	(C6) X FAC-Neutral Test (D5)
Surface Soil Cracks (B6)		Stunted	or Stressed Plants (D1) (LRI	R A) Raised Ant Mounds (D6) (LRR A)
Inundation Visible on Aeri	al Imagery (B7)	Other (I	Explain in Remarks)	Frost-Heave Hummocks (D7)
Sparsely Vegetated Conc	ave Surface (B8	)		<del></del>
Field Observations:				
Surface Water Present?	Yes	No X	Depth (inches):	
Water Table Present?	Yes X	No	Depth (inches): 10	
Saturation Present?	Yes X	No	Depth (inches): 6	Wetland Hydrology Present? Yes X No
(includes capillary fringe)			, ,	, <u>—</u> —
Describe Recorded Data (stre	am gauge, moni	toring well, ac	erial photos, previous inspection	ons), if available:
Remarks:				
Wet meadow with standing po	ckets of surface	water near w	etland data plot.	

Project/Site: Taft - V	Vest			City/Cou	nty: Lookout	Pass/Mineral		Sampling Dat	e: <u>7-1</u> 9	9-2021
Applicant/Owner:	Montana Depart	ment of Trans	sportation			State:	MT	Sampling Poir	nt: <u> </u>	JP-03
Investigator(s): Mark	κ Traxler & Jon Sc	hick - HDR		Section,	Гownship, Raı	nge: Sec. 03;	Γ19N; R32	:W		
Landform (hillside, to	errace, etc.): Roa	dside Fill Slo	ре	Local relief (c	oncave, conve	ex, none): cor	ıcave		Slope (%	): 10
Subregion (LRR):	LRR E	Lat: 47	.434362		Long: -1	15.662468		 Datur	m: NAI	 D83
Soil Map Unit Name								ation: NA		
Are climatic / hydrole				of year?						
Are Vegetation	_			-						
Are Vegetation	_					' plain any answe				_
SUMMARY OF								•	atures	s, etc.
Hydrophytic Vegeta	ation Present?	⁄es	No X	Is the	e Sampled A	rea				
Hydric Soil Present	t? \	/es	No X	withi	in a Wetland?	? Ye	s	No X		
Wetland Hydrology	Present?	Yes	No <u>X</u>							
Remarks:										
Roadside fill slope	adjacent to WL-03	3								
VEGETATION -	- Use scientifi	c names o								
Tree Stratum	(Plot size:	)	Absolute % Cover		Indicator Status	Dominance 1	Cast works	shoot:		
1.	(1 101 3126.		70 COVE	<u>Opecies:</u>		Number of Do				
2.		-				Are OBL, FAC			0	(A)
3.						Total Number	of Domina	ant Species		_ ` `
I 4						Across All Str		· _	3	(B)
				_=Total Cover		Percent of Do				
Sapling/Shrub Stra		ize:	)			Are OBL, FAC	CW, or FAC	<sup>D:</sup> _	0.0%	_ (A/B)
1						Duning laws and				
2						Prevalence II	naex work Cover of:		tiply by:	
I 4						OBL species	0	x 1 =	0	_
5.						FACW specie		x 2 =		_
		,		=Total Cover		FAC species		x 3 =		_
Herb Stratum	(Plot size:	5' )		_		FACU species	s 60	x 4 =	240	_
1. Achillea millefol	lium		30	Yes	<u>FACU</u>	UPL species	15	x 5 =	75	_
2. Fragaria vesca			30	Yes	_FACU_	Column Total		(A)	315	(B)
3. <u>Centaurea stoe</u>	be		15	Yes	UPL	Prevalence	Index = I	B/A =4	1.20	_
4						I le relevente estic				-
5.						Hydrophytic	_	ydrophytic Ve		
6							nance Test		getation	
7. 8.						_	lence Inde			
9.								daptations <sup>1</sup> (Pr	ovide su	pporting
10						data in	Remarks	or on a separa	ate sheet	i)
11						5 - Wetlai	nd Non-Va	cular Plants <sup>1</sup>		
			75	_=Total Cover		Problema	tic Hydrop	hytic Vegetati	on¹ (Exp	lain)
Woody Vine Stratu  1.		ize:				<sup>1</sup> Indicators of be present, ur				y must
2.						Hydrophytic				
				=Total Cover		Vegetation				
% Bare Ground in I	Herb Stratum _	25				Present?	Yes	No _	X	
Remarks:										

SOIL Sampling Point: **UP-03** Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features Loc<sup>2</sup> Color (moist) % Color (moist) Type<sup>1</sup> (inches) Texture Remarks 0-6 10YR 3/2 100 Loamy/Clayey loam with gravel <sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils<sup>3</sup>: Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10) Histic Epipedon (A2) Stripped Matrix (S6) Red Parent Material (F21) Loamy Mucky Mineral (F1) (except MLRA 1) Black Histic (A3) Very Shallow Dark Surface (F22) Hydrogen Sulfide (A4) Other (Explain in Remarks) 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) <sup>3</sup>Indicators of hydrophytic vegetation and 2.5 cm Mucky Peat or Peat (S2) (LRR G) wetland hydrology must be present, Redox Depressions (F8) Sandy Gleyed Matrix (S4) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): **Hydric Soil Present?** Yes 6 No Х Remarks: Soil comprised of highway fill material. No hydric indicators **HYDROLOGY** Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (2 or more required) Surface Water (A1) Water-Stained Leaves (B9) (except Water-Stained Leaves (B9) (MLRA 1, 2 High Water Table (A2) MLRA 1, 2, 4A, and 4B) 4A, and 4B) Saturation (A3) Salt Crust (B11) Drainage Patterns (B10) Water Marks (B1) Aquatic Invertebrates (B13) Dry-Season Water Table (C2) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Oxidized Rhizospheres on Living Roots (C3) Geomorphic Position (D2) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Frost-Heave Hummocks (D7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Depth (inches): Yes Water Table Present? Depth (inches): Saturation Present? Depth (inches): Wetland Hydrology Present? Yes No X

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

Dry fill slope - no wetland hydrology indicators

(includes capillary fringe)

Project/Site: Taft - West		City/Cour	nty: Lookout	Pass/Mineral	Sa	ampling Date:	7-19	-2021
Applicant/Owner: Montana Department of Transpo	ortation			State:	MT Sa	ampling Point:	WI	L-04
Investigator(s): Mark Traxler & Jon Schick - HDR		Section, T	ownship, Rar	nge: <u>Sec.11; T</u>	19N; R32W			
Landform (hillside, terrace, etc.): drain ditch		Local relief (co	oncave, conve	ex, none): con	cave	Slo	pe (%):	: 2
Subregion (LRR): LRR E Lat: 47.42	23366		Long: -1	15.635981		 Datum:	NAD	 )83
Soil Map Unit Name: Kawuneeche family, stream bott					/I classificati	on: PEM		
Are climatic / hydrologic conditions on the site typical		f vear?	Yes x					
Are Vegetation, Soil, or Hydrology		•						
Are Vegetation, Soil, or Hydrology				plain any answei				_
SUMMARY OF FINDINGS – Attach site m	_		·	•		,	ıtures,	, etc.
Hydrophytic Vegetation Present? Yes X	lo	Is the	Sampled Ar	rea				
·	lo	withi	n a Wetland?	? Yes	s <u>X</u>	No		
Wetland Hydrology Present? Yes X N	<del></del>							
Remarks:								
Roadside ditch between old highway and interstate.	Ditch approxi	mately 2-3 fee	t wide across	bottom.				
VECETATION Lies esigntific names of	nlonto							
VEGETATION – Use scientific names of	Absolute	Dominant	Indicator					
Tree Stratum (Plot size: )	% Cover		Status	Dominance T	est worksh	eet:		
1				Number of Do	minant Spec	cies That		
2				Are OBL, FAC	W, or FAC:		3	_ (A)
3.				Total Number		t Species		
4				Across All Stra			3	– <sup>(B)</sup>
Sapling/Shrub Stratum (Plot size:	\	=Total Cover		Percent of Don Are OBL, FAC	•		00.0%	/
1.	_ /			Ale OBL, FAC	VV, OI FAC.		00.070	_ (A/D)
2.				Prevalence In	idex works!	heet:		
3.				Total % C	Cover of:	Multip	ly by:	
4.				OBL species	20	x 1 =	20	_
5				FACW species	s <u>35</u>	_ x 2 =	70	_
		=Total Cover		FAC species	25	_ x 3 =	75	_
Herb Stratum (Plot size: 5' )	20	V	EA C)A/	FACU species		_ x4=	20	_
Calamagrostis canadensis     Schoenoplectus acutus	20	Yes Yes	OBL FACW	UPL species Column Totals	0 s: 85	x 5 = (A)	0 185	– (B)
3. Equisetum arvense	20	Yes	FAC		Index = B/	_ ` <i>'</i>		<b>–</b> (D)
4. Heracleum maximum	5	No	FAC					_
5. Solidago canadensis	5	No	FACU	Hydrophytic \	Vegetation	Indicators:		
6. Castilleja miniata	5	No	FACW	1 - Rapid	Test for Hyd	Irophytic Vege	tation	
7				X 2 - Domin				
8.				X 3 - Prevale				
9.						ptations <sup>1</sup> (Prov		
10	-				nd Non-Vacu		; 511661)	
11	85	=Total Cover				/tic Vegetation	ı¹ (Expla	ain)
Woody Vine Stratum (Plot size:				<sup>1</sup> Indicators of I		_		
1.				be present, un				must
2.				Hydrophytic				
		=Total Cover		Vegetation				
% Bare Ground in Herb Stratum15				Present?	Yes X	No		
Remarks:								
Dominanace of wetland vegetation. Plot includes so	me upland for	bs because w	idth of wetlan	id is small.				

Depth Matrix inches) Color (moist) %	Color (moist)	x Features  % Type <sup>1</sup>	Loc <sup>2</sup>	Textur	e	Re	emarks	
0-6 10Yr 3/1 98		2 RM	M	Loamy/Cl			with gravel	
						,		
						1		
	_					,		
	_					1		
Type: C=Concentration, D=Depletion,	PM-Peduced Matrix (	S=Covered or Co		and Grains	<sup>2</sup> l ocatio	on: PL=Pore Li	ning M=Mat	triv
lydric Soil Indicators: (Applicable to			oated Sa			for Problemati		-
Histosol (A1)	Sandy Red			_		uck (A10)	,	
Histic Epipedon (A2)	Stripped M			_		rent Material (F	21)	
Black Histic (A3)		ıcky Mineral (F1)	(except	MLRA 1)		iallow Dark Sur	,	
Hydrogen Sulfide (A4)		eyed Matrix (F2)		´ <del>-</del>		Explain in Rema	, ,	
Depleted Below Dark Surface (A11)	) Depleted N	Matrix (F3)		_		·	•	
Thick Dark Surface (A12)	X Redox Da	rk Surface (F6)						
Sandy Mucky Mineral (S1)	Depleted [	Dark Surface (F7)		3	Indicators of	of hydrophytic v	egetation ar	nd
2.5 cm Mucky Peat or Peat (S2) <b>(LF</b>	Redox De	pressions (F8)			wetland	hydrology mus	t be present	t,
Sandy Gleyed Matrix (S4)	<del></del>				unless	disturbed or pro	blematic.	
estrictive Layer (if observed):								
Type: rock								
Depth (inches): 6				Hydric Soil	Present?	Ye	s_XI	No
Remarks:				Hydric Soil	Present?	Ye	s_XI	No
Remarks: Meets hydric soil criteria F6.				Hydric Soil	Present?	Ye	s_XI	No
Remarks: Meets hydric soil criteria F6.  YDROLOGY				Hydric Soil	Present?	Ye	s <u>X</u> I	No
Remarks: Meets hydric soil criteria F6.  YDROLOGY  Wetland Hydrology Indicators:							<del></del>	
Remarks:  Meets hydric soil criteria F6.  YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one is re	•		/avaant		Secondary I	ndicators (2 or	more requir	ed)
Remarks:  Meets hydric soil criteria F6.  YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one is recommon of the common of the commo	Water-Sta	ined Leaves (B9)			Secondary I Water-S	ndicators (2 or Stained Leaves	more requir	<u></u>
Primary Indicators (minimum of one is re Surface Water (A1) High Water Table (A2)	Water-Sta	ined Leaves (B9) <b>1, 2, 4A, and 4B</b> )		<u>S</u>	Secondary I Water-S 4A, a	ndicators (2 or Stained Leaves and 4B)	more requir (B9) ( <b>MLR</b> A	<u></u>
Primary Indicators (Materia Water Table (A2)  Saturation (A3)	Water-Stai MLRA Salt Crust	ined Leaves (B9) 1, 2, 4A, and 4B) (B11)		<u>S</u>	Secondary I Water-S 4A, a X Drainag	ndicators (2 or Stained Leaves and 4B) le Patterns (B10	more requir (B9) ( <b>MLRA</b>	<u></u>
Remarks:  Meets hydric soil criteria F6.  YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one is really Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)	Water-Stal MLRA Salt Crust Aquatic In	ined Leaves (B9) 1, 2, 4A, and 4B) (B11) vertebrates (B13)		<u>S</u>	Secondary I  Water-S  4A, a  X Drainag  Dry-Sea	ndicators (2 or Stained Leaves and 4B) le Patterns (B10 ason Water Tab	more requir (B9) (MLRA	ed)
Remarks:  Meets hydric soil criteria F6.  YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one is result of some is result)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  X Sediment Deposits (B2)	Water-Stal MLRA Salt Crust Aquatic In	ined Leaves (B9)  1, 2, 4A, and 4B) (B11) vertebrates (B13) Sulfide Odor (C1)	)		Secondary I  Water-S  4A, i  X Drainag  Dry-Sea  Saturati	ndicators (2 or Stained Leaves and 4B) le Patterns (B10 ason Water Tab on Visible on A	more requir (B9) ( <b>MLRA</b> 0) ole (C2) erial Imager	ed)
Remarks:  Meets hydric soil criteria F6.  YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one is reserved)  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  X Sediment Deposits (B2)  X Drift Deposits (B3)	Water-Stal MLRA Salt Crust Aquatic In Hydrogen Oxidized F	ined Leaves (B9)  1, 2, 4A, and 4B) (B11) vertebrates (B13) Sulfide Odor (C1) Rhizospheres on L	) Living Ro		Secondary I  Water-S  4A, i  X Drainag  Dry-Sea  Saturati  Geomo	ndicators (2 or Stained Leaves and 4B) de Patterns (B10 deson Water Tab deson Visible on A rphic Position (I	more requir (B9) ( <b>MLRA</b> 0) ole (C2) erial Imager	ed)
Remarks:  Meets hydric soil criteria F6.  YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one is reserved)  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  X Sediment Deposits (B2)	Water-Stal  MLRA  Salt Crust  Aquatic In  Hydrogen  Oxidized F  X Presence	ined Leaves (B9)  1, 2, 4A, and 4B) (B11) vertebrates (B13) Sulfide Odor (C1)	) Living Ro C4)	- Soots (C3)	Secondary I  Water-S  4A, a  X Drainag  Dry-Sea  Saturati  Geomon  Shallow	ndicators (2 or Stained Leaves and 4B) le Patterns (B10 ason Water Tab on Visible on A	more requir (B9) ( <b>MLRA</b> 0) ole (C2) erial Imager	ed)
Remarks:  Meets hydric soil criteria F6.  YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one is recomply)  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  X Sediment Deposits (B2)  X Drift Deposits (B3)  Algal Mat or Crust (B4)	Water-Stal  MLRA  Salt Crust  Aquatic In  Hydrogen  Oxidized F  X Presence  Recent Iro	ined Leaves (B9)  1, 2, 4A, and 4B) (B11) vertebrates (B13) Sulfide Odor (C1) Rhizospheres on L of Reduced Iron (	) Living Ro C4) lled Soils	oots (C3)	Secondary I Water-S 4A, a X Drainag Dry-Sea Saturati Geomol Shallow X FAC-Ne	ndicators (2 or Stained Leaves and 4B) as on Water Tabon Visible on Arphic Position (I	more requir (B9) ( <b>MLRA</b> 0) ole (C2) erial Imager D2)	ed)
Remarks: Meets hydric soil criteria F6.  YDROLOGY  Vetland Hydrology Indicators: Primary Indicators (minimum of one is research to the second of the second	Water-Stai  MLRA  Salt Crust  Aquatic In  Hydrogen  Oxidized F  X Presence  Recent Iro  Stunted or	ined Leaves (B9)  1, 2, 4A, and 4B) (B11) vertebrates (B13) Sulfide Odor (C1) Rhizospheres on L of Reduced Iron ( on Reduction in Til	) Living Ro C4) lled Soils	oots (C3)	Secondary I Water-S 4A, a X Drainag Dry-Sea Saturati Geomo Shallow X FAC-Ne Raised	ndicators (2 or Stained Leaves and 4B) le Patterns (B10 ason Water Tabon Visible on Arphic Position (I Aquitard (D3) eutral Test (D5)	more requir. (B9) (MLRA 0) ole (C2) erial Imager D2)	ed) \ 1, 2
Remarks:  Meets hydric soil criteria F6.  YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one is reserved by Saturation (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  X Sediment Deposits (B2)  X Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Surface Soil Cracks (B6)	Water-Stal  MLRA  Salt Crust  Aquatic Int  Hydrogen  Oxidized F  X Presence of  Recent Iro  Stunted or  y (B7)  Water-Stal	ined Leaves (B9)  1, 2, 4A, and 4B) (B11) vertebrates (B13) Sulfide Odor (C1) Rhizospheres on L of Reduced Iron ( on Reduction in Til r Stressed Plants	) Living Ro C4) lled Soils	oots (C3)	Secondary I Water-S 4A, a X Drainag Dry-Sea Saturati Geomo Shallow X FAC-Ne Raised	ndicators (2 or Stained Leaves and 4B) le Patterns (B10 ason Water Tab on Visible on A rphic Position (I or Aquitard (D3) eutral Test (D5) Ant Mounds (D	more requir. (B9) (MLRA 0) ole (C2) erial Imager D2)	ed) \ 1, 2
Remarks:  Meets hydric soil criteria F6.  YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one is reserved by the second secon	Water-Stal  MLRA  Salt Crust  Aquatic Int  Hydrogen  Oxidized F  X Presence of  Recent Iro  Stunted or  y (B7)  Water-Stal	ined Leaves (B9)  1, 2, 4A, and 4B) (B11) vertebrates (B13) Sulfide Odor (C1) Rhizospheres on L of Reduced Iron ( on Reduction in Til r Stressed Plants	) Living Ro C4) lled Soils	oots (C3)	Secondary I Water-S 4A, a X Drainag Dry-Sea Saturati Geomo Shallow X FAC-Ne Raised	ndicators (2 or Stained Leaves and 4B) le Patterns (B10 ason Water Tab on Visible on A rphic Position (I or Aquitard (D3) eutral Test (D5) Ant Mounds (D	more requir. (B9) (MLRA 0) ole (C2) erial Imager D2)	ed) \ 1, 2
Remarks:  Meets hydric soil criteria F6.  YDROLOGY  Netland Hydrology Indicators:  Primary Indicators (minimum of one is reserved by the second secon	Water-Stai  MLRA  Salt Crust  Aquatic Interpretation  Hydrogen  Oxidized F  X Presence  Recent Iro  Stunted or  y (B7)  Ce (B8)	ined Leaves (B9)  1, 2, 4A, and 4B) (B11) vertebrates (B13) Sulfide Odor (C1) Rhizospheres on L of Reduced Iron ( on Reduction in Til r Stressed Plants	) Living Ro C4) lled Soils	oots (C3)	Secondary I Water-S 4A, a X Drainag Dry-Sea Saturati Geomo Shallow X FAC-Ne Raised	ndicators (2 or Stained Leaves and 4B) le Patterns (B10 ason Water Tab on Visible on A rphic Position (I or Aquitard (D3) eutral Test (D5) Ant Mounds (D	more requir. (B9) (MLRA 0) ole (C2) erial Imager D2)	ed) \ 1, 2
Remarks:  Weets hydric soil criteria F6.  YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one is reserved by the second secon	Water-Stai  MLRA  Salt Crust  Aquatic Interpretation  Hydrogen  Oxidized F  X Presence of Recent Iro  Stunted or other (Expect (B8))	ined Leaves (B9)  1, 2, 4A, and 4B) (B11) vertebrates (B13) Sulfide Odor (C1) Rhizospheres on L of Reduced Iron ( on Reduction in Til r Stressed Plants plain in Remarks)	) Living Ro C4) lled Soils	oots (C3)	Secondary I Water-S 4A, a X Drainag Dry-Sea Saturati Geomo Shallow X FAC-Ne Raised	ndicators (2 or Stained Leaves and 4B) le Patterns (B10 ason Water Tab on Visible on A rphic Position (I or Aquitard (D3) eutral Test (D5) Ant Mounds (D	more requir. (B9) (MLRA 0) ole (C2) erial Imager D2)	ed) \ 1, 2
Remarks:  Weets hydric soil criteria F6.  IYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one is reserved.)  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  X Sediment Deposits (B2)  X Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Surface Soil Cracks (B6)  Inundation Visible on Aerial Imagery.  Sparsely Vegetated Concave Surface.	Water-Stain   MLRA	ined Leaves (B9)  1, 2, 4A, and 4B) (B11) vertebrates (B13) Sulfide Odor (C1) Rhizospheres on L of Reduced Iron ( on Reduction in Til Stressed Plants plain in Remarks)  Depth (inches):	) Living Ro C4) lled Soils	oots (C3)	Secondary I  Water-S  4A, i  X Drainag  Dry-Sea  Saturati  Geomol  Shallow  X FAC-Ne  Raised  Frost-Hi	ndicators (2 or Stained Leaves and 4B) le Patterns (B10 ason Water Tab on Visible on A rphic Position (I or Aquitard (D3) eutral Test (D5) Ant Mounds (D	more requir (B9) (MLRA 0) ole (C2) erial Imager D2) 6) (LRR A) is (D7)	ed) \ 1, 2
Remarks:  Meets hydric soil criteria F6.  YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one is reserved by Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  X Sediment Deposits (B2)  X Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Surface Soil Cracks (B6)  Inundation Visible on Aerial Imagery  Sparsely Vegetated Concave Surface Water Present?  Ves  Saturation Present? Yes  Saturation Present? Yes	Water-Stain   MLRA	ined Leaves (B9)  1, 2, 4A, and 4B) (B11) vertebrates (B13) Sulfide Odor (C1) Rhizospheres on L of Reduced Iron ( on Reduction in Til 'Stressed Plants plain in Remarks)  Depth (inches): Depth (inches):	) Living Ro C4) lled Soils	oots (C3)	Secondary I  Water-S  4A, i  X Drainag  Dry-Sea  Saturati  Geomol  Shallow  X FAC-Ne  Raised  Frost-Hi	ndicators (2 or Stained Leaves and 4B) de Patterns (B10 ason Water Tab on Visible on A rphic Position (I or Aquitard (D3) deutral Test (D5) Ant Mounds (D eave Hummock	more requir (B9) (MLRA 0) ole (C2) erial Imager D2) 6) (LRR A) is (D7)	ed)
Remarks:  Meets hydric soil criteria F6.  YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one is reserved by Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  X Sediment Deposits (B2)  X Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Surface Soil Cracks (B6)  Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface Surface Water Present?  Water Table Present?  Yes  Water Table Present?	Water-Stal   MLRA     Salt Crust     Aquatic In     Hydrogen     Oxidized F     X     Presence     Recent Iro     Stunted or     Other (Expose (B8)     No   X     No   X     No   X     No   X	ined Leaves (B9)  1, 2, 4A, and 4B) (B11) vertebrates (B13) Sulfide Odor (C1) Rhizospheres on L of Reduced Iron ( on Reduction in Til r Stressed Plants plain in Remarks)  Depth (inches): Depth (inches): Depth (inches):	.iving Rd C4) Iled Soils (D1) ( <b>LR</b>	oots (C3)	Secondary I  Water-S  4A, a  X Drainag  Dry-Sea  Saturati  Geomon  Shallow  X FAC-Ne  Raised  Frost-H	ndicators (2 or Stained Leaves and 4B) de Patterns (B10 ason Water Tab on Visible on A rphic Position (I or Aquitard (D3) deutral Test (D5) Ant Mounds (D eave Hummock	more requir (B9) (MLRA 0) ole (C2) erial Imager D2) 6) (LRR A) is (D7)	ed)
Primary Indicators (minimum of one is result of the state	Water-Stal   MLRA     Salt Crust     Aquatic In     Hydrogen     Oxidized F     X     Presence     Recent Iro     Stunted or     Other (Expose (B8)     No   X     No   X     No   X     No   X	ined Leaves (B9)  1, 2, 4A, and 4B) (B11) vertebrates (B13) Sulfide Odor (C1) Rhizospheres on L of Reduced Iron ( on Reduction in Til r Stressed Plants plain in Remarks)  Depth (inches): Depth (inches): Depth (inches):	.iving Rd C4) Iled Soils (D1) ( <b>LR</b>	oots (C3)	Secondary I  Water-S  4A, a  X Drainag  Dry-Sea  Saturati  Geomon  Shallow  X FAC-Ne  Raised  Frost-H	ndicators (2 or Stained Leaves and 4B) de Patterns (B10 ason Water Tab on Visible on A rphic Position (I or Aquitard (D3) deutral Test (D5) Ant Mounds (D eave Hummock	more requir (B9) (MLRA 0) ole (C2) erial Imager D2) 6) (LRR A) is (D7)	ed)
Remarks:  Meets hydric soil criteria F6.  YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one is reserved by the second of the secon	Water-Stal   MLRA     Salt Crust     Aquatic In     Hydrogen     Oxidized F     X     Presence     Recent Iro     Stunted or     Other (Expose (B8)     No   X     No   X     No   X     No   X	ined Leaves (B9)  1, 2, 4A, and 4B) (B11) vertebrates (B13) Sulfide Odor (C1) Rhizospheres on L of Reduced Iron ( on Reduction in Til r Stressed Plants plain in Remarks)  Depth (inches): Depth (inches): Depth (inches):	.iving Rd C4) Iled Soils (D1) ( <b>LR</b>	oots (C3)	Secondary I  Water-S  4A, a  X Drainag  Dry-Sea  Saturati  Geomon  Shallow  X FAC-Ne  Raised  Frost-H	ndicators (2 or Stained Leaves and 4B) de Patterns (B10 ason Water Tab on Visible on A rphic Position (I or Aquitard (D3) deutral Test (D5) Ant Mounds (D eave Hummock	more requir (B9) (MLRA 0) ole (C2) erial Imager D2) 6) (LRR A) is (D7)	ed) 11,2

Project/Site: Taft - West		City/Cour	nty: Lookout	Pass/Mineral	_ Sampling Date	7-19-2021
Applicant/Owner: Montana Department of Transp	ortation			State: MT	_ Sampling Point	:: <u>UP-04</u>
Investigator(s): Mark Traxler & Jon Schick - HDR		Section, T	ownship, Rai	nge: <u>Sec. 11; T19N;</u> F	R32W	
Landform (hillside, terrace, etc.): Roadway fill slope		Local relief (co	oncave, conve	ex, none): none	SI	ope (%): 5
Subregion (LRR): LRR E Lat: 47.42	23355		Long: -1	15.636008	 Datum	: NAD83
Soil Map Unit Name: Kawuneeche family, stream bot					sification: NA	
Are climatic / hydrologic conditions on the site typical		f vear?	Yes x		«plain in Remarks.)	
Are Vegetation, Soil, or Hydrology		-				
Are Vegetation, Soil, or Hydrology	<del>_</del>			plain any answers in R		
SUMMARY OF FINDINGS – Attach site m				•	,	atures, etc.
Hydrophytic Vegetation Present? Yes	No X	Is the	Sampled A	rea		
	No X	withi	n a Wetland?	? Yes	No <u>X</u>	
Wetland Hydrology Present? Yes	No <u>X</u>					
Remarks:						
Data point on highway fill slope. Matching upland pl	ot to WL-04					
VEGETATION – Use scientific names of	plants.					
Tree Stratum (Diet size) 201	Absolute	Dominant Species?	Indicator	Dominanae Teet we		
Tree Stratum (Plot size: 20' )  1. Picea engelmannii	% Cover	Species?	Status FAC	Dominance Test wo		
2.				Number of Dominant Are OBL, FACW, or	•	1 (A)
3.				Total Number of Don		(
4.				Across All Strata:		2 (B)
	1	=Total Cover		Percent of Dominant	Species That	
Sapling/Shrub Stratum (Plot size: 10'	_)			Are OBL, FACW, or	FAC:	50.0% (A/B)
1	_					
2				Prevalence Index w Total % Cover of		dy by:
3					0 x1=	0
5.	_				10 x 2 =	20
		=Total Cover			31 x 3 =	93
Herb Stratum (Plot size: 5' )				FACU species	50 x 4 =	200
Dactylis glomerata	30	Yes	FACU	UPL species	2 x 5 =	10
2. Equisetum arvense	30	Yes	FAC		93 (A)	323 (B)
3. Leucanthemum vulgare	_ 10	No	FACU	Prevalence Index	= B/A =3.4	47
Castilleja miniata     Solidago canadensis	10	No No	FACU FACU	Hydrophytic Vegets	tion Indicators	
6. Centaurea stoebe	2	No No	UPL	Hydrophytic Vegeta	or Hydrophytic Veg	etation
7	- <u>-</u>			2 - Dominance T		station
8.				3 - Prevalence Ir		
9.				4 - Morphologica	al Adaptations¹(Pro	vide supporting
10				data in Remar	rks or on a separat	e sheet)
11	_			5 - Wetland Non		
	92	=Total Cover		Problematic Hyd	Irophytic Vegetatio	n¹ (Explain)
Woody Vine Stratum (Plot size:	<b>-</b> '			<sup>1</sup> Indicators of hydric		
1.				be present, unless d	sturbed or problem	iatic.
2		=Total Cover		Hydrophytic		
% Bare Ground in Herb Stratum 8				Vegetation Present? Yes	s No_>	<u>&lt;</u>
Remarks: Upland grasses, forbs and weedy species						

SOIL Sampling Point: UP-04 Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features Loc<sup>2</sup> Color (moist) % Color (moist) Type<sup>1</sup> (inches) Texture Remarks 0-6 10YR 3/2 100 Loamy/Clayey Loam with rocks <sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils<sup>3</sup>: 2 cm Muck (A10) Histosol (A1) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6) Red Parent Material (F21) Loamy Mucky Mineral (F1) (except MLRA 1) Black Histic (A3) Very Shallow Dark Surface (F22) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) <sup>3</sup>Indicators of hydrophytic vegetation and 2.5 cm Mucky Peat or Peat (S2) (LRR G) Redox Depressions (F8) wetland hydrology must be present, Sandy Gleyed Matrix (S4) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): **Hydric Soil Present?** Yes 6 No Х Remarks: Highway fill slope material. No hydrid soil indicators. HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (2 or more required) Surface Water (A1) Water-Stained Leaves (B9) (except Water-Stained Leaves (B9) (MLRA 1, 2 High Water Table (A2) MLRA 1, 2, 4A, and 4B) 4A, and 4B) Saturation (A3) Salt Crust (B11) Drainage Patterns (B10) Water Marks (B1) Aquatic Invertebrates (B13) Dry-Season Water Table (C2) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Oxidized Rhizospheres on Living Roots (C3) Geomorphic Position (D2) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Frost-Heave Hummocks (D7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Depth (inches): Yes Water Table Present? Depth (inches): Saturation Present? Depth (inches): Wetland Hydrology Present? Yes No X

No wetland hydrology on road slope.

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

(includes capillary fringe)

Remarks:

Project/Site: Taft - West		City/Cour	nty: Lookou	it Pass/Mineral	Sampling Date:	7-19-2021
Applicant/Owner: Montana Department of Transpor	rtation			State: MT	Sampling Point:	WL-05
Investigator(s): Mark Traxler & Jon Schick - HDR		Section, T	ownship, Ra	ange: Sec.11; T19N; R3	2W	
Landform (hillside, terrace, etc.): Wet meadow		Local relief (co	oncave, conv	vex, none): concave	Slop	oe (%):1_
Subregion (LRR): LRR E Lat: 47.422	2776		Long: <u>-</u>	115.635464	Datum:	NAD83
Soil Map Unit Name: Kawuneeche family, stream botto	oms			NWI classif	ication: PEM/PSS	
Are climatic / hydrologic conditions on the site typical for		f year?	Yes x		olain in Remarks.)	
Are Vegetation, Soil, or Hydrologys	significantly					<b>o</b>
Are Vegetation, Soil, or Hydrology				xplain any answers in Rei		
SUMMARY OF FINDINGS – Attach site ma				•	,	ures, etc.
Hydrophytic Vegetation Present? Yes X No	·	Is the	Sampled A	Area		
		withi	n a Wetland	!? Yes <u>X</u>	No	
Wetland Hydrology Present? Yes X No	<u> </u>					
Remarks:						
Large wetland meadow complex.						
VEGETATION – Use scientific names of p	lante					
VEGETATION – Ose scientific flames of p	Absolute	Dominant	Indicator	1		
Tree Stratum (Plot size: 20' )	% Cover	Species?	Status	Dominance Test wor	ksheet:	
1. Picea engelmannii	5	Yes	FAC	Number of Dominant S	Species That	
2. Pinus contorta	5	Yes	FAC	Are OBL, FACW, or F.	AC:	5 (A)
3.				Total Number of Domi	nant Species	- (5)
4		=Total Cover		Across All Strata:		5 (B)
Sapling/Shrub Stratum (Plot size: 10'	10	- Total Cover		Percent of Dominant S Are OBL, FACW, or F.	•	0.0% (A/B)
1. Salix drummondiana	, 10	Yes	FACW	Ale OBE, I ACW, OIT	<u>10</u>	<u>0.070</u> (A/D)
2.				Prevalence Index wo	rksheet:	
3.				Total % Cover of	: Multiply	by:
4				OBL species 50	0 x 1 =	50
5				FACW species50		100
	10	=Total Cover		FAC species10	<del></del>	30
Herb Stratum (Plot size: 5' )	40	Voc	EACW.	FACU species 0		0
Calamagrostis canadensis     Schoenoplectus acutus	40	Yes Yes	OBL	UPL species0 Column Totals: 11		0 180 (B)
3. Carex nebrascensis	10	No	OBL	Prevalence Index	`'	
4.						
5.				Hydrophytic Vegetat	ion Indicators:	
6				1 - Rapid Test for	Hydrophytic Vegeta	ation
7				X 2 - Dominance Te		
8.				X 3 - Prevalence Inc		
9.				<del></del>	Adaptations <sup>1</sup> (Provides or on a separate	
10				5 - Wetland Non-\		sileet)
11	90	=Total Cover		<del></del>	ophytic Vegetation <sup>1</sup>	(Explain)
Woody Vine Stratum (Plot size:		<b>-</b> -		¹Indicators of hydric so		
1.				be present, unless dis		
2.				Hydrophytic		
% Bare Ground in Herb Stratum 10		=Total Cover		Vegetation	X No	
				Tresent: 165		
Remarks: Wetland dominated by Salix and various species in he	erbaceous la	yer.				

SOIL Sampling Point: WL-05

Profile Desc Depth	ription: (Describe to Matrix	to the dept		<b>ment th</b> Featur		itor or c	confirm the	absence of	indicators.)	
(inches)	Color (moist)		Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Text	ture	Remar	ks
0-7	10YR 3/2	100			71		Loamy/		Loam with	roots
7-20	10YR 2/2	95	10YR 5/6	5		PL/M	Loamy/		grave	
	1011(2/2		10111070			1 12/101	Loamy	Oldycy	giuvo	<u> </u>
	-									
	oncentration, D=Dep					oated S	and Grains.		ion: PL=Pore Lining,	
	Indicators: (Applica	ble to all L							for Problematic Hy	dric Soils':
— Histosol			Sandy Red						Muck (A10)	
	oipedon (A2)		Stripped M	`	,	lovoont	MI DA 4\		arent Material (F21)	<b>(</b> E22)
Black His			Loamy Muc	-		(except	WILKA 1)		hallow Dark Surface	
	n Sulfide (A4) I Below Dark Surface	(Δ11)	Loamy Gle					Other	(Explain in Remarks)	
·	rk Surface (A12)	(Д11)	Redox Darl							
	lucky Mineral (S1)		Depleted D		. ,	١		<sup>3</sup> Indicators	of hydrophytic veget	ation and
	lucky Peat or Peat (	S2) (LRR <b>G</b> )			٠,				d hydrology must be	
	leyed Matrix (S4)	, (	· — '		( - /				disturbed or problem	
Restrictive I	_ayer (if observed):									
Туре:										
Depth (ir	nches):		_				Hydric S	oil Present?	Yes	X No
Remarks:										
Faint redox b	elow 7". Meets crite	ria for F3.								
LIVEROLO	CV									
HYDROLO										
_	drology Indicators:	no la roquir	ad, abaak all that a	nnl.()				Cocondon	Indicators (2 or more	roquirod)
-	cators (minimum of o Water (A1)	ne is require	Water-Stair		wes (R0)	(ovcon	+		Indicators (2 or more Stained Leaves (B9)	
	,								and 4B)	(WILIXA I, Z
`	X High Water Table (A2) MLRA 1, 2, 4A, and 4B) Saturation (A3) Salt Crust (B11)					,		•	ge Patterns (B10)	
	Water Marks (B1)  Aquatic Invertebrates (B13)								eason Water Table (C	(2)
	Sediment Deposits (B2)  Hydrogen Sulfide Odor (C1)								tion Visible on Aerial	•
Drift Deposits (B3) Oxidized Rhizospheres on Living						Living R	oots (C3)	Geomo	orphic Position (D2)	
Algal Mat or Crust (B4) Presence of Reduced Iron (C4)						(C4)		Shallov	w Aquitard (D3)	
Iron Deposits (B5) Recent Iron Reduction in Tilled So						lled Soil	ls (C6)	X FAC-N	leutral Test (D5)	
Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (L					(D1) ( <b>L</b> l	RR A)	Raised	l Ant Mounds (D6) ( <b>L</b>	RR A)	
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)							Frost-H	Heave Hummocks (D	7)	
Sparsely	Vegetated Concave	Surface (B	8)						,	
Field Obser										
Surface Wate					nches): _					
Water Table					nches): _	16	18/24/-	ما الرياسة ا	· Dwaggeto - V	V N-
Saturation P		s <u>X</u>	No	eptn (i	nches): _	10	wetlan	a Hydrology	/ Present? Yes	X No
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:										
Describe 1/60	onded Data (Stredill	gauge, moi	morning well, aellal	ριισισδ	, previous	, moher	nionioj, ii ava	anabic.		
Remarks:						-	1			
	ater but water in pit	and soil sati	urated at 10".							

Project/Site: Taft - West	City/Cou	nty: Lookout	Sampling Date	e: <u>7-19-2021</u>				
Applicant/Owner: Montana Department of Transpo	ortation			State: MT	Sampling Poin	nt: <u>UP-05</u>		
Investigator(s): Mark Traxler & Jon Schick - HDR		Section, Township, Range: Sec.11; T19N; R32W						
Landform (hillside, terrace, etc.): hillside		Local relief (co	oncave, conve	ex, none): concave	S	Slope (%): 5		
Subregion (LRR): LRR E Lat: 47.42	2824		Long: -1	15.63539	Datun	n: NAD83		
Soil Map Unit Name: Kawuneeche family, stream bott			_		sification: NA			
Are climatic / hydrologic conditions on the site typical f		f vear?	Yes x	No (If no, e		)		
Are Vegetation, Soil, or Hydrology		•						
Are Vegetation, Soil, or Hydrology				plain any answers in R				
SUMMARY OF FINDINGS – Attach site m				·	•	atures, etc.		
Hydrophytic Vegetation Present? Yes N	lo X	Is the	e Sampled Aı	rea				
	lo X	i i	n a Wetland?		No X			
	lo X							
Remarks:								
Matching upland plot to WL-05								
VEGETATION – Use scientific names of p	olants.							
	Absolute	Dominant	Indicator					
Tree Stratum (Plot size: 20' )	% Cover	Species?	Status	Dominance Test w	orksheet:			
1. Picea engelmannii	5	Yes	FAC	Number of Dominan	•	2 (4)		
2. Pinus contorta 3.	5	Yes	FAC	Are OBL, FACW, or		(A)		
4.				Total Number of Do Across All Strata:	minant Species	4 (B)		
··· -	10	=Total Cover		Percent of Dominan	t Species That	(5)		
Sapling/Shrub Stratum (Plot size: 10'	)			Are OBL, FACW, or	•	50.0% (A/B)		
1	· 							
2.				Prevalence Index v	vorksheet:			
3				Total % Cover	of: Multi	iply by:		
4				OBL species	0 x 1 =	0		
5	· <del></del>			FACW species	10 x 2 =	20		
Herb Stratum (Plot size: 5' )		=Total Cover		FAC species FACU species	20 x 3 = 30 x 4 =	120		
1. Bromus inermis	20	Yes	UPL	UPL species	20 x 5 =	100		
2. Equisetum arvense	5	No	FAC	· · · · · · · · · · · · · · · · · · ·	80 (A)	300 (B)		
3. Leucanthemum vulgare	10	No	FACU	Prevalence Index	` ' _	.75		
4. Castilleja miniata	10	No	FACW					
5. Phleum pratense	5	No	FAC	Hydrophytic Veget	ation Indicators:			
6. Achillea millefolium	20	Yes	<u>FACU</u>	1 - Rapid Test f	or Hydrophytic Veg	getation		
7				2 - Dominance				
8				3 - Prevalence I				
9.					al Adaptations¹(Pro			
10	· <del></del>				arks or on a separa	ite sneet)		
11	70	-Total Cover			n-Vacular Plants <sup>1</sup> drophytic Vegetatio	on <sup>1</sup> (Evoloin)		
Woody Vine Stratum (Plot size:		=Total Cover		<del></del>				
1	• •			<sup>1</sup> Indicators of hydric be present, unless of				
2.								
		=Total Cover		Hydrophytic Vegetation				
% Bare Ground in Herb Stratum30					s No	X		
Remarks:								
Mix upland grass and forbs								

SOIL Sampling Point: **UP-05** Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features Loc<sup>2</sup> Color (moist) % Color (moist) Type<sup>1</sup> (inches) Texture Remarks 0-6 10YR 4/2 100 Loamy/Clayey Loam with rocks <sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils<sup>3</sup>: Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10) Histic Epipedon (A2) Stripped Matrix (S6) Red Parent Material (F21) Loamy Mucky Mineral (F1) (except MLRA 1) Black Histic (A3) Very Shallow Dark Surface (F22) Hydrogen Sulfide (A4) Other (Explain in Remarks) 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) <sup>3</sup>Indicators of hydrophytic vegetation and 2.5 cm Mucky Peat or Peat (S2) (LRR G) Redox Depressions (F8) wetland hydrology must be present, Sandy Gleyed Matrix (S4) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): **Hydric Soil Present?** Yes No Х Remarks: No hydric soil indicators. HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (2 or more required) Surface Water (A1) Water-Stained Leaves (B9) (except Water-Stained Leaves (B9) (MLRA 1, 2 High Water Table (A2) MLRA 1, 2, 4A, and 4B) 4A, and 4B) Saturation (A3) Salt Crust (B11) Drainage Patterns (B10) Water Marks (B1) Aquatic Invertebrates (B13) Dry-Season Water Table (C2) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Oxidized Rhizospheres on Living Roots (C3) Geomorphic Position (D2) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Frost-Heave Hummocks (D7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Depth (inches): Yes Water Table Present? Depth (inches): Saturation Present? Depth (inches): Wetland Hydrology Present? Yes No X (includes capillary fringe)

Remarks:
No hydrology indicators

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

Project/Site: Taft - West		City/Cour	Sampl	Sampling Date:		2021			
Applicant/Owner: Montana Department of Transport	tation			State:N	<u>/IT</u> Sampli	Sampling Point:		WL-06	
Investigator(s): Mark Traxler & Jon Schick - HDR		Section, T	ownship, Ra	nge: <u>Sec. 04; T</u> 1	9N; R32W				
Landform (hillside, terrace, etc.): Bench		Local relief (co	oncave, conve	ex, none): conc	ave	Slop	e (%):	1	
Subregion (LRR): LRR E Lat: 47.418	036		Long: <u>-1</u>	15.622813		Datum:	NAD8	83	
Soil Map Unit Name: Kawuneeche family, stream botton	ms			NWI	classification:	PEM/PSS			
Are climatic / hydrologic conditions on the site typical fo		f year?	Yes x	No (If I					
Are Vegetation, Soil, or Hydrologys	significantly	-					,		
Are Vegetation, Soil, or Hydrologyr				plain any answers				-	
SUMMARY OF FINDINGS – Attach site ma					,	tant feat	ures,	etc.	
Hydrophytic Vegetation Present? Yes X No		Is the	Sampled A	rea					
Hydric Soil Present? Yes X No		withi	n a Wetland	? Yes	X No _				
Wetland Hydrology Present? Yes X No	<u> </u>								
Remarks:									
Bench adjacent to St Regis River and standing water.									
VEGETATION – Use scientific names of pl	lants.								
Tree Stratum (Plot size: )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Te	et workshoot:				
1. (Flot size)	76 Cover	Species?	Status			Th at			
2.				Number of Don Are OBL, FACV	•		2	(A)	
3.				Total Number o	of Dominant Spe	ecies		•	
4.				Across All Strat			2	(B)	
		=Total Cover		Percent of Dom	•				
Sapling/Shrub Stratum (Plot size: 10')	0.5	V	E 4 6)4/	Are OBL, FAC	V, or FAC:	100	0.0%	- (A/B)	
1. Salix drummondiana	25	Yes	FACW	Prevalence Inc	lov workshoot				
2				Total % Co		Multiply	bv.		
				OBL species			30	-	
5.				FACW species	35	x 2 = 7	70	-	
	25	=Total Cover		FAC species	0 :	x 3 =	0	- -	
Herb Stratum (Plot size: 5' )				FACU species	0 :	x 4 =	0	_	
Schoenoplectus acutus	80	Yes	OBL	UPL species			0	-	
2. Mentha arvensis	5	No	FACW	Column Totals:		<i></i>	50	- <sup>(B)</sup>	
3. Epilobium ciliatum	5	No	<u>FACW</u>	Prevalence	Index = B/A = _	1.30		-	
5.				Hydrophytic V	egetation Indic	ators:			
6.					est for Hydroph		ıtion		
7.					nce Test is >50	-			
8.				X 3 - Prevale	nce Index is ≤3.	.0 <sup>1</sup>			
9					logical Adaptation	•		oorting	
10					Remarks or on a		heet)		
11					d Non-Vacular F		(Evele	.:\	
Woody Vine Stratum (Plot size: )		=Total Cover		<del></del>	c Hydrophytic V	_		-	
1				<sup>1</sup> Indicators of hybe present, unli				must	
2.						,			
		=Total Cover		Hydrophytic Vegetation					
% Bare Ground in Herb Stratum10				Present?	Yes X	No			
Remarks: Wetland vegetation on bench above St. Regis River						-			

SOIL Sampling Point: WL-06 Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features Loc<sup>2</sup> Color (moist) % Color (moist) Type<sup>1</sup> (inches) Texture Remarks 0-20 10YR 2/1 100 Loamy/Clayey roots and rocks <sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils<sup>3</sup>: Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10) Histic Epipedon (A2) Stripped Matrix (S6) Red Parent Material (F21) Loamy Mucky Mineral (F1) (except MLRA 1) Black Histic (A3) Very Shallow Dark Surface (F22) Hydrogen Sulfide (A4) Other (Explain in Remarks) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F3) X Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) <sup>3</sup>Indicators of hydrophytic vegetation and 2.5 cm Mucky Peat or Peat (S2) (LRR G) wetland hydrology must be present, Redox Depressions (F8) Sandy Gleyed Matrix (S4) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): **Hydric Soil Present?** Yes No Remarks: No redox noted in dark surface layer. HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (2 or more required) Surface Water (A1) Water-Stained Leaves (B9) (except Water-Stained Leaves (B9) (MLRA 1, 2 X High Water Table (A2) MLRA 1, 2, 4A, and 4B) 4A, and 4B) X Saturation (A3) Salt Crust (B11) Drainage Patterns (B10) Water Marks (B1) Aquatic Invertebrates (B13) Dry-Season Water Table (C2) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Oxidized Rhizospheres on Living Roots (C3) Geomorphic Position (D2) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Frost-Heave Hummocks (D7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Depth (inches): Yes Water Table Present? Depth (inches):

Depth (inches):

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

0

Remarks:
Soil pit saturated to surface.

Saturation Present?

(includes capillary fringe)

No

Wetland Hydrology Present? Yes X

Project/Site: Taft - West	City/County: Lookout Pass/Mineral Sampling Date:	7-19-2021
Applicant/Owner: Montana Department of Transportation	State: MT Sampling Point:	UP-06
Investigator(s): Mark Traxler & Jon Schick - HDR	Section, Township, Range: Sec.12; T19N; R32W	
Landform (hillside, terrace, etc.): road slope	Local relief (concave, convex, none): concave Slop	e (%):5
Subregion (LRR): LRR E Lat: 47.418132	Long: -115.622764 Datum:	NAD83
Soil Map Unit Name: Kawuneeche family, stream bottoms	NWI classification: NA	
Are climatic / hydrologic conditions on the site typical for this ti		
Are Vegetation , Soil , or Hydrology significa	intly disturbed? Are "Normal Circumstances" present? Yes x No	)
Are Vegetation, Soil, or Hydrologynaturall		
	owing sampling point locations, transects, important feat	ures, etc.
Hydrophytic Vegetation Present? Yes No _X	Is the Sampled Area	
Hydric Soil Present? Yes No X	within a Wetland? Yes No _X_	
Wetland Hydrology Present? Yes No _X		
Remarks:		
Matching upland plot to WL-06. Road slope.		
VEGETATION – Use scientific names of plants.		
Abso Tree Stratum (Plot size: ) % Co		
1. (Flot size) 76 CC		
2.	Number of Dominant Species That Are OBL, FACW, or FAC:	0 (A)
3.	Total Number of Dominant Species	
4.	Across All Strata:	1 (B)
	=Total Cover Percent of Dominant Species That	
Sapling/Shrub Stratum (Plot size:)	Are OBL, FACW, or FAC: 0	.0% (A/B)
1	Prevalence Index worksheet:	
3	Total % Cover of: Multiply	bv:
4.	ODIi 0i	0
5.		0
	=Total Cover FAC species 0 x 3 =	0
Herb Stratum (Plot size: 5')		0
1. Centaurea stoebe 40		200
2		200 (B)
3		
	Hydrophytic Vogetation Indicators:	
6.	1 - Rapid Test for Hydrophytic Vegeta	ation
7.	2 - Dominance Test is >50%	
8.	3 - Prevalence Index is ≤3.0 <sup>1</sup>	
9	4 - Morphological Adaptations <sup>1</sup> (Provid	de supporting
10	data in Remarks or on a separate	sheet)
11	5 - Wetland Non-Vacular Plants <sup>1</sup>	(F. 1 · )
Woody Vine Stratum (Plat size:		
Woody Vine Stratum (Plot size:)	<sup>1</sup> Indicators of hydric soil and wetland hyd be present, unless disturbed or problema	
1		
	Hydrophytic Section Se	
% Bare Ground in Herb Stratum 60	Present? Yes No _X	_
Remarks: sparsely vegetated roadslope. Knapweed only species noted		

SOIL Sampling Point: **UP-06** Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features Loc<sup>2</sup> Color (moist) % Color (moist) Type<sup>1</sup> (inches) Texture Remarks 10YR 5/3 0-10 100 Loamy/Clayey loam with gravel <sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils<sup>3</sup>: Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10) Histic Epipedon (A2) Stripped Matrix (S6) Red Parent Material (F21) Loamy Mucky Mineral (F1) (except MLRA 1) Black Histic (A3) Very Shallow Dark Surface (F22) Hydrogen Sulfide (A4) Other (Explain in Remarks) 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) <sup>3</sup>Indicators of hydrophytic vegetation and 2.5 cm Mucky Peat or Peat (S2) (LRR G) Redox Depressions (F8) wetland hydrology must be present, Sandy Gleyed Matrix (S4) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): 10 **Hydric Soil Present?** Yes No Х Remarks: No Hydric Soil indicators HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (2 or more required) Surface Water (A1) Water-Stained Leaves (B9) (except Water-Stained Leaves (B9) (MLRA 1, 2 High Water Table (A2) MLRA 1, 2, 4A, and 4B) 4A, and 4B) Saturation (A3) Salt Crust (B11) Drainage Patterns (B10) Water Marks (B1) Aquatic Invertebrates (B13) Dry-Season Water Table (C2) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Oxidized Rhizospheres on Living Roots (C3) Geomorphic Position (D2) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Frost-Heave Hummocks (D7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Depth (inches): Yes Water Table Present? Depth (inches): Saturation Present? Depth (inches): Wetland Hydrology Present? Yes No X (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

No Hydrology noted.

Remarks:

Project/Site: Taft - V	Vest				City/Cou	inty: <u>Lookou</u>	t Pass/Mineral		Sampling Da	ite: <u>7-20</u>	0-2021
Applicant/Owner:	Montana Depa	rtment of Tran	sportation				State:	MT	Sampling Po	int: W	/L-07
Investigator(s): Mark	k Traxler & Jon S	chick - HDR		:	Section, <sup>-</sup>	Township, Ra	nge: Sec. 04;	T19N; R32	:W		
Landform (hillside, to	errace, etc.): stre	eam edge		Loca	al relief (c	oncave, conv	ex, none): co	ncave		Slope (%)	):2
Subregion (LRR):	LRR E	Lat: _47	.421314			Long:1	115.631383		Datu	ım: <u>NA</u> E	283
Soil Map Unit Name	: Kawuneeche fa	amily, stream b	oottoms				NV	VI classific	 ation: PEM/F	SS/PFO	
Are climatic / hydrole	ogic conditions o	n the site typic	al for this t	ime of yea	 ar?	Yes x	 No (	If no, expla	in in Remark	s.)	
Are Vegetation	, Soil , or	· Hydrology	signific	antly distu				present?	Yes x	No	
Are Vegetation							xplain any answe				_
SUMMARY OF									•	eatures	, etc.
Hydrophytic Vegeta	ation Present?	Yes X	No		Is th	e Sampled A	rea		, , ,		
Hydric Soil Present	t?	Yes X	No	_	with	in a Wetland	? Ye	s X	No		
Wetland Hydrology	Present?	Yes X	No								
Remarks:											
Wetland along Chip PEM, PSS, and PF			, ,		•			90 traffic. \	Netland inclu	des areas	of
VEGETATION -	- Use scientif	fic names c									
Tree Stratum	(Plot size:	20' )			ominant pecies?	Indicator Status	Dominance '	Test works	sheet:		
Picea engelmai				5 5	Yes	FAC	Number of D				
2. Pinus contorta				5	Yes	FAC	Are OBL, FA			5	_ (A)
3							Total Numbe Across All St		ant Species	5	(B)
				0 =Tot	tal Cover		Percent of Do		- ecies That		_ (5)
Sapling/Shrub Stra	itum (Plot s	size: 10	)				Are OBL, FA			100.0%	(A/B)
1. Salix drummon	diana			<u> </u>	Yes	FACW					
2							Prevalence I		sheet:		
3.								Cover of:		Itiply by:	_
4 5.							OBL species		x1=_ x2=	70 30	_
J				 5 =Tot	tal Cover		FACW species FAC species		x2 x3=	60	_
Herb Stratum	(Plot size:	5' )			.a. 00101		FACU specie		x 4 =	0	_
1. Carex aquatilis	`		3	0	Yes	OBL	UPL species		x 5 = _	0	_
2. Schoenoplectus	s acutus		4	0	Yes	OBL	Column Tota	ls: 105	(A)	160	(B)
3. <u>Heracleum max</u>			1	0	No	FAC	Prevalenc	e Index =	B/A =	1.52	_
4. <u>Platanthera stri</u>				0	No	<u>FACW</u>					
_							Hydrophytic	_	ydrophytic Ve		
							X 2 - Domi			getation	
7. 8.							X 3 - Preva				
I ^							4 - Morph	nological A	daptations¹(P	rovide sup	pporting
l 40							data ir	n Remarks	or on a separ	ate sheet)	)
11									ıcular Plants <sup>1</sup>		
				<u>0</u> =Tot	tal Cover		Problema	atic Hydrop	hytic Vegetat	ion¹ (Expl	ain)
Woody Vine Stratu	_ `	size:					<sup>1</sup> Indicators of				/ must
1.							be present, u		ibea or proble	emauc.	
2				=To	tal Cover		Hydrophytic Vegetation				
% Bare Ground in	Herb Stratum	10					Present?	Yes _	X No_		
Remarks: Wetland trees, shru	uhe and horbook	ious species									
VVenanu nees, siirt	apo, and nemace	ous species									

SOIL Sampling Point: WL-07 Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features Loc<sup>2</sup> Color (moist) % Color (moist) Type<sup>1</sup> (inches) Texture Remarks 0-12 10YR 4/1 100 Loamy/Clayey Heavy organics <sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils<sup>3</sup>: Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10) X Histic Epipedon (A2) Stripped Matrix (S6) Red Parent Material (F21) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Very Shallow Dark Surface (F22) Hydrogen Sulfide (A4) Other (Explain in Remarks) 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) <sup>3</sup>Indicators of hydrophytic vegetation and 2.5 cm Mucky Peat or Peat (S2) (LRR G) wetland hydrology must be present, Redox Depressions (F8) Sandy Gleyed Matrix (S4) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): 12 **Hydric Soil Present?** Yes No Remarks: Meets criteria for A2 HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (2 or more required) Surface Water (A1) Water-Stained Leaves (B9) (except Water-Stained Leaves (B9) (MLRA 1, 2 X High Water Table (A2) MLRA 1, 2, 4A, and 4B) 4A, and 4B) X Saturation (A3) Salt Crust (B11) X Drainage Patterns (B10) Water Marks (B1) Aquatic Invertebrates (B13) Dry-Season Water Table (C2) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Oxidized Rhizospheres on Living Roots (C3) Geomorphic Position (D2) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Frost-Heave Hummocks (D7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Depth (inches): Yes Water Table Present? Depth (inches): Saturation Present? Depth (inches): 0 Wetland Hydrology Present? Yes X No (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Water flowing in Chippy Creek and tributary that feeds Chippy in the median.

Project/Site: Taft - West	City/County: Lookou	ut Pass/Mineral	Sampling Date: 7-19	9-2021
Applicant/Owner: Montana Department of Transportation	on	State: MT	Sampling Point: UI	P-07
Investigator(s): Mark Traxler & Jon Schick - HDR	Section, Township, Ra	ange: <u>Sec. 11; T19N; R3</u>	2W	
Landform (hillside, terrace, etc.): Road Slope	Local relief (concave, con	vex, none): None	Slope (%)	: 3
Subregion (LRR): LRR E Lat: 47.421379	Long: -	-115.631371	Datum: NAD	 D83
Soil Map Unit Name: Kawuneeche family, stream bottoms		NWI classific	cation: NA	
Are climatic / hydrologic conditions on the site typical for this	s time of year? Yes x			
Are Vegetation, Soil, or Hydrologysigni		<del></del>		
Are Vegetation, Soil, or Hydrology natur		explain any answers in Rem		_
SUMMARY OF FINDINGS – Attach site map s			•	, etc.
Hydrophytic Vegetation Present? Yes No _>	( Is the Sampled A	Area		
Hydric Soil Present? Yes No _>		d? Yes	No X	
Wetland Hydrology Present? Yes No _>	<u>(                                    </u>			
Remarks:				
Matching upland plot to WL-07 on road fill slope.				
VEGETATION – Use scientific names of plant				
	Species Species Status	Dominance Test work	rehoot:	
1. (Flot size)	Cover Species: Status			
2.		Number of Dominant S Are OBL, FACW, or FA	•	(A)
3.		Total Number of Domir	nant Species	_ ` `
4		Across All Strata:	2	_ (B)
	=Total Cover	Percent of Dominant S	•	
Sapling/Shrub Stratum (Plot size:)		Are OBL, FACW, or FA	AC: 0.0%	_ (A/B)
1		Prevalence Index wor		
2		Total % Cover of:		
4		OBL species 0		_
5.		FACW species 0	x 2 = 0	_
	=Total Cover	FAC species 10	x 3 = 30	_
Herb Stratum (Plot size: 5' )		FACU species30	x 4 =120	_
Centaurea stoebe	20 Yes UPL	UPL species 20		_
2. Leucanthemum vulgare	20 Yes FACU	Column Totals: 60		_ <sup>(B)</sup>
Phleum pratense     Solidago canadensis	10 No FAC 10 No FACU	Prevalence Index =	B/A = 4.17	_
		Hydrophytic Vegetation	on Indicators:	
6.		1	Hydrophytic Vegetation	
7.		2 - Dominance Tes		
8.		3 - Prevalence Inde	ex is ≤3.0 <sup>1</sup>	
9		4 - Morphological A	Adaptations¹(Provide sup	porting
10			or on a separate sheet)	)
11		5 - Wetland Non-V		
- Woody Vino Stratum (Diet size)	60 =Total Cover	<del>-</del>	phytic Vegetation <sup>1</sup> (Expl	-
Woody Vine Stratum (Plot size:)		<sup>1</sup> Indicators of hydric so be present, unless dist	il and wetland hydrology urbed or problematic	/ must
1			and or problematio.	
	=Total Cover	Hydrophytic Vegetation		
% Bare Ground in Herb Stratum 40		Present? Yes_	NoX	
Remarks:				
Sparsely vegetated road slope. Upland grasses and weed	ly species.			

SOIL Sampling Point: **UP-07** Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features Loc<sup>2</sup> Color (moist) % Color (moist) Type<sup>1</sup> (inches) Texture Remarks Loamy/Clayey 0-10 10YR 4/2 100 Loam with rocks <sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils<sup>3</sup>: Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10) Histic Epipedon (A2) Stripped Matrix (S6) Red Parent Material (F21) Loamy Mucky Mineral (F1) (except MLRA 1) Black Histic (A3) Very Shallow Dark Surface (F22) Hydrogen Sulfide (A4) Other (Explain in Remarks) 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) <sup>3</sup>Indicators of hydrophytic vegetation and 2.5 cm Mucky Peat or Peat (S2) (LRR G) Redox Depressions (F8) wetland hydrology must be present, Sandy Gleyed Matrix (S4) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): 10 **Hydric Soil Present?** Yes No Х Remarks: No hydric soil indicators HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (2 or more required) Surface Water (A1) Water-Stained Leaves (B9) (except Water-Stained Leaves (B9) (MLRA 1, 2 High Water Table (A2) MLRA 1, 2, 4A, and 4B) 4A, and 4B) Saturation (A3) Salt Crust (B11) Drainage Patterns (B10) Water Marks (B1) Aquatic Invertebrates (B13) Dry-Season Water Table (C2) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Oxidized Rhizospheres on Living Roots (C3) Geomorphic Position (D2) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Frost-Heave Hummocks (D7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Depth (inches): Yes Water Table Present? Depth (inches): Saturation Present? Depth (inches): Wetland Hydrology Present? Yes No X (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

No hydrology indicators

Remarks:

Project/Site: Taft - West		City/Cour	nty: Lookout	Pass/Mineral	Sampling Date:	7-20-2021
Applicant/Owner: Montana Department of Transpo	rtation			State: MT	Sampling Point:	WL-08
Investigator(s): Mark Traxler & Jon Schick - HDR		Section, T	ownship, Rar	nge: Sec. 04; T19N; R3	32W	
Landform (hillside, terrace, etc.): stream edge		Local relief (co	oncave, conve	ex, none): concave	Slop	oe (%):1_
Subregion (LRR): LRR E Lat: 47.42	7284		Long: <u>-1</u>	15.638696	Datum:	NAD83
Soil Map Unit Name: Kawuneeche family, stream botto	oms			NWI classifi	ication: PEM/PSS/	PFO
Are climatic / hydrologic conditions on the site typical for		f year?	Yes x	No (If no, exp	•	
Are Vegetation, Soil, or Hydrology	significantly			<del></del>		)
Are Vegetation, Soil, or Hydrology				blain any answers in Rer		
SUMMARY OF FINDINGS – Attach site ma			·	•	,	ures, etc.
Hydrophytic Vegetation Present? Yes X No	0	Is the	Sampled Ar	rea		
Hydric Soil Present? Yes X No	o <u> </u>	withi	n a Wetland?	Yes <u>X</u>	No	
Wetland Hydrology Present? Yes X No	°					
Remarks:						
Start of Chippy Creek in interstate median.						
VEGETATION – Use scientific names of p	olants.					
Tree Stratum (Diet size: 201	Absolute	Dominant Species?	Indicator	Dominanas Tast war	kabaati	
Tree Stratum (Plot size:0)  1. Populus balsamifera	% Cover 20	Species? Yes	Status FAC	Dominance Test wor		
Picea engelmannii	10	Yes	FAC	Number of Dominant S Are OBL, FACW, or FA	•	5 (A)
3. Pinus contorta	10	Yes	FAC	Total Number of Domi		('')
4.				Across All Strata:		5 (B)
	40	=Total Cover		Percent of Dominant S	Species That	
Sapling/Shrub Stratum (Plot size: 10'	)			Are OBL, FACW, or FA	AC: <u>10</u>	0.0% (A/B)
1. Salix drummondiana	5	Yes	FACW			
2				Prevalence Index wo		b.a
3.				Total % Cover of: OBL species 60		60
5.				FACW species 30		60 60
	5	=Total Cover		FAC species 50		150
Herb Stratum (Plot size: 5' )				FACU species 0	x 4 =	0
Carex utriculata	60	Yes	OBL	UPL species 0	x 5 =	0
2. Platanthera stricta	10	No	<u>FACW</u>	Column Totals: 14	<u> </u>	270 (B)
3. Epilobium ciliatum	10	No	FACW	Prevalence Index =	= B/A =1.93	
4. Equisetum arvense		No No	FAC	I le caluma un hecchi a Manuschart	ion Indiantana	
5. Juncus torreyi 6.	5	No	FACW_	Hydrophytic Vegetat	ion indicators: Hydrophytic Vegeta	ation
7				X 2 - Dominance Te		10011
8.				X 3 - Prevalence Inc		
9.				4 - Morphological	Adaptations <sup>1</sup> (Provid	de supporting
10				data in Remark	s or on a separate	sheet)
11				5 - Wetland Non-\		
		=Total Cover		Problematic Hydro	ophytic Vegetation <sup>1</sup>	(Explain)
Woody Vine Stratum (Plot size:				<sup>1</sup> Indicators of hydric so		
1				be present, unless dis	urbed or problema	IIC.
2		=Total Cover		Hydrophytic Vegetation		
% Bare Ground in Herb Stratum5					X No	
Remarks: Wetland species dominant						

SOIL Sampling Point: WL-08 Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features Loc<sup>2</sup> Color (moist) % Color (moist) Type<sup>1</sup> (inches) Texture Remarks 0-10 10YR 3/2 100 Loamy/Clayey heavy organics <sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils<sup>3</sup>: Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10) X Histic Epipedon (A2) Stripped Matrix (S6) Red Parent Material (F21) Loamy Mucky Mineral (F1) (except MLRA 1) Black Histic (A3) Very Shallow Dark Surface (F22) Hydrogen Sulfide (A4) Other (Explain in Remarks) 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) <sup>3</sup>Indicators of hydrophytic vegetation and 2.5 cm Mucky Peat or Peat (S2) (LRR G) wetland hydrology must be present, Redox Depressions (F8) Sandy Gleyed Matrix (S4) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): 10 **Hydric Soil Present?** Yes No Remarks: Meets criteria for A2 **HYDROLOGY** Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (2 or more required) X Surface Water (A1) Water-Stained Leaves (B9) (except Water-Stained Leaves (B9) (MLRA 1, 2 X High Water Table (A2) MLRA 1, 2, 4A, and 4B) 4A, and 4B) Saturation (A3) Salt Crust (B11) Drainage Patterns (B10) Water Marks (B1) Aquatic Invertebrates (B13) Dry-Season Water Table (C2) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Oxidized Rhizospheres on Living Roots (C3) Geomorphic Position (D2) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Frost-Heave Hummocks (D7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Depth (inches): Water Table Present? Depth (inches): Saturation Present? Depth (inches): 0 Wetland Hydrology Present? Yes X No (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Chippy Creek flow

Applicant/Owner:   Montana Department of Transportation   State:   MT   Sampling Point:   Univestigator(s):   Mark Traxider & Jon Schick - HDR   Section, Township, Range:   Sec. 11; T19N; R32W	083
Landform (hillside, terrace, etc.): roads slope	083
Subregion (LRR):   LRR E	083
Soil Map Unit Name: Kawuneeche family, stream bottoms  Are climatic / hydrologic conditions on the site typical for this time of year? Yes _ x _ No (If no, explain in Remarks.)  Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes _ x _ No  Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)  SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features  Hydrophytic Vegetation Present? Yes No _ X	_
Soil Map Unit Name: Kawuneeche family, stream bottoms  Are climatic / hydrologic conditions on the site typical for this time of year? Yes _ x _ No (If no, explain in Remarks.)  Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes _ x _ No  Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)  SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features  Hydrophytic Vegetation Present? Yes No _ X	_
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No (If no, explain in Remarks.)  Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes x No Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)  SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features  Hydrophytic Vegetation Present? Yes No_X Is the Sampled Area within a Wetland? Yes No_X  Wetland Hydrology Present? Yes No_X Sepaces? No_X  Wetland Hydrology Present? Yes No_X Sepaces? No_X Sepaces? Status Sepaces Sepaces? Status Sepaces Sep	_
Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes x No Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)  SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features  Hydrophytic Vegetation Present? Yes No X is the Sampled Area within a Wetland? Yes No X within a Wetland? Yes No X is the Sampled Area within a Wetland? Yes No X is the Sampled Ar	_
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)  SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features  Hydrophytic Vegetation Present?	_
Hydrophytic Vegetation Present? Yes No X Is the Sampled Area within a Wetland? Yes No X Wetland Hydrology Present? Yes No X Within a Wetland? Yes No X Wetland Hydrology Present? Yes No X Wetland? Yes No X Dominant? Yes No X Dominant Presents Worksheet:    Tree Stratum (Plot size: )	, etc.
Hydric Soil Present?   Yes	
Hydric Soil Present?   Yes	
Wetland Hydrology Present? Yes No X           Remarks:           Highway fill slope. Paired upland data point to WL-08           VEGETATION – Use scientific names of plants.           Tree Stratum         (Plot size:)         Absolute % Cover Species?         Dominant Indicator Status         Dominance Test worksheet:           1	
VEGETATION – Use scientific names of plants.           Tree Stratum         (Plot size:)         Absolute % Cover Species?         Dominant Species That Are OBL, FACW, or FAC:	
VEGETATION – Use scientific names of plants.           Tree Stratum         (Plot size:)         Absolute % Cover Species?         Dominant Indicator Species?         Dominance Test worksheet:           1.	
Absolute   Dominant   Indicator   Species?   Status   Status   Dominance Test worksheet:   Number of Dominant   Species That   Are OBL, FACW, or FAC:   0   Total Number of Dominant Species Across All Strata:   3   Percent of Dominant Species That   Are OBL, FACW, or FAC:   0   Total Number of Dominant Species   Across All Strata:   3   Percent of Dominant Species That   Are OBL, FACW, or FAC:   0   O.0%	
Tree Stratum         (Plot size:)         % Cover	
1.       Number of Dominant Species That Are OBL, FACW, or FAC:       0         3.       Total Number of Dominant Species Across All Strata:       3         4.       =Total Cover       Percent of Dominant Species That Across All Strata:       3         Percent of Dominant Species That Across All Strata:       3         Percent of Dominant Species That Across All Strata:       3         Percent of Dominant Species That Across All Strata:       3         Percent of Dominant Species That Across All Strata:       3         Percent of Dominant Species That Across All Strata:       3         Percent of Dominant Species That Across All Strata:       3         Percent of Dominant Species That Across All Strata:       3         Percent of Dominant Species That Across All Strata:       3         Percent of Dominant Species That Across All Strata:       3         Percent of Dominant Species That Across All Strata:       3         Percent of Dominant Species That Across All Strata:       3         Percent of Dominant Species That Across All Strata:       3         Percent of Dominant Species That Across All Strata:       3         Percent of Dominant Species That Across All Strata:       3         Percent of Dominant Species That Across All Strata:       3         Percent of Dominant Species That Across All Strata:       3	
2.       Are OBL, FACW, or FAC:       0         3.       Total Number of Dominant Species         Across All Strata:       3         Percent of Dominant Species That       Are OBL, FACW, or FAC:       0.0%         1.       Prevalence Index worksheet:         3.       Total % Cover of:       Multiply by:         4.       OBL species       0       x 1 = 0         5.       FACW species       0       x 2 = 0         FACW species       0       x 3 = 0         FACU species       35       x 4 = 140	
3.	(A)
Across All Strata: 3	<b>-</b> ` ′
Sapling/Shrub Stratum   (Plot size:)	_ (B)
1.       2.       Prevalence Index worksheet:         3.       Total % Cover of:       Multiply by:         4.       OBL species       0       x 1 = 0         5.       FACW species       0       x 2 = 0         FAC species       0       x 3 = 0         FACU species       35       x 4 = 140	
Prevalence Index worksheet:       3.     Total % Cover of:     Multiply by:       4.     OBL species     0     x 1 = 0       5.     FACW species     0     x 2 = 0       FAC species     0     x 3 = 0       FACU species     35     x 4 = 140	_ (A/B)
3.       Total % Cover of:       Multiply by:         4.       OBL species       0       x 1 = 0         5.       FACW species       0       x 2 = 0         FAC species       0       x 3 = 0         FACU species       35       x 4 = 140	
4.       OBL species       0       x 1 = 0         5.       FACW species       0       x 2 = 0         FAC species       0       x 3 = 0         FACU species       35       x 4 = 140	
5.       =Total Cover       FACW species       0       x 2 =       0         FAC species       0       x 3 =       0         FACU species       35       x 4 =       140	-
=Total Cover	_
Herb Stratum         (Plot size:         5'         )         FACU species         35         x 4 =         140	_
1. Bromus inermis 20 Yes UPL UPL species 40 x 5 = 200	_
	_
2. Dactylis glomerata   20   Yes   FACU   Column Totals:   75   (A)   340	(B)
3. <u>Centaurea stoebe</u> 20 Yes UPL Prevalence Index = B/A = 4.53	_
4. Achillea millefolium 10 No FACU	
5. <u>Fragaria virginiana</u> 5 No FACU Hydrophytic Vegetation Indicators:	
6 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50%	
8	porting
10. data in Remarks or on a separate sheet	
11 5 - Wetland Non-Vacular Plants <sup>1</sup>	
	ain)
Woody Vine Stratum (Plot size:)  1. Indicators of hydric soil and wetland hydrology be present, unless disturbed or problematic.	must
2 =Total Cover Hydrophytic Vegetation	
% Bare Ground in Herb Stratum No _X	
Remarks: Upland grasses, forbs, and weedy species	

SOIL Sampling Point: **UP-08** Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features Loc<sup>2</sup> Color (moist) % Color (moist) Type<sup>1</sup> (inches) Texture Remarks 8-0 10YR 3/2 100 Loamy/Clayey Loam with rocks <sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils<sup>3</sup>: Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10) Histic Epipedon (A2) Stripped Matrix (S6) Red Parent Material (F21) Loamy Mucky Mineral (F1) (except MLRA 1) Black Histic (A3) Very Shallow Dark Surface (F22) Hydrogen Sulfide (A4) Other (Explain in Remarks) 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) <sup>3</sup>Indicators of hydrophytic vegetation and 2.5 cm Mucky Peat or Peat (S2) (LRR G) Redox Depressions (F8) wetland hydrology must be present, Sandy Gleyed Matrix (S4) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): **Hydric Soil Present?** Yes No Х Remarks: No Hydric Soil Indicators HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (2 or more required) Surface Water (A1) Water-Stained Leaves (B9) (except Water-Stained Leaves (B9) (MLRA 1, 2 High Water Table (A2) MLRA 1, 2, 4A, and 4B) 4A, and 4B) Saturation (A3) Salt Crust (B11) Drainage Patterns (B10) Water Marks (B1) Aquatic Invertebrates (B13) Dry-Season Water Table (C2) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Oxidized Rhizospheres on Living Roots (C3) Geomorphic Position (D2) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Frost-Heave Hummocks (D7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Depth (inches): Yes Water Table Present? Depth (inches): Saturation Present? Depth (inches): Wetland Hydrology Present? Yes No X (includes capillary fringe)

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

No Hydrology Indicators

US Army Corps of Engineers

Remarks:

Project/Site: Taft - West		City/Cour	nty: Lookout	t Pass/Mineral	Sampling Date:	7-19-2021
Applicant/Owner: Montana Department of Transpor	rtation			State: MT	Sampling Point:	WL-09
Investigator(s): Mark Traxler & Jon Schick - HDR		Section, T	ownship, Ra	nge: Sec. 02; T19N; R	32W	
Landform (hillside, terrace, etc.): Hillside		Local relief (co	oncave, conv	ex, none): concave	Slop	oe (%):5_
Subregion (LRR): LRR E Lat: 47.430	)169		Long: <u>-1</u>	115.640967	Datum:	NAD83
Soil Map Unit Name: Kawuneeche family, stream botto	oms			NWI classif	ication: PEM/PSS	
Are climatic / hydrologic conditions on the site typical for	or this time o	f year?	Yes x	No (If no, exp	·	
Are Vegetation, Soil, or Hydrology	significantly	disturbed? A	Are "Normal C			)
Are Vegetation, Soil, or Hydrology				plain any answers in Re		
SUMMARY OF FINDINGS – Attach site ma			g point lo	cations, transects,	important feat	ures, etc.
Hydrophytic Vegetation Present? Yes X No		Is the	Sampled A	rea		
Hydric Soil Present? Yes X No	<u> </u>	withi	n a Wetland	? Yes X	No	
Wetland Hydrology Present? Yes X No	<u> </u>					
Remarks:						
Steep hillside wetland with water seeping out of cut sle	ope					
VEGETATION – Use scientific names of p	lants.					
Tree Stratum (Plot size: )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test wor	·kshoot:	
1. (Flot Size)	76 Cover	Species?	Status	Number of Dominant		
2.				Are OBL, FACW, or F	•	4 (A)
3.				Total Number of Dom	nant Species	
4.				Across All Strata:	· <u> </u>	4 (B)
		=Total Cover		Percent of Dominant S	•	
Sapling/Shrub Stratum (Plot size: 10'	)	V	E 4 O 1 4 /	Are OBL, FACW, or F	AC: <u>10</u>	0.0% (A/B)
Alnus incana     Populus balsamifera	<u>5</u>	Yes Yes	FACW FAC	Prevalence Index wo	arkshoot:	
<u>·</u>			FAC	Total % Cover of		, hv.
3				OBL species (		0
5.				FACW species 4	5 x 2 =	90
	20	=Total Cover		FAC species 4	5 x 3 =	135
Herb Stratum (Plot size: 5')				FACU species0	x 4 =	0
1. Juncus torreyi	30	Yes	FACW	UPL species		0
2. Carex pachystachya	30	Yes	FAC	Column Totals: 9		225 (B)
Calamagrostis canadensis     Platanthera stricta	<u>5</u>	No No	FACW FACW	Prevalence Index	= B/A =2.50	<u> </u>
			TACW	Hydrophytic Vegetat	ion Indicators:	
6.					Hydrophytic Veget	ation
7.				X 2 - Dominance Te	est is >50%	
8.				X 3 - Prevalence Inc	dex is ≤3.0 <sup>1</sup>	
9				4 - Morphological	Adaptations <sup>1</sup> (Provi	de supporting
10					s or on a separate	sheet)
11				5 - Wetland Non-		<i>(</i> = )
Woody Vine Stratum (Plot size:		=Total Cover		<del></del>	ophytic Vegetation <sup>1</sup>	
\ <u>——</u>	-			<sup>1</sup> Indicators of hydric so be present, unless dis		
1					La. 200 of problema	
		=Total Cover		Hydrophytic Vegetation		
% Bare Ground in Herb Stratum30					X No	<del>_</del>
Remarks:  Cottonwoods are samplings in the shrub layer.						

SOIL Sampling Point: WL-09 Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features Loc<sup>2</sup> Color (moist) % Color (moist) Type<sup>1</sup> (inches) Texture Remarks 0-8 10YR 4/1 100 Loamy/Clayey peat loam 8-12 10YR 4/2 100 Loamy/Clayey peat loam <sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils<sup>3</sup>: Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10) X Histic Epipedon (A2) Stripped Matrix (S6) Red Parent Material (F21) Loamy Mucky Mineral (F1) (except MLRA 1) Black Histic (A3) Very Shallow Dark Surface (F22) Hydrogen Sulfide (A4) Other (Explain in Remarks) 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) <sup>3</sup>Indicators of hydrophytic vegetation and 2.5 cm Mucky Peat or Peat (S2) (LRR G) wetland hydrology must be present, Redox Depressions (F8) Sandy Gleyed Matrix (S4) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): 12 **Hydric Soil Present?** Yes No Remarks: Heavy organics in upper 8 inches of profile. HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (2 or more required) X Surface Water (A1) Water-Stained Leaves (B9) (except Water-Stained Leaves (B9) (MLRA 1, 2 X High Water Table (A2) MLRA 1, 2, 4A, and 4B) 4A, and 4B) Saturation (A3) Salt Crust (B11) Drainage Patterns (B10) Water Marks (B1) Aquatic Invertebrates (B13) Dry-Season Water Table (C2) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Oxidized Rhizospheres on Living Roots (C3) Geomorphic Position (D2) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Frost-Heave Hummocks (D7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Depth (inches): Water Table Present? Depth (inches): Saturation Present? Depth (inches): 0 Wetland Hydrology Present? Yes X No (includes capillary fringe)

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

Remarks: Very wet hillslope

Project/Site: Taft - West		City/Cou	nty: Lookout	Pass/Mineral	S	Sampling Date:	7-19-202	21
Applicant/Owner: Montana Department of Transpo	rtation			State:	MT S	Sampling Point:	UP-09	1
Investigator(s): Mark Traxler & Jon Schick - HDR		Section, T	ownship, Ran	ge: Sec. 02; T	19N; R32V	V		
Landform (hillside, terrace, etc.): Road slope		Local relief (co	oncave, conve	x, none): con	cave	Slo	pe (%):5	5
Subregion (LRR): LRR E Lat: 47.43	0177		Long: -1	15.641002		Datum:	NAD83	
Soil Map Unit Name: Kawuneeche family, stream botto					/I classificat	ion: NA		
Are climatic / hydrologic conditions on the site typical for		f vear?	Yes x	No (If				_
Are Vegetation, Soil, or Hydrology				<del></del>				
Are Vegetation, Soil, or Hydrology				olain any answei				
SUMMARY OF FINDINGS – Attach site ma			·	•		,	itures, etc	c.
Hydrophytic Vegetation Present? Yes N	o X	Is the	Sampled Ar	ea				
	o <u>X</u>	withi	n a Wetland?	Yes	s	No X		
Wetland Hydrology Present? Yes N	o <u>X</u>							
Remarks:								
Road slope - paired upland plot to WL-09								
VEGETATION – Use scientific names of p	olants.							_
Tree Stratum (Plot size: )	Absolute % Cover	Dominant Species?	Indicator	Dominance T	oot workel	2004:		
Tree Stratum (Plot size:)  1.	% Cover	Species?	Status					
2.				Number of Do Are OBL, FAC			0 (A)	.)
3.				Total Number			`	,
4.				Across All Stra			2 (B)	)
		=Total Cover		Percent of Do	minant Spe	cies That		
Sapling/Shrub Stratum (Plot size:	)			Are OBL, FAC	W, or FAC:	: <u> </u>	0.0% (A/	/B)
1								_
2				Prevalence In Total % C		sneet: Multipl	ly by:	
3				OBL species	0	x 1 =	0	
5.				FACW species			0	
		=Total Cover		FAC species	0	x 3 =	0	
Herb Stratum (Plot size: 5' )				FACU species	31	x 4 =	124	
Dactylis glomerata	15	Yes	FACU	UPL species	1	x 5 =	5	
2. Melilotus officinalis	10	Yes	FACU	Column Totals		(A)	129 (B)	)
3. Leucanthemum vulgare	5	No	FACU	Prevalence	Index = B	/A =4.0	13	
Centaurea stoebe     Achillea millefolium	1	No	UPL FACU	Hydrophytic \	Vegetetien	Indicators		_
		No	_FACU		•	drophytic Vege	etation	
7.					ance Test is		riation.	
8.					ence Index			
9.				4 - Morpho	ological Ada	aptations¹(Prov	/ide supporti	ing
10				data in	Remarks or	r on a separate	sheet)	
11					nd Non-Vac			
		=Total Cover		Problemat	tic Hydroph	ytic Vegetation	າ <sup>1</sup> (Explain)	
Woody Vine Stratum (Plot size:	-					and wetland hy		st
1.				pe present, un	iess disturb	oed or problem	atic.	_
<u></u>		=Total Cover		Hydrophytic				
% Bare Ground in Herb Stratum68		70tal 00vel		Vegetation Present?	Yes	No _X		
Remarks: Sparsely vegetated road slope. Upland grasses, forb	s, and weeds	<del></del> S.						

SOIL Sampling Point: **UP-09** Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features Loc<sup>2</sup> Color (moist) % Color (moist) Type<sup>1</sup> (inches) Texture Remarks 0-6 10YR 3/2 100 Loamy/Clayey Loam with gravel <sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils<sup>3</sup>: Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10) Histic Epipedon (A2) Stripped Matrix (S6) Red Parent Material (F21) Loamy Mucky Mineral (F1) (except MLRA 1) Black Histic (A3) Very Shallow Dark Surface (F22) Hydrogen Sulfide (A4) Other (Explain in Remarks) 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) <sup>3</sup>Indicators of hydrophytic vegetation and 2.5 cm Mucky Peat or Peat (S2) (LRR G) Redox Depressions (F8) wetland hydrology must be present, Sandy Gleyed Matrix (S4) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): **Hydric Soil Present?** Yes No Х Remarks: No Hydric Soil Indicators HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (2 or more required) Surface Water (A1) Water-Stained Leaves (B9) (except Water-Stained Leaves (B9) (MLRA 1, 2 High Water Table (A2) MLRA 1, 2, 4A, and 4B) 4A, and 4B) Saturation (A3) Salt Crust (B11) Drainage Patterns (B10) Water Marks (B1) Aquatic Invertebrates (B13) Dry-Season Water Table (C2) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Oxidized Rhizospheres on Living Roots (C3) Geomorphic Position (D2) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Frost-Heave Hummocks (D7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Depth (inches): Yes Water Table Present? Depth (inches): Saturation Present? Depth (inches): Wetland Hydrology Present? Yes No X (includes capillary fringe)

Remarks:

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

US Army Corps of Engineers

No Hyrology Indicators.

Project/Site: Taft - West		City/Cour	nty: Lookou	t Pass/Mineral	Sampling Date:	7-19-2021
Applicant/Owner: Montana Department of Transpor	rtation			State: MT	Sampling Point:	WL-10
Investigator(s): Mark Traxler & Jon Schick - HDR		Section, T	ownship, Ra	inge: Sec. 11; T19N; R	32W	
Landform (hillside, terrace, etc.): Drainage		Local relief (co	oncave, conv	ex, none): concave	Slop	oe (%):1_
Subregion (LRR): LRR E Lat: 47.427	7779		Long: <u>-</u> 1	115.638563	Datum:	NAD83
Soil Map Unit Name: Kawuneeche family, stream botto	ms				fication: PEM/PSS	
Are climatic / hydrologic conditions on the site typical for		f year?	Yes x	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	
Are Vegetation, Soil, or Hydrology	significantly	-				0
Are Vegetation, Soil, or Hydrology				rplain any answers in Re		
SUMMARY OF FINDINGS – Attach site ma					•	ures, etc.
Hydrophytic Vegetation Present? Yes X No	)	Is the	Sampled A	ırea		
Hydric Soil Present? Yes X No		withi	n a Wetland	? Yes X	No	
Wetland Hydrology Present? Yes X No						
Remarks:						
Steep drainage that flows into highway ditch and acro	ss interstate	to St. Regis R	River.			
VEGETATION – Use scientific names of p	lants.					
(B) ( )	Absolute	Dominant	Indicator			
Tree Stratum (Plot size:) 1.	% Cover	Species?	<u>Status</u>	Dominance Test wo		
2.				Number of Dominant Are OBL, FACW, or F	•	6 (A)
3.				Total Number of Dom		(**)
4.				Across All Strata:		6 (B)
		=Total Cover		Percent of Dominant	Species That	
Sapling/Shrub Stratum (Plot size: 10'	)			Are OBL, FACW, or F	AC: <u>10</u>	0.0% (A/B)
1. Populus balsamifera	10	Yes	FAC	<del></del>		
2. Alnus incana	<u>10</u> 5	Yes	FACW FACW	Prevalence Index wo		, h
3. Salix drummondiana 4.		Yes	FACW	Total % Cover of OBL species 1		7 by. 10
5.						60
	25	=Total Cover		·		105
Herb Stratum (Plot size: 5' )				FACU species (	x 4 =	0
Equisetum arvense	25	Yes	FAC	UPL species (	) x 5 =	0
2. Platanthera stricta	10	Yes	FACW		`	175 (B)
3. Juncus torreyi	5	No	FACW	Prevalence Index	= B/A =2.33	<u> </u>
4. Carex aquatilis	10	Yes	OBL_	Llydranbytic Variatio	tion Indicators	
5 6.				Hydrophytic Vegetat	· Hydrophytic Veget	ation
7.				X 2 - Dominance Te		ation
8.				X 3 - Prevalence Inc		
9.				4 - Morphological	Adaptations <sup>1</sup> (Provi	de supporting
10				data in Remark	s or on a separate	sheet)
11				5 - Wetland Non-		
		=Total Cover		—— Problematic Hydr	ophytic Vegetation <sup>1</sup>	(Explain)
Woody Vine Stratum (Plot size:				<sup>1</sup> Indicators of hydric s		
1				be present, unless dis	surbed or problema	uc.
<u></u>		=Total Cover		Hydrophytic		
% Bare Ground in Herb Stratum50				Vegetation Present? Yes	XNo	_
Remarks:  Bare ground is covered by moss.						

SOIL Sampling Point: WL-10 Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features Loc<sup>2</sup> Color (moist) % Color (moist) Type<sup>1</sup> (inches) Texture Remarks 0-12 10YR 3/2 100 Mucky Peat Heavy organics <sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils<sup>3</sup>: Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10) X Histic Epipedon (A2) Stripped Matrix (S6) Red Parent Material (F21) Loamy Mucky Mineral (F1) (except MLRA 1) Black Histic (A3) Very Shallow Dark Surface (F22) Hydrogen Sulfide (A4) Other (Explain in Remarks) 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) <sup>3</sup>Indicators of hydrophytic vegetation and 2.5 cm Mucky Peat or Peat (S2) (LRR G) wetland hydrology must be present, Redox Depressions (F8) Sandy Gleyed Matrix (S4) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): 12 **Hydric Soil Present?** Yes No Remarks: Heavy organics in upper 12" HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (2 or more required) Surface Water (A1) Water-Stained Leaves (B9) (except Water-Stained Leaves (B9) (MLRA 1, 2 X High Water Table (A2) MLRA 1, 2, 4A, and 4B) 4A, and 4B) Saturation (A3) Salt Crust (B11) X Drainage Patterns (B10) Water Marks (B1) Aquatic Invertebrates (B13) Dry-Season Water Table (C2) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Oxidized Rhizospheres on Living Roots (C3) Geomorphic Position (D2) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Frost-Heave Hummocks (D7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Depth (inches): Yes Water Table Present? Depth (inches): Saturation Present? Depth (inches): 0 Wetland Hydrology Present? Yes X No (includes capillary fringe)

Water in pit to the surface and standing surface water nearby.

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

Project/Site: Taft - V	Vest				City/Cou	ınty: <u>Lookou</u>	ıt Pass/Mineral	Sampling Date	: <u>7-19-202</u>	1
Applicant/Owner:	Montana Dep	artment of Tra	ansport	ation			State: MT	_ Sampling Point	t: <u>UP-10</u>	
Investigator(s): Mar	k Traxler & Jon	Schick - HDR			Section,	Township, Ra	ange: <u>Sec. 11; T19N; R</u>	(32W		
Landform (hillside, t	errace, etc.): R	load Slope			Local relief (c	concave, conv	vex, none): None	SI	ope (%):5	
Subregion (LRR):	LRR E	Lat:	47.427	744		Long: -	115.638619	Datum	: NAD83	
Soil Map Unit Name							NWI classi	fication: NA		
Are climatic / hydrol	ogic conditions	on the site typ	oical for	this time o	of year?	Yes x	No (If no, ex	plain in Remarks.)	)	
							Circumstances" present?		No	
		_					xplain any answers in Re			
							cations, transects		atures, etc	۶.
Hydrophytic Veget	ation Present?	Yes	No	X	ls th	e Sampled <i>A</i>	Area			
Hydric Soil Presen	t?	Yes		X	with	in a Wetland	l? Yes	No X		
Wetland Hydrology	/ Present?	Yes	No	X						
Remarks: Road slope. Uplan			- f - 1							
VEGETATION -	- Use scient	THE names	or pi	Absolute	Dominant	Indicator	T .			_
Tree Stratum	(Plot size:		)	% Cover	Dominant Species?	Status	Dominance Test wo	rksheet:		
1							Number of Dominant	Species That		
2							Are OBL, FACW, or F	FAC:	(A)	ł
3. 4.							Total Number of Dom Across All Strata:	inant Species	3 (B)	)
					=Total Cover	•	Percent of Dominant	Species That		
Sapling/Shrub Stra	atum (Plo	t size:	)				Are OBL, FACW, or F	-AC:	0.0% (A/	B)
1							Prevalence Index we			_
2				-			Total % Cover of		oly by:	
3							-	0 x 1 =	0	
5.							·	0 x 2 =	0	
					=Total Cover		FAC species	0 x 3 =	0	
<u>Herb Stratum</u>	(Plot size: _	5'	)				· —	35 x 4 =	140	
1. Bromus inermi				20	Yes	UPL		20 x 5 =	100	
2. Dactylis glome					Yes	<u>FACU</u>		55 (A)	240 (B)	1
3. Melilotus officir 4.				15	Yes	_FACU_	Prevalence Index	= B/A =4.	36	
							Hydrophytic Vegeta	tion Indicators:		_
							1	r Hydrophytic Veg	etation	
7.							2 - Dominance To			
8.							3 - Prevalence In	dex is ≤3.0 <sup>1</sup>		
I ^							<del></del>	l Adaptations¹(Pro		ng
								ks or on a separat	e sheet)	
11					<del></del>		5 - Wetland Non-		1,	
Mandy Vina Strate	um (Dia	t ai=a.	,	55	=Total Cover	•	I —	rophytic Vegetatio		
Woody Vine Stratu		t size:					<sup>1</sup> Indicators of hydric s be present, unless dis			t
2.								2. 5. 5. 5. 5. 5. 6. 6. 6. 6. 6. 6. 6. 6. 6. 6. 6. 6. 6.		_
					=Total Cover		Hydrophytic Vegetation			
% Bare Ground in	Herb Stratum	45			-			No _>	<u>×</u>	
Remarks:										
Sparsley vegetated	road slope. U	pland grasses	and fo	ords.						

SOIL Sampling Point: **UP-10** Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features Loc<sup>2</sup> Color (moist) % Color (moist) Type<sup>1</sup> (inches) Texture Remarks 10YR 4/1 0-6 100 Loamy/Clayey Loam with rocks <sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils<sup>3</sup>: Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10) Histic Epipedon (A2) Stripped Matrix (S6) Red Parent Material (F21) Loamy Mucky Mineral (F1) (except MLRA 1) Black Histic (A3) Very Shallow Dark Surface (F22) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) <sup>3</sup>Indicators of hydrophytic vegetation and 2.5 cm Mucky Peat or Peat (S2) (LRR G) Redox Depressions (F8) wetland hydrology must be present, Sandy Gleyed Matrix (S4) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): **Hydric Soil Present?** Yes No Х Remarks: No Hydric Soil Indicators HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (2 or more required) Surface Water (A1) Water-Stained Leaves (B9) (except Water-Stained Leaves (B9) (MLRA 1, 2 High Water Table (A2) MLRA 1, 2, 4A, and 4B) 4A, and 4B) Saturation (A3) Salt Crust (B11) Drainage Patterns (B10) Water Marks (B1) Aquatic Invertebrates (B13) Dry-Season Water Table (C2) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Oxidized Rhizospheres on Living Roots (C3) Geomorphic Position (D2) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Frost-Heave Hummocks (D7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Depth (inches): Yes Water Table Present? Depth (inches): Saturation Present? Depth (inches): Wetland Hydrology Present? Yes No X

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

No wetland hydrology indicators

(includes capillary fringe)

Remarks:

Project/Site: Taft - We	est		City/Cou	nty: Lookou	t Pass/Mineral	<u> </u>	Sampling Da	ite: <u>7-19</u>	9-2021
Applicant/Owner:	Montana Department of Trans	portation			State:	MT	Sampling Po	int: W	/L-11
Investigator(s): Mark	Traxler & Jon Schick - HDR		Section, 1	ownship, Ra	nge: <u>Sec. 11</u>	1; T19N; R3	2W		
Landform (hillside, te	rrace, etc.): Roadside Ditch		Local relief (co	oncave, conv	ex, none): c	concave		Slope (%)	):1
Subregion (LRR):	LRR E Lat: 47.4	421455		Long: -1	 115.630719		 Datu	ım: NA[	 D83
	Kawuneeche family, stream bo					NWI classific	 cation: PEM/P	 'SS	
	gic conditions on the site typica		of vear?	Yes x			ain in Remarks		
•	, Soil , or Hydrology		•						
	, Soil, or Hydrology				plain any ans،				_
	FINDINGS – Attach site ı						•	eatures	s, etc.
Hydrophytic Vegetat	tion Present? Yes X	No	Is the	Sampled A	 irea				
Hydric Soil Present?		No	withi	n a Wetland	?	Yes X	No		
Wetland Hydrology		No							
Remarks:									
Roadside ditch west	t of rest area on north side of in	iterstate. Water	r flows under ir	nterstate and	joins Chippy C	Creek.			
VEGETATION -	Use scientific names of	f plants.							
Tree Stratum	(Diet eize:	Absolute % Cover	Dominant Species?	Indicator	Dominana	a Taat wark	roboot:		
1.	(Plot size:)	% Cover	Species?	Status		e Test work			
					Are OBL, F		pecies That C:	4	(A)
							- nant Species		_` ′
1					Across All S		ant openies	4	(B)
·			=Total Cover		Percent of f	Dominant S	pecies That		_
Sapling/Shrub Strate	um (Plot size: 10'	)			Are OBL, F	ACW, or FA	'С:	100.0%	_ (A/B
Salix drummond			Yes	FACW					
2. Populus balsami	fera	5	Yes	FAC	Prevalence			letter beer been	
3. 4.		_			OBL specie	Cover of:		Itiply by: 10	_
5.					FACW specie			90	_
·		10	=Total Cover		FAC specie			90	_
Herb Stratum	(Plot size: 5')				FACU spec			0	_
1. Equisetum arver	nse	25	Yes	FAC	UPL specie		x 5 =	0	_
2. Juncus torreyi		40	Yes	FACW	Column Tot	tals: 85	(A)	190	(B)
3. Carex aquatilis		10	No	OBL	Prevaler	nce Index =	B/A =	2.24	_
4									
					1	-	on Indicators		
							Hydrophytic Ve	egetation	
0						ninance Tes valence Inde			
							ox is <u>≤</u> 3.0 Adaptations¹(P	rovide su	nnorting
					I —	-	or on a separ		
11.		_			5 - Wet	tland Non-V	acular Plants <sup>1</sup>		,
		75	=Total Cover		Probler	matic Hydro	phytic Vegetat	tion <sup>1</sup> (Expl	lain)
Woody Vine Stratum	n (Plot size:	)	•		1Indicators	of hydric so	il and wetland	hydrology	y must
1					be present,	unless dist	urbed or proble	ematic.	
2					Hydrophyt	ic			
0/ D-= 0	Luck Otrustini		=Total Cover		Vegetation	1	v ···		
% Bare Ground in H	lerb Stratum 25				Present?	Yes _	X No_		
Remarks: Heavv moss cover i	n wetland also								
	. woulding alou								

SOIL Sampling Point: WL-11 Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features Loc<sup>2</sup> Color (moist) % Color (moist) Type<sup>1</sup> (inches) Texture Remarks 8-0 10YR 5/1 100 Peat Heavy organics <sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils<sup>3</sup>: X Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10) Histic Epipedon (A2) Stripped Matrix (S6) Red Parent Material (F21) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Very Shallow Dark Surface (F22) Hydrogen Sulfide (A4) Other (Explain in Remarks) 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) <sup>3</sup>Indicators of hydrophytic vegetation and 2.5 cm Mucky Peat or Peat (S2) (LRR G) wetland hydrology must be present, Redox Depressions (F8) Sandy Gleyed Matrix (S4) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): **Hydric Soil Present?** Yes No Remarks: Heavy organics upper 8" HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (2 or more required) X Surface Water (A1) Water-Stained Leaves (B9) (except Water-Stained Leaves (B9) (MLRA 1, 2 X High Water Table (A2) MLRA 1, 2, 4A, and 4B) 4A, and 4B) Saturation (A3) Salt Crust (B11) Drainage Patterns (B10) Water Marks (B1) Aquatic Invertebrates (B13) Dry-Season Water Table (C2) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Oxidized Rhizospheres on Living Roots (C3) Geomorphic Position (D2) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Frost-Heave Hummocks (D7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Depth (inches): Water Table Present? Depth (inches):

Depth (inches):

0

Remarks:

spring seep from hillside above. Additional hydrology from perennial tributary to Chippy Creek.

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

Saturation Present?

(includes capillary fringe)

No

Wetland Hydrology Present? Yes X

Project/Site: Taft - West		City/Cour	nty: Lookout	Pass/Mineral	Sa	ampling Date	: <u>7-19</u>	9-2021
Applicant/Owner: Montana Department of Transporta	ation			State:!	MT Sa	ampling Point	t: <u>U</u> F	P-11
Investigator(s): Mark Traxler & Jon Schick - HDR		Section, T	ownship, Ran	ge: Sec. 11; T	19N; R32W	ı		
Landform (hillside, terrace, etc.): Road slope	1	Local relief (co	oncave, conve	x, none): cond	cave	SI	ope (%):	: 2
Subregion (LRR): LRR E Lat: 47.4214	66		Long: -11	15.630797		Datum	: NAD	 )83
Soil Map Unit Name: Kawuneeche family, stream bottom					I classificati	on: NA		
Are climatic / hydrologic conditions on the site typical for		vear?	Yes x	No (If			)	
Are Vegetation, Soil, or Hydrologysi		•						
Are Vegetation, Soil, or Hydrologyna				olain any answer				_
SUMMARY OF FINDINGS – Attach site map			·	•		•	atures	, etc.
Hydrophytic Vegetation Present? Yes No	Х	Is the	Sampled Are	ea				
Hydric Soil Present? Yes No	Х	withi	n a Wetland?	Yes	·	NoX		
Wetland Hydrology Present? Yes No	X							
Remarks:								
Roadway fill slope. Paired with WL-11								
VEGETATION – Use scientific names of pla	ants.							
Tree Stratum (Plot size: )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance To	oot worken	oot		
Tree Stratum (Plot size:)  1.	% Cover	Species?	Status					
2.				Number of Dor Are OBL, FAC		ies inat	1	(A)
3.				Total Number		t Species		<b>-</b> ` ′
4.				Across All Stra		· _	2	_ (B)
_		=Total Cover		Percent of Dor	ninant Spec	ies That		
Sapling/Shrub Stratum (Plot size:)				Are OBL, FAC	W, or FAC:		50.0%	_ (A/B)
1								
2				Prevalence In Total % C			oly by:	
3				OBL species	0	x 1 =	0 0	_
5.				FACW species		- ^ · · ·	0	_
		=Total Cover		FAC species	45	x 3 =	135	_
Herb Stratum (Plot size: 5' )				FACU species	40	x 4 =	160	_
Agrostis stolonifera	40	Yes	FAC	UPL species	5	x 5 =	25	_
2. Melilotus officinalis	40	Yes	_FACU_	Column Totals		_ (A)	320	_ (B)
3. Centaurea stoebe	5	<u>No</u>	UPL_	Prevalence	Index = B/	Δ =3.	56	_
4. <u>Trifolium hybridum</u>	5	No	FAC					
5 6.				Hydrophytic \	_	<b>Indicators:</b> Irophytic Veg	ototion	
					ance Test is		etation	
7. 8.					ence Index i			
9.						ptations <sup>1</sup> (Pro	vide sup	porting
10.				data in I	Remarks or	on a separat	e sheet)	)
11				5 - Wetlan	d Non-Vacu	ılar Plants <sup>1</sup>		
	90	=Total Cover		Problemat	ic Hydrophy	tic Vegetatio	n¹ (Expla	ain)
Woody Vine Stratum (Plot size:) 1				<sup>1</sup> Indicators of h be present, un				must
2.								
		=Total Cover		Hydrophytic Vegetation Present?	Voc	No. \	¥	
% Bare Ground in Herb Stratum10				Present?	Yes	No>	<u>`</u>	
Remarks: Upland grasses and forbs								

SOIL Sampling Point: **UP-11** Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features Loc<sup>2</sup> Color (moist) % Color (moist) Type<sup>1</sup> (inches) Texture Remarks 10YR 5/1 Loamy/Clayey 0-6 100 Loam with rocks <sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils<sup>3</sup>: Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10) Histic Epipedon (A2) Stripped Matrix (S6) Red Parent Material (F21) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Very Shallow Dark Surface (F22) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) <sup>3</sup>Indicators of hydrophytic vegetation and Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) 2.5 cm Mucky Peat or Peat (S2) (LRR G) Redox Depressions (F8) wetland hydrology must be present, Sandy Gleyed Matrix (S4) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): 6" **Hydric Soil Present?** Yes No Х Remarks: No Hydric Soil Indicators **HYDROLOGY** 

Wetland Hydrology Indicato	ors:			
Primary Indicators (minimum	of one is required	; check all t	hat apply)	Secondary Indicators (2 or more required)
Surface Water (A1)		Water	-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2
High Water Table (A2)		ML	.RA 1, 2, 4A, and 4B)	4A, and 4B)
Saturation (A3)		Salt C	rust (B11)	Drainage Patterns (B10)
Water Marks (B1)		Aquat	ic Invertebrates (B13)	Dry-Season Water Table (C2)
Sediment Deposits (B2)		Hydro	gen Sulfide Odor (C1)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)		Oxidiz	ed Rhizospheres on Living Ro	pots (C3) Geomorphic Position (D2)
Algal Mat or Crust (B4)		Prese	nce of Reduced Iron (C4)	Shallow Aquitard (D3)
Iron Deposits (B5)		Recer	nt Iron Reduction in Tilled Soils	FAC-Neutral Test (D5)
Surface Soil Cracks (B6)		Stunte	ed or Stressed Plants (D1) ( <b>LR</b> I	RR A) Raised Ant Mounds (D6) (LRR A)
Inundation Visible on Aer	ial Imagery (B7)	Other	(Explain in Remarks)	Frost-Heave Hummocks (D7)
Sparsely Vegetated Cond	cave Surface (B8)			<del>_</del>
Field Observations:				
Surface Water Present?	Yes	No X	Depth (inches):	
Water Table Present?	Yes	No X		
Saturation Present?	Yes	No X	Depth (inches):	Wetland Hydrology Present? Yes No _X_
(includes capillary fringe)				
Describe Recorded Data (stre	eam gauge, monit	oring well, a	aerial photos, previous inspecti	ions), if available:
Remarks:				
No hydrology indicators				

Project/Site: Taft - West	City/County: Lookou	t Pass/Mineral	Sampling Date: 7	'-19-2021
Applicant/Owner: Montana Department of Transportation	n	State: MT	Sampling Point:	WL-12
Investigator(s): Mark Traxler & Jon Schick - HDR	Section, Township, Ra	ange: Sec. 3; T19N; R32	:W	
Landform (hillside, terrace, etc.): Roadside Ditch	Local relief (concave, conv	ex, none): concave	Slope (	(%): <u>1</u>
Subregion (LRR):         LRR E         Lat:         47.431655	Long:´	115.64764	Datum: N	IAD83
Soil Map Unit Name: Kawuneeche family, stream bottoms		NWI classifi	cation: PEM	
Are climatic / hydrologic conditions on the site typical for this	s time of year? Yes x			
Are Vegetation, Soil, or Hydrologysigni	ficantly disturbed? Are "Normal (			
Are Vegetation, Soil, or Hydrologynatur		· κplain any answers in Ren		<del></del>
SUMMARY OF FINDINGS – Attach site map s			•	es, etc.
Hydrophytic Vegetation Present? Yes X No	Is the Sampled A	rea		
Hydric Soil Present? Yes X No	within a Wetland	? Yes X	No	
Wetland Hydrology Present? Yes X No				
Remarks:				
Roadside ditch wetland				
VEGETATION – Use scientific names of plant	ts.			
	osolute Dominant Indicator	Di		
<u>Tree Stratum</u> (Plot size:)	Cover Species? Status	Dominance Test work		
		Number of Dominant S Are OBL, FACW, or FA	•	(A)
3.		Total Number of Domir		('')
4.		Across All Strata:	3	(B)
	=Total Cover	Percent of Dominant S	pecies That	
Sapling/Shrub Stratum (Plot size:)		Are OBL, FACW, or FA	AC: 100.0	0% (A/B)
1		<del></del>		
2		Prevalence Index wor		
3		Total % Cover of:  OBL species 30		
5.		FACW species 60		
	=Total Cover	FAC species 0		<del></del>
Herb Stratum (Plot size: 5' )		FACU species 0	x 4 = 0	
Carex aquatilis	30 Yes OBL	UPL species 0	x 5 =0	
2. Juncus torreyi	30 Yes FACW	Column Totals: 90		(B)
3. Juncus nevadensis	30 Yes FACW	Prevalence Index =	= B/A =1.67	
4		Hydrophytic Vegetati	on Indicators:	
6.			Hydrophytic Vegetation	on.
7.		X 2 - Dominance Tes		
8.		X 3 - Prevalence Inde	ex is ≤3.0 <sup>1</sup>	
9.		4 - Morphological A	Adaptations¹(Provide	supporting
10		data in Remarks	s or on a separate she	et)
11		5 - Wetland Non-V		
— (Blat size	90 =Total Cover	l <del>-</del>	phytic Vegetation¹ (E	
Woody Vine Stratum (Plot size:)		<sup>1</sup> Indicators of hydric so be present, unless dist		
1			urbed or problematic.	
	=Total Cover	Hydrophytic Vegetation		
% Bare Ground in Herb Stratum 10		Present? Yes_	X No	,
Remarks: Wetland dominated by sedge and rush				

SOIL Sampling Point: WL-12 Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features Loc<sup>2</sup> Color (moist) % Color (moist) Type<sup>1</sup> (inches) Texture Remarks 8-0 10YR 3/2 100 Peat gravel <sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils<sup>3</sup>: Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10) X Histic Epipedon (A2) Stripped Matrix (S6) Red Parent Material (F21) Loamy Mucky Mineral (F1) (except MLRA 1) Black Histic (A3) Very Shallow Dark Surface (F22) Hydrogen Sulfide (A4) Other (Explain in Remarks) 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) <sup>3</sup>Indicators of hydrophytic vegetation and 2.5 cm Mucky Peat or Peat (S2) (LRR G) wetland hydrology must be present, Redox Depressions (F8) Sandy Gleyed Matrix (S4) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): **Hydric Soil Present?** Yes No Remarks: Heavy organics in upper 8". HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (2 or more required) X Surface Water (A1) Water-Stained Leaves (B9) (except Water-Stained Leaves (B9) (MLRA 1, 2 X High Water Table (A2) MLRA 1, 2, 4A, and 4B) 4A, and 4B) Saturation (A3) Salt Crust (B11) Drainage Patterns (B10) Water Marks (B1) Aquatic Invertebrates (B13) Dry-Season Water Table (C2) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Oxidized Rhizospheres on Living Roots (C3) Geomorphic Position (D2) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Frost-Heave Hummocks (D7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Depth (inches): Water Table Present? Depth (inches): Saturation Present? Depth (inches): 0 Wetland Hydrology Present? Yes X No (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Seep in roadside ditch

Remarks:

Applicant/Owner:   Montano Department of Transportation   State   MT   Sampling Point   QP1/2	Project/Site: Taft - West	City/County: Lo	ookout Pass/Mineral	Sampling Date: 7-19-2021
Landform (hillside, terrace, etc.)   Road fill slope	Applicant/Owner: Montana Department of Transportation	n	State: MT	Sampling Point: UP-12
Soli Map Unit Name: Kawuneehe family, stream bottoms	Investigator(s): Mark Traxler & Jon Schick - HDR	Section, Townshi	p, Range: <u>Sec. 3; T19N; R3</u>	2W
Soil Map Unit Name:   Kawuneeche family: steam bottoms   Vasi x   No   (If no, explain in Remarks.)	Landform (hillside, terrace, etc.): Road fill slope	Local relief (concave,	convex, none): concave	Slope (%):5
Soli Map Unit Name	Subregion (LRR): LRR E Lat: 47.431639	 Lon	ig: -115.647679	Datum: NAD83
Are Vegetation				ication:
Are Vegetation				
Are Vegetation	, ,	_		
Summary   Communication   Continue   Communication				
Hydro Soil Present?   Yes				•
Hydric Soil Present?   Yes	Hydrophytic Vegetation Present? Yes No X	Is the Samp	led Area	
Number of Dominant Species That Are OBL, FACW, or FAC:	Hydric Soil Present? Yes No _X		tland? Yes	No X
Note   Continue   Co	Wetland Hydrology Present? Yes No _X	<u> </u>		
VEGETATION - Use scientific names of plants.   Absolute   Species?   Status   Indicator   Status   Species?   Status   Status   Species?   Status   Statu	Remarks:			
Absolute	Road slope. Paired with WL-12			
Tree Stratum   (Plot size:	VEGETATION – Use scientific names of plant	S.		
Number of Dominant Species That Are OBL, FACW, or FAC:				draha ak
2.	<del></del>	Cover Species? Statu	<del></del>	
Total Number of Dominant Species				•
Across All Strata: 2 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B) 1.  2. 3.	3.		<del></del> i	<del></del> ' · · ·
Sapling/Shrub Stratum	4.			•
1.   2.   3.   3.   4.   4.   5.   5.   9.   1.   8.   1.   1.   1.   1.   1.   1		=Total Cover	Percent of Dominant S	Species That
2.	Sapling/Shrub Stratum (Plot size:)		Are OBL, FACW, or F	AC: 0.0% (A/B)
3.			_	
4.	2		<del></del>	
FACW species   O				
Herb Stratum	5.		— ı · · —	
Herb Stratum   (Plot size: 5' )   20		=Total Cover		
2. Melilotus officinalis       30       Yes       FACU       Column Totals: 70 (A) 310 (B)         3. Centaurea stoebe       10       No       UPL         4. Dactylis glomerata       10       No       FACU         5.       Hydrophytic Vegetation Indicators:         6.       1 - Rapid Test for Hydrophytic Vegetation         7.       2 - Dominance Test is >50%         8.       3 - Prevalence Index is ≤3.0¹         9.       3 - Prevalence Index is ≤3.0¹         10.       4 - Morphological Adaptations¹(Provide supporting data in Remarks or on a separate sheet)         11.       5 - Wetland Non-Vacular Plants¹         — Problematic Hydrophytic Vegetation¹ (Explain)         ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.         2.       Hydrophytic Vegetation         Yes No X	Herb Stratum (Plot size: 5' )			0 x 4 = 160
3. Centaurea stoebe       10       No       UPL       Prevalence Index = B/A = 4.43         4. Dactylis glomerata       10       No       FACU         5.	1. Bromus inermis	20 Yes UPL	UPL species3	0 x 5 = 150
4. Dactylis glomerata       10       No       FACU         5			<del></del>	
5			<del></del>	= B/A =4.43
6.				ion Indicators
7.			<del></del>   ' ' ' ' '	
8. 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹(Provide supporting data in Remarks or on a separate sheet) 11. 5 - Wetland Non-Vacular Plants¹			— I — ·	• • •
9	8.		3 - Prevalence Inc	dex is ≤3.0 <sup>1</sup>
10	9.		4 - Morphological	Adaptations <sup>1</sup> (Provide supporting
11	10		data in Remark	s or on a separate sheet)
Woody Vine Stratum (Plot size:)  1.			_	
1		70 =Total Cover	Problematic Hydro	ophytic Vegetation <sup>1</sup> (Explain)
2=Total Cover Hydrophytic Vegetation Present? Yes No X  Remarks:	· — /			
## Total Cover   Vegetation   Yes   No X    Remarks:				turbed or problematic.
% Bare Ground in Herb Stratum 30 Present? Yes No X  Remarks:		=Total Cover		
	% Bare Ground in Herb Stratum 30			No _X

SOIL Sampling Point: UP-12 Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features Loc<sup>2</sup> % Color (moist) Color (moist) Type<sup>1</sup> (inches) Texture Remarks 10YR 3/2 0-6 100 Loamy/Clayey loam with rock <sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils<sup>3</sup>: Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10) Histic Epipedon (A2) Red Parent Material (F21) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Very Shallow Dark Surface (F22) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) <sup>3</sup>Indicators of hydrophytic vegetation and Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) 2.5 cm Mucky Peat or Peat (S2) (LRR G) Redox Depressions (F8) wetland hydrology must be present, Sandy Gleyed Matrix (S4) unless disturbed or problematic. Restrictive Layer (if observed): Type: rock fill **Hydric Soil Present?** Depth (inches): 6 Yes No Remarks: Road fill material. No hydric soil indicators **HYDROLOGY Wetland Hydrology Indicators:** Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (2 or more required) Surface Water (A1) Water-Stained Leaves (B9) (except Water-Stained Leaves (B9) (MLRA 1, 2 High Water Table (A2) MLRA 1, 2, 4A, and 4B) 4A, and 4B) Saturation (A3) Salt Crust (B11) Drainage Patterns (B10) Water Marks (B1) Aquatic Invertebrates (B13) Dry-Season Water Table (C2)

Sediment Deposits (B2)	Hydrogen Sulfide Odor (C1)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Oxidized Rhizospheres on Living Ro	oots (C3) Geomorphic Position (D2)
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)	Shallow Aquitard (D3)
Iron Deposits (B5)	Recent Iron Reduction in Tilled Soils	FAC-Neutral Test (D5)
Surface Soil Cracks (B6)	Stunted or Stressed Plants (D1) (LR	RA) Raised Ant Mounds (D6) (LRR A)
Inundation Visible on Aerial Imagery (I	B7) Other (Explain in Remarks)	Frost-Heave Hummocks (D7)
Sparsely Vegetated Concave Surface	(B8)	
Field Observations:		
Surface Water Present? Yes	No X Depth (inches):	
Water Table Present? Yes	No X Depth (inches):	
Saturation Present? Yes	No X Depth (inches):	Wetland Hydrology Present? Yes No _X_
(includes capillary fringe)		
Describe Recorded Data (stream gauge, n	nonitoring well, aerial photos, previous inspecti	ions), if available:
Remarks:		
No Hydrology Indicators		
IS Army Corns of Engineers		Western Mountains, Valleys, and Coast - Version 2

Project/Site: Taft - West	City/County: Lookout Pa	ss/Mineral	Sampling Date:	7-19-2021
Applicant/Owner: Montana Department of Transportation		State:MT	Sampling Point:	WL-13
Investigator(s): Mark Traxler & Jon Schick - HDR	Section, Township, Range	: Sec. PB49; T20N;	R32W	
Landform (hillside, terrace, etc.): Roadside Ditch	Local relief (concave, convex,	none): concave	Slope	e (%): <u>3</u>
Subregion (LRR):         LRR E         Lat:         47.449173	 Long:115.	693489	Datum:	NAD83
Soil Map Unit Name: Vaywood family, glacial-valley floors, ex	tremely bouldery	NWI classific	cation: PEM	
Are climatic / hydrologic conditions on the site typical for this t		lo (If no, expl		
Are Vegetation, Soil, or Hydrology signific		umstances" present?		
Are Vegetation, Soil, or Hydrology natural		n any answers in Ren		
SUMMARY OF FINDINGS – Attach site map sh		ions, transects, i	important featu	ıres, etc.
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area			
Hydric Soil Present? Yes X No	within a Wetland?	Yes X	No	
Wetland Hydrology Present? Yes X No	_			
Remarks:				
Roadside ditch connects to natural channel.				
VEGETATION – Use scientific names of plants				
I	olute Dominant Indicator over Species? Status <b>E</b>	ominance Test work	rehoot:	
1. (Flot size)				
2		lumber of Dominant S are OBL, FACW, or FA	•	3 (A)
3.	T	otal Number of Domir	nant Species	
4.		cross All Strata:	•	3 (B)
<u> </u>		ercent of Dominant S	•	
Sapling/Shrub Stratum (Plot size:)	A	are OBL, FACW, or FA	AC: 100	<u>.0%</u> (A/B)
1		revalence Index wor	·kshoot:	
		Total % Cover of:		bv:
3	1 6	DBL species 50		50
5.		ACW species 30	x 2 = 6	0
	=Total Cover F	AC species 0	x 3 =	)
Herb Stratum (Plot size:5' )		ACU species0	x 4 =	<u>)                                    </u>
		JPL species 0		<u>)</u> (7)
		Column Totals: 80	\'	10 (B)
	0	Prevalence Index =	B/A = 1.38	<del></del>
5		lydrophytic Vegetati	on Indicators:	
6.			- - - - - - - - - - - - - - - - - - -	tion
7.		X 2 - Dominance Tes	st is >50%	
8		X 3 - Prevalence Inde		
9			Adaptations <sup>1</sup> (Provid	
10			or on a separate s	heet)
11	 0 =Total Cover	5 - Wetland Non-V	acular Plants <sup>.</sup> phytic Vegetation <sup>1</sup> (	(Evolain)
Woody Vine Stratum (Plot size: )			_	
1		ndicators of hydric so e present, unless dist		
2.		lydrophytic		
		egetation		
% Bare Ground in Herb Stratum20		resent? Yes _	X No	
Remarks:				
Sedge and rush dominant				

SOIL

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

Depth Matrix Redox Features

Depth (inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Tex	ture		Remarks	
0-10	10YR 3/2	95	10YR 5/8	5	<u>D</u>	PL	Sar	ndy	sand	y loam with g	ravel
Type: C=Co	ncentration, D=D	pletion, RM	I=Reduced Matrix, 0	CS=Cove	ered or C	oated S	and Grains.	<sup>2</sup> Locat	on: PL=Poi	re Lining, M=	Matrix.
ydric Soil Ir	ndicators: (Appli	cable to all	LRRs, unless other	rwise n	oted.)			Indicators	for Proble	matic Hydric	Soils <sup>3</sup> :
_ Histosol (	A1)		X Sandy Red	dox (S5)				2 cm N	1uck (A10)		
_	pedon (A2)		Stripped M		-				arent Materi	,	
Black His	` '		Loamy Mu	-		(except	MLRA 1)			Surface (F2	2)
_	Sulfide (A4)		Loamy Gle	•	, ,			Other	Explain in F	Remarks)	
	Below Dark Surfa	ice (A11)	Depleted N	-	•						
	k Surface (A12)		Redox Da		` '			31	- <b>f</b> la codo a codo a		
	ucky Mineral (S1)		Depleted [							tic vegetation	
_	ucky Peat or Pea eyed Matrix (S4)	. (52) <b>(LRR</b>	G) Redox De	pression	s (F8)					must be pres r problemation	
	ayer (if observed	4)·					,	uniess	uistar bea o		•
	ayer (ii observet	1).									
Type:	Roc	k									
Type: Depth (inc	Roc ches):	k 10					Hydric S	oil Present?		Yes X	No
Depth (incemarks:		10	<u>_</u>				Hydric S	oil Present?		Yes X	No_
Depth (inc emarks: eavy roadwa	ches):  ay sanding materi	10					Hydric S	oil Present?		Yes X	No _
Depth (incention of the control of t	ches):  ay sanding materi	10 al in pit.					Hydric S	oil Present?		Yes X	No_
Depth (independent of the property of the prop	ches):  ay sanding materi  GY  rology Indicator	al in pit.	ired: check all that of	apply)			Hydric S				
Depth (incention of the content of t	ches):  ay sanding materi  GY  rology Indicator ators (minimum o	al in pit.	nired; check all that a		aves (B9)	(except)		Secondary	Indicators (	2 or more rec	quired)
Depth (incompared to be performed to be perfor	ay sanding materials  GY  rology Indicator ators (minimum or Water (A1)	al in pit.	Water-Sta	ined Lea	, ,			Secondary Water-	Indicators ( Stained Lea		quired)
Depth (incomplete property)  Personal Property of the property	ay sanding materi  GY  rology Indicator ators (minimum or Vater (A1) er Table (A2)	al in pit.	Water-Sta MLRA	ined Lea	aves (B9) , and 4B)			Secondary Water-	Indicators ( Stained Lea and 4B)	2 or more red	quired)
Depth (incomparison of the comparison of the com	ay sanding material ay sanding material ay sanding material are rology Indicator ators (minimum of Vater (A1) er Table (A2) in (A3)	al in pit.	Water-Sta	ined Lea <b>1, 2, 4A</b> , (B11)	, and 4B)			Secondary Water- 4A, X Draina	Indicators ( Stained Lea <b>and 4B</b> ) ge Patterns	2 or more red	quired)
Depth (incepts)  Property	ay sanding material ay sanding material ay sanding material are rology Indicator ators (minimum of Vater (A1) er Table (A2) in (A3)	al in pit.	Water-Sta MLRA Salt Crust	ined Lea <b>1, 2, 4A</b> , (B11) vertebra	, <b>and 4B</b> )			Secondary Water- 4A, X Draina Dry-Se	Indicators ( Stained Lea and 4B) ge Patterns ason Water	2 or more rec aves (B9) ( <b>ML</b> (B10)	<u>-</u> <u>juired)</u> .RA 1, 2
Depth (incomplete property)  Property of the p	ay sanding materials  ay sanding materials  ay sanding materials  arong Indicator  ators (minimum of the content of the conten	al in pit.	Water-Sta MLRA Salt Crust Aquatic In	ined Lea <b>1, 2, 4A</b> , (B11) vertebrate Sulfide (	, <b>and 4B</b> ) tes (B13) Odor (C1)	)	t	Secondary Water- 4A, X Draina Dry-Se Satura	Indicators ( Stained Lea and 4B) ge Patterns ason Water	2 or more recaves (B9) ( <b>ML</b> (B10) Table (C2) on Aerial Ima	<u>juired)</u> .RA 1, 2
Depth (incemarks: eavy roadway  //DROLOG /etland Hyd rimary Indica Surface V High Wate Saturation Water Mate Company Drift Depondent	ay sanding materials  ay sanding materials  ay sanding materials  arong Indicator  ators (minimum of the control of the contro	al in pit.	Water-Sta MLRA Salt Crust Aquatic In Hydrogen	ined Lea 1, 2, 4A, (B11) vertebrate Sulfide ( Rhizosph	tes (B13) Odor (C1)	) Living R	t	Secondary Water- 4A, X Draina Dry-Se Satura Geome	Indicators ( Stained Lea and 4B) ge Patterns eason Water tion Visible (	2 or more rec aves (B9) ( <b>ML</b> (B10) Table (C2) on Aerial Ima on (D2)	<u>juired)</u> .RA 1, 2
Depth (incomplete property)  Property of the p	rology Indicator (Minimum or Vater (A1) er Table (A2) in (A3) er Ks (B1) er Deposits (B2) osits (B3) or Crust (B4)	al in pit.	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F	ined Lea 1, 2, 4A, (B11) vertebrai Sulfide ( Rhizosph of Reduce	tes (B13) Odor (C1) neres on L	) Living R (C4)	t oots (C3)	Secondary Water- 4A, X Draina Dry-Se Satura Geome	Indicators ( Stained Lea and 4B) ge Patterns ason Water tion Visible	2 or more rec aves (B9) ( <b>ML</b> (B10) Table (C2) on Aerial Ima on (D2)	<u>quired)</u> .RA 1, 2
Primary Indicates Surface V High Water Mater Mat	rology Indicator (Minimum or Vater (A1) er Table (A2) in (A3) er Ks (B1) er Deposits (B2) osits (B3) or Crust (B4)	al in pit.	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence	ined Lea 1, 2, 4A, (B11) vertebrate Sulfide ( Rhizosphof Reduction on Reduction	tes (B13) Odor (C1) neres on L ced Iron (	) Living R C4) lled Soil	oots (C3)	Secondary Water- 4A, X Draina Dry-Se Satura Geome Shallor X FAC-N	Indicators ( Stained Lea and 4B) ge Patterns eason Water tion Visible orphic Positi w Aquitard ( eutral Test	2 or more rec aves (B9) ( <b>ML</b> (B10) Table (C2) on Aerial Ima on (D2)	juired) .RA 1, 2
Depth (included)  Personal Properties  Personal Properties  Personal Properties  Personal Properties  Algal Matter Surface Sur	rology Indicator (A1) er Table (A2) n (A3) arks (B1) Deposits (B2) posits (B3) or Crust (B4) posits (B5)	al in pit.  s: f one is requ	Water-Sta  MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or	ined Lea 1, 2, 4A, (B11) vertebrat Sulfide ( Rhizosph of Reduct on Reduct Stresse	tes (B13) Odor (C1) heres on l ced Iron ( ction in Til	) Living R C4) lled Soil	oots (C3)	Secondary Water- 4A, X Draina Dry-Se Satura Geome Shallor X FAC-N Raiseo	Indicators ( Stained Lea and 4B) ge Patterns eason Water tion Visible orphic Positi w Aquitard ( eutral Test	2 or more recaves (B9) (ML (B10) Table (C2) on Aerial Ima on (D2) D3) (D5) Is (D6) (LRR	juired) .RA 1, 2
Depth (inclemarks: leavy roadward  YDROLOG  Yetland Hydrimary Indication Surface V High Water Mater Ma	rology Indicator (Ma) arks (B1) arks (B1) arks (B3) or Crust (B4) bosits (B5) soil Cracks (B6)	al in pit.  s: f one is requ	Water-Sta  MLRA  Salt Crust  Aquatic In  Hydrogen  Oxidized F  Presence  Recent Iro  Stunted or  Other (Exp	ined Lea 1, 2, 4A, (B11) vertebrat Sulfide ( Rhizosph of Reduct on Reduct Stresse	tes (B13) Odor (C1) heres on l ced Iron ( ction in Til	) Living R C4) lled Soil	oots (C3)	Secondary Water- 4A, X Draina Dry-Se Satura Geome Shallor X FAC-N Raiseo	Indicators ( Stained Lea and 4B) ge Patterns eason Water tion Visible orphic Positi w Aquitard ( eutral Test	2 or more recaves (B9) (ML (B10) Table (C2) on Aerial Ima on (D2) D3) (D5) Is (D6) (LRR	juired) .RA 1, 2
Depth (inclemarks: leavy roadwarks: leav	rology Indicator ators (minimum or Vater (A1) er Table (A2) in (A3) arks (B1) er Deposits (B2) posits (B3) or Crust (B4) posits (B5) Goil Cracks (B6) in Visible on Aeria Vegetated Concatations:	al in pit.  s: f one is requ	Water-Sta  MLRA  Salt Crust  Aquatic In  Hydrogen  Oxidized F  Presence  Recent Iro  Stunted or  Other (Exp	ined Lea 1, 2, 4A, (B11) vertebrat Sulfide ( Rhizosph of Reduc on Reduc Stresse blain in R	tes (B13) Odor (C1) neres on l ced Iron ( ction in Ti d Plants Remarks)	) Living R C4) lled Soil	oots (C3)	Secondary Water- 4A, X Draina Dry-Se Satura Geome Shallor X FAC-N Raiseo	Indicators ( Stained Lea and 4B) ge Patterns eason Water tion Visible orphic Positi w Aquitard ( eutral Test	2 or more recaves (B9) (ML (B10) Table (C2) on Aerial Ima on (D2) D3) (D5) Is (D6) (LRR	juired) .RA 1, 2
Depth (inclements)  Proposition of the proposition	rology Indicator (Ma) arks (B1) arks (B3) or Crust (B4) osits (B5) or Crust (B6) or Visible on Aeria (Vegetated Concastions:	al in pit.  s: f one is requ  I Imagery (B ve Surface (	Water-Sta  MLRA  Salt Crust  Aquatic In  Hydrogen  Oxidized F  Presence  Recent Iro  Stunted or  Other (Exp  (B8)	ined Lea 1, 2, 4A, (B11) vertebrat Sulfide ( Rhizosph of Reduct on Reduct Stresse blain in R	tes (B13) Odor (C1) neres on L ced Iron ( ction in Ti d Plants Remarks)	) Living R C4) lled Soil	oots (C3)	Secondary Water- 4A, X Draina Dry-Se Satura Geome Shallor X FAC-N Raiseo	Indicators ( Stained Lea and 4B) ge Patterns eason Water tion Visible orphic Positi w Aquitard ( eutral Test	2 or more recaves (B9) (ML (B10) Table (C2) on Aerial Ima on (D2) D3) (D5) Is (D6) (LRR	juired) .RA 1, 2
Depth (included in the control of th	ay sanding material ators (minimum of vater (A1) are Table (A2) and (A3) arks (B1) are Deposits (B2) are Crust (B4) as a constant (B4) as a constant (B5) are Crust (B6) and Vegetated Concastions:  The present?	al in pit.  s: f one is requ  I Imagery (B ve Surface (	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or Other (Exp (B8)	ined Lea 1, 2, 4A, (B11) vertebrat Sulfide ( Rhizosph of Reduct on Reduct Stresse plain in R	tes (B13) Odor (C1) neres on lection in Tiled Plants Remarks) nches): _ nches): _	) Living R C4) lled Soil	oots (C3) s (C6) RR A)	Secondary Water- 4A, X Draina Dry-Se Satura Geome Shallor X FAC-N Raised Frost-h	Indicators ( Stained Lea and 4B) ge Patterns ason Water tion Visible or prhic Positi w Aquitard ( eutral Test I Ant Mound	2 or more recaves (B9) (ML (B10) Table (C2) on Aerial Ima on (D2) D3) (D5) Is (D6) (LRR mocks (D7)	quired) RA 1, 2 gery (C
Depth (incomplete National Property of Procession of Proce	rology Indicator ators (minimum of Vater (A1) er Table (A2) er (A3) er (B4) er (B4) er (B4) er (B4) er (B4) er (B5) er	al in pit.  s: f one is requ  I Imagery (B ve Surface (	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or Other (Exp (B8)	ined Lea 1, 2, 4A, (B11) vertebrat Sulfide ( Rhizosph of Reduct on Reduct Stresse blain in R	tes (B13) Odor (C1) neres on lection in Tiled Plants Remarks) nches): _ nches): _	) Living R C4) lled Soil	oots (C3) s (C6) RR A)	Secondary Water- 4A, X Draina Dry-Se Satura Geome Shallor X FAC-N Raiseo	Indicators ( Stained Lea and 4B) ge Patterns ason Water tion Visible or prhic Positi w Aquitard ( eutral Test I Ant Mound	2 or more recaves (B9) (ML (B10) Table (C2) on Aerial Ima on (D2) D3) (D5) Is (D6) (LRR mocks (D7)	juired) .RA 1, 2
Depth (incomplete products)  Proposition of the products of th	ay sanding material ators (minimum or vater (A1) er Table (A2) er (A3)	al in pit.  s: f one is requ  I Imagery (B ve Surface ( Yes Yes Yes	Water-Sta   MLRA   Salt Crust   Aquatic In   Hydrogen   Oxidized F   Presence   Recent Iro   Stunted or   Other (Exp (B8)   No   X   No   X   No   X	ined Lea  1, 2, 4A, (B11) vertebrat Sulfide ( Rhizosph of Reduc n Reduc Stresse clain in F  Depth (i Depth (i	tes (B13) Odor (C1) neres on I ced Iron ( ction in Til ed Plants Remarks) nches): nches): nches):	Living Rockett	oots (C3) s (C6) RR A) Wetlan	Secondary Water- 4A, X Draina Dry-Se Satura Geome Shallo X FAC-N Raisec Frost-H	Indicators ( Stained Lea and 4B) ge Patterns ason Water tion Visible or prhic Positi w Aquitard ( eutral Test I Ant Mound	2 or more recaves (B9) (ML (B10) Table (C2) on Aerial Ima on (D2) D3) (D5) Is (D6) (LRR mocks (D7)	quired) RA 1, 2 gery (C
Depth (incomplete products)  Proposition of the products of th	ay sanding material ators (minimum or vater (A1) er Table (A2) er (A3)	al in pit.  s: f one is requ  I Imagery (B ve Surface ( Yes Yes Yes	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or Other (Exp (B8)	ined Lea  1, 2, 4A, (B11) vertebrat Sulfide ( Rhizosph of Reduc n Reduc Stresse clain in F  Depth (i Depth (i	tes (B13) Odor (C1) neres on I ced Iron ( ction in Til ed Plants Remarks) nches): nches): nches):	Living Rockett	oots (C3) s (C6) RR A) Wetlan	Secondary Water- 4A, X Draina Dry-Se Satura Geome Shallo X FAC-N Raisec Frost-H	Indicators ( Stained Lea and 4B) ge Patterns ason Water tion Visible or prhic Positi w Aquitard ( eutral Test I Ant Mound	2 or more recaves (B9) (ML (B10) Table (C2) on Aerial Ima on (D2) D3) (D5) Is (D6) (LRR mocks (D7)	quired) RA 1, 2 gery (C
Popth (incomplete incomplete inco	ay sanding material ators (minimum or vater (A1) er Table (A2) er (A3)	al in pit.  s: f one is requ  I Imagery (B ve Surface ( Yes Yes Yes	Water-Sta   MLRA   Salt Crust   Aquatic In   Hydrogen   Oxidized F   Presence   Recent Iro   Stunted or   Other (Exp (B8)   No   X   No   X   No   X	ined Lea  1, 2, 4A, (B11) vertebrat Sulfide ( Rhizosph of Reduc n Reduc Stresse clain in F  Depth (i Depth (i	tes (B13) Odor (C1) neres on I ced Iron ( ction in Til ed Plants Remarks) nches): nches): nches):	Living Rockett	oots (C3) s (C6) RR A) Wetlan	Secondary Water- 4A, X Draina Dry-Se Satura Geome Shallo X FAC-N Raisec Frost-H	Indicators ( Stained Lea and 4B) ge Patterns ason Water tion Visible or prhic Positi w Aquitard ( eutral Test I Ant Mound	2 or more recaves (B9) (ML (B10) Table (C2) on Aerial Ima on (D2) D3) (D5) Is (D6) (LRR mocks (D7)	quired) RA 1, 2 gery (C
Depth (inclemarks: leavy roadwarks: leav	ay sanding material ators (minimum or vater (A1) er Table (A2) er (A3)	al in pit.  s: f one is requ  I Imagery (B ve Surface ( Yes Yes Yes m gauge, m	Water-Sta  MLRA  Salt Crust  Aquatic In  Hydrogen  Oxidized F  Presence  Recent Iro  Stunted or  Other (Exp  (B8)  No X  No X	ined Lea  1, 2, 4A, (B11) vertebrat Sulfide ( Rhizosph of Reduc n Reduc Stresse clain in F  Depth (i Depth (i	tes (B13) Odor (C1) neres on I ced Iron ( ction in Til ed Plants Remarks) nches): nches): nches):	Living Rockett	oots (C3) s (C6) RR A) Wetlan	Secondary Water- 4A, X Draina Dry-Se Satura Geome Shallo X FAC-N Raisec Frost-H	Indicators ( Stained Lea and 4B) ge Patterns ason Water tion Visible or prhic Positi w Aquitard ( eutral Test I Ant Mound	2 or more recaves (B9) (ML (B10) Table (C2) on Aerial Ima on (D2) D3) (D5) Is (D6) (LRR mocks (D7)	quired) RA 1, 2 gery (C

Project/Site: Taft - West	City/County: Lookou	ıt Pass/Mineral	Sampling Date:	7-20-2021
Applicant/Owner: Montana Department of Transportation		State: MT	Sampling Point:	UP-13
Investigator(s): Mark Traxler & Jon Schick - HDR	Section, Township, Ra	ange: Sec. PB49; T20N	; R32W	
Landform (hillside, terrace, etc.): cut slope	Local relief (concave, con-	vex, none): concave	Slop	e (%): <u>10</u>
Subregion (LRR):         LRR E         Lat:         47.449154	Long:	115.693462	Datum:	NAD83
Soil Map Unit Name: Vaywood family, glacial-valley floors, extre	mely bouldery	NWI classif	ication: NA	
Are climatic / hydrologic conditions on the site typical for this time			olain in Remarks.)	
Are Vegetation, Soil, or Hydrology significant	tly disturbed? Are "Normal	Circumstances" present?	Yes x No	)
Are Vegetation, Soil, or Hydrologynaturally p		xplain any answers in Re	marks.)	
SUMMARY OF FINDINGS – Attach site map show	ving sampling point lo	cations, transects,	important feat	ures, etc.
Hydrophytic Vegetation Present? Yes No _X	Is the Sampled A	Area		-
Hydric Soil Present? Yes No X	within a Wetland		No X	
Wetland Hydrology Present? Yes No X				
Remarks:				
Steep cut slope above highway. Paired with WL-13.				
VEGETATION – Use scientific names of plants.				
Absolut		T		
Tree Stratum (Plot size:) % Cove	er Species? Status	Dominance Test wor		
1		Number of Dominant S Are OBL, FACW, or F	•	1 (A)
3.		Total Number of Domi		(`,
4.		Across All Strata:	•	3 (B)
	=Total Cover	Percent of Dominant S	•	
Sapling/Shrub Stratum (Plot size:)		Are OBL, FACW, or F	AC: <u>33</u>	6.3% (A/B)
1		Prevalence Index wo		-
3		Total % Cover of		bv:
4.		OBL species 0		0
5.		FACW species 0	) x 2 =	0
	=Total Cover	FAC species 2	0 x 3 = 6	60
Herb Stratum (Plot size: 5' )		FACU species2	0 x 4 =8	80
1. Melilotus officinalis 20	Yes FACU	UPL species 10		50 (B)
2. <u>Trifolium hybridum</u> 20 3. Centaurea stoebe 10	Yes FAC Yes UPL	Column Totals: 5		90 (B)
		Frevalence index	- B/A	
5.		Hydrophytic Vegetat	ion Indicators:	
6.			Hydrophytic Vegeta	ation
7.		2 - Dominance Te	st is >50%	
8		3 - Prevalence Inc		
9		I —	Adaptations <sup>1</sup> (Provid	
10			s or on a separate s	sheet)
11	-Total Cover	5 - Wetland Non-	Vacular Plants <sup>1</sup> ophytic Vegetation <sup>1</sup>	(Evalois)
Woody Vine Stratum (Plot size: )	=Total Cover			
1		<sup>1</sup> Indicators of hydric so be present, unless dis		
2.		Hydrophytic	•	
	=Total Cover	Vegetation		
% Bare Ground in Herb Stratum50		Present? Yes	No X	
Remarks:				
Sparsley vegetated with upland forbs.				

SOIL Sampling Point: **UP-13** Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features Loc<sup>2</sup> Color (moist) % Color (moist) Type<sup>1</sup> (inches) Texture Remarks 0-6 10YR 3/2 100 Loamy/Clayey Loam with gravel <sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils<sup>3</sup>: Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10) Histic Epipedon (A2) Stripped Matrix (S6) Red Parent Material (F21) Loamy Mucky Mineral (F1) (except MLRA 1) Black Histic (A3) Very Shallow Dark Surface (F22) Hydrogen Sulfide (A4) Other (Explain in Remarks) 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) <sup>3</sup>Indicators of hydrophytic vegetation and 2.5 cm Mucky Peat or Peat (S2) (LRR G) Redox Depressions (F8) wetland hydrology must be present, Sandy Gleyed Matrix (S4) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): **Hydric Soil Present?** Yes No Х Remarks: No Hydric soil indicators. HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (2 or more required) Surface Water (A1) Water-Stained Leaves (B9) (except Water-Stained Leaves (B9) (MLRA 1, 2 High Water Table (A2) MLRA 1, 2, 4A, and 4B) 4A, and 4B) Saturation (A3) Salt Crust (B11) Drainage Patterns (B10) Water Marks (B1) Aquatic Invertebrates (B13) Dry-Season Water Table (C2) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Oxidized Rhizospheres on Living Roots (C3) Geomorphic Position (D2) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Frost-Heave Hummocks (D7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Depth (inches): Yes

Water Table Present? Depth (inches): Saturation Present? Depth (inches): Wetland Hydrology Present? Yes No X (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: No Hydrology indicators. Western Mountains, Valleys, and Coast - Version 2.0

#### MDT MONTANA WETLAND ASSESSMENT FORM (revised March 2008)

1.	. Project Name: Taft - West 2	MDT Project #: IM 90-1(227)	<u>)0</u> 3. Control #: <u>9487000</u>		
3.	Evaluation Date: <u>07/19/2021</u>	4. Evaluator(s): M. Traxler,	J. Schick - HDR Engineering	5. Wetland/Site #(s): <u>WL-01, (</u>	<u>04, 12, 13</u>
6.	. Wetland Location(s): Towns	ship <u>20 N</u> , Range <u>32 W</u> , Sectior	n <u>49 Protracted;</u> Township <u>19 N</u>	<u>I,</u> Range <u>32 W</u> , Section <u>3, 11</u>	
	Approximate Stationing or F	Roadposts: Interstate 90: WL-0	01 @ RP 0.2; WL-04 @ RP 4.2	: WL-12 @ RP 3.3; WL-13 @ R	P 0.3
	Watershed: 3 - Lower Clark	Fork County: Mineral			
7.	Evaluating Agency: MDT Purpose of Evaluation:  ☑ Wetland potentially affe ☐ Mitigation wetlands; pro		8. Wetland Size (acre)	:(visually estimated) 0.01 - 0.8 (measured, e.g. GF	PS)
	<ul><li>☐ Mitigation wetlands; po</li><li>☐ Other</li></ul>	st-construction		<b>AA) Size (acre):</b> 0.5 - 1.0 (visu rmining AA) (measu	
1	0. CLASSIFICATION OF WET	LAND AND AQUATIC HABITA	ATS IN AA (See manual for def	initions.)	
	HGM Class (Brinson)	Class (Cowardin)	Modifier (Cowardin)	Water Regime	% OF AA
	Riverine	Emergent Wetland		Permanent / Perennial	90
	Riverine	Rock Bottom		Permanent / Perennial	10

HGM Class (Brinson)	Class (Cowardin)	Modifier (Cowardin)	Water Regime	% OF AA
Riverine	Emergent Wetland		Permanent / Perennial	90
Riverine	Rock Bottom		Permanent / Perennial	10

Comments: Perennial surface flows and seeps in the I-90 ROW - dominated by PEM habitat

11. ESTIMATED RELATIVE ABUNDANCE (of similarly classified sites within the same Major Montana Watershed Basin; see manual.) common

#### 12. GENERAL CONDITION OF AA

 i. Disturbance: Use matrix below to select the appropriate response; see manual for Montana listed noxious weed and aquatic nuisance vegetation species lists.

species lists.			
	Predominar	nt Conditions Adjacent to (within	500 feet of) AA
Conditions within AA	Managed in predominantly natural state; is not grazed, hayed, logged, or otherwise converted; does not contain roads or buildings; and noxious weed or ANVS cover is ≤15%.	Land not cultivated, but may be moderately grazed or hayed or selectively logged; or has been subject to minor clearing; contains few roads or buildings; noxious weed or ANVS cover is ≤30%.	Land cultivated or heavily grazed or logged; subject to substantial fill placement, grading, clearing, or hydrological alteration; high road or building density; or noxious weed or ANVS cover is >30%.
AA occurs and is managed in predominantly natural state; is not grazed, hayed, logged, or otherwise converted; does not contain roads or occupied buildings; and noxious weed or ANVS cover is ≤15%.			
AA not cultivated, but may be moderately grazed or hayed or selectively logged; or has been subject to relatively minor clearing, fill placement, or hydrological alteration; contains few roads or buildings; noxious weed or ANVS cover is ≤30%.			
AA cultivated or heavily grazed or logged; subject to relatively substantial fill placement, grading, clearing, or hydrological alteration; high road or building density; or noxious weed or ANVS cover is >30%.			high disturbance

Comments (types of disturbance, intensity, season, etc.): Wetlands all occur with in the existing I-90 ROW. Wetlands subject to winter sanding and summer mowing.

ii. Prominent noxious, aquatic nuisance, and other exotic vegetation species:

iii. Provide brief descriptive summary of AA and surrounding land use/habitat: AA is comprised of 4 separate roadside ditch wetlands that are fed by runoff and spring flows. Surrounding land includes the I-90 corridor and forested habitat outside the ROW.

13. STRUCTURAL DIVERSITY (Based on number of "Cowardin" vegetated classes present [do not include unvegetated classes]; see #10 above.)

Existing # of "Cowardin" Vegetated Classes in AA	Initial Rating	Is current management peristence of additional	<b>.</b> . ,	Modified Rating
≥3 (or 2 if one is forested) classes		NA	NA	NA
2 (or 1 if forested) classes		NA	NA	NA
1 class, but not a monoculture	mod	←NO	YES→	
1 class, monoculture (1 species comprises ≥90% of total cover)		NA	NA	NA

Comments: All wetlands within the AA are PEM with no aquatic trees or shrubs present.

							We	tland	l/Site	#(s): <u>W</u>	L-01, 0	)4, 12	<u>2, 13</u>							
14A. HABITAT FOR FEDERA	LLY LI	STED	OR P	ROP	OSED	THRE	EATEN	IED (	OR EI	NDANG	ERED	PLA	NTS C	OR AN	IMALS	3				
i. AA is Documented (D) or S Primary or critical habitat (lis Secondary habitat (list spec Incidental habitat (list specie No usable habitat	t speci ies) es)	ies)			S S S	_														
ii. Rating: Based on the strong																			r	_
Highest Habitat Level	Doc/F		ry S	Sus/P	rimary	Do	c/Sec	onda	ary	Sus/Se	conda	ry	Doc/li	ncider	ntal	Sus	/Incide	ntal	Non	е
Functional Point/Rating								<u>.                                      </u>			<del></del>								0L	
Sources for documented use habitat for T&E species.	(e.g. o	bserva	ations,	, recc	oras): <u>1</u>	nese	wetlan	<u>d are</u>	smal	l and lo	cated	withir	the I-	90 Rig	nt-ot-v	vay.	Inere	is no l	<u>isable</u>	
14B. HABITAT FOR PLANTS  Do not include species lie	sted in	14A a	bove.										HERIT	AGE I	PROG	RAM				
i. AA is Documented (D) or S Primary or critical habitat (lis Secondary habitat (list spec Incidental habitat (list specie No usable habitat	t speci ies) es)	ies) `			S S S	_														
ii. Rating: Based on the stron													•					1		_
Highest Habitat Level	Doc/F	rima	ry S	Sus/P	rimary	, Do	c/Sec	onda	ary	Sus/Se	conda	ry	Doc/li	ncider	ntal	Sus/	Incide	ntal	None	
S1 Species Functional Point/Rating				-				-												
S2 and S3 Species Functional Point/Rating				-				-			5M									
Sources for documented use	(e.g. o	bserva	ations,	, reco	ords): <u>T</u>	hese	wetlan	d are	smal	l and lo	cated	withir	the I-	90 Rig	ht-of-v	vay.	There	is no ι	ısable	_
habitat for sensitive species.																				
i. Evidence of Overall Wildlife  Substantial: Based on any observations of abundan abundant wildlife sign su presence of extremely lir interview with local biological services.	e Use i of the f it wildlif ich as s niting h	n the following #s of cat, translated	AA: ( ng [chain high racks, featur	eck]. spec nest	cies dive structur ot avail	ersity res, ga	(durino ame tra	g any ails, e	perio	d)	⊠ <i>Mir</i> i □ f □ li	nimal ew o ttle to	: Base r no wi o no wi e adjad	d on a Idlife o ildlife s cent up	ny of the bserva	ations ood s	ources	g peak	k]. use po	
☐ Moderate: Based on any of ☐ observations of scattered ☐ common occurrence of w ☐ adequate adjacent uplan ☐ interview with local biolog ii. Wildlife Habitat Features:	d wildlife vildlife s d food gist with	e grou sign su source n knov	ips or i uch as es vledge	indivi scat of th	, tracks ie AA	, nest	strúcti	ures,	game	e trails,	etc.	•		at ratir	ng. Str	uctur	al dive	rsity is	s from ‡	<b>#</b> 13.
For class cover to be considered																	n other	in ter	ms of tl	heir
percent composition of the AA (S/I = seasonal/intermittent; T/E																nıaı;				
Structural Diversity (see #13)		•			High						Σ	Mo	derate	)					.ow	
Class Cover Distribution		E	ven		Г	Un	even			⊠E	ven			☐ Un	even			□ Ε	ven	
(all vegetated classes)  Duration of Surface												Γ.								
Water in ≥ 10% of AA	P/P	S/I	T/E	Α	P/P	S/I	T/E	Α	P/P	S/I	T/E	Α	P/P	S/I	T/E	Α	P/P	S/I	T/E	Α
□ Low Disturbance at AA (see #12i)																				
☐ Moderate Disturbance																				
at AA (see #12i)  ☑ High Disturbance at																				
AA (see #12i)									М											
iii. Rating: Use the conclusion	ns from	i and	ii abo	<u>ve a</u> n	<u>id the</u> n	<u>natrix</u>	<u>below</u>	to se	elect th	ne funct	ional p	oint :	and rat	ting.						
Evidence of Wildlife Use						/ildlife	Habit			s Rati	ng (ii)									
(i) ☐ Substantial		Exc	ceptio	nal		L	High 			⊠ Mo	oderat	<u>e</u>		☐ Lo	w	-				

.2L

 ☐ Moderate
 -- -- 

 ☑ Minimal
 -- -- 

 Comments: Wetland occurs within the Right-of-way of I-90. Low value to local wildlife.

Wetland/Site #(s): WL-01, 04, 12, 13

14	AD. GENERAL FISH HABITA If the AA is not used by fis entrapped in a canal], the	sh, fish	use is	not re	storab		íto ha		onstra	ints, c	r is not	desire	ed fron	n a ma	anagen	nent pe	erspec	tive [s	uch as	i fish
	Assess this function if the precluded by perched culv					existin	g situ	ation is	corr "corr	ectabl	e" such	n that t	he AA	could	be use	ed by f	ish [i.e	e., fish	use is	
	Type of Fishery:  Cole	d Wate	er (CW)		Warm	Water	(WW	) Use	the C	W or	WW gu	ıidelin	es in th	e mar	nual to	comple	ete the	matrix	к.	
١. إ	Habitat Quality and Known	Susp	ected I	Fish S	pecie	s in A	<b>A:</b> U:	se mati	rix to :	select	the fun	ctiona	l point	and r	ating.					
	Duration of Surface Water in AA	□Р€	ermane	ent / P	erenn	ial		□ s	easor	nal / Ir	ntermit	tent		<b>□</b> T	empoi	rary / E	Ephen	neral		
	Aquatic Hiding / Resting / Escape Cover	Opti		Adeq	uate	Po		Opti	] mal	Ade	] quate	Po	_	Opt	timal	Adec	]  uate	Po	oor	
	Thermal Cover: optimal / suboptimal	0	S	0	S	0	s	0	s	0	S	0	S	0	S	0	S	0	S	
	FWP Tier I fish species										-						-			
	FWP Tier II or Native Game fish species																			
	FWP Tier III or Introduced Game fish																			
	FWP Non-Game Tier IV or No fish species																			
S	ources used for identifying fi	ish sp	p. pote	ntially	/ foun	d in A	A:													ı
a) Msi ii 14	Modified Rating: NOTE: Modified Rating: NOTE: Modified Rating: NOTE: Modified Rating: DEQ list of waterbodies in need apport, or do aquatic nuisance.  Does the AA contain a document active fish or introduced game fit.  Final Score and Rating:  BE. FLOOD ATTENUATION Applies only to wetlands to lif wetlands in AA are not fit wetlands in AA are not finite nod-prone width = estimated hour prone width / bankfull width	ntly read of TI plant of plant	duced by MDL defor animospawning YES, nents: N. e. subject from in (see notal project from tal project	evelopi al specing are , add to A (pro- ct to flo n-char nanual	went were considered to score to score ceed to score to score ceed to score	dike, o with liss see Ap other case in i case to 14F y via in- overb dditionalere 2 >	r other ted "F pend ted "F pend ted "F pend ted "F pend ted ted ted ted ted ted ted ted ted te	er man- Probabl lix E) o habitat 0.1 =  nel or c ow, cho dance) imum t	made e Impp ccur i t featu or or overbaeck the . Enti	strucciaired an fish ure (i.e. No	Uses" in habitat habit	ncludii ?	eed to	d or welling and the second se	arm wa score ng area width) / e floodp	ater fish in i by a; spec (bank blain o	full widen each	dth).	one Wide	<b>)</b> or stream.
	Slightly Entr ER ≥ 2. C stream type D stream t	. <b>2</b> type		eam ty	/pe		ER =	Iy Entr 1.41 – eam ty	2.2	eu	A stre	eam typ	oe	ER =	renche : 1.0 – ream ty	1.4	G str	ream t	cype	
i.,	Rating: Working from top to b																		П	
	Estimated or Calculated (Rosgen 1994, 1996)					ightly I , E str				B	erately stream				A, F, G	Entrend stream		s		
	Percent of Flooded Wetland Forested and/or Scrub/Sh		sified a		□ 75%	25-7	] '5%	□ <25%		□ 5%	 25-75	i% <	⊠ <25%	75	_	□ 25-759	% <	□ 25%		
	AA contains no outlet or res	stricte	d outle	_																
	AA contains unrestrict	ed out	tlet				-						.4M		-					

ii. Are ≥10 acres of wetland in the AA subject to flooding AND are man-made features which may be significantly damaged by floods located within 0.5 mile downstream of the AA? ☐ YES ☐ NO Comments: Very small channels associated with these four wetlands.

				Wetla	nd/Site #(s	s): <u>WL-01</u>	, 04, 12	<u>, 13</u>					
14	F. SHORT AND LONG TERM SURFACE Applies to wetlands that flood or pond fi If no wetlands in the AA are subject to f	rom overbank	or in-chan	nel flow, pr		, uplánd s			oundwat	er flow.			
	<b>Rating:</b> Working from top to bottom, use the follows: P/P = permanent/perennial; S/I = s					U							
	Estimated Maximum Acre Feet of W in Wetlands within the AA that are Periodic Flooding or Ponding	ater Containe	ed	☐ >5 acre				cre feet		≤1 acre t			
	Duration of Surface Water at Wetlands	s within the A	A □ P/F	P □ S/I	□ T/E	□ P/P	□ S/I	□ T/E	□ P/P	⊠ S/I	⊠ T/E		
	Wetlands in AA flood or pond ≥ 5 out of	10 years								.3L			
	Wetlands in AA flood or pond < 5 out of	10 years											
Co	omments: Wetlands subject to annual floor	ding during sp	ring runoff	period.									
i. 	If no wetlands in the AA are subject to	AA receives has potential nutrients, of	need of TN causes" retained that other functions are not translating impaired. Minor nentation, sources of nutrients or functions are not provided to the second of the se						dy is on MDEQ list of waterbodie TMDL development for "probable related to sediment, nutrients, os or AA receives or surrounding intial to deliver high levels of sees, or compounds such that others are substantially impaired. Maj tation, sources of nutrients or to				
	Sediment, Nutrient, and Toxicant Input Levels within AA	substantial sedimentat	ly impaire	d. Minor es of nutr	ients or	nutrien functio sedime	ts, or c ns are s ntation	ompound substanti	Is such t ally impa of nutri	hat othe aired. M ents or	er ajor		
		substantial sedimentat toxicants, o	ly impaire ion, sourc or signs of	d. Minor es of nutr eutrophic	ients or	nutrien functio sedime	ts, or c ns are s ntation	ompound substanti , sources trophicati	Is such t ally impa of nutri	hat othe aired. M ents or ent.	er ajor		
-	Input Levels within AA	substantial sedimentat toxicants, o present.	ly impaire ion, sourc or signs of	d. Minor es of nutr eutrophic	ients or ation	nutrien functio sedime	ts, or c ns are s ntation s of eut ⊠ ≥ 7	ompound substanti , sources trophicati	Is such t ally impa of nutri on prese	hat othe aired. M ents or ent.	er ajor toxicants		
-	Input Levels within AA  % Cover of Wetland Vegetation in AA	substantial sedimentat toxicants, o present.	ly impaired ion, source or signs of 0%	d. Minor es of nutri eutrophic	ients or ation	nutrien functio sedime or sign	ts, or c ns are s ntation s of eur	ompound substantia , sources trophicati	Is such t ally impa of nutri on prese	hat other aired. Ments or ent.	er ajor toxicants 70%		
-	% Cover of Wetland Vegetation in AA  Evidence of Flooding / Ponding in AA  AA contains no or restricted outlet  AA contains unrestricted outlet	substantial sedimentati toxicants, o present.  □ ≥ 7 □ Yes	ly impaire ion, sourc or signs of 0% No	d. Minor es of nutrice eutrophic	70% No	nutrien functio sedime or sign	ts, or c ns are s ntation s of eut ⊠ ≥ 7	ompound substantia s, sources trophicati 0% No	Is such tally impa of nutri	hat other ired. Ments or ent.	er ajor toxicants 70% No		
Co	% Cover of Wetland Vegetation in AA  Evidence of Flooding / Ponding in AA  AA contains no or restricted outlet	substantial sedimentati toxicants, o present.  □ ≥ 7 □ Yes	ly impaire ion, sourc or signs of 0% No	d. Minor es of nutrice eutrophic	70% No	nutrien functio sedime or sign	ts, or c ns are s ntation s of eut ⊠ ≥ 7	ompound substantia sources trophicati  0%  No	Is such tally impa of nutri	hat other ired. Ments or ent.	er ajor toxicants 70% □ No		
	% Cover of Wetland Vegetation in AA  Evidence of Flooding / Ponding in AA  AA contains no or restricted outlet  AA contains unrestricted outlet	substantial sedimentati toxicants, opresent.  □ ≥ 7 □ Yes □ □ anding of I-90 of the banks of a	ly impaire ion, sourc or signs of  0%  No during wint  NA (priver, stream	d. Minor es of nutrieutrophic	70% No 141)	nutrien functio sedime or sign	ts, or c ns are s entation s of eut ≥ 7/ es	ompound substantia , sources trophicati 0%  No	Is such tally impa of nutrion prese	hat other in the interest of t	er ajor toxicants 70% No 		

% Cover of Wetland Streambank or Shoreline by Species with Stability	Duration of S	Duration of Surface Water Adjacent to Rooted Vegetation							
Ratings of ≥6 (see Appendix F).	☐ Permanent / Perennial	☐ Seasonal / Intermittent	☐ Temporary / Ephemeral						
⊠ ≥ 65%		.9H							
□ 35-64%									
☐ < 35%									

Comments:

#### 14I. PRODUCTION EXPORT / FOOD CHAIN SUPPORT

i. Level of Biological Activity: Synthesis of wildlife and fish habitat rates (select).

General Fish Habitat Rating	General Wildlife Habitat Rating (14Ciii)								
(14Diii)	☐ E/H	■ M	ĎL						
☐ E/H									
■ M									
□ L									
⊠ NA			L						

**ii. Rating:** Working from top to bottom, use the matrix below to select the functional point and rating. Factor A = acreage of vegetated wetland component in the AA; Factor B = level of biological activity rating from above (14li); Factor C = whether or not the AA contains a surface or subsurface outlet; the final three rows pertain to the duration of surface water in the AA, where P/P, S/I, and T/E were previously defined, and A = "absent" [see manual for further definitions of these terms].

Α		Vegeta	ted Co	mponent	t >5 ac	res	☐ Vegetated Component 1-5 acres						☑ Vegetated Component <1 acre					
В	_ 	☐ High ☐ Moderate ☐ Low		☐ High ☐ Moderate ☐ Low			_ 	ligh	☐ Mo	derate	⊠ Low							
С	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
P/P																		
S/I				-				-					-	-			.3L	
T/E/A																		

Wetland/Site #(s): WL-01, 04, 12, 13

14I. PRODUCTION EXPORT / FOOD CH											
	IAIN SUF	PPORT (conti	nued)								
iii. Modified Rating: Note: Modified scor	re cannot	exceed 1.0 o	r be less than	0.1.							
Vegetated Upland Buffer: Area with mowing or clearing (unless for weed of the sthere an average ≥ 50-foot wide veg	ontrol).						-		_		
iv. Final Score and Rating: <u>.4M</u> Comm	nents: _										
14J. GROUNDWATER DISCHARGE / R Check the appropriate indicators in											
i. Discharge Indicators  The AA is a slope wetland.  Springs or seeps are known of the Vegetation growing during do wetland occurs at the toe of the Seeps are present at the wetless a	ormant se a natural land edge ng drough out no inle	eason/drought slope. e. ht periods. et.	:	☐ Perr ☐ Wet ☐ Stre	land contains	s ate present wi inlet but no ou n 'losing' strea	ıtlet.	, , ,	0 ,		
iii. Rating: Use the information from i an									<b>a</b>		
		Duration of Saturation at AA Wetlands FROM GROUNDWATER DISCHARGE or WITH WATER THAT IS RECHARGING THE GROUNDWATER SYSTEM									
Criteria		☐ P/P	⊠ S				☐ Non				
☐ Groundwater Discharge or Rech	arge		.7M								
☐ Insufficient Data/Information											
14K. UNIQUENESS i. Rating: Working from top to bottom, us	AA cor	atrix below to s				n previously		s not contai	n		
Replacement Potential spri		(·					AA does	previously cited rare type associations AND structu diversity (#13) is low-mod			
Replacement Potential	foreste	s or mature ( ed wetland Of ation listed a NHP	>80 yr-old) R plant	cited ra diversi contair	are types ANI ty (#13) is hig ns plant asso as "S2" by the	O structural gh OR ciation	previou associa		tructural		
Replacement Potential  Estimated Relative Abundance (#11)	foreste associa the MT	ed wetland Of ation listed a	>80 yr-old) R plant s "S1" by	cited ra diversi contair listed a	are types ANI ty (#13) is hiç ns plant asso	O structural gh OR ciation e MTNHP	previou associa diversit	y (#13) is lo	tructural		
Estimated Relative Abundance (#11)  Low Disturbance at AA (#12i)	foreste associa the MT	ed wetland Of ation listed a NHP  Common	>80 yr-old) R plant s "S1" by	cited ra diversi contain listed a	are types ANI ty (#13) is hig ns plant asso as "S2" by the Common	O structural gh OR ciation e MTNHP	previou associa diversit	y (#13) is lov  Common	tructural w-moderate		
Estimated Relative Abundance (#11)  Low Disturbance at AA (#12i)  Moderate Disturbance at AA (#12i)	foreste associathe MT	ed wetland Of ation listed a NHP  Common	>80 yr-old) R plant s "S1" by	cited radiversi contain listed a	are types ANI ty (#13) is hig ns plant asso as "S2" by the Common	O structural gh OR ciation e MTNHP  Abundant	previou associa diversit	y (#13) is lov ☑ Common	tructural w-moderate  Abundant		
Estimated Relative Abundance (#11)  Low Disturbance at AA (#12i)  Moderate Disturbance at AA (#12i)  High Disturbance at AA (#12i)	foreste associa the MT	ed wetland Of ation listed a NHP  Common	>80 yr-old) R plant s "S1" by	cited ra diversi contain listed a	are types ANI ty (#13) is hig ns plant asso as "S2" by the Common	O structural gh OR ciation e MTNHP  Abundant	previou associa diversit	y (#13) is lov  Common	tructural w-moderate		
Estimated Relative Abundance (#11)  Low Disturbance at AA (#12i)  Moderate Disturbance at AA (#12i)  High Disturbance at AA (#12i)  Comments:  14L. RECREATION / EDUCATION POTE Affords 'bonus' points if AA provides	foreste associathe MT Rare ENTIAL a recrea	ed wetland Of ation listed a NHP  Common    tional or educ	>80 yr-old) R plant s "S1" by  Abundant NA (proceed to ational opportu	cited radiversi contain listed a Rare O Overall unity.	are types ANI ty (#13) is high s plant asso s "S2" by the Common Summary and	O structural gh OR ciation e MTNHP  Abundant I Rating page)	previou associa diversit	y (#13) is lov ☑ Common	tructural w-moderate  Abundant		
Estimated Relative Abundance (#11)  Low Disturbance at AA (#12i)  Moderate Disturbance at AA (#12i)  High Disturbance at AA (#12i)  Comments:  14L. RECREATION / EDUCATION POTI Affords 'bonus' points if AA provides i. Is the AA a known or potential recrea	foreste associative MT Rare ENTIAL a recrea	ed wetland Of ation listed a NHP  Common tional or educ	>80 yr-old) R plant s "S1" by  Abundant NA (proceed to ational opportu	cited radiversi contain listed a Rare O Overall unity.	are types ANI ty (#13) is high as plant asso as "S2" by the Common Summary and	D structural gh OR ciation e MTNHP  Abundant   I Rating page)	previou associa diversit	y (#13) is lov ⊠ Common   .2L	dructural w-moderate Abundant		
Estimated Relative Abundance (#11)  Low Disturbance at AA (#12i)  Moderate Disturbance at AA (#12i)  High Disturbance at AA (#12i)  Comments:  14L. RECREATION / EDUCATION POTE Affords 'bonus' points if AA provides	FORTIAL a recrea	ed wetland Of ation listed a NHP  Common tional or educ	>80 yr-old) R plant s "S1" by  Abundant NA (proceed to ational opportu	cited radiversi contain listed a Rare O Overall unity.	are types ANI ty (#13) is high as plant asso as "S2" by the Common Summary and	D structural gh OR ciation e MTNHP  Abundant   I Rating page)	previou associa diversit	y (#13) is lov ⊠ Common   .2L	dructural w-moderate Abundant		
Estimated Relative Abundance (#11)  Low Disturbance at AA (#12i)  Moderate Disturbance at AA (#12i)  High Disturbance at AA (#12i)  Comments:  14L. RECREATION / EDUCATION POTI Affords 'bonus' points if AA provides i. Is the AA a known or potential recrea	FORTIAL a recrea	ed wetland Of ation listed a NHP  Common    tional or educational ducational/Scither:	>80 yr-old) R plant s "S1" by  Abundant NA (proceed to ational opportuisite?  YES ientific Study	cited radiversi contain listed a Rare O Overall unity.	are types ANI ty (#13) is high as plant asso as "S2" by the Common Summary and	D structural gh OR ciation e MTNHP  Abundant   I Rating page)	previou associa diversit	y (#13) is lov ⊠ Common   .2L	dructural w-moderate Abundant		
Estimated Relative Abundance (#11)  Low Disturbance at AA (#12i)  Moderate Disturbance at AA (#12i)  High Disturbance at AA (#12i)  Comments:  14L. RECREATION / EDUCATION POTI Affords 'bonus' points if AA provides i. Is the AA a known or potential recreatii. Check categories that apply to the Aiii. Rating: Use the matrix below to select	FORTIAL a recrea ational or the functions	ed wetland Of ation listed a NHP  Common   tional or educe r educational ducational/Scither:  ctional point and	>80 yr-old) R plant s "S1" by  Abundant NA (proceed to ational opportuisite?  YES ientific Study	cited radiversi contain listed a Rare	are types ANI ty (#13) is high as plant asso as "S2" by the Common Summary and	D structural gh OR ciation e MTNHP  Abundant   I Rating page)	previou associa diversit	y (#13) is lov ⊠ Common   .2L	Abundant		
Estimated Relative Abundance (#11)  Low Disturbance at AA (#12i)  Moderate Disturbance at AA (#12i)  High Disturbance at AA (#12i)  Comments:  14L. RECREATION / EDUCATION POTI Affords 'bonus' points if AA provides i. Is the AA a known or potential recreatii. Check categories that apply to the Aiii. Rating: Use the matrix below to select Known or Public ownership or public easements.	ENTIAL a recrea ational or the func	d wetland Of ation listed a NHP  Common   tional or educt reducational ducational/Scither:  ctional point ar Recreational eneral public	>80 yr-old) R plant s "S1" by  Abundant NA (proceed to ational opportusite? YES ientific Study I or Education access (no process)	cited radiversi contain listed a Rare O Overall unity.  G, go to ii.  Conserval Area ermissio	are types ANI ty (#13) is high s plant asso as "S2" by the Common Summary and NO, che umptive Recre	D structural gh OR ciation e MTNHP  Abundant   I Rating page)	previou associa diversity  Rare	y (#13) is low Common2L mptive recrea	Abundant		
Estimated Relative Abundance (#11)  Low Disturbance at AA (#12i)  Moderate Disturbance at AA (#12i)  High Disturbance at AA (#12i)  Comments:  14L. RECREATION / EDUCATION POTI Affords 'bonus' points if AA provides i. Is the AA a known or potential recreatii. Check categories that apply to the Aiii. Rating: Use the matrix below to select Known or Public ownership or public easemer Private ownership with general publical in the Aiii and the Aiii	ENTIAL a recrea ational or the func cotential at with getic acces	tional or educational ducational point ar Recreational eneral publics (no permiss	>80 yr-old) R plant s "S1" by  Abundant NA (proceed to ational opportusite? YES ientific Study I or Education access (no posion required)	cited radiversi contain listed a Rare O Overall unity.  G, go to ii.  Conserval Area ermission	are types ANI ty (#13) is high as plant asso as "S2" by the Common Summary and NO, che umptive Recre	D structural gh OR ciation e MTNHP  Abundant   I Rating page)  ck the NA box eational	previou associa diversity  Rare	y (#13) is low Common2L mptive recrea	Abundant		
Estimated Relative Abundance (#11)  Low Disturbance at AA (#12i)  Moderate Disturbance at AA (#12i)  High Disturbance at AA (#12i)  Comments:  14L. RECREATION / EDUCATION POTI Affords 'bonus' points if AA provides i. Is the AA a known or potential recreatii. Check categories that apply to the Aiii. Rating: Use the matrix below to select Known or Public ownership or public easemer Private ownership with general publi Private or public ownership without	ENTIAL a recrea ational or the func cotential at with getic acces	tional or educational ducational point ar Recreational eneral publics (no permiss	>80 yr-old) R plant s "S1" by  Abundant NA (proceed to ational opportusite? YES ientific Study I or Education access (no posion required)	cited radiversi contain listed a Rare O Overall unity.  G, go to ii.  Conserval Area ermission	are types ANI ty (#13) is high as plant asso as "S2" by the Common Summary and NO, che umptive Recre	D structural gh OR ciation e MTNHP  Abundant   I Rating page)  ck the NA box eational	massocia diversity  Rare Known	y (#13) is low Common2L  Potential	Abundant		
Estimated Relative Abundance (#11)  Low Disturbance at AA (#12i)  Moderate Disturbance at AA (#12i)  High Disturbance at AA (#12i)  Comments:  14L. RECREATION / EDUCATION POTI Affords 'bonus' points if AA provides i. Is the AA a known or potential recreatii. Check categories that apply to the Aiii. Rating: Use the matrix below to select Known or Public ownership or public easemer Private ownership with general publical in the Aiii and the Aiii	ENTIAL a recrea ational or the func cotential at with getic acces	tional or educational ducational point ar Recreational eneral publics (no permiss	>80 yr-old) R plant s "S1" by  Abundant NA (proceed to ational opportusite? YES ientific Study I or Education access (no posion required)	cited radiversi contain listed a Rare O Overall unity.  G, go to ii.  Conserval Area ermission	are types ANI ty (#13) is high as plant asso as "S2" by the Common Summary and NO, che umptive Recre	D structural gh OR ciation e MTNHP  Abundant   I Rating page)  ck the NA box eational	Rare Service S	y (#13) is low Common2L  Potential	Abundant		

Wetland/Site #(s): WL-01, 04, 12, 13

Function & Value Variables	Rating – Actual Functional Points	Possible Functional Points	Functional Units: Actual Points x Estimated AA Acreage	Indicate the Four Most Prominent Functions with an Asterisk
A. Listed / Proposed T&E Species Habitat	low 0.00	1.00		
B. MT Natural Heritage Program Species Habitat	low 0.00	1.00		
C. General Wildlife Habitat	low 0.20	1.00		
D. General Fish Habitat	NA	NA		
E. Flood Attenuation	mod 0.40	1.00		*
F. Short and Long Term Surface Water Storage	low 0.30	1.00		
G. Sediment / Nutrient / Toxicant Removal	mod 0.40	1.00		*
H. Sediment / Shoreline Stabilization	high 0.90	1.00		*
I. Production Export / Food Chain Support	mod 0.40	1.00		
J. Groundwater Discharge / Recharge	mod 0.70	1.00		*
K. Uniqueness	low 0.20	1.00		
L. Recreation / Education Potential (bonus point)	NA			
Total Points	3.5	10	Total	Functional Units
Percent of Possibl	e Score 35% (round	I to nearest who	e number)	

	Category I Wetland: (must satisfy one of the following criteria; otherwise go to Category II)  ☐ Score of 1 functional point for Listed/Proposed Threatened or Endangered Species; or ☐ Score of 1 functional point for Uniqueness; or ☐ Score of 1 functional point for Flood Attenuation and answer to Question 14E.ii is "yes"; or ☐ Percent of possible score > 80% (round to nearest whole #).
	Category II Wetland: (Criteria for Category I not satisfied and meets any one of the following criteria; otherwise go to Category IV)  Score of 1 functional point for MT Natural Heritage Program Species Habitat; or Score of .9 or 1 functional point for General Wildlife Habitat; or Score of .9 or 1 functional point for General Fish Habitat; or "High" to "Exceptional" ratings for both General Wildlife Habitat and General Fish/Aquatic Habitat; or Score of .9 functional point for Uniqueness; or Percent of possible score > 65% (round to nearest whole #).
	Category IV Wetland: (Criteria for Categories I or II are not satisfied and all of the following criteria are met; if not go to Category III)  "Low" rating for Uniqueness; and  Vegetated wetland component < 1 acre (do not include upland vegetated buffer); and  Percent of possible score < 35% (round to nearest whole #).
C	VERALL ANALYSIS AREA (AA) RATING: Check the appropriate category based on the criteria outlined above.

#### MDT MONTANA WETLAND ASSESSMENT FORM (revised March 2008)

1.	Project Name: Taft - West 2	2. MDT Project #: IM 90-1(227	<u>0</u> 3. Control #: <u>9487000</u>							
3.	Evaluation Date: 07/19/2021	4. Evaluator(s): M. Traxler,	J. Schick - HDR Engineering	5. Wetland/Site #(s): <u>WL-02, (</u>	03, 05, 06					
6.	Wetland Location(s): Towns	ship <u>19 N</u> , Range <u>32 W</u> , Sectior	1 <u>3, 4, 11, 12;</u> Township <u>N</u> , I	Range <u>E</u> , Section						
	Approximate Stationing or I	Roadposts: Interstate 90: WL-0	02 @ RP 1.8; WL-03 @ RP 2.6;	WL-05 @ RP 4.3; WL-06 @ RF	<u> 5.0</u>					
	Watershed: 3 - Lower Clark Fork County: _ Mineral									
7.	Evaluating Agency: MDT Purpose of Evaluation:  ☑ Wetland potentially affe ☐ Mitigation wetlands; po ☐ Other	e-construction	9. Assessment Area (A	(visually estimated) 0.01 - 2.0 (measured, e.g. GF  AA) Size (acre): 1.0 - 5.0 (visurmining AA) (measured)	ally estimated)					
10	. CLASSIFICATION OF WET	LAND AND AQUATIC HABITA	ATS IN AA (See manual for def	initions.)						
	HGM Class (Brinson)	Class (Cowardin)	Modifier (Cowardin)	Water Regime	% OF AA					
	Riverine	Emergent Wetland		Permanent / Perennial	40					
	Riverine	Scrub-Shrub Wetland	·	Permanent / Perennial	30					
	Riverine	Forested Wetland	·	Permanent / Perennial	20					
	Riverine	Rock Bottom		Permanent / Perennial	al 10					

Comments: AA includes the St. Regis River channel and fringe/floodplain wetlands immediately adjacent to the river. WL-03 flows into St. Regis River from the south.

11. ESTIMATED RELATIVE ABUNDANCE (of similarly classified sites within the same Major Montana Watershed Basin; see manual.) <a href="mailto:common">common</a>

#### 12. GENERAL CONDITION OF AA

i. Disturbance: Use matrix below to select the appropriate response; see manual for Montana listed noxious weed and aquatic nuisance vegetation species lists.

	Predominar	nt Conditions Adjacent to (within	500 feet of) AA
Conditions within AA	Managed in predominantly natural state; is not grazed, hayed, logged, or otherwise converted; does not contain roads or buildings; and noxious weed or ANVS cover is ≤15%.	Land not cultivated, but may be moderately grazed or hayed or selectively logged; or has been subject to minor clearing; contains few roads or buildings; noxious weed or ANVS cover is ≤30%.	Land cultivated or heavily grazed or logged; subject to substantial fill placement, grading, clearing, or hydrological alteration; high road or building density; or noxious weed or ANVS cover is >30%.
AA occurs and is managed in predominantly natural state; is not grazed, hayed, logged, or otherwise converted; does not contain roads or occupied buildings; and noxious weed or ANVS cover is ≤15%.			
AA not cultivated, but may be moderately grazed or hayed or selectively logged; or has been subject to relatively minor clearing, fill placement, or hydrological alteration; contains few roads or buildings; noxious weed or ANVS cover is ≤30%.			
AA cultivated or heavily grazed or logged; subject to relatively substantial fill placement, grading, clearing, or hydrological alteration; high road or building density; or noxious weed or ANVS cover is >30%.			high disturbance

Comments (types of disturbance, intensity, season, etc.): The original construction of I-90 had significant impacts to the St. Regis River and its associated wetlands.

- ii. Prominent noxious, aquatic nuisance, and other exotic vegetation species: knapweed
- iii. Provide brief descriptive summary of AA and surrounding land use/habitat: AA includes the St. Regis River channel and adjacent fringe and floodplain wetlands. Adjacent land includes the I-90 corridor and forested mountains.

13. STRUCTURAL DIVERSITY (Based on number of "Cowardin" vegetated classes present [do not include unvegetated classes]; see #10 above.)

Existing # of "Cowardin" Vegetated Classes in AA	Initial Rating	Is current management p existence of additional		Modified Rating
≥3 (or 2 if one is forested) classes	high	NA	NA	NA
2 (or 1 if forested) classes		NA	NA	NA
1 class, but not a monoculture		←NO	YES→	
1 class, monoculture (1 species comprises ≥90% of total cover)		NA	NA	NA

Comments: Fringe and floodplain wetlands are a combination of PEM, PSS, and PFO

	Wetland/Site #(s): <u>WL-02, 03, 05, 06</u>																		
14A. HABITAT FOR FEDERAL	LLY LIST	ED OR	PROF	OSED	THRE	EATEN	IED (	OR E	NDANG	BERED	PLA	NTS C	OR AN	IMALS	S				
i. AA is Documented (D) or SI Primary or critical habitat (list Secondary habitat (list specie Incidental habitat (list specie No usable habitat	species es) s)		D	S S <u></u> S griz	zly be	<u>ear</u>													
ii. Rating: Based on the strong	est habita	t chose	en in 1	4A(i) at	ove,	select t	the c	orres	ponding	functi	onal <sub>l</sub>	point a	nd rati	ng.					_
Highest Habitat Level	Doc/Prir	nary	Sus/F	Primary	/ Do	oc/Sec	onda	ary	Sus/Se	conda	ary	Doc/I	ncider	ntal	Sus	/Incide	ental	Non	е
Functional Point/Rating					<u> </u>		_									.1L			
Sources for documented use uncommon in this area.	(e.g. obse	ervation	is, reco	oras): <u>G</u>	<u> Frizzly</u>	bears	may	use 1	ine St. I	<del>Regis F</del>	River	<u>rıparıaı</u>	n area	as a ti	<u>ravel</u>	corrido	or. Gri	zzlies a	<u>are</u>
<b>14B. HABITAT FOR PLANTS</b> Do not include species lis				S1, S2	, OR S	S3 BY	THE	MON	ITANA	NATU	RAL	HERIT	AGE I	PROG	RAM				
<ul> <li>AA is Documented (D) or Society Primary or critical habitat (list Secondary habitat (list special incidental habitat (list special No usable habitat)</li> </ul>	species es) s)		D	S <u>wes</u> S S	stslope —	e cutth	roat t	<u>trout</u>											
ii. Rating: Based on the strong																	[		7
Highest Habitat Level	Doc/Prir	nary	Sus/F	Primary	/ Do	oc/Sec	onda	ary	Sus/Se	conda	ary	Doc/I	ncider	ntal	Sus/	Incide	ntal	None	4
S1 Species Functional Point/Rating							-												
S2 and S3 Species Functional Point/Rating	.9H						-												
Sources for documented use	(e.g. obse	ervation	s, reco	ords): <u>F</u>	WP o	nline d	ataba	ase a	nd MTN	IHP re	cords	<u> </u>							_
14C. GENERAL WILDLIFE HA	Use in t	he AA:	Chec	k subst	antial	, mode	rate,	or lo	w base	_					ho fo	llove in o	· Cabaa	ld.	
☐ Substantial: Based on any of abundant ☐ abundant wildlife sign suc ☐ presence of extremely lim ☐ interview with local biolog	t wildlife # ch as scat niting habi	s or hig , tracks tat feat	ih spec s, nest ures n	structu ot avail	res, g	àme tra	ails, e	etc.	,	f	ew o ittle to spars	r no wi o no wi e adjad	ildlife o ildlife s cent up	bserva sign bland f	ations ood s	ources	g peak	use po	
<ul> <li>Moderate: Based on any of</li> <li></li></ul>	wildlife g ildlife sigr d food sou	roups of such a irces	r indiv as scat	, tracks	or rela s, nest	tively fo	ew sį ures,	pecie gam	s durinç e trails,	g peak etc.	perio	ds							
ii. Wildlife Habitat Features: \	Vorking fr	om top	to bott	tom, ch	eck a	ppropri	ate A	AA att	ributes	in matı	rix to	arrive	at ratir	ng. Str	ructur	al dive	rsity is	from 7	#13.
For class cover to be considered	d evenly o	listribut	ed, the	most a	and le	ast pre	evale	nt ve	getated	classe	es mu	ust be v	within 2	20% of	f eacl	h other	in ter	ms of t	heir
percent composition of the AA ( S/I = seasonal/intermittent; T/E															ınıal;				
Structural Diversity (see #13)	tompore	лу орн		High	· ub	00111 [0	00 111		1101 141			derate		<u> </u>				.ow	
Class Cover Distribution (all vegetated classes)		Even			⊠ Un	even			□ E	ven			☐ Un	even			□ E	ven	
Duration of Surface Water in ≥ 10% of AA	P/P S	/I T/E	<b>A</b>	P/P	S/I	T/E	Α	P/P	S/I	T/E	Α	P/P	S/I	T/E	Α	P/P	S/I	T/E	Α
□ Low Disturbance at AA (see #12i)																			
☐ Moderate Disturbance at AA (see #12i)																			
☑ High Disturbance at AA (see #12i)				М															
III Dating Head				- al Al-		la a la	4-	Ja - 1 -	L - E	41			· · · ·						
iii. Rating: Use the conclusion	s trom i a	na II ab	ove ar						ne func es Rati		oint	and rat	ung.		7				
Evidence of Wildlife Use (i)		Except	ional	۷۱		High	ιαι Γ'(	<del>c</del> atur		ng (II) oderat	e		☐ Lo	w					
☐ Substantial						 71/4		$\perp$							-				
						.7M									4				

Minimal Comments: Wetlands adjacent to the St. Regis River provide habitat for a number of mammals and birds in the area.

14D. GENERAL FISH HABITAT	■ NA (proceed to 14E
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If the AA is not used by fish, fish use is not restorable due to habitat constraints, or is not desired from a management perspective [such as fish entrapped in a canal], then check the NA box and proceed to 14E.

Assess this function if the AA is used by fish or the existing situation is "correctable" such that the AA could be used by fish [i.e., fish use is precluded by perched culvert or other barrier].

Type of Fishery: Cold Water (CW) Warm Water (WW) Use the CW or WW guidelines in the manual to complete the matrix.

i. Habitat Quality and Known / Suspected Fish Species in AA: Use matrix to select the functional point and rating.

Duration of Surface Water in AA	⊠ Pe	erman	ent / P	erenn	ial		□s	☐ Seasonal / Intermittent						☐ Temporary / Ephemeral				
Aquatic Hiding / Resting / Escape Cover	Opti	] mal	⊠ Adequate		□ Poor		☐ Optimal		Adequate		□ Poor		Optimal		Adequate		Poor	
Thermal Cover: optimal / suboptimal	0	S	0	S	0	s	0	s	0	S	0	s	0	S	0	S	0	s
FWP Tier I fish species			.8H															
FWP Tier II or Native Game fish species																		
FWP Tier III or Introduced Game fish										-								
FWP Non-Game Tier IV or No fish species																		

Sources used for identifying fish spp. potentially found in AA: FWP online database and MTNHP database

- ii. Modified Rating: NOTE: Modified score cannot exceed 1.0 or be less than 0.1.
- a) Is fish use of the AA significantly reduced by a culvert, dike, or other man-made structure or activity, **or** is the waterbody included on the current final MDEQ list of waterbodies in need of TMDL development with listed "Probable Impaired Uses" including cold or warm water fishery or aquatic life support, **or** do aquatic nuisance plant or animal species (see **Appendix E**) occur in fish habitat? **YES**, reduce score in **i** by 0.1 = .7 or **N0**
- b) Does the AA contain a documented spawning area or other critical habitat feature (i.e., sanctuary pool, upwelling area; specify in comments) for native fish or introduced game fish? 

  YES, add to score in i or iia 0.1 = .8 or 
  No
- iii. Final Score and Rating: <u>.8H</u> Comments: \_\_\_\_\_

#### **14E. FLOOD ATTENUATION** NA (proceed to 14F)

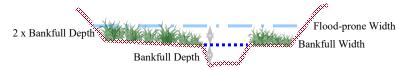
Applies only to wetlands that are subject to flooding via in-channel or overbank flow.

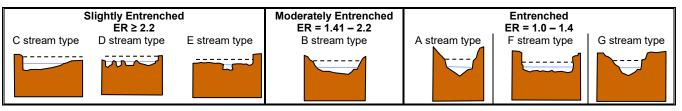
If wetlands in AA are not flooded from in-channel or overbank flow, check the NA box and proceed to 14F.

Entrenchment Ratio (ER) Estimation (see manual for additional guidance). Entrenchment ratio = (flood-prone width) / (bankfull width). Flood-prone width = estimated horizontal projection of where 2 X maximum bankfull depth elevation intersects the floodplain on each side of the stream.

<u>12</u> / <u>10</u> = <u>1.2</u>

flood prone width / bankfull width = entrenchment ratio





i. Rating: Working from top to bottom, use the matrix below to select the functional point and rating.

Estimated or Calculated Entrenchment	Sli	ightly Entrei	nched	☐ Mod	lerately Enti	renched				
(Rosgen 1994, 1996)	C, D	, E stream t	ypes	В	stream typ	е	A, F, G stream types			
Percent of Flooded Wetland Classified as								$\boxtimes$		
Forested and/or Scrub/Shrub	75%	25-75%	<25%	75%	25-75%	<25%	75%	25-75%	<25%	
AA contains no outlet or restricted outlet							-			
AA contains unrestricted outlet	-							.2L		

ii. Are ≥10 acres of wetland in the AA subject to flooding AND are man-made features which may be significantly damaged by floods located within 0.5 mile downstream of the AA? ☐ YES ☐ NO Comments: St. Regis is entrenched as a result of past impacts from I-90. This project occurs in the headwaters of the St. Regis River.

14F.	14F. SHORT AND LONG TERM SURFACE WATER STORAGE NA (proce	eed to 14G)
	Applies to wetlands that flood or pond from overbank or in-channel flow, precip	itation, upland surface flow, or groundwater flow.
	If no wetlands in the AA are subject to flooding or ponding, then check the NA I	pox and proceed to 14G.

i. Rating: Working from top to bottom, use the matrix below to select the functional point and rating. Abbreviations for surface water durations are as follows: P/P = permanent/perennial; S/I = seasonal/intermittent; and T/E = temporary/ephemeral [see manual for further definitions of these terms].

Estimated Maximum Acre Feet of Water Contained in Wetlands within the AA that are Subject to Periodic Flooding or Ponding		>5 acre fo	eet	<b>⊠ 1</b> .1	l to 5 ac	re feet	☐ ≤1 acre foot			
Duration of Surface Water at Wetlands within the AA	□ P/P	□ S/I	□ T/E	⊠ P/P	□ S/I	□ T/E	□ P/P	□ S/I	□ T/E	
Wetlands in AA flood or pond ≥ 5 out of 10 years				.8H						
Wetlands in AA flood or pond < 5 out of 10 years										

Comments: Wetlands subject to annual flooding during spring runoff period.

14G.	<b>SEDIMENT</b>	/ NUTRIENT	/ TOXICANT	/ RETENTION	AND REMOVA	L 🗌 NA	(proceed to 1	14H
------	-----------------	------------	------------	-------------	------------	--------	---------------	-----

Applies to wetland with potential to receive sediments, nutrients, or toxicants through influx of surface or ground water or direct input. If no wetlands in the AA are subject to such input, check the NA box and proceed to 14H.

i. Rating: Working from top to bottom, use the matrix below to select the functional point and rating.

Sediment, Nutrient, and Toxicant Input Levels within AA	AA receive has potent nutrients, such that a substantia sedimenta toxicants, present.	tial to delive or compount other funct ally impaire tion, source	er sedime inds at lev ions are n d. Minor es of nutr	ents, rels not rients or	Waterbody is need of TMDI causes" relat toxicants or A has potential nutrients, or c functions are sedimentation or signs of eu	developmer ed to sedime AA receives o to deliver hig compounds s substantially n, sources of	nt for "probal nt, nutrients, or surroundin gh levels of s such that oth or impaired. M nutrients or	ole or g land use ediments, er ajor	
% Cover of Wetland Vegetation in AA	□≥	70%	□<	70%	⊠≥7	70%	□ < 70%		
Evidence of Flooding / Ponding in AA	☐ Yes	□No	☐ Yes	☐ No	⊠ Yes	☐ No	☐ Yes	☐ No	
AA contains no or restricted outlet									
AA contains unrestricted outlet					4M				

	mei		

#### 

Applies only if AA occurs on or within the banks of a river, stream, or other natural or man-made drainage, or on the shoreline of a standing water body which is subject to wave action.

If 14H does not apply, check the NA box and proceed to 14I.

% Cover of <u>Wetland</u> Streambank or Shoreline by Species with Stability	Duration of S	urface Water Adjacent to Roo	ted Vegetation
Ratings of ≥6 (see Appendix F).	Permanent / Perennial	☐ Seasonal / Intermittent	☐ Temporary / Ephemeral
⊠ ≥ 65%	1H		
□ 35-64%			
☐ < 35%			

_		
	omments:	
v	Ullillielitä.	

#### 14I. PRODUCTION EXPORT / FOOD CHAIN SUPPORT

i. Level of Biological Activity: Synthesis of wildlife and fish habitat rates (select).

General Fish Habitat Rating	Genera	General Wildlife Habitat Rating (14Ciii)								
(14Diii)	☐ E/H	$\boxtimes$ M	L							
⊠ E/H		Н								
■ M										
□ L										
□ NA										

**ii. Rating:** Working from top to bottom, use the matrix below to select the functional point and rating. Factor A = acreage of vegetated wetland component in the AA; Factor B = level of biological activity rating from above (14li); Factor C = whether or not the AA contains a surface or subsurface outlet; the final three rows pertain to the duration of surface water in the AA, where P/P, S/I, and T/E were previously defined, and A = "absent" [see manual for further definitions of these terms].

Α		Vegeta	ted Co	mponent	t >5 ac	res	☑ Vegetated Component 1-5 acres						☐ Vegetated Component <1 acre					
В	☐ High ☐ Moderate		oderate		Low High		☐ Moderate		Low		☐ High				Low			
С	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
P/P							.9H											
S/I				-		-		-										
T/E/A																		

141													
	<ol> <li>PRODUCTION EXPORT / FOOD CH</li> </ol>	IAIN SUF	PPORT (contin	nued)									
ii.	Modified Rating: Note: Modified scor	e cannot	exceed 1.0 o	r be less than	0.1.								
	Vegetated Upland Buffer: Area with mowing or clearing (unless for weed cols there an average ≥ 50-foot wide veg	ontrol).					_	-		_			
v.	Final Score and Rating: <u>.9H</u> Comm	nents:											
14.	J. GROUNDWATER DISCHARGE / RI Check the appropriate indicators in												
	i. Discharge Indicators  The AA is a slope wetland. Springs or seeps are known of Vegetation growing during do Wetland occurs at the toe of a Seeps are present at the wetler AA permanently flooded during Wetland contains an outlet, b Shallow water table and the second of the contains and the contains and the second of the contains and the contains an	ormant se a natural land edge ng drough ut no inle	eason/drought. slope. e. ht periods. et.		☐ Perr ☐ Wet ☐ Stre	land contains	s ate present wi inlet but no ou n 'losing' strea	ıtlet.	, , ,	0 ,			
ii.	Rating: Use the information from i and									<b>-</b> 1			
				Saturation at A ATER THAT I									
	Criteria		<u>₩// P/P</u>	AIER INAI I □ S		T ∃	GROUNDWA	∏ No					
	☐ Groundwater Discharge or Recha	arge											
	☐ Insufficient Data/Information	90			l l	NA	L		1				
	K. UNIQUENESS  Rating: Working from top to bottom, us						nreviously						
		AA cor springs foreste	ntains fen, bo s or mature (2 ed wetland OF ation listed a	g, warm >80 yr-old) ⋜ plant	AA doe cited ra diversi contair	nt and rating. es not contain are types ANI ty (#13) is hig as plant asso as "S2" by the	Structural h OR ciation	previou associa	es not contai usly cited rar ations AND s ty (#13) is lov	e types OR structural			
i. I	Rating: Working from top to bottom, us	AA cor springs foreste associa the MT	ntains fen, bo s or mature (2 ed wetland OF ation listed a	g, warm >80 yr-old) ⋜ plant	AA doe cited ra diversi contair listed a	es not contain are types ANI ty (#13) is hig ns plant asso ns "S2" by the	Structural h OR ciation	previou associa diversi	usly cited rar ations AND s ty (#13) is lo	e types OR structural			
i. <u> </u>	Rating: Working from top to bottom, us  Replacement Potential  stimated Relative Abundance (#11)  Low Disturbance at AA (#12i)	AA cor springs foreste associa the MT	ntains fen, bo s or mature (3 d wetland OF ation listed as NHP	g, warm >80 yr-old) R plant s "S1" by	AA doe cited ra diversi contair listed a	es not contain are types ANI ty (#13) is hig as plant asso as "S2" by the Common	Distructural Jih OR ciation EMTNHP Discrepance	previou associa diversi	usly cited rar ations AND s ty (#13) is low Common	e types OR structural w-moderate			
i. I	Rating: Working from top to bottom, us  Replacement Potential  Estimated Relative Abundance (#11)  Low Disturbance at AA (#12i)  Moderate Disturbance at AA (#12i)	AA cor springs foreste associa the MT	ntains fen, bo s or mature (: ed wetland OF ation listed a: NHP	g, warm >80 yr-old) R plant s "S1" by	AA doe cited ra diversi contair listed a	es not contain are types ANI ty (#13) is hig as plant asso as "S2" by the Common	O structural gh OR ciation e MTNHP Abundant	previou associa diversi	usly cited rar ations AND s ty (#13) is low Common	e types OR structural w-moderate			
E	Replacement Potential  Replacement Potential  Estimated Relative Abundance (#11)  Low Disturbance at AA (#12i)  Moderate Disturbance at AA (#12i)  High Disturbance at AA (#12i)	AA cor springs foreste associa the MT	ntains fen, bo s or mature (3 d wetland OF ation listed as NHP	g, warm >80 yr-old) R plant s "S1" by	AA doe cited ra diversi contair listed a	es not contain are types ANI ty (#13) is hig as plant asso as "S2" by the Common	Distructural Jih OR ciation EMTNHP Discrepance	previou associa diversi	usly cited rar ations AND s ty (#13) is low Common	e types OR structural w-moderate			
i. I	Rating: Working from top to bottom, us  Replacement Potential  Estimated Relative Abundance (#11)  Low Disturbance at AA (#12i)  Moderate Disturbance at AA (#12i)	AA cor springs foreste associa the MT	ntains fen, bo s or mature (: ed wetland OF ation listed a: NHP	g, warm >80 yr-old) R plant s "S1" by	AA doe cited ra diversi contair listed a	es not contain are types ANI ty (#13) is hig as plant asso as "S2" by the Common	O structural gh OR ciation e MTNHP Abundant	previou associa diversi	usly cited rar ations AND s ty (#13) is low Common	e types OR structural w-moderate			
i. I	Replacement Potential  Replacement Potential  Estimated Relative Abundance (#11)  Low Disturbance at AA (#12i)  Moderate Disturbance at AA (#12i)  High Disturbance at AA (#12i)	AA cor springs foreste associathe MT	ntains fen, bo s or mature (: ed wetland OF ation listed as NHP  Common	g, warm >80 yr-old) R plant s "S1" by  Abundant NA (proceed to	AA doe cited ra diversi contair listed a Rare	es not contain are types ANI ty (#13) is high as plant asso as "S2" by the Common	D structural ph OR ciation mathematical math	previou associa diversi	usly cited rar ations AND s ty (#13) is low Common	e types OR structural w-moderate			
E Co	Rating: Working from top to bottom, us  Replacement Potential  Estimated Relative Abundance (#11)  Low Disturbance at AA (#12i)  Moderate Disturbance at AA (#12i)  High Disturbance at AA (#12i)  mments:  L. RECREATION / EDUCATION POTE	AA cor springs foreste associathe MT Rare	ntains fen, bos or mature (and wetland OF ation listed and NHP  Common  tional or educations or mature (and the second control of the second c	g, warm >80 yr-old) R plant s "S1" by  Abundant NA (proceed to ational opportu	AA doe cited ra diversi contair listed a Rare	es not container types ANI ty (#13) is higher assons "S2" by the Common Summary and	D structural ph OR ciation a MTNHP  Abundant Rating page)	previou associa diversi Rare	usly cited rar ations AND s ty (#13) is low Common	e types OR structural w-moderate			
E Co	Rating: Working from top to bottom, us  Replacement Potential  Estimated Relative Abundance (#11)  Low Disturbance at AA (#12i)  Moderate Disturbance at AA (#12i)  High Disturbance at AA (#12i)  mments:  L. RECREATION / EDUCATION POTE  Affords 'bonus' points if AA provides	AA cor springs foreste associative MT Rare ENTIAL a recreational or	ntains fen, bos or mature (and wetland OF ation listed and NHP  Common  tional or educar educational	g, warm >80 yr-old) R plant s "S1" by  Abundant NA (proceed to ational opportures ite?	AA doe cited ra diversi contair listed a Rare O Overall unity.	es not container types ANI ty (#13) is higher assons "S2" by the Common Summary and	D structural ph OR ciation a MTNHP  Abundant Rating page)	previous associativersi	usly cited rar ations AND s ty (#13) is lov Common2L	e types OR structural w-moderate  Abundant			
i. I	Replacement Potential  Replacement Potential  Stimated Relative Abundance (#11)  Low Disturbance at AA (#12i)  Moderate Disturbance at AA (#12i)  High Disturbance at AA (#12i)  mments:  L. RECREATION / EDUCATION POTE Affords 'bonus' points if AA provides Is the AA a known or potential recrea Check categories that apply to the A  Rating: Use the matrix below to select	AA cor springs foreste associathe MT Rare ENTIAL a recreational or	ntains fen, bo s or mature (: ed wetland OF ation listed as NHP  Common  tional or educational ducational/Sci ether: estional point ar	g, warm >80 yr-old) R plant s "S1" by  Abundant NA (proceed to ational opporture site?  YES entific Study	AA doe cited ra diversi contair listed a Rare O Overall unity.  S, go to ii.	es not container types ANI ty (#13) is higher assons "S2" by the Common Summary and	D structural ph OR ciation a MTNHP  Abundant Rating page)	previous associativersi	usly cited rar ations AND s ty (#13) is lov Common2L	e types OR structural w-moderate  Abundant			
E Co Co 141 i. i	Replacement Potential  Replacement Potential  Stimated Relative Abundance (#11)  Low Disturbance at AA (#12i)  Moderate Disturbance at AA (#12i)  High Disturbance at AA (#12i)  Migh Dist	AA cor springs foreste associate MT Rare Rare arecreational or A: En Cotential	ntains fen, bo s or mature (: ed wetland OF ation listed as NHP  Common  tional or educational ducational/Sci ther: ctional point ar Recreational	g, warm >80 yr-old) R plant s "S1" by  Abundant NA (proceed to ational opporture site?  YES entific Study or Education	AA doe cited ra diversi contair listed a Rare	es not container types ANI ty (#13) is higher assons "S2" by the Common Summary and NO, che	D structural ph OR ciation a MTNHP  Abundant Rating page)	previous associativersi Pare	usly cited rar ations AND s ty (#13) is lov  Common  2L	e types OR structural w-moderate			
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E Co 141 i. i	Replacement Potential  Replacement Potential  Stimated Relative Abundance (#11)  Low Disturbance at AA (#12i)  Moderate Disturbance at AA (#12i)  High Disturbance at AA (#12i)  mments:  L. RECREATION / EDUCATION POTE Affords 'bonus' points if AA provides Is the AA a known or potential recrea Check categories that apply to the A  Rating: Use the matrix below to select Known or P  Public ownership or public easemen	AA corsprings foreste associate MT Rare	tains fen, bos or mature (3 de wetland OF ation listed and NHP  Common   tional or educational ducational/Scither:  ctional point ar  Recreational eneral public s (no permiss	g, warm >80 yr-old) R plant s "S1" by  Abundant NA (proceed to ational opportusite? YES entific Study or Education access (no posion required)	AA doe cited ra diversi contair listed a Rare O Overall unity.  G, go to ii.  Consular Area ermissio	es not container types ANI ty (#13) is higher splant assons "S2" by the Common Summary and NO, che umptive Recre	D structural ph OR ciation e MTNHP  Abundant Rating page) ck the NA box eational	previous associativersi diversi Rare	usly cited rar ations AND s ty (#13) is lov  Common  2L  Potential	e types OR structural w-moderate			
i. I Co 14I ii. I iii.	Replacement Potential  Replacement Potential  Stimated Relative Abundance (#11)  Low Disturbance at AA (#12i)  Moderate Disturbance at AA (#12i)  High Disturbance at AA (#12i)  High Disturbance at AA (#12i)  Moderate Disturbance at AA (#12i)  High Disturbance at AA (#12i)  Moderate Disturbance at AA (#12i)  High Disturbance at AA (#12i)  Moderate Disturbance at AA (#12i)  High Disturbance at AA (#12i)  Moderate Disturbance at AA (#12i)  High Disturbance at AA (#12i)  Moderate Disturbance at AA (#12i)  Moderate Disturbance at AA (#12i)  High Disturbance at AA (#12i)  Moderate Disturbance at AA (#12i)  High Disturbance at AA (#12i)  Moderate Disturbance at AA (#12i)  High Disturbance at AA (#12i)  Moderate Disturbance at AA (#12i)  High Disturbance at AA (#12i)  Moderate Disturbance at AA (#12i)  High Disturbance at AA (#12i)  Moderate Disturbance at AA (#12i)  High Disturbance at AA (#12i)  Moderate Disturbance at AA (#12i)  High Disturbance at AA (#12i)  Moderate Disturbance at AA	AA corsprings foreste associate MT Rare	tains fen, bos or mature (3 de wetland OF ation listed and NHP  Common   tional or educational ducational/Scither:  ctional point ar  Recreational eneral public s (no permiss	g, warm >80 yr-old) R plant s "S1" by  Abundant NA (proceed to ational opportusite? YES entific Study or Education access (no posion required)	AA doe cited ra diversi contair listed a Rare O Overall unity.  G, go to ii.  Consular Area ermissio	es not container types ANI ty (#13) is higher splant assons "S2" by the Common Summary and NO, che umptive Recre	D structural ph OR ciation e MTNHP  Abundant Rating page) ck the NA box eational	previous associativersi diversi Rare	usly cited rar ations AND s ty (#13) is lov  Common 2L  Potential	e types OR structural w-moderate			

15. GENERAL SITE NOTES: Public can access the river for fishing and scientific study.

Function & Value Variables	Rating – Actual Functional Points	Possible Functional Points	Functional Units: Actual Points x Estimated AA Acreage	Indicate the Four Most Prominent Functions with an Asterisk			
A. Listed / Proposed T&E Species Habitat	low 0.10	1.00					
B. MT Natural Heritage Program Species Habitat	high 0.90	1.00		*			
C. General Wildlife Habitat	mod 0.70	1.00					
D. General Fish Habitat	high 0.80	1.00					
E. Flood Attenuation	low 0.20	1.00					
F. Short and Long Term Surface Water Storage	high 0.80	1.00		*			
G. Sediment / Nutrient / Toxicant Removal	mod 0.40	1.00					
H. Sediment / Shoreline Stabilization	high 1.00	1.00		*			
I. Production Export / Food Chain Support	high 0.90	1.00		*			
J. Groundwater Discharge / Recharge	NA	NA					
K. Uniqueness	low 0.20	1.00					
L. Recreation / Education Potential (bonus point)	high 0.20						
Total Points	6.2	10	Total	Functional Units			
Percent of Possible Score 62% (round to nearest whole number)							

Category I Wetland: (must satisfy one of the following criteria; o  ☐ Score of 1 functional point for Listed/Proposed Threatene ☐ Score of 1 functional point for Uniqueness; or ☐ Score of 1 functional point for Flood Attenuation and ansu ☐ Percent of possible score > 80% (round to nearest whole	d or Endangered Species; <b>or</b> ver to Question 14E.ii is "yes"; <b>or</b>
Category II Wetland: (Criteria for Category I not satisfied and metals and score of 1 functional point for MT Natural Heritage Progration Score of .9 or 1 functional point for General Wildlife Habits Score of .9 or 1 functional point for General Fish Habitat; "High" to "Exceptional" ratings for both General Wildlife Hoscore of .9 functional point for Uniqueness; or Percent of possible score > 65% (round to nearest whole	m Species Habitat; <b>or</b> at; <b>or</b> or abitat <b>and</b> General Fish/Aquatic Habitat; <b>or</b>
☐ Category III Wetland: (Criteria for Categories I, II, or IV not sa	atisfied)
Category IV Wetland: (Criteria for Categories I or II are not satisf  □ "Low" rating for Uniqueness; and □ Vegetated wetland component < 1 acre (do not include up □ Percent of possible score < 35% (round to nearest whole	
OVERALL ANALYSIS AREA (AA) RATING: Check	the appropriate category based on the criteria outlined above.

# MDT MONTANA WETLAND ASSESSMENT FORM (revised March 2008)

1.	1. Project Name: Taft - West 2. MDT Project #: IM 90-1(227)0 3. Control #: 9487000	
3.	3. Evaluation Date: 07/19/2021 4. Evaluator(s): M. Traxler, J. Schick - HDR Engineering 5. Wetland/Site #(s): WL-07, 08,	<u>10, 11</u>
6.	6. Wetland Location(s): Township 19 N, Range 32 W, Section 11; Township N, Range W, Section	
	Approximate Stationing or Roadposts: Interstate 90: WL-07 @ RP 4.4; WL-08 @ RP 3.9; WL-10 @ RP 3.9; WL-11 @ RP 4	<u>.5</u>
	Watershed: 3 - Lower Clark Fork County: _ Mineral	
7.	7. Evaluating Agency: MDT Purpose of Evaluation:  Wetland potentially affected by MDT project Mitigation wetlands; pre-construction  Mitigation wetlands; post-construction  Mitigation wetlands; post-construction  9. Assessment Area (AA) Size (acre): 0.5 - 1.0 (visually	,
	Other (see manual for determining AA) (measured	, e.g. GPS
10	10. CLASSIFICATION OF WETLAND AND AQUATIC HABITATS IN AA (See manual for definitions.)	

LIOM Olege (Deimers)	01 (0	Maralifian (Oassandin)	Matau Danima	0/ 05 44
HGM Class (Brinson)	Class (Cowardin)	Modifier (Cowardin)	Water Regime	% OF AA
Riverine	Emergent Wetland		Permanent / Perennial	30
Riverine	Scrub-Shrub Wetland		Permanent / Perennial	40
Riverine	Forested Wetland		Permanent / Perennial	20
Riverine	Rock Bottom		Permanent / Perennial	10

Comments: Wetland associated with the Chippy Creek channel and its tributaries.

11. ESTIMATED RELATIVE ABUNDANCE (of similarly classified sites within the same Major Montana Watershed Basin; see manual.) common

#### 12. GENERAL CONDITION OF AA

i. Disturbance: Use matrix below to select the appropriate response; see manual for Montana listed noxious weed and aquatic nuisance vegetation species lists.

	Predominant Conditions Adjacent to (within 500 feet of) AA								
Conditions within AA	Managed in predominantly natural state; is not grazed, hayed, logged, or otherwise converted; does not contain roads or buildings; and noxious weed or ANVS cover is ≤15%.	Land not cultivated, but may be moderately grazed or hayed or selectively logged; or has been subject to minor clearing; contains few roads or buildings; noxious weed or ANVS cover is ≤30%.	Land cultivated or heavily grazed or logged; subject to substantial fill placement, grading, clearing, or hydrological alteration; high road or building density; or noxious weed or ANVS cover is >30%.						
AA occurs and is managed in predominantly natural state; is not grazed, hayed, logged, or otherwise converted; does not contain roads or occupied buildings; and noxious weed or ANVS cover is ≤15%.									
AA not cultivated, but may be moderately grazed or hayed or selectively logged; or has been subject to relatively minor clearing, fill placement, or hydrological alteration; contains few roads or buildings; noxious weed or ANVS cover is ≤30%.									
AA cultivated or heavily grazed or logged; subject to relatively substantial fill placement, grading, clearing, or hydrological alteration; high road or building density; or noxious weed or ANVS cover is >30%.			high disturbance						

Comments (types of disturbance, intensity, season, etc.): The original construction of I-90 had significant impacts to Chippy Creek and its associated wetlands.

- ii. Prominent noxious, aquatic nuisance, and other exotic vegetation species: knapweed and thistle
- iii. Provide brief descriptive summary of AA and surrounding land use/habitat: AA includes the Chippy Creek channel and adjacent fringe and floodplain wetlands. Adjacent land includes the I-90 corridor and forested mountains.

13. STRUCTURAL DIVERSITY (Based on number of "Cowardin" vegetated classes present [do not include unvegetated classes]; see #10 above.)

Existing # of "Cowardin" Vegetated Classes in AA	Initial Rating	Is current management peristence of additional		Modified Rating
≥3 (or 2 if one is forested) classes	high	NA	NA	NA
2 (or 1 if forested) classes		NA	NA	NA
1 class, but not a monoculture		←NO	YES→	
1 class, monoculture (1 species comprises ≥90% of total cover)		NA	NA	NA

Comments: Fringe and floodplain wetlands are a combination of PEM, PSS, and PFO

							We	tland	l/Site	#(s): <u>W</u>	L-07, C	8, 10	), 11							
14A. HABITAT FOR FEDERAL	LLY LIS	STED	OR P	ROP	OSED	THRE	EATEN	IED (	OR EI	NDANG	ERED	PLA	NTS C	R AN	IMALS	3				
i. AA is Documented (D) or SI Primary or critical habitat (list Secondary habitat (list specie Incidental habitat (list specie No usable habitat	specie es)		to co		s s	eck bo	ox base	ed on	defin	itions ir	n manu	al.								
ii. Rating: Based on the strong	est hab	itat cl	nosen	in 14	łA(i) ab	ove, s	select t	he co	orresp	onding	function	onal p	ooint a	nd rati	ng.					
Highest Habitat Level	Doc/P	rimar	y S	Sus/P	rimary	Do	c/Sec	onda	ary	Sus/Se	conda	ry	Doc/li	ncider	ntal	Sus	/Incide	ntal	Non	е
Functional Point/Rating		-		-				•											0L	
Sources for documented use uncommon in this area.	(e.g. ob	serva	itions,	, reco	ords): <u>G</u>	<u>Srizzly</u>	bears	may	use t	ne St. F	Regis F	River	ripariar	n area	as a tı	<u>ravel</u>	corrido	or. Gri	zzlies a	<u>are</u>
<b>14B. HABITAT FOR PLANTS</b> Do not include species lis				TED :	S1, S2	OR S	S3 BY	THE	MON	TANA	NATUI	RAL	HERIT	AGE F	PROG	RAM				
i. AA is Documented (D) or St Primary or critical habitat (list Secondary habitat (list speci Incidental habitat (list specie No usable habitat	specie es) s)	es) `			S <u>pile</u> S <u>S</u> S	ated v	woodpe	<u>ecker</u>	<u>-</u>											
ii. Rating: Based on the strong																C/	lu al da		Mana	7
Highest Habitat Level S1 Species	Doc/P	rımar	уε	ous/P	rimary	י טכ	oc/Sec	onaa	ary	Sus/Se	conaa	iry	Doc/li	nciaer	itai	Sus/	Incide	ntai	None	-
Functional Point/Rating	-	-		-				•		•										
S2 and S3 Species Functional Point/Rating		-		-						_;	5M									
i. Evidence of Overall Wildlife  Substantial: Based on any of observations of abundant of abundant of presence of extremely linguister interview with local biology  Moderate: Based on any of of observations of scattered of common occurrence of wo adequate adjacent uplant of interview with local biology  ii. Wildlife Habitat Features: Note that the abundant of the AA (S/I = seasonal/intermittent; T/E  Structural Diversity	of the formula the folial wildlife single side of the folial wildlife side of food so the	ollowire #s or eat, transitat know owing group gn su ource know from y distr	ng [chrhigh acks, featureledge checks] [checks selection to	eck]. specenests res note of the scat, of the bottom to bottom to the ations	duals of tracks  tracks  most a most a most a service.	ersity res, gable in or rela in, nest eck apand le inface	(during ame trans the solution the solution to the solution to the solution the sol	g any ails, e urrou ew sp ures, ate A evaler durat	perice pecies game	d) area s during trails, ributes getated are as f	☐ Mir ☐ f ☐ li ☐ s ☐ i I peak etc.	perio	: Base r no wi o no wi e adjac iew wit  ds  arrive : ast be v = perm ns of t	d on a Idlife o Idlife s cent up th local at ratin within 2 nanent	ny of t bserva sign bland fo I biolog ng. Str 20% of /peren	ations ood s gist w ructur f eacl	ources vith kno ral dive	g peak s www.edg	cuse po	4 #13.
(see #13)				⊠ F	ligh							] Mo	derate	•				□ L	.ow	
Class Cover Distribution (all vegetated classes)		□ Ev	⁄en			⊠ Un	even			□ E	ven			□ Un	even			□Е	ven	
Duration of Surface Water in ≥ 10% of AA	P/P	S/I	T/E	Α	P/P	S/I	T/E	Α	P/P	S/I	T/E	Α	P/P	S/I	T/E	Α	P/P	S/I	T/E	Α
☐ Low Disturbance at AA (see #12i)																				
☐ Moderate Disturbance at AA (see #12i)																				
					М															
iii. Rating: Use the conclusion	e from i	and	ii aho	ve an	d the n	natriv	helow	to so	alect th	ne func	ional r	oint ·	and rot	ina						
Evidence of Wildlife Use			eptio			/ildlife				es Rati			and rat	.irig. □ Lo	\ <b>\</b>	7				
(i) ☐ Substantial			eptio 	ııaı								<b>U</b>	T .	<u> L0</u>	₩	=				
✓ Moderate											5M									

☐ Minimal Comments: Wetlands adjacent to Chippy Creek provide habitat for a number of mammals and birds in the area.

							vvet	iand/S	te #(s): <u>\</u>	/VL-U/	, 08, 10	<u>, 11</u>					
D. GENERAL FISH HABITA If the AA is not used by fi entrapped in a canal], the	sh, fish	use is	not res	storab				straint	s, or is n	ot desi	red fron	n a ma	anager	ment pe	erspec	tive [s	uch as
Assess this function if the precluded by perched cul					existing	situati	ion is "	correct	able" su	ch that	the AA	could	be us	ed by f	ish [i.e	e., fish	use is
Type of Fishery:   Co	d Wate	er (CW)	□ \	Narm	Water (	WW)	Use t	he CW	or WW	guideli	nes in tl	he man	ual to	comple	te the	matri	ζ.
Habitat Quality and Known	/ Susp	ected F	ish S	pecie	s in AA	: Use	matrix	to sel	ect the fu	ınction	al point	and ra	ating.				
Duration of Surface Water in AA	□Р	ermane	nt / P	erenn	ial	1	☐ Sea	sonal	/ Interm	ittent		□т	empo	rary / E	Ephen	neral	
Aquatic Hiding / Resting / Escape Cover	Opti	imal	Adeq	] uate	Poo	or	Optim	al A	☐ dequate	P	oor	Opt	imal	Aded	]  uate	Pc	oor
Thermal Cover: optimal / suboptimal	0	s	0	S	0	s	0	s (	s	0	S	0	S	0	s	0	S
FWP Tier I fish species			1												-		
FWP Tier II or Native Game fish species																	
FWP Tier III or Introduced Game fish																	
FWP Non-Game Tier IV or No fish species															1		
urces used for identifying	fish sp	p. pote	ntially	/ foun	d in AA	۱:				•	•						
Final Score and Rating: FINAL	that are flooded mation or izon	nents: _  Note subject If from in (see motal project	A (pro to flo n-chan nanual ection	ceed fooding inel or for ac of who	to 14F) via in-c overba dditional ere 2 X	channe nk flow I guida maxim	el or ov v, chec ince). num ba	erbank k the t Entren	flow. IA box a chment i lepth ele	atio =	(flood-p interse	orone v	flood		n each Flo	side ood-pro	ne Widt
Slightly Ent	renche	d						nched					renche				
ER ≥ 2 C stream type D stream		E stre	eam tv	pe l			<b>41 – 2</b> am type		A st	ream t	<sub>vpe</sub> I		1.0 – eam tv		G sti	ream f	vpe
C stream type D stream type E stream type						201108	/	1	7.31		-	F stream type G stream					
Rating: Working from top to	hottom	use th	e matr	ix hel	nw to se	elect th	e func	tional r	oint and	rating							
Estimated or Calculated				☐ SI	ightly E	ntrencl	nched 🛛 Mod		oderatel	derately Entrenched			☐ Entrenched A, F, G stream type				
(Rosgen 1994, 1996)  Percent of Flooded Wetlan Forested and/or Scrub/Sl	d Clas	oified a	_		, E stre	am typ	es 		B strea					strear	п туре	S	
i diedied alla/of delab/di		Silleu a			25-75	i%	_					_	_	25-759	% _		
AA contains no outlet or re	nrub		7	75% 	25-75	5% <	<25% 	75% 		′5%	<25% 	75°	%	25-75 <sup>9</sup>	% <	_	
AA contains <b>no outlet or re</b> AA contains <b>unrestric</b>	nrub estricte	d outle	7	75%		5% <	_	75%	25-7	'5% -	<25%	75	-	25-759 	% <		

ii. Are ≥10 acres of wetland in the AA subject to flooding AND are man-made features which may be significantly damaged by floods located within 0.5 mile downstream of the AA? ☐ YES ☐ NO Comments: \_\_\_\_\_

14	IF. SHORT AND LONG TERM SURFACE WATER STORAGE ☐ NA (proceed to 14G)
	Applies to wetlands that flood or pond from overbank or in-channel flow, precipitation, upland surface flow, or groundwater flow.
	If no wetlands in the AA are subject to flooding or ponding, then check the NA box and proceed to 14G.
i.	Rating: Working from top to bottom, use the matrix below to select the functional point and rating. Abbreviations for surface water durations are as
	follows: P/P = permanent/perennial; S/I = seasonal/intermittent; and T/E = temporary/ephemeral [see manual for further definitions of these terms].

Estimated Maximum Acre Feet of Water Contained in Wetlands within the AA that are Subject to Periodic Flooding or Ponding		>5 acre fe	eet	⊠ 1.1	to 5 ac	re feet	☐ ≤1 acre foot			
Duration of Surface Water at Wetlands within the AA	□ P/P	□ S/I	□ T/E	⊠ P/P	□ S/I	□ T/E	□ P/P	□ S/I	□ T/E	
Wetlands in AA flood or pond ≥ 5 out of 10 years		-		.8H				-		
Wetlands in AA flood or pond < 5 out of 10 years		-								

Comments: Wetlands subject to annual flooding during spring runoff period.

14G.	SEDIMENT / NUTRIENT / TOXICANT / RETENTION AND REMOVAL NA (proceed to 14H)
	Applies to wetland with potential to receive sediments, nutrients, or toxicants through influx of surface or ground water or direct input
	If no wetlands in the AA are subject to such input, check the NA box and proceed to 14H.

i. Rating: Working from top to bottom, use the matrix below to select the functional point and rating.

Sediment, Nutrient, and Toxicant Input Levels within AA	AA receive has potent nutrients, such that of substantia sedimenta toxicants, present.	ial to deliv or compou other funct lly impaire tion, sourc	er sedime nds at lev ions are n d. Minor es of nutr	ents, rels not rients or	Waterbody is on MDEQ list of waterbodies in need of TMDL development for "probable causes" related to sediment, nutrients, or toxicants or AA receives or surrounding land use has potential to deliver high levels of sediments, nutrients, or compounds such that other functions are substantially impaired. Major sedimentation, sources of nutrients or toxicants, or signs of eutrophication present.				
% Cover of Wetland Vegetation in AA	□≥:	70%	□ < 70%		⊠ ≥ 70%		□ < 70%		
Evidence of Flooding / Ponding in AA	☐ Yes	☐ No	☐ Yes	☐ No	⊠ Yes	☐ No	☐ Yes	☐ No	
AA contains no or restricted outlet									
AA contains unrestricted outlet					.4M				

_			
	me		

## 14H. SEDIMENT / SHORELINE STABILIZATION NA (proceed to 14I)

Applies only if AA occurs on or within the banks of a river, stream, or other natural or man-made drainage, or on the shoreline of a standing water body which is subject to wave action.

If 14H does not apply, check the NA box and proceed to 14I.

% Cover of <u>Wetland</u> Streambank or Shoreline by Species with Stability	Duration of Surface Water Adjacent to Rooted Vegetation						
Ratings of ≥6 (see Appendix F).	Permanent / Perennial	☐ Seasonal / Intermittent	☐ Temporary / Ephemeral				
⊠ ≥ 65%	1H						
□ 35-64%							
☐ < 35%							

C	O	m	m	e	n	ts	:		

### 14I. PRODUCTION EXPORT / FOOD CHAIN SUPPORT

i. Level of Biological Activity: Synthesis of wildlife and fish habitat rates (select).

General Fish Habitat Rating	Genera	General Wildlife Habitat Rating (14Ciii)						
(14Diii)	☐ E/H	$\boxtimes$ M	L					
☐ E/H								
■ M								
_ L								
⊠ NA		M						

**ii. Rating:** Working from top to bottom, use the matrix below to select the functional point and rating. Factor A = acreage of vegetated wetland component in the AA; Factor B = level of biological activity rating from above (14li); Factor C = whether or not the AA contains a surface or subsurface outlet; the final three rows pertain to the duration of surface water in the AA, where P/P, S/I, and T/E were previously defined, and A = "absent" [see manual for further definitions of these terms].

Α		☐ Vegetated Component >5 acres					☑ Vegetated Component 1-5 acres					☐ Vegetated Component <1 acre						
В	_ 	ligh	Ш	oderate		Low	_ 	ligh	⊠ Mc	derate		Low	_ 	ligh	☐ Mo	derate		.ow
С	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
P/P									.7M									
S/I				-									-	-				
T/E/A																		

				,	,				
14I. PRODUCTION EXPORT / FOOD CH	AIN SU	IPPORT (conti	nued)						
iii. Modified Rating: Note: Modified scor	e canno	ot exceed 1.0 o	r be less than	0.1.					
Vegetated Upland Buffer: Area with mowing or clearing (unless for weed c Is there an average ≥ 50-foot wide veg	ontrol).					_	-		
iv. Final Score and Rating: <u>.7M</u> Comn	nents: _	<u> </u>							
14J. GROUNDWATER DISCHARGE / RI Check the appropriate indicators in									
i. Discharge Indicators  The AA is a slope wetland.  Springs or seeps are known of Vegetation growing during do Wetland occurs at the toe of a Seeps are present at the wetler AA permanently flooded during Wetland contains an outlet, b Shallow water table and the sometime of the second services of the second second services of the second second services of the second seco	rmant so a natura and edg ng droug ut no inl ite is sa	eason/drought I slope. ge. ght periods. let. iturated to the s	surface.	☐ Per ☐ We ☐ Stre	tland contains eam is a knowr er:	ate present wii inlet but no ou n 'losing' streal	tlet.	, , ,	0 ,
iii. Rating: Use the information from i and	ıı abov					and rating. GROUNDWATI	FR DISC	HARGE or	1
			ATER THAT	IS RECH	ARGING THE	GROUNDWA			
Criteria		☐ P/P	<u> </u>	S/I	<u></u> □ T		☐ No	ne	
Groundwater Discharge or Recha	arge								
					NA				
14K. UNIQUENESS  i. Rating: Working from top to bottom, us  Replacement Potential	AA co spring forest	ntains fen, bo gs or mature ( ed wetland Of	g, warm >80 yr-old) ⋜ plant	AA do cited r divers	es not contain are types ANI ity (#13) is hiç	Structural gh OR	previou	es not contai usly cited rar ations AND s	re types OR
	assoc the M	iation listed a TNHP	s "S1" by		ns plant asso as "S2" by the			ty (#13) is lo	
Estimated Relative Abundance (#11)	□ Rare	e ☐ Common	☐ Abundant		□ Common		□ Rare	□ Common	☐ Abundant
Low Disturbance at AA (#12i)									
Moderate Disturbance at AA (#12i)									
☐ High Disturbance at AA (#12i)								.2L	
Comments:  14L. RECREATION / EDUCATION POTE Affords 'bonus' points if AA provides  i. Is the AA a known or potential recrea  ii. Check categories that apply to the A	a recreational of A:	ational or educ or educational	ational opport	unity. <b>S</b> , go to ii	. <b>NO</b> , che			umptive recrea	ational
iii. Rating: Use the matrix below to select	the fun	ctional point ar	nd rating.						_
		I Recreational					Known	Potentia	
Public ownership or public easement Private ownership with general public					n required)				
Private or public ownership without					sion for publi	ic access			1
Comments:	J		-,	<u> </u>				1	
15. GENERAL SITE NOTES:									

Function & Value Variables	Rating – Actual Functional Points	Possible Functional Points	Functional Units: Actual Points x Estimated AA Acreage	Indicate the Four Most Prominent Functions with an Asterisk					
A. Listed / Proposed T&E Species Habitat	low 0.10	1.00							
B. MT Natural Heritage Program Species Habitat	mod 0.50	1.00		*					
C. General Wildlife Habitat	mod 0.50	1.00		*					
D. General Fish Habitat	NA	NA							
E. Flood Attenuation	mod 0.60	1.00		*					
F. Short and Long Term Surface Water Storage	high 0.80	1.00							
G. Sediment / Nutrient / Toxicant Removal	mod 0.40	1.00		*					
H. Sediment / Shoreline Stabilization	high 1.00	1.00							
I. Production Export / Food Chain Support	mod 0.70	1.00							
J. Groundwater Discharge / Recharge	NA	NA							
K. Uniqueness	low 0.20	1.00							
L. Recreation / Education Potential (bonus point)	NA								
Total Points	Total Points 4.8 9 Total Functional Units								
Percent of Possibl	e Score 53% (round	I to nearest who	e number)						

	Category I Wetland: (must satisfy one of the following criteria; otherwise go to Category II)  ☐ Score of 1 functional point for Listed/Proposed Threatened or Endangered Species; or ☐ Score of 1 functional point for Uniqueness; or ☐ Score of 1 functional point for Flood Attenuation and answer to Question 14E.ii is "yes"; or ☐ Percent of possible score > 80% (round to nearest whole #).
	Category II Wetland: (Criteria for Category I not satisfied and meets any one of the following criteria; otherwise go to Category IV)  Score of 1 functional point for MT Natural Heritage Program Species Habitat; or Score of .9 or 1 functional point for General Wildlife Habitat; or Score of .9 or 1 functional point for General Fish Habitat; or "High" to "Exceptional" ratings for both General Wildlife Habitat and General Fish/Aquatic Habitat; or Score of .9 functional point for Uniqueness; or Percent of possible score > 65% (round to nearest whole #).
	Category IV Wetland: (Criteria for Categories I or II are not satisfied and all of the following criteria are met; if not go to Category III)  "Low" rating for Uniqueness; and  Vegetated wetland component < 1 acre (do not include upland vegetated buffer); and  Percent of possible score < 35% (round to nearest whole #).
C	VERALL ANALYSIS AREA (AA) RATING: Check the appropriate category based on the criteria outlined above.

# MDT MONTANA WETLAND ASSESSMENT FORM (revised March 2008)

1.	Project Name: Taft - West 2	2. MDT Project #: IM 90-1(227	<u>)0</u> 3. Control #: <u>9487000</u>						
3.	Evaluation Date: 07/19/2021	4. Evaluator(s): M. Traxler,	J. Schick - HDR Engineering	5. Wetland/Site #(s): <u>WL-09</u>					
6.	Wetland Location(s): Towns	ship <u>19 N,</u> Range <u>32 W</u> , Sectior	n <u>2</u> ; Township <u>N</u> , Range <u></u>	W, Section					
	Approximate Stationing or Roadposts: Interstate 90: WL-09 @ RP 3.7								
	Watershed: 3 - Lower Clark Fork County: _ Mineral								
7. Evaluating Agency: MDT Purpose of Evaluation:  Wetland potentially affected by MDT project Mitigation wetlands; pre-construction Mitigation wetlands; post-construction Other (visually estimated)  8. Wetland Size (acre): (visually estimated) 0.09 (measured, e.g. GPS)  9. Assessment Area (AA) Size (acre): (visually estimated) 9. Assessment Area (AA) Size (acre): (measured, e.g. GPS)									
10	. CLASSIFICATION OF WET	LAND AND AQUATIC HABITA	ATS IN AA (See manual for def	initions.)					
	HGM Class (Brinson)	Class (Cowardin)	Modifier (Cowardin)	Water Regime	% OF AA				
	Slope	Emergent Wetland		Permanent / Perennial	50				
	Slope	Scrub-Shrub Wetland		Permanent / Perennial	50				

Comments: Slope wetland on north side of interstate. Water seeping from roadway cutslope.

11. ESTIMATED RELATIVE ABUNDANCE (of similarly classified sites within the same Major Montana Watershed Basin; see manual.) common

#### 12. GENERAL CONDITION OF AA

 i. Disturbance: Use matrix below to select the appropriate response; see manual for Montana listed noxious weed and aquatic nuisance vegetation species lists.

	Predominar	nt Conditions Adjacent to (within	500 feet of) AA
Conditions within AA	Managed in predominantly natural state; is not grazed, hayed, logged, or otherwise converted; does not contain roads or buildings; and noxious weed or ANVS cover is ≤15%.	Land not cultivated, but may be moderately grazed or hayed or selectively logged; or has been subject to minor clearing; contains few roads or buildings; noxious weed or ANVS cover is ≤30%.	Land cultivated or heavily grazed or logged; subject to substantial fill placement, grading, clearing, or hydrological alteration; high road or building density; or noxious weed or ANVS cover is >30%.
AA occurs and is managed in predominantly natural state; is not grazed, hayed, logged, or otherwise converted; does not contain roads or occupied buildings; and noxious weed or ANVS cover is ≤15%.			
AA not cultivated, but may be moderately grazed or hayed or selectively logged; or has been subject to relatively minor clearing, fill placement, or hydrological alteration; contains few roads or buildings; noxious weed or ANVS cover is ≤30%.			
AA cultivated or heavily grazed or logged; subject to relatively substantial fill placement, grading, clearing, or hydrological alteration; high road or building density; or noxious weed or ANVS cover is >30%.			high disturbance

Comments (types of disturbance, intensity, season, etc.): This wetland occurs on a steep I-90 cut slope and water drains into roadside ditch. High disturbance associated with this wetland.

- ii. Prominent noxious, aquatic nuisance, and other exotic vegetation species:  $\underline{\mathsf{NA}}$
- iii. Provide brief descriptive summary of AA and surrounding land use/habitat: This wetland occurs on a steep I-90 cut slope and water drains into roadside ditch. Wetland extends outside ROW a short distance but does not appear to have a downstream connection to any WUS. Surrounding land includes the I-90 corridor to the south and forested lands to the north.

13. STRUCTURAL DIVERSITY (Based on number of "Cowardin" vegetated classes present [do not include unvegetated classes]; see #10 above.)

Existing # of "Cowardin" Vegetated Classes in AA	Initial Rating	Is current management peristence of additional	Modified Rating	
≥3 (or 2 if one is forested) classes		NA	NA	NA
2 (or 1 if forested) classes	mod	NA	NA	NA
1 class, but not a monoculture		←NO	YES→	
1 class, monoculture (1 species comprises ≥90% of total cover)		NA	NA	NA

Comments: Wetland is a mix of PEM and PSS habitat.

							We	tland	l/Site#	‡(s): <u>W</u>	L-09									
<ul> <li>14A. HABITAT FOR FEDERA</li> <li>i. AA is Documented (D) or S</li> <li>Primary or critical habitat (list Secondary habitat (list specincidental habitat (list specinciden</li></ul>	Suspecto st specie cies)	ed (S	_	ontai	n: Che S S S								ANTS C	OR AN	IMALS	6				
No usable habitat	,			$\boxtimes$	s															
ii. Rating: Based on the stron	ř –																		Ī	_
Highest Habitat Level	Doc/P	rimaı	ry S	Sus/P	rimary	Do	oc/Sec	onda	ary S	Sus/Se	conda	ıry	Doc/li	ncider	ntal	Sus	/Incide	ntal	Non	е
Functional Point/Rating		<u></u>			 - \ -						<del></del>				0.5: 1				0L	_
Sources for documented use habitat for T&E species.	e.g. ob	oserva	ations	, reco	rds): <u>T</u>	his we	etland	is sm	iall, isc	olated a	and loc	ated	within	the I-9	0 Righ	nt-of-v	vay. T	here i	s no us	<u>sable</u>
14B. HABITAT FOR PLANTS Do not include species li				TED	S1, S2,	, OR S	S3 BY	THE	MON <sup>-</sup>	ΓΑΝΑ	NATU	RAL	HERIT	AGE I	PROG	RAM				
i. AA is Documented (D) or S Primary or critical habitat (lis Secondary habitat (list specincidental habitat (list specinous) No usable habitat	st specie ies)				s s	_	x base	d on	definit	ions in	manua	al.								
ii. Rating: Based on the stror																		r		_
Highest Habitat Level	Doc/P	rimaı	ry S	Sus/P	rimary	/ Do	oc/Sec	onda	ary S	Sus/Se	conda	ıry	Doc/li	ncider	ntal	Sus/	Incide	ntal	None	4
S1 Species Functional Point/Rating				-				-											.0L	
S2 and S3 Species				_				_												
Functional Point/Rating Sources for documented use	/o.a. ob	2005/	otiono	rooo	rdo). T	bio w	atland	io om	الما	latad	and los	otod	within	tha I O	O Diak	t of v	T	hara i	0 00 110	
Substantial: Based on any on observations of abundar abundant wildlife sign surpresence of extremely liming interview with local biological bi	nt wildlife uch as so miting ha egist with f the follo d wildlife wildlife si nd food s gist with  Working ed evenly (see #10	e #s ocat, trabitat i know owing e grouign susception know y from y district.	r high acks, featur vledge [chec ps or uch as es vledge top	specenests res notes of the sk]. individual scat, se of the botton ations	structur ot availa e AA duals o tracks e AA om, che most a	res, gable in rela restant rela restant rela restant restant le inface	ame transter tively for struction ast pre-	ew spures,	etc. Inding pecies game  AA attr nt <b>veg</b> tions a	during trails, ibutes etated re as f	☑ f ☑ i ☐ s ☐ i I peak etc. in mati classe ollows:	ew o ittle to spars nterv period rix to es mu	arrive : ust be v = perm	Idlife o ildlife s cent up th loca at ratir within 2 nanent	bserva ign bland f I biolog ng. Str 20% o /peren	ations ood s gist w ructur f eacl	during ources with kno	g peak s wledg	use po	A #13.
S/I = seasonal/intermittent; T/E	= tempo	orary/	epher	neral	; and A	. = ab:	sent [s	ee m	anual	for furt	her de	finitic	ns of t	hese te	erms].					
Structural Diversity (see #13)				□ H	ligh						$\triangleright$	☑ Mo	derate	•					.ow	
Class Cover Distribution (all vegetated classes)		□ E	ven		[	□ Un	even			⊠E	ven			☐ Un	even				ven	
Duration of Surface Water in ≥ 10% of AA	P/P	S/I	T/E	Α	P/P	S/I	T/E	Α	P/P	S/I	T/E	Α	P/P	S/I	T/E	Α	P/P	S/I	T/E	Α
□ Low Disturbance at AA																				
(see #12i)  ☐ Moderate Disturbance																				
at AA (see #12i)																				
☑ High Disturbance at AA (see #12i)									М											
iii. Rating: Use the conclusio		i and	ii abo	ve an								oint	and rat	ing.		<b>-</b>				
Evidence of Wildlife Use		7 Ev-	eptio	nal	VV		Habit High	iat F	eature	_	ng (II) oderat	Δ		⊠ Lo	\ <b>A</b> /					
(i) ☐ Substantial		_ EX(	 -epu0	ııaı	1				1	IAIG		<del>U</del>	1	<u> </u>	VV.	$\dashv$				

Comments: Wetland occurs within the Right-of-way of I-90. Low value to local wildlife.

✓ Moderate✓ Minimal

4D. GENERAL FISH HABITAT NA (proceed to 14E)  If the AA is not used by fish, fish use is not restorable due to habitat constraints, or is not desired from a management perspective [such as fish entrapped in a canal], then check the NA box and proceed to 14E.																			
	Assess this function if the AA is used by fish or the existing situation is "correctable" such that the AA could be used by fish [i.e., fish use is precluded by perched culvert or other barrier].																		
Type of Fishery:   Col	d Wate	er (CW	) 🔲 '	Warm	Water	(WW	) Use	the C	CW or	WW gu	iideline	es in th	e man	ual to	comple	te the	matri	х.	
i. Habitat Quality and Known	/ Susp	ected	Fish S	pecie	s in A	<b>A</b> : Us	se matr	ix to	selec	the fun	ctiona	l point	and ra	ating.					
Duration of Surface Water in AA	☐ Pe	erman	ent / P	erenn	ial		□ Se	easoi	nal / I	ntermit	tent		□т	empo	rary / E	Ephen	neral		
Aquatic Hiding / Resting / Escape Cover	Opti	] imal	Aded	] luate	Po	_	Opti	] mal	Ade	guate	Po		_	imal	Adec	] luate	Po	oor	
Thermal Cover: optimal / suboptimal	0	s	0	s	0	s	0	s	0	s	0	s	0	s	0	s	0	s	
FWP Tier I fish species																			
FWP Tier II or Native Game fish species																			
FWP Tier III or Introduced																			
FWP Non-Game Tier IV or No fish species																			
Sources used for identifying f	ish sp	p. pote	entially	/ foun	d in A	A:	<u> </u>												<u>J</u>
ii. Modified Rating: NOTE: Mo a) Is fish use of the AA significant	odified otly red	score	cannot by a cu	excee	ed 1.0 dike, o	or be r othe	r man-	made	struc										nt final
MDEQ list of waterbodies in nee support, <b>or</b> do aquatic nuisance	plant o	or anin	nal spe	cies (s	see Ap	pend	ix <b>E</b> ) o	ccur i	in fish	habitat	? 🗌 <b>١</b>	ES, re	educe	score	in <b>i</b> by	0.1 =	or	□ No	
b) Does the AA contain a docum native fish or introduced game fi											tuary p	ool, u	owellir	ng area	a; spec	ify in (	comm	ents) f	or
iii. Final Score and Rating: _	Comm	nents:																	
14E. FLOOD ATTENUATION Applies only to wetlands t If wetlands in AA are not t	hat are	subje	IA (pro ct to flo in-char	oding	via in	chan	nel or c	verback th	ank fle ne NA	ow. box and	d proc	eed to	14F.						
Entrenchment Ratio (ER) Estin Flood-prone width = estimated h																		of the	stream.
/	= _								λ <i>I</i> .								0		
flood prone width / bankfull width	n = ent	renchr	nent ra	itio		2 x I	Bankful	Dept	th		Se Va	XXXX X	\	18	Karan	gr.	-	ne Wio	lth
										Ban	kfull D	epth	Sephood	• • • • • • • • • • • • • • • • • • •	www.com/	Bankf	ull W10	ith	
Slightly Entr		d					ly Entr		ed					renche					
ER ≥ 2 C stream type D stream t		E sti	ream ty	/pe			<b>1.41 –</b> eam ty			A stre	am typ	ре		• <b>1.0 –</b> eam ty		G st	ream t	type	
				[		7					——————————————————————————————————————		£		==[	7			
i. Rating: Working from top to b	ottom	use th	ne mati	riv halr	ow to s	alact	the fun	ction	al noi	nt and r	atina								
Estimated or Calculated				☐ SI	ightly I	Entrer	nched			lerately		ched		E	Entrend	ched		1	
(Rosgen 1994, 1996) Percent of Flooded Wetland		sified			, E str					stream				]	strear				
Forested and/or Scrub/Sh  AA contains no outlet or re		d outl		75% 	25-7		<25%		'5% 	25-75	70 <	<25% 	75' 		25-759	/0 <	25%		
AA contains unrestrict			<u> </u>			-		+			+			-					
ii. Are ≥10 acres of wetland in			iect to	flood	ina Al	ND ar	e man-	mad	e feat	ures wi	hich m	nav be	sjani	ficant	lv dam	aged	by flo	ods Id	cated
within 0.5 mile downstream	of the	e AA?	☐ YE	s 🗆	NO	Comi	nents:		_			,	5			<b>J</b> = ~	•		

14F	SHORT AND LONG TERM SURFACE WATER STORAGE	NA (proceed to 14G)

Applies to wetlands that flood or pond from overbank or in-channel flow, precipitation, upland surface flow, or groundwater flow. If no wetlands in the AA are subject to flooding or ponding, then check the NA box and proceed to 14G.

i. Rating: Working from top to bottom, use the matrix below to select the functional point and rating. Abbreviations for surface water durations are as follows: P/P = permanent/perennial; S/I = seasonal/intermittent; and T/E = temporary/ephemeral [see manual for further definitions of these terms].

Estimated Maximum Acre Feet of Water Contained in Wetlands within the AA that are Subject to Periodic Flooding or Ponding		>5 acre f	eet	☐ <b>1</b> .1	l to 5 ac	re feet	⊠≤	≤1 acre t	foot
Duration of Surface Water at Wetlands within the AA	□ P/P	□ S/I	□ T/E	□ P/P	□ S/I	□ T/E	□ P/P	□ S/I	⊠ T/E
Wetlands in AA flood or pond ≥ 5 out of 10 years									.2L
Wetlands in AA flood or pond < 5 out of 10 years									

Comments: This wetland is not subject to annual flooding.

14G.	<b>SEDIMENT</b>	/ NUTRIENT	/ TOXICANT	/ RETENTION	AND REMOVAL	□NA	(proceed to 14)	Н
------	-----------------	------------	------------	-------------	-------------	-----	-----------------	---

Applies to wetland with potential to receive sediments, nutrients, or toxicants through influx of surface or ground water or direct input. If no wetlands in the AA are subject to such input, check the NA box and proceed to 14H.

i. Rating: Working from top to bottom, use the matrix below to select the functional point and rating.

Sediment, Nutrient, and Toxicant Input Levels within AA	AA receive has potent nutrients, such that a substantia sedimenta toxicants, present.	tial to deliv or compou other funct Illy impaire tion, sourc	er sedime nds at lev ions are n d. Minor es of nutr	nts, els ot ients or	Waterbody is need of TMDL causes" relat toxicants or A has potential nutrients, or c functions are sedimentation or signs of eu	developmer ed to sedime AA receives o to deliver hig compounds s substantially n, sources of	nt for "probat nt, nutrients, or surroundin gh levels of so such that other impaired. M nutrients or	ole or g land use ediments, er ajor		
% Cover of Wetland Vegetation in AA	⊠≥′	70%	<b>□</b> <	70%	□ ≥ 70% □ < 70%					
Evidence of Flooding / Ponding in AA	☐ Yes	⊠ No	☐ Yes	☐ No	☐ Yes	☐ No	☐ Yes	☐ No		
AA contains no or restricted outlet		.8H								
AA contains unrestricted outlet										

Comments: Wetland appears isolated with good retention and removal of sediment.

#### 14H. SEDIMENT / SHORELINE STABILIZATION NA (proceed to 14I)

Applies only if AA occurs on or within the banks of a river, stream, or other natural or man-made drainage, or on the shoreline of a standing water body which is subject to wave action.

If 14H does not apply, check the NA box and proceed to 14I.

% Cover of Wetland Streambank or Shoreline by Species with Stability	Duration of Surface Water Adjacent to Rooted Vegetation								
Ratings of ≥6 (see Appendix F).	☐ Permanent / Perennial	☐ Seasonal / Intermittent	☐ Temporary / Ephemeral						
□ ≥ 65%									
□ 35-64%									
☐ < 35%									

Comments:

#### 14I. PRODUCTION EXPORT / FOOD CHAIN SUPPORT

i. Level of Biological Activity: Synthesis of wildlife and fish habitat rates (select).

General Fish Habitat Rating	Genera	l Wildlife Habitat Rati	ing (14Ciii)
(14Diii)	☐ E/H		ĎL
☐ E/H			
■ M			
L			
⊠ NA			L

**ii. Rating:** Working from top to bottom, use the matrix below to select the functional point and rating. Factor A = acreage of vegetated wetland component in the AA; Factor B = level of biological activity rating from above (14li); Factor C = whether or not the AA contains a surface or subsurface outlet; the final three rows pertain to the duration of surface water in the AA, where P/P, S/I, and T/E were previously defined, and A = "absent" [see manual for further definitions of these terms].

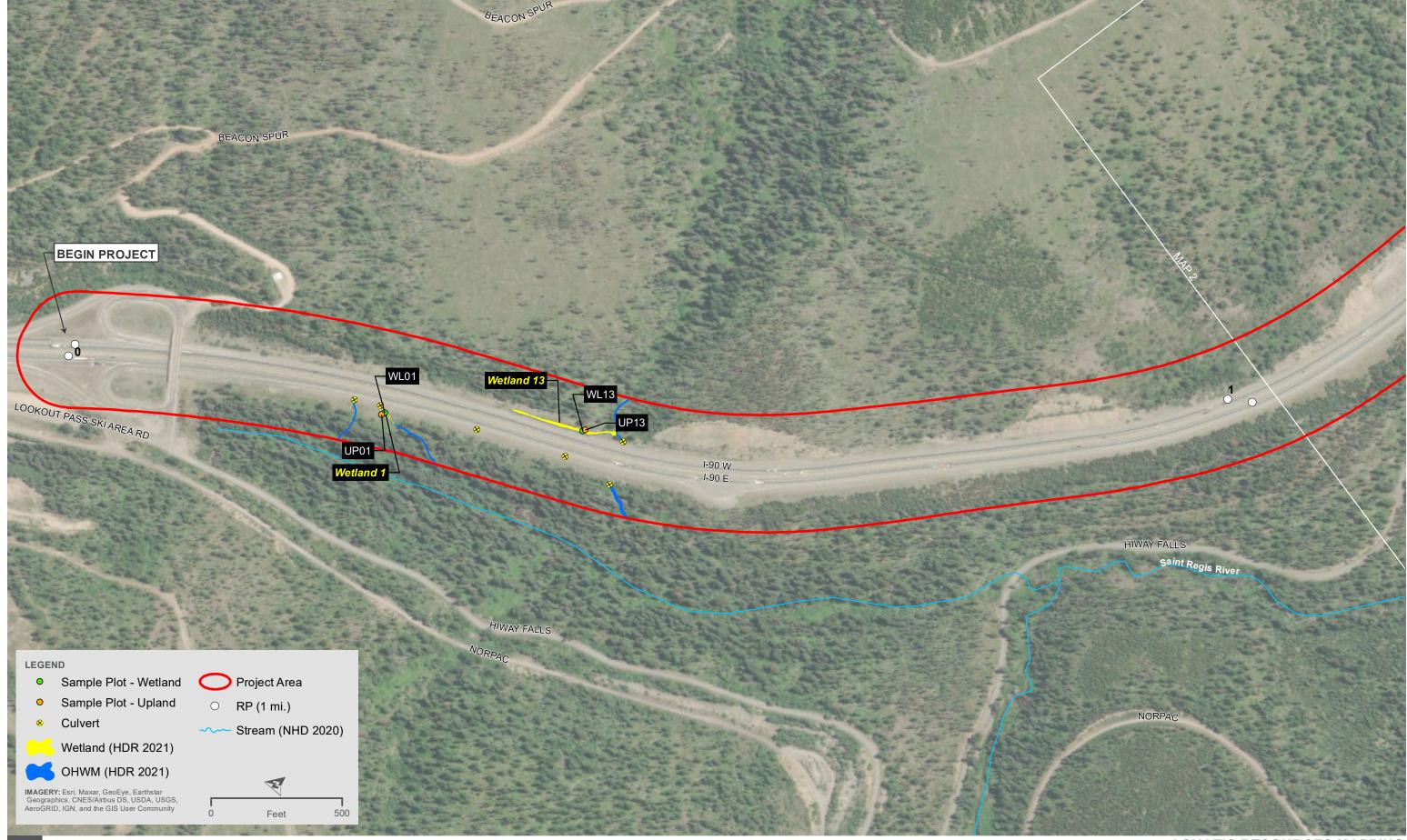
Α	A						Vegeta	ated Co	mponent	1-5 ac	res							
В	_ _	ligh	Ш	oderate		Low	_ 	ligh		derate		Low	_ 	ligh	☐ Mo	derate		.ow
С	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
P/P																	.3L	
S/I								-					-	-				
T/E/A																		

14I. PRODUCTION EXPORT / FOOD CH	IAIN SU	PPORT (conti	nued)						
iii. Modified Rating: Note: Modified score	re canno	t exceed 1.0 o	r be less than	0.1.					
<b>Vegetated Upland Buffer:</b> Area with ≥ 30% plant cover, ≤ 15% noxious weed or ANVS cover, AND that is not subjected to periodic mechanical mowing or clearing (unless for weed control).  Is there an average ≥ 50-foot wide vegetated upland buffer around ≥ 75% of the AA's perimeter? $\boxtimes$ YES, add 0.1 to score in ii = 0.00 $\square$ NO									
iv. Final Score and Rating: $\underline{^{4}\mathrm{M}}$ Comr	nents: _								
14J. GROUNDWATER DISCHARGE / R Check the appropriate indicators in									
i. Discharge Indicators  The AA is a slope wetland. Springs or seeps are known wetland. Vegetation growing during do Wetland occurs at the toe of Seeps are present at the wetland contains an outlet, but Shallow water table and the second of	ormant se a natural dand edg ng droug out no inle	eason/drought   slope.  e. ht periods. et.		☐ Perr ☐ Wet ☐ Stre	land contains	ate present wi inlet but no ou n 'losing' strea	tlet.	, , ,	0 ,
iii. Rating: Use the information from i an	d ii abov								<b>a</b>
			Saturation at A						
Criteria		<u>WITH W</u> ⊠ P/P	<u>/ATER THAT I</u> S □		ARGING THE ☐ T	GROUNDWA	Noi		
☐ Groundwater Discharge or Rech	arge	1H		<del>'</del>	<u></u>				
☐ Insufficient Data/Information	<b>.</b>		J			Į.			
Comments:									_
14K. UNIQUENESS									
	se the ma	atrix below to s	select the funct	ional poi	nt and rating.				
14K. UNIQUENESS i. Rating: Working from top to bottom, us		atrix below to s			nt and rating.	n previously	A A		_
i. Rating: Working from top to bottom, us	AA co	ntains fen, bo s or mature (	og, warm >80 yr-old)	AA doe	es not contain are types ANI	o structural		es not contai	
	AA conspring	ntains fen, bo s or mature ( ed wetland Ol	og, warm >80 yr-old) ⋜ plant	AA doe cited ra diversi	es not contain are types ANI ty (#13) is hig	Structural gh OR	previou	es not containusly cited rareations AND s	e types OR
i. Rating: Working from top to bottom, us	AA conspring forester associ	ntains fen, bo is or mature ( ed wetland Ol iation listed a	og, warm >80 yr-old) ⋜ plant	AA doe cited ra diversi contair	es not contain are types ANI ty (#13) is hig ns plant asso	O structural gh OR ciation	previou associa	ısly cited rar	e types OR tructural
i. Rating: Working from top to bottom, us  Replacement Potential	AA conspring forester associate MT	ntains fen, bo is or mature ( ed wetland Ol iation listed a 「NHP	og, warm >80 yr-old) R plant s "S1" by	AA doe cited ra diversi contair listed a	es not contain are types ANI ty (#13) is hig ns plant asso ns "S2" by the	O structural gh OR ciation e MTNHP	previou associa diversi	usly cited rar ations AND s ty (#13) is lov	e types OR tructural w-moderate
i. Rating: Working from top to bottom, us  Replacement Potential  Estimated Relative Abundance (#11)	AA conspring forester associate MT	ntains fen, bo is or mature ( ed wetland Ol iation listed a	og, warm >80 yr-old) R plant s "S1" by	AA doe cited ra diversi contair listed a	es not contain are types ANI ty (#13) is hig ns plant asso ns "S2" by the	O structural gh OR ciation	previou associa diversi	usly cited rar ations AND s	e types OR tructural
Replacement Potential  Estimated Relative Abundance (#11)  Low Disturbance at AA (#12i)	AA conspring forester associate MT	ntains fen, bo is or mature ( ed wetland Ol iation listed a 「NHP	og, warm >80 yr-old) R plant s "S1" by	AA doe cited ra diversi contair listed a	es not contain are types ANI ty (#13) is hig ns plant asso ns "S2" by the	O structural gh OR ciation e MTNHP	previou associa diversi	usly cited rar ations AND s ty (#13) is lov	e types OR tructural w-moderate
Replacement Potential  Estimated Relative Abundance (#11)  Low Disturbance at AA (#12i)  Moderate Disturbance at AA (#12i)	AA conspring foreste associathe MT	ntains fen, bo is or mature ( ed wetland Ol iation listed a TNHP Common	og, warm >80 yr-old) R plant s "S1" by  ☐ Abundant	AA doe cited ra diversi contair listed a	es not contain are types ANI ty (#13) is hig as plant asso as "S2" by the Common	O structural gh OR ciation e MTNHP  Abundant	previou associa diversit	usly cited rar ations AND s ty (#13) is lov Common	e types OR tructural w-moderate  Abundant
Replacement Potential  Estimated Relative Abundance (#11)  Low Disturbance at AA (#12i)	AA colspring foreste associ the MT	ntains fen, bo s or mature (: ed wetland Ol iation listed a 'NHP	og, warm >80 yr-old) R plant s "S1" by	AA doe cited ra diversi contair listed a	es not contain are types ANI ty (#13) is hig as plant asso as "S2" by the Common	O structural gh OR ciation e MTNHP  Abundant	previou associa diversit	usly cited rar ations AND s ty (#13) is lov	e types OR tructural w-moderate  Abundant
Replacement Potential  Estimated Relative Abundance (#11)  Low Disturbance at AA (#12i)  Moderate Disturbance at AA (#12i)  High Disturbance at AA (#12i)	AA collapse spring forestern associate MT Rare	ntains fen, bo is or mature () ed wetland Ol iation listed a TNHP  Common	og, warm >80 yr-old) R plant s "S1" by  Abundant NA (proceed to	AA doe cited ra diversi contain listed a Rare	es not contain are types ANI ty (#13) is high as plant asso as "S2" by the Common	O structural gh OR ciation e MTNHP  Abundant	previou associa diversit	usly cited rar ations AND s ty (#13) is lov	e types OR tructural w-moderate  Abundant
i. Rating: Working from top to bottom, us  Replacement Potential  Estimated Relative Abundance (#11)  Low Disturbance at AA (#12i)  Moderate Disturbance at AA (#12i)  High Disturbance at AA (#12i)  Comments:  14L. RECREATION / EDUCATION POTE	AA coi spring foreste associ the MT Rare	ntains fen, bo	og, warm >80 yr-old) R plant s "S1" by  Abundant NA (proceed to ational opportu	AA doc cited ra diversi contain listed a Rare O Overall inity.	es not container types ANI ty (#13) is higher assons "S2" by the Common Summary and	O structural gh OR ciation e MTNHP  Abundant I Rating page)	previou associa diversit	usly cited rar ations AND s ty (#13) is lov	e types OR tructural w-moderate  Abundant
Replacement Potential  Replacement Potential  Estimated Relative Abundance (#11)  Low Disturbance at AA (#12i)  Moderate Disturbance at AA (#12i)  High Disturbance at AA (#12i)  Comments:  14L. RECREATION / EDUCATION POTE	AA coi spring foreste associ the M1 Rare	ntains fen, bo s or mature (: ed wetland Ol iation listed a "NHP  Common   xtional or educ r educational	og, warm >80 yr-old) R plant s "S1" by  Abundant NA (proceed to ational opportures the?	AA doc cited ra diversi contain listed a Rare	es not container types ANI ty (#13) is higher splant asso se "S2" by the Common Summary and	O structural gh OR ciation e MTNHP  Abundant    I Rating page)	previou associa diversit	usly cited rar ations AND s ty (#13) is lov Common2L	e types OR tructural w-moderate  Abundant
Replacement Potential  Replacement Potential  Estimated Relative Abundance (#11)  Low Disturbance at AA (#12i)  Moderate Disturbance at AA (#12i)  High Disturbance at AA (#12i)  Comments:  14L. RECREATION / EDUCATION POTE Affords 'bonus' points if AA provides i. Is the AA a known or potential recreatii. Check categories that apply to the Aiii. Rating: Use the matrix below to select	AA coi spring foreste associ the MT Rare	ntains fen, bo s or mature () ed wetland Ol iation listed a TNHP  Common  ational or educ r educational/Sc Other: ctional point an	og, warm >80 yr-old) R plant s "S1" by  Abundant NA (proceed to ational opporture site? YES ientific Study	AA doe cited ra diversi contain listed a Rare	es not container types ANI ty (#13) is higher splant asso se "S2" by the Common Summary and	O structural gh OR ciation e MTNHP  Abundant    I Rating page)	previou associa diversit	usly cited rar ations AND s ty (#13) is lov Common2L	e types OR tructural w-moderate  Abundant
Replacement Potential  Replacement Potential  Estimated Relative Abundance (#11)  Low Disturbance at AA (#12i)  Moderate Disturbance at AA (#12i)  High Disturbance at AA (#12i)  Comments:  14L. RECREATION / EDUCATION POTE Affords 'bonus' points if AA provides i. Is the AA a known or potential recreatii. Check categories that apply to the Aiii. Rating: Use the matrix below to select Known or Figure 1.	AA colspring forester associate MT a recreational of the functional option of the function of	ntains fen, bo s or mature () ed wetland Ol iation listed a TNHP  Common  ational or educ r educational Educational/Sc Other: ctional point an	og, warm >80 yr-old) R plant s "S1" by  Abundant NA (proceed to ational opportusite? YES ientific Study I or Education	AA doe cited radiversi contain listed a Rare	es not container types ANI ty (#13) is higher assons "S2" by the Common Summary and NO, che	O structural gh OR ciation e MTNHP  Abundant    I Rating page)	previou associa diversit	usly cited rar ations AND s ty (#13) is lov Common2L	e types OR tructural w-moderate  Abundant
Replacement Potential  Replacement Potential  Estimated Relative Abundance (#11)  Low Disturbance at AA (#12i)  Moderate Disturbance at AA (#12i)  High Disturbance at AA (#12i)  Comments:  14L. RECREATION / EDUCATION POTE Affords 'bonus' points if AA provides i. Is the AA a known or potential recreatii. Check categories that apply to the Aiii. Rating: Use the matrix below to select Known or Public ownership or public easement	AA colspring forester associate MTIAL a recreational of the functional of the functi	ntains fen, bo s or mature () ed wetland Ol iation listed a TNHP  Common  ational or educ r educational Educational/Sc Other: ctional point an Recreational eneral public	og, warm >80 yr-old) R plant s "S1" by  Abundant NA (proceed to ational opportusite? YES ientific Study I or Education access (no po	AA doc cited ra diversi contain listed a Rare O Overall inity. G, go to ii. Cons al Area ermissio	es not container types ANI ty (#13) is higher assons "S2" by the Common Summary and NO, che	O structural gh OR ciation e MTNHP  Abundant    I Rating page)	previou associa diversiti	usly cited rar ations AND s ty (#13) is lov ☑ Common2L	e types OR tructural w-moderate  Abundant
Replacement Potential  Replacement Potential  Estimated Relative Abundance (#11)  Low Disturbance at AA (#12i)  Moderate Disturbance at AA (#12i)  High Disturbance at AA (#12i)  Comments:  14L. RECREATION / EDUCATION POTE Affords 'bonus' points if AA provides i. Is the AA a known or potential recreatii. Check categories that apply to the Aiii. Rating: Use the matrix below to select Known or Public ownership or public easemer Private ownership with general public	AA colspring foreste associthe M1 Rare	ntains fen, bo s or mature (i ed wetland Ol iation listed a "NHP  Common  ational or educ r educational ducational/Scother: ctional point an Recreationa eneral public s (no permis	g, warm >80 yr-old) R plant s "S1" by  Abundant NA (proceed to ational opportusite? YES ientific Study I or Education access (no posion required)	AA doc cited ra diversi contain listed a Rare O Overall inity. G, go to ii. Cons al Area ermissio	es not container types ANI ty (#13) is higher splant asso is "S2" by the Common Summary and NO, che umptive Recreation	D structural gh OR ciation e MTNHP  Abundant   I Rating page)  ck the NA box eational	previou associa diversiti Rare	Isly cited rarations AND sty (#13) is low  Common 2L  Potential	e types OR tructural w-moderate  Abundant
Replacement Potential  Replacement Potential  Estimated Relative Abundance (#11)  Low Disturbance at AA (#12i)  Moderate Disturbance at AA (#12i)  High Disturbance at AA (#12i)  Comments:  14L. RECREATION / EDUCATION POTE Affords 'bonus' points if AA provides i. Is the AA a known or potential recreatii. Check categories that apply to the Aiii. Rating: Use the matrix below to select Known or Public ownership or public easement	AA colspring foreste associthe M1 Rare	ntains fen, bo s or mature (i ed wetland Ol iation listed a "NHP  Common  ational or educ r educational ducational/Scother: ctional point an Recreationa eneral public s (no permis	g, warm >80 yr-old) R plant s "S1" by  Abundant NA (proceed to ational opportusite? YES ientific Study I or Education access (no posion required)	AA doc cited ra diversi contain listed a Rare O Overall inity. G, go to ii. Cons al Area ermissio	es not container types ANI ty (#13) is higher splant asso is "S2" by the Common Summary and NO, che umptive Recreation	D structural gh OR ciation e MTNHP  Abundant   I Rating page)  ck the NA box eational	previou associa diversiti Rare	Isly cited rarations AND sty (#13) is low  ☐ Common2L  Imptive recrea	e types OR tructural w-moderate  Abundant

Function & Value Variables	Rating – Actual Functional Points	Possible Functional Points	Functional Units: Actual Points x Estimated AA Acreage	Indicate the Four Most Prominent Functions with an Asterisk
A. Listed / Proposed T&E Species Habitat	low 0.00	1.00		
B. MT Natural Heritage Program Species Habitat	low 0.00	1.00		
C. General Wildlife Habitat	low 0.30	1.00		*
D. General Fish Habitat	NA	NA		
E. Flood Attenuation	NA	NA		
F. Short and Long Term Surface Water Storage	NA	NA		
G. Sediment / Nutrient / Toxicant Removal	high 0.80	1.00		*
H. Sediment / Shoreline Stabilization	NA	NA		
I. Production Export / Food Chain Support	mod 0.40	1.00		*
J. Groundwater Discharge / Recharge	high 1.00	1.00		*
K. Uniqueness	low 0.20	1.00		
L. Recreation / Education Potential (bonus point)	NA			
Total Points	2.7	7	Total	Functional Units
Percent of Possibl	e Score 39% (round	I to nearest who	e number)	

Cate	egory I Wetland: (must satisfy one of the following criteria; otherwise go to Category II)  Score of 1 functional point for Listed/Proposed Threatened or Endangered Species; or Score of 1 functional point for Uniqueness; or Score of 1 functional point for Flood Attenuation and answer to Question 14E.ii is "yes"; or Percent of possible score > 80% (round to nearest whole #).
Cate	egory II Wetland: (Criteria for Category I not satisfied and meets any one of the following criteria; otherwise go to Category IV)  ☐ Score of 1 functional point for MT Natural Heritage Program Species Habitat; or  ☐ Score of .9 or 1 functional point for General Wildlife Habitat; or  ☐ Score of .9 or 1 functional point for General Fish Habitat; or  ☐ "High" to "Exceptional" ratings for both General Wildlife Habitat and General Fish/Aquatic Habitat; or  ☐ Score of .9 functional point for Uniqueness; or  ☐ Percent of possible score > 65% (round to nearest whole #).
	Category III Wetland: (Criteria for Categories I, II, or IV not satisfied)
Cate	egory IV Wetland: (Criteria for Categories I or II are not satisfied and all of the following criteria are met; if not go to Category III)  "Low" rating for Uniqueness; and  Vegetated wetland component < 1 acre (do not include upland vegetated buffer); and  Percent of possible score < 35% (round to nearest whole #).
OVE	RALL ANALYSIS AREA (AA) RATING: Check the appropriate category based on the criteria outlined above.

# **APPENDIX C:** Aquatic Resources Mapping Results



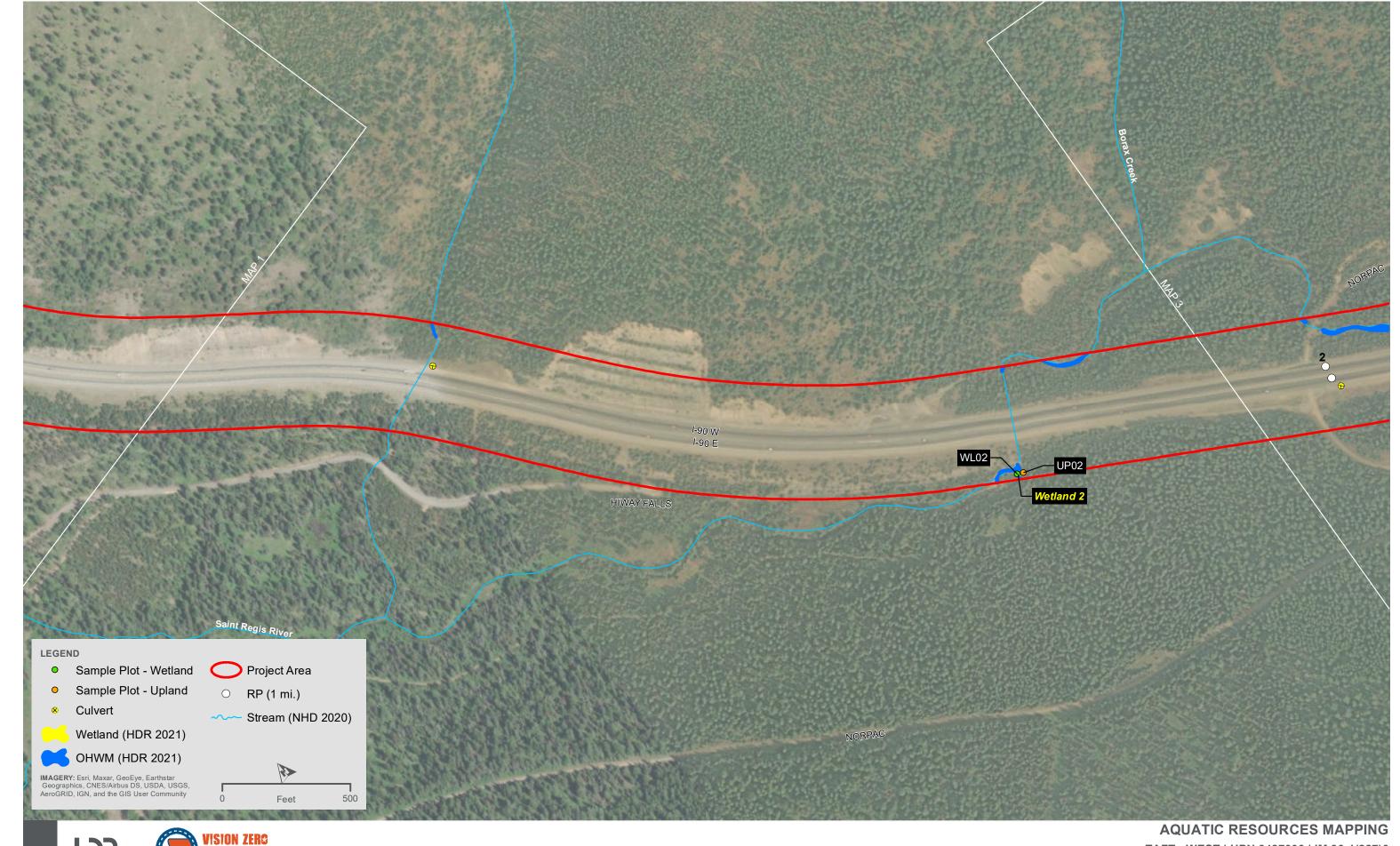




AQUATIC RESOURCES MAPPING

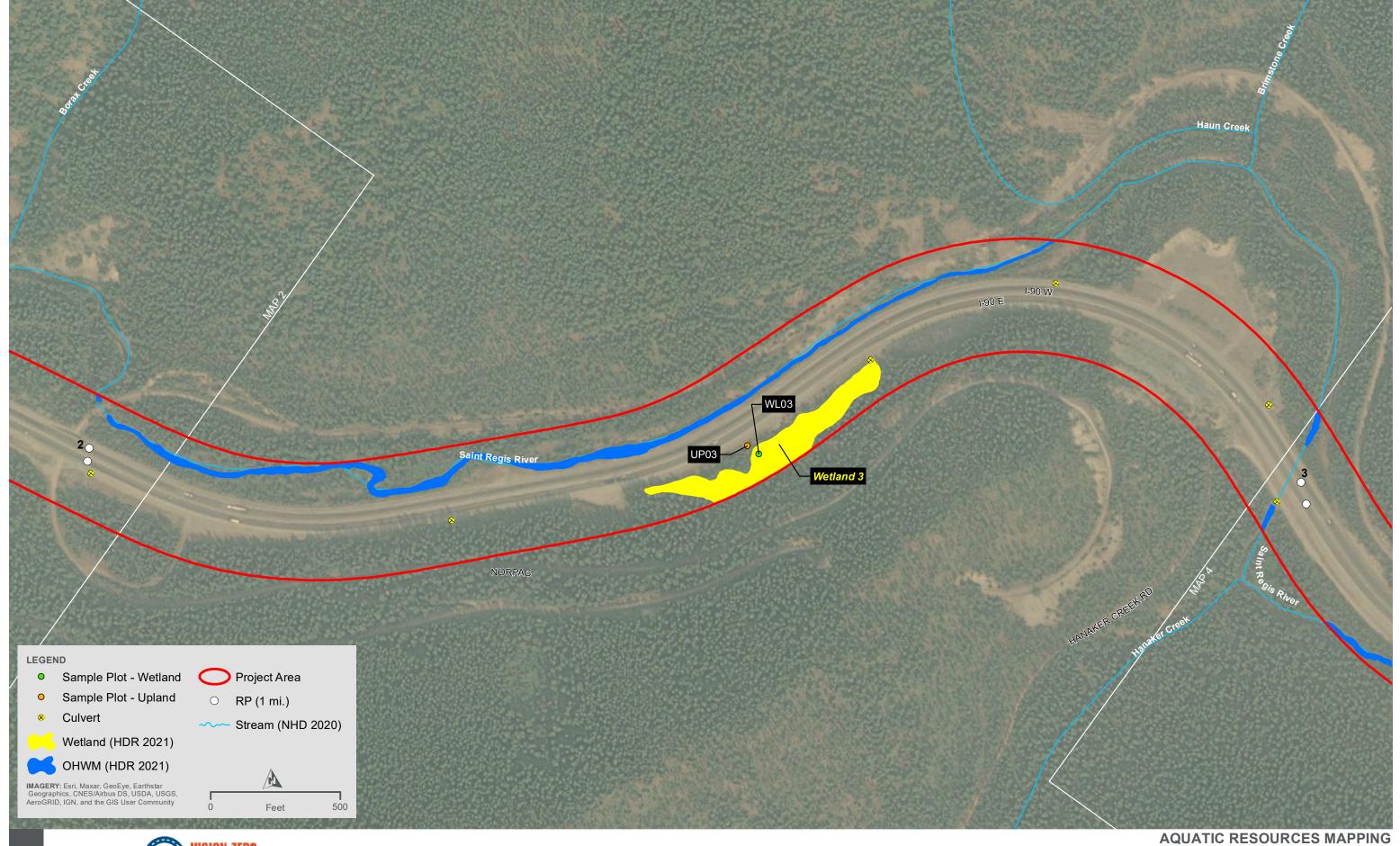
TAFT - WEST | UPN 9487000 | IM 90-1(227)0

**MAP 1 OF 6** 



TH: G:\PROJECTS\MDT\TAFT-WEST\MAP\_DOCS\TAFTWEST\_WETLANDS\_DDP.MXD - USER: JSCHICK - DATE: 8/20/2021

TAFT - WEST | UPN 9487000 | IM 90-1(227)0

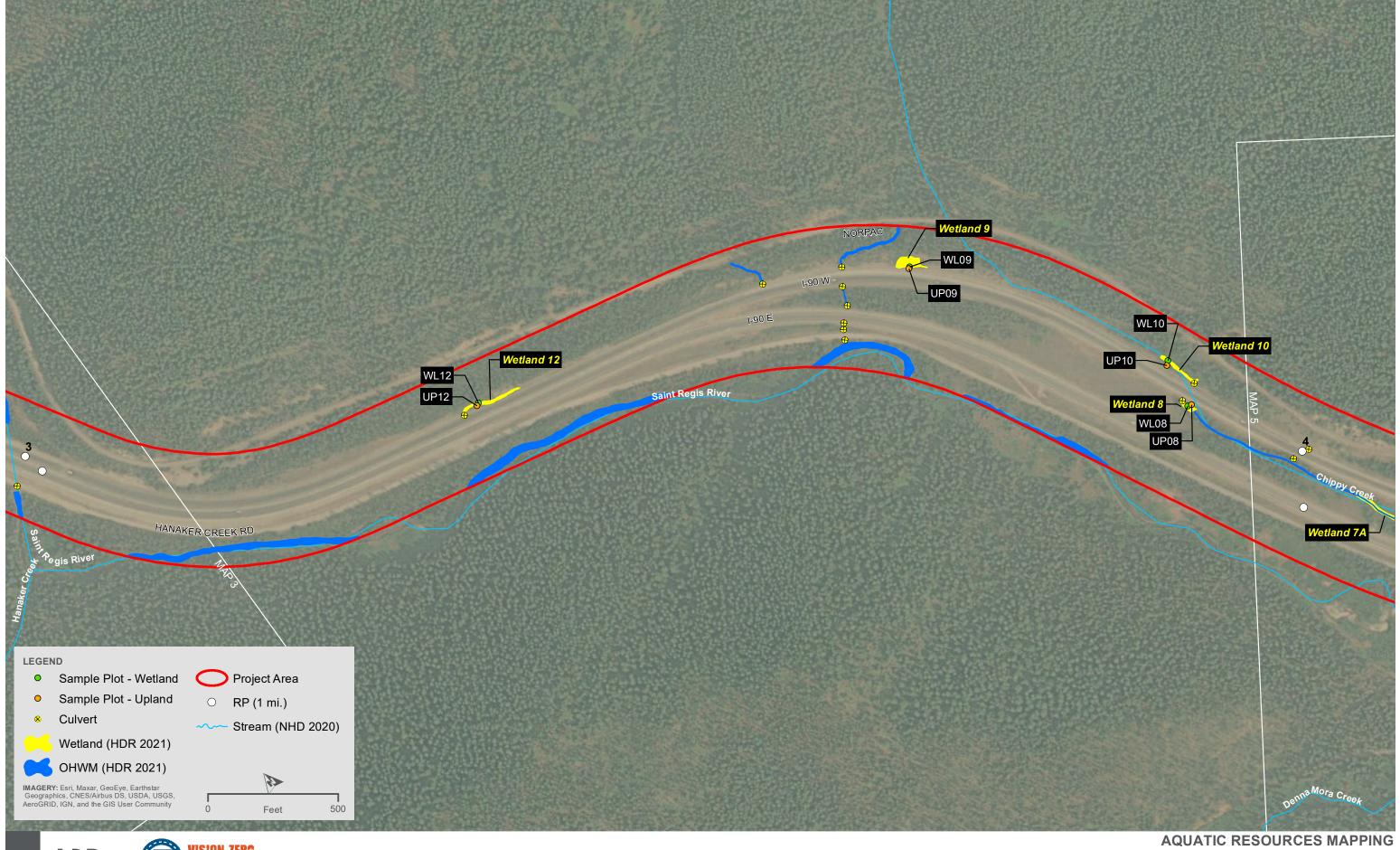


FOR



TAFT - WEST | UPN 9487000 | IM 90-1(227)0

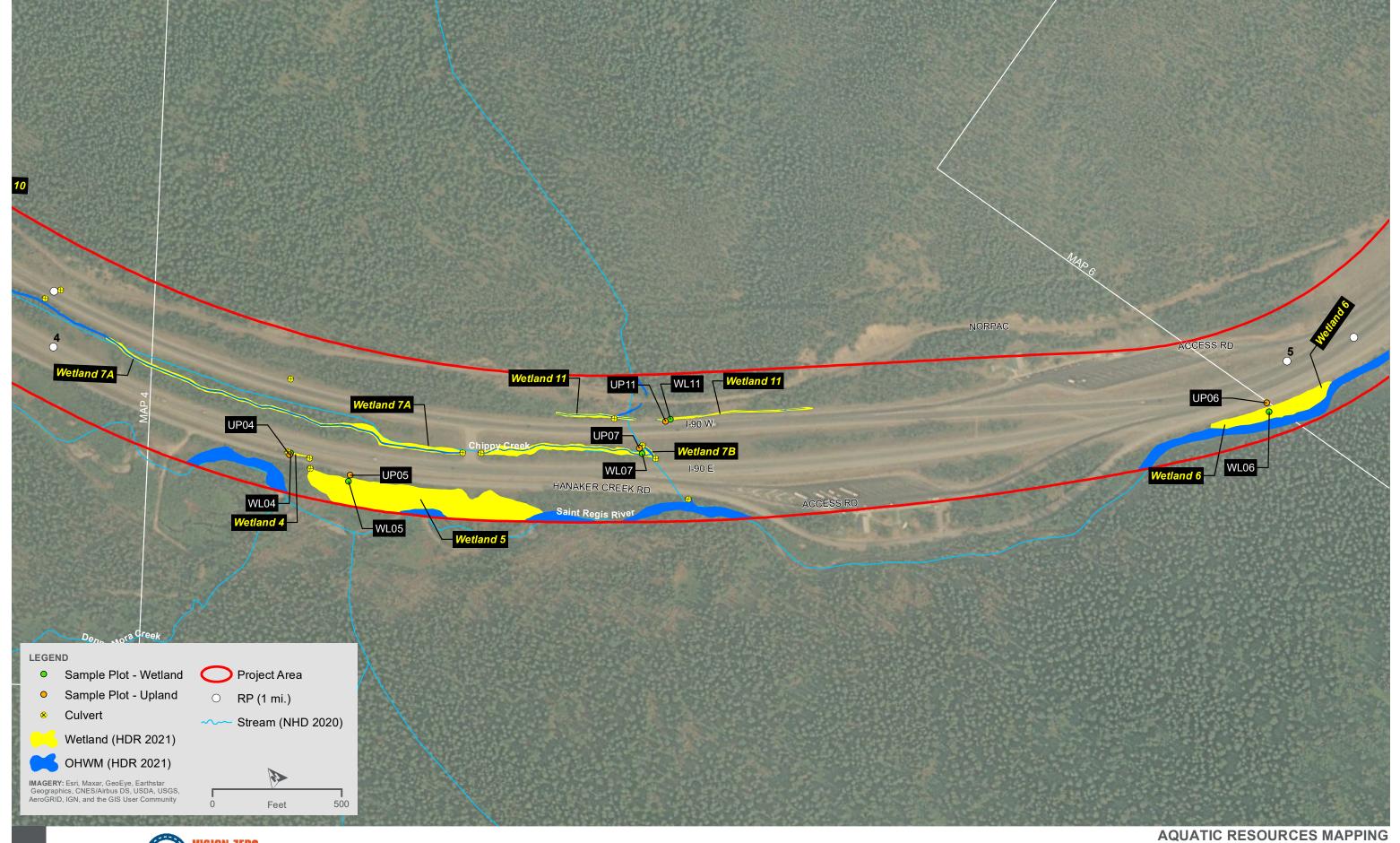
**MAP 3 OF 6** 







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FJR



AQUATIC RESOURCES MAPPING

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AP 5 OF 6







TAFT - WEST | UPN 9487000 | IM 90-1(227)0

MAP 6 OF 6