DRAFT Environmental Assessment Racetrack Pond Fishing Access Site and Habitat Improvement Project

August 3, 2017

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ACRONYMS/ABBREVIATIONS

Acronyms/Abbreviations	Definition
ACOE	U.S. Army Corps of Engineers
ADA	U.S. Americans with Disabilities Act
ARM	Administrative Rules of Montana
BMP	Best Management Practice
EA	Environmental Assessment
EPA	U.S. Environmental Protection Agency
FAS	Fishing Access Site
FEMA	Federal Emergency Management Agency
FWP	Fish, Wildlife and Parks
FWS	U.S. Fish and Wildlife Service
GGTU	George Grant Chapter of Montana Trout Unlimited
MCA	Montana Code Annotated
MDEQ	Montana Department of Environmental Quality
MEPA	Montana Environmental Policy Act
MTNHP	Montana Natural Heritage Program
NRDP	Natural Resource Damage Program
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
SHPO	State Historic Preservation Office
SOC	Species of Concern
SPCC	Spill Prevention, Control, and Countermeasure
SWPPP	Storm Water Pollution Prevention Plan

1.0 PROPOSED ACTION DESCRIPTION

1.1 TYPE OF PROPOSED ACTION

The Montana Department of Fish, Wildlife and Parks (FWP) in cooperation with the Montana Natural Resource Damage Program (NRDP) proposes to improve the Racetrack Pond Area near Racetrack, Montana, for the purpose of developing the area into a fishing access site (FAS). The proposed FAS developments include access roads, walking trails, boat launch, parking area including U.S. Americans with Disabilities Act (ADA) accessible parking, an ADA latrine and an ADA fishing access platform. Habitat improvements include regrading of the pond area for the purpose of increasing the quality of shoreline vegetation, wetlands, waterfowl habitat, and aquatic habitat.

1.2 AGENCY AUTHORITY FOR THE PROPOSED ACTION

The proposed action is being undertaken by FWP in cooperation with the NRDP. The NRDP will be responsible for implementing the construction activities of the proposed action. FWP will be responsible for the ownership, operation and maintenance of the proposed action once constructed.

The 1977 Montana Legislature enacted Section 87-1-605, Montana Code Annotated (MCA), which directs Montana Fish Wildlife and Parks (FWP) to acquire, develop and operate a system of fishing accesses. The legislature earmarked a funding account to ensure that the fishing access site program would be implemented. Section 87-1-303, MCA, authorizes the collection fees and charges for the use of fishing access sites, and contains rule-making authority for their use, occupancy, and protection. Furthermore, Section 23-1-110, MCA, and Administrative Rules of Montana (ARM) 12.2.433 guides public involvement and comment for the improvements at state parks and fishing access sites, which this document provides.

ARM 12.8.602 requires FWP to consider the wishes of the public, the capacity of the site for development, environmental impacts, long-range maintenance, protection of natural features and impacts on tourism as these elements relate to development or improvement to fishing access sites or state parks. This document will illuminate the facets of the Proposed Action in relation to this rule. See Appendix A for HB 495 qualification checklist.

The proposed action contributes to implementation of State of Montana's Revised Restoration Plan for the Clark Fork River Aquatic and Riparian Resources, Section 4.0 (NRDP 2007) and State of Montana's Final Upper Clark Fork River Basin Aquatic and Terrestrial Resource Restoration Plans, Section 5.2.1.(NRDP 2016).

1.3 NAME OF PROJECT

Racetrack Pond Fishing Access Site and Habitat Improvement Project

1.4 PROJECT SPONSORS

Montana Department of Fish, Wildlife and Parks, Region 2
3201 Spurgin Road
Missoula, MT 59804

Montana Natural Resource Damage Program
1720 9th Avenue
Helena, MT 59620

1.5 ANTICIPATED SCHEDULE

Table 1 below presents the anticipated project schedule.

Table 1. Racetrack Pond FAS and Habitat Improvement Project Anticipated Schedule

Task	Date
Public Comment Period:	August 4, 2017 –September 4, 2017
Public Meeting:	August 17, 2017
Estimated Decision Notice:	September 2017
Estimated Commencement Date:	October 2017
Estimated Completion Date:	Spring 2018
Current Status of Project Design (% complete):	30%

1.6 LOCATION AFFECTED BY THE PROPOSED ACTION

Racetrack Pond is located adjacent to the Clark Fork River off Interstate 90 at exit 195 along West River Road near Racetrack, Powell County, Montana, Section 16, Township 06 North, Range 9 West. The area affected by the Proposed Action includes the pond, the pond shoreline and surrounding uplands, the current outlet channel that leads to the Clark Fork River, and an adjacent hayfield. **Sheet G01 - Cover** presents a location map, and **Sheet C01 – Racetrack Pond Site Plan** presents a site plan.

1.7 PROJECT SIZE

This Proposed Action encompasses 78 acres of water, wetland, shoreline, and upland habitat **(Sheet C07 – Existing Vegetation Communities)**.

1.8 PHYSICAL AND HISTORICAL BACKGROUND

Racetrack Pond was originally created as a borrow pit for road fill when Interstate 90 was constructed in the 1960s and 1970s. Some effort was made by the Montana Department of Highways (currently the Montana Department of Transportation) to reclaim it for habitat, including a small island and peninsula, but much of the shoreline consists of steep linear banks. A small, perennially flowing, approximately 350-foot outlet channel was originally constructed in the northeast portion of the pond, which drains directly to the Clark Fork River.

The Racetrack Pond property was acquired by the State of Montana through an Upper Clark Fork River Basin Restoration Program grant sponsored by the George Grant Chapter of Montana Trout Unlimited (GGTU). The Montana Department of Environmental Quality (MDEQ) currently holds title to the property. The acquisition was to replace fishing and water sport activities lost due to the release of hazardous substances from historic mining and smelting activities and assist with the ability of the State (MDEQ and NRDP) to conduct remediation and restoration resulting in natural resource improvements to the property. Since purchase of the property by the State, debris and abandoned material has been removed from the site. In 2016, MDEQ developed an alluvium borrow source north of Racetrack Pond to use as general fill within the Clark Fork River Phase 5 & 6 Remedial Action Project. In addition, a haul road was constructed as part of remediation from West River Road to the borrow area. It is anticipated that, following FAS development and pond habitat improvements, the property would be transferred to FWP to be managed as a FAS.

In 2012, funds were allocated to FWP for FAS acquisition and development in the Upper Clark Fork River Basin Aquatic and Terrestrial Restoration Plans. These funds were allocated for FWP to acquire and develop up to 10 FASs within the upper Clark Fork River, including for this proposed project. In addition, funds from the Clark Fork River Restoration fund are allocated to enhance and improve aquatic and riparian habitat of the Clark Fork River. The proposed Racetrack Pond FAS and Habitat Improvement Project will be funded through these funding allocations.

Upon completion of this project, the property would be managed under existing FWP public use regulations. Management of the FAS would include routine maintenance, control of vehicles and firearms, and enforcement of other accepted FWP recreation area management activities. Protection of the natural resources, health and safety of visitors, and consideration of neighboring properties would be considered and incorporated into development plans for this site. The FAS would be for day-use only, and no overnight camping would be allowed on the site. Development of the Racetrack Pond FAS would provide public access for fishing, hunting, boating, and floating, as well as recreational opportunities for hiking, dog walking, picnicking, and wildlife viewing.

Racetrack Pond offers year-round fishing. Per the 2013 FWP fishing pressure survey, the Clark Fork River upstream of the confluence with the Little Blackfoot River at Garrison Junction (River Section 5) receives approximately 10,984 angler days per year and is 67th in the State for use. Racetrack Pond is stocked with game fish by FWP, which are known to escape through the existing outlet channel.

1.9 PROJECT SIZE

Table 2. Project Size

Land use	Size (acres)
Developed Residential	0
Developed Industrial	0
Open Space/Woodlands/Recreation (entire site)	78
Wetlands/Riparian Areas	55
Floodplain (entire site)	78
Uplands	23
Productive: Irrigated cropland	0
Productive: Dry cropland	0
Productive: Forestry	0
Productive: Rangeland (proposed outlet channel)	2.5
Productive: Other	NA

1.10 FUNDING

The Proposed Action is being funded by the NRDP using funds from the Restoration Fund allocated in the Upper Clark Fork River Basin Aquatic and Terrestrial Resources Restoration Plans, 2016 and the Clark Fork River Restoration Fund through the Revised Restoration Plan for the Clark Fork River Aquatic and Riparian Resources, 2007. These funds contain no taxpayer funds. Estimated costs are presented below:

Table 3. Project Funding

Activity	Estimated Cost
Habitat Improvement	$400,000
FAS Development	$85,000
Total	**$485,00**

1.11 NARRATIVE DESCRIPTION OF THE PROPOSED ACTION

FWP in coordination with NRDP propose to improve the existing Racetrack Pond area with increased habitat and amenities for inclusion in FWP's system of FASs. Racetrack Pond is located west of the Clark Fork River at Racetrack, Montana, and approximately 8 miles south of the City of Deer Lodge. The legal description for the state-owned parcel in which the site resides is Section 16, Township 6 North, Range 9 West, West 100' NW4NW4, West 100'N2SW4NW4, South 910' SW4NE4, S2S2NW4, NW4SE4, SW4NW4, NW4SE4, SW4.

Currently, the site is bound to the north by a soil berm created in 2016 during excavation of borrow material, to the east by a haul road, to the south by the adjacent property boundary, and to the west by the West Side Irrigation Canal. Steep banks with limited wetland area characterizes most of the shoreline, and the north end where borrow material was excavated is completely stripped of organic soil and vegetation. The site functions as habitat for stocked fish and migrating waterfowl, but is generally underutilized for wetlands and recreation. The current pond outlet consists of an undersized culvert that flows into an approximately 350-foot linear constructed ditch that discharges into the Clark Fork River.

The Proposed Actions are presented on **Sheets C01 – Sheet D01**. The NRDP will be responsible for implementing the construction activities of the proposed action. The pond habitat upgrades include regrading approximately 170,000 cubic yards of material and reusing this material as fill resulting in a net zero design plan where no fill is required or left over upon project completion. It is anticipated that on-site stockpiled topsoil will be applied to the pond banks and upland areas to aid in vegetation establishment. **Sheet C07 – Design Habitat Features** and **Appendix E** present a description of design habitat type, estimated size and design criteria. The existing pond outlet will be upgraded to include a constructed fish barrier and relocation of the outlet channel to an approximately 1,900 foot meandering stream that creates wetland and aquatic habitat opportunities. The proposed FAS developments are shown on **Sheet C04 – Racetrack Pond Amenities Plan** and include access roads, walking trails, boat launch, parking area including ADA accessible parking, an ADA latrine and an ADA fishing access platform.

The pond is stocked annually by FWP with native westslope cutthroat trout and sterile rainbow trout. Other species present in the pond include: largescale sucker, brown trout, mountain whitefish, and yellow perch (J. Lindstrom, personal communication). Yellow perch were illegally introduced into Racetrack Pond at an unknown date and pose a threat to stocked fish as they compete for food and other resources. The perch also represent a source of fish for other possible illegal introductions. During dewatering of the pond, FWP personnel will capture

and remove as many illegally introduced and non-game fish as possible. Fish capture will be done either through electroshocking or use of nets, depending on water depths. After construction activities are complete, FWP will restock Racetrack Pond in spring 2018 with native westslope cutthroat trout and sterile rainbow trout.

1.12 PURPOSE AND NEED

1.12.1 Purpose

The purpose of the Proposed Action is to improve ecological functioning of the pond to include aquatic and waterfowl habitat, expand the existing wetlands along the shoreline and at the pond outlet, and develop the area into a FAS, including ADA accessible amenities.

1.12.2 Need

The Proposed Action allows for the development of the Racetrack Pond Fishing Access Site and habitat improvements, and contributes to implementation of State of Montana's Revised Restoration Plan for the Clark Fork River Aquatic and Riparian Resources, Section 4.0 (NRDP 2007) and State of Montana's Final Upper Clark Fork River Basin Aquatic and Terrestrial Resource Restoration Plans, Section 5.2.1. (NRDP 2016). This project will meet the goals of the Upper Clark Fork River Aquatic and Terrestrial Resources Restoration Plans, 2016, Section 5.0, and the Revised Restoration Plan for the Clark Fork River Aquatic and Riparian Resources, 2007, Section 3.0 by providing additional public access to the Clark Fork River and Racetrack Pond and development of the FAS.

1.12.3 Public and Agency Concerns

During a site visit an adjacent landowners voiced a concern that pond expansion and site improvements may alter the hydrology of the area. Other potential concerns include noise and the potential for spills and leaks of contaminants during construction. Section 3.0 addresses these concerns and provides an explanation of mitigation procedures that will be implemented.

1.12.4 Governmental Jurisdiction

The Proposed Action will require the following agency permit approvals prior to implementation:

- U.S. Army Corps of Engineers (ACOE), Section 404 of Federal Clean Water Act
- MDEQ Water Protection Bureau, Section 318 of the Water Quality Act, Short Term Water Quality Standards for Turbidity
- MDEQ Water Protection Bureau, General Permit for Storm Water Discharges Associated with Construction Activity
- FWP, Section 124 of the Stream Protection Act
- Powell County Conditional Use Permit
- Powell County Floodplain Permit
- Powell County Sanitation Permit

The appropriate permit applications will be submitted to the agencies listed above and construction activity will occur after the necessary approvals.

1.12.5 Public Review

Public notice, a public meeting, and public comment will be conducted as part of this Environmental Assessment (EA) and is presented in Section 5.0.

2.0 ALTERNATIVES

2.1 NO ACTION

If no action is taken and the 78 acres is not developed as a FAS, then the area would continue to be underutilized for ecological functioning and recreation. Invasive weeds have colonized much of the upland areas along the north and east shores of the pond. The shoreline lacks diverse vegetation communities, and the north end of the pond is almost entirely void of vegetation leaving open the opportunity for increased weed encroachment. The steep banks create unsafe public conditions. No Action would likely increase the spread of weeds, limit the ponds use by wildlife and the public, and would be a visual scar on the landscape adjacent to the Clark Fork River and Interstate Highway 90. No action would not require additional state or local funds; however, weed management would continue to be an issue and would have to be addressed by the MDEQ and future title holders.

2.2 PROPOSED ACTION

The Proposed Action is to restore Racetrack Pond to provide more shoreline vegetation, wetlands, waterfowl habitat, and aquatic habitat, as well as increase recreational access with ADA accessible amenities associated with the FAS. Improvements would include two deep water habitat areas, gentle sloping banks, a parking area, a boat launch, concrete vault latrine, protective fencing, a gravel walking trail, and ADA accessible fishing access platform. The Proposed Action would improve overall biological functioning of aquatic and waterfowl habitat and increase vegetation, which would prevent the spread of invasive weeds. The FAS amenities would increase access and use of the site. The financial burden associated with the FAS would include routine maintenance costs typical of other FASs in the area.

During construction NRDP would employ Best Management Practices (BMPs) **(Appendix B)**, which are designed to reduce or eliminate sediment delivery to waterways during construction. Dust control measure including watering to prevent nuisance dust during construction would be required. NRDP would develop the final design and specifications for the Proposed Action. All county, state and federal permits listed in Section 1.12.4 would be obtained by NRDP as required. A private contractor selected through the State's contracting processes would complete the construction.

3.0 ENVIRONMENTAL REVIEW

The tables below summarize potential effects to the physical and human environments if the Proposed Action is implemented.

Table 4. Potential Impacts to the Physical Environment – Land Resources

Will the proposed action result in potential impacts to:	Unknown	Potentially significant	Minor	None	Can be mitigated	Comment
A. Soil instability or changes in geologic substructure?				X		
B. Disruption, displacement, erosion, compaction, moisture loss, or over-covering of soil			X		Yes	4B.

Will the proposed action result in potential impacts to:	Unknown	Potentially significant	Minor	None	Can be mitigated	Comment
which would reduce productivity or fertility?						
C. Destruction, covering or modification of any unique geologic or physical features?				X		
D. Changes in siltation, deposition or erosion patterns that may modify the channel of a river or stream or the bed or shore of a lake?			X		Yes	4D.
E. Exposure of people or property to earthquakes, landslides, ground failure, or other natural hazard?				X		

Comments:

4B. During construction activities, temporary modifications to soil would cause disruption, displacement, erosion, and compaction. All slopes will be graded to promote stability. All disturbed areas will receive temporary erosion control BMPs during and after construction. All disturbed areas will be seeded and planted with containerized plants following construction to minimize erosion and the spread of noxious weeds. All seeding and planting will use native plants. The property currently serves as wildlife habitat with limited public recreation and is not in agricultural production. The Proposed Action would not affect soil productivity or fertility. FWP BMPs would be followed during all phases of construction to minimize erosion **(Appendix B)**. The proposed actions in the long term would promote vegetation establishment and reduce overall erosion. Vegetation establishment would improve soil fertility over time.

4D. The Proposed Action habitat improvements will alter the bed and bank of the existing pond. The existing pond will be dewatered before any excavation or grading activities are started and the dewatering water will flow through a sediment detention pond prior to discharge into the Clark Fork River. Sedimentation of the Clark Fork River from dewatering activities is anticipated to be minimal. NRDP would obtain an MDEQ 318 Authorization Permit for Short Term Water Quality Standard for Turbidity, all requirements of the permit would be followed during construction. The Proposed Action aquatic habitat improvements include excavation of two deep water aquatic habitat areas (approximately 8 feet and 12 feet) below the existing bed of the pond. The proposed shoreline improvements include reducing the side slopes of the banks, creating wetland areas and planting native vegetation. Although there is disturbance to the bed and banks of the pond, the improvements are anticipated improve the quality of vegetation on the banks and reduce bank erosion. Overall the proposed actions would have long-term significant positive impacts to water quality, soil erosion, wildlife habitat and economic benefit.

The Proposed Action will be designed, so that material excavated to create the deep water aquatic habitat areas will be balanced with fill required to reduce the bank side slopes. Stockpiled topsoil will be applied to the pond banks and upland areas to aid in vegetation establishment.

Table 5. Potential Impacts to the Physical Environment – Water

Will the proposed action result in potential impacts to:	Unknown	Potentially significant	Minor	None	Can be mitigated	Comment
A. Discharge into surface water or any alteration of surface water quality including, but not limited to, temperature, dissolved oxygen or turbidity?			X		Yes	5A.
B. Changes in drainage patterns or the rate and amount of surface runoff?			X		Yes	5B.
C. Alteration of the course or magnitude of flood water or other flows?				X		
D. Changes in the amount of surface water in any water body or creation of a new water body?			X		Yes, Positive	5D.
E. Exposure of people or property to water-related hazards such as flooding?				X		
F. Changes in the quality of groundwater?				X		
G. Changes in the quantity of groundwater?				X		
H. Increase in risk of contamination of surface or groundwater?			X		Yes	5H.
I. Effects on any existing water right or reservation?				X		5I.
J. Effects on other water users as a result of any alteration in surface or groundwater quality?				X		
K. Effects on other users as a result of any alteration in surface or groundwater quantity?			X			5K.
L. Will the project affect a designated floodplain?			X			5L.

Will the proposed action result in potential impacts to:	Unknown	Potentially significant	Minor	None	Can be mitigated	Comment
M. Will the project result in any discharge that will affect federal or state water quality regulations?			X		Yes	5M.

Comments:

5A. The Proposed Action may cause surface water quality to be altered for temperature and turbidity. Temperature may be increased due to the type of outlet structure and increase in the length of the pond outlet channel. Currently, the outlet is a 10-inch culvert and an approximately 350-foot long, straight, 2-foot wide channel, and the Proposed Action replaces the existing structure with a fish barrier consisting of a concrete weir and creates an approximate 1,900-foot meandering channel with varying widths. The design includes the placement of shade vegetation to mitigate some of the effects of solar radiation on water temperature. Over time, shade cover from riparian vegetation is expected to increase as stands become more mature. Dewatering activities may cause a temporary, localized increase in turbidity in the Clark Fork River. NRDP would obtain an MDEQ 318 Authorization Permit for Short Term Water Quality Standard for Turbidity, all requirements of the permit would be followed during construction. Dewatering water would be required to pass through appropriately sized sediment detention ponds, and the discharge from these pond must visibly show a reduction in turbidity before it would be allowed to be discharged into the Clark Fork River.

5B. Construction of the FAS amenities, shown on **Sheet C04 – Racetrack Pond Amenities Plan**, may alter surface runoff direction. The Proposed Action would be designed to minimize any effect on surface water, surface runoff, and drainage patterns.

5D. The Proposed Action decreases the area of open water at Racetrack Pond by approximately 1.31 acres but does not change the water volume or water surface elevation. The regrading of the side slopes will increase the quality of the shoreline habitat. **Sheet C07 – Design Habitat Features** and **Appendix E** presents a description of design habitat type, estimated size and design criteria.

5H. The use of heavy equipment during construction may result in a slight risk of contamination from petroleum products and potentially a temporary increase in sediment delivery to the river. Contract documents will require the Contractor to provide and maintain primary containment of fuel stored in the Project Area and a designated vehicle fueling area within secondary containment. Fuel, oil, grease, hydraulic fluid, anti-freeze and other such materials shall be stored in one location within the staging area. All liquid materials shall be stored within a berm, plastic lined (minimum of 30 mil PVC) storage area with a capacity to contain 110 percent of the combined volume of stored liquids. Absorbent materials shall be on-site at all times for use in cleanup of spilled liquids. FWP's BMPs would be followed during all phases of construction to minimize these risks **(Appendix B)**.

5I. The Proposed Action aquatic habitat improvements include excavation of two deep water aquatic habitat areas (approximately 8 feet and 12 feet) below the existing bed of the pond. The excavated materials from the creating of the deep water aquatic habitat will be used to regrade the side slope and increase the quality of the shoreline habitat resulting in a net zero design plan where no fill is required or left over upon project completion. As a result the water volume and water surface elevation of the pond is not anticipated to change as a result of the Proposed Action.

5K. The dewatering activities associated with the Proposed Action would temporarily decrease groundwater quantity around the project area. These impacts are expected to be minor and temporary. Construction is

anticipated to occur in winter months, outside of irrigation season. Grading of the pond for the proposed habitat improvements is not anticipated to alter groundwater quantity.

5L. The Proposed Action is within a designated floodplain, as shown on the Federal Emergency Management Agency (FEMA) Map # 3000591550B, Map revised September 30, 1994. The Proposed Action is located within the 100-year floodplain, with a 1% annual chance of a flood hazard. The Proposed Action is not going to change the 100-year flood elevation or increase the risk of flooding to adjacent landowners. Permits from FWP, MDEQ, the ACOE, and Powell County will be obtained to insure that federal, state, and county floodplain and water quality regulations are followed.

5M. Dewatering activities and construction of the outlet channel may result in temporary turbidity discharges to the Clark Fork River. NRDP would obtain an MDEQ 318 Authorization Permit for Short Term Water Quality Standard for Turbidity, all requirements of the permit would be followed during construction.

Table 6. Potential Impacts to the Physical Environment – Air

Will the proposed action result in potential impacts to:	Unknown	Potentially significant	Minor	None	Can be mitigated	Comment
A. Emission of air pollutants or deterioration of ambient air quality?			X			6A.
B. Creation of objectionable odors?			X			6B.
C. Alteration of air movement, moisture, or temperature patterns or any change in climate, either locally or regionally?				X		
D. Adverse effects on vegetation, including crops, due to increased emissions of pollutants?				X		
E. Will the project result in any discharge which will conflict with federal or state air quality regulations?				X		

Comments:

6A. Dust may be temporarily generated during grading of the pond and construction of the roads, trails, boat launch, and parking area. Dust control measure including watering to prevent nuisance dust during construction would be required. NRDP will follow the construction BMPs listed in **Appendix B** to minimize impacts to air quality. The Proposed Action would temporary increase diesel exhaust while excavators, dozers, haul trucks, and

other heavy equipment are operating. Diesel impacts will dissipate rapidly when construction ceases, and all impacts to air quality will be short term and minor.

6B. The concrete vault latrine will be designed to minimize objectionable odors and regularly maintained by FWP personnel.

Table 7. Potential Impacts to the Physical Environment – Vegetation

Will the proposed action result in potential impacts to:	Unknown	Potentially significant	Minor	None	Can be mitigated	Comment
A. Changes in the diversity, productivity or abundance of plant species (including trees, shrubs, grass, crops, and aquatic plants)?			X		Yes	7A
B. Alteration of a plant community?			X		Yes	7B
C. Adverse effects on any unique, rare, threatened, or endangered species?				X		7C
D. Reduction in acreage or productivity of any agricultural land?			X		Yes	7D
E. Establishment or spread of noxious weeds?			X		Yes	7E
F. Will the project affect wetlands, or prime and unique farmland?			X		Yes	7F

Comments:

7A. A map of existing vegetation communities is provided in **Sheet C07 – Existing Vegetation Communities**. **Appendix D** provides a summary of existing vegetation community types and other land cover types in the project area. The pond occupies the largest portion of the project area and vegetated areas comprise approximately 28 percent of the project area. The site is characterized by disturbed conditions and upland herbaceous vegetation dominated by non-native species and is currently the most common vegetation community in the project area. Few scattered trees occur around the edges of the project area. Wetland shrub stands are located on the west side of Racetrack Pond and in the northern portion of the project area along a side channel of Clark Fork River. The mature shrub stands located on the peninsula will be preserved. Herbaceous wetlands occur around the edges of Racetrack Pond, along the pond's outlet channel, and in low elevation swales in the project area. A narrow fringe of aquatic bed vegetation occurs in portions of the shallow water zone on the west side of Racetrack Pond. Hayfields are present in the proposed outlet channel.

Grading within and around Racetrack Pond will increase the area of both aquatic and vegetated habitat in the project area. Existing wetland shrubs on the west side of the pond will be preserved. The Proposed Action will impact existing vegetation communities in the project area to varying extents; however, actions are expected to result in positive changes to plant species diversity, productivity, and abundance over time. The Proposed Action

is expected to have long term significant positive effects on the quality of vegetation in the project area. The table in **Appendix D** summarizes anticipated acres of impacts by vegetation community and other land cover types as a result of Proposed Action actions. The anticipated habitats and vegetation types expected to be created by the Proposed Actions are shown on **Sheet C08 – Design Habitats**.

7B. **Sheet C07 – Existing Vegetation Communities** provides a map of existing vegetation communities in the project area. The Proposed Actions will alter existing plant communities in all areas where excavation or material placement is proposed. Approximately 19.20 acres of existing vegetation will be affected by the Proposed Action **(Appendix D)**, including increased native vegetation cover in the project area **(Appendix E)**.

7C. Sources of existing information for threatened, endangered, or rare plant species included a data request from the MTNHP (MTNHP, 2017a) for Township 06 North, Range 09 West that includes the project area. The data request information was verified during the site visit on June 6 and 7, 2017. The MTNHP does not report any threatened or endangered plant species within the vicinity of the project area (MTNHP 2017a) and none were observed during the field visit.

The MTNHP reports one plant SOC in the vicinity of the project area, annual Indian paintbrush (*Castilleja exilis*) (MTNHP, 2017a). Annual Indian paintbrush is found in moist alkaline meadows in valleys and has a state rank of S2 for at risk because of very limited and/or potentially declining population numbers, range and/or habitat, making it vulnerable to global extinction or extirpation in the state, and a global rank of G5 for common, widespread, and abundant (although it may be rare in parts of its range). The state rank of S2 is largely due to population threats such as alterations to hydrology, impacts by invasive weeds, and land use changes (MTNHP 2017b). The species was not observed in the project area. No suitable habitat is present in the project area.

7D. The existing pond outlet will be relocated to the north end of the project area within an existing hayfield. The hayfield consists of a mix of wetland herbaceous species such as arctic rush and introduced pasture grasses, including smooth brome. There will be ground disturbance in the hayfield associated with building the outflow channel (approximately 0.2 acres).

7E. Noxious weed cover is low (less than five percent) in the project area and includes scattered populations of spotted knapweed (*Centaurea stoebe*) and Canada thistle (*Cirsium arvense*). Cheatgrass (*Bromus tectorum*), a regulated plant in Montana, is a dominant species in upland areas in the project area. The State's contract documents will require that all equipment to be washed and inspected prior to entering the project area. Prior to construction, noxious weed infestations will be documented. Grading activities will create disturbance and areas of bare soil that will be at risk of being colonized by noxious weeds. All disturbed areas that will not become parking areas or access paths will be seeded with native grasses and forbs. Weed control activities such as chemical application of herbicides have been ongoing and will continue post-project to facilitate the establishment of desired vegetation by limiting competition from weedy species.

7F. Wetlands in the project area were mapped in June 2017. Existing wetland areas and open water habitats are shown on **Sheet C07 – Existing Vegetation Communities**. The Proposed Action is expected to temporarily impact approximately 1.08 acres of wetland which will be subsequently restored. The Proposed Action is anticipated to have long term significantly positive impacts to the quality and quantity of wetland within the project area. Other temporary impacts would occur in association with pond expansion and grading, and pond outlet relocation. However, the overall impact of the Proposed Action will result in a zero decrease of wetland acres. A copy of the wetland delineation report is presented in **Appendix C**.

The project area is mapped as the Carten loam, zero to four percent slopes soil map unit (map unit 562), which has a farmland classification of "Farmland of local importance" (Soil Survey Staff 2016). However, with the exception of the area where the new pond outlet channel is located, the soils in the project area have been disturbed or removed during past soil borrow and excavation at the site. The Proposed Actions will impact approximately 0.2 acres of the Carten loam soil currently undisturbed in the project area. Relocation of the outlet channel may convert some agricultural land to wetland by routing pond outlet flows through the northern portion of

the project area. This action is not expected to reduce the productivity of the land surrounding the outlet channel for agricultural use.

Table 8. Potential Impacts to the Physical Environment – Fish and Wildlife

Will the proposed action result in potential impacts to:	Unknown	Potentially significant	Minor	None	Can be mitigated	Comment
A. Deterioration of critical fish or wildlife habitat?			X		Yes	8A
B. Changes in the diversity or abundance of game animals or bird species?			X		Yes	8B
C. Changes in the diversity or abundance of nongame species?			X			8C
D. Introduction of new species into an area?				X		
E. Creation of a barrier to the migration or movement of animals?			X		Yes	8E
F. Adverse effects on any unique, rare, threatened, or endangered species?			X		Yes	8F
G. Increase in conditions that stress wildlife populations or limit abundance (including harassment, legal or illegal harvest or other human activity)?			X		Yes	8G
H. Will the project be performed in any area in which threatened or endangered species are present, and will the project affect any threatened or endangered species or their habitat?			X		Yes	8H, see also 8F
I. Will the project introduce or export any species not presently or historically occurring in the receiving location?				X		

Comments:

8A. No critical habitat is mapped within the project area. The adjacent Clark Fork River is mapped as critical habitat for bull trout (*Salvelinus confluentus*) (USFWS, 2010). The Proposed Action is not expected to affect habitat in the Clark Fork River. There are two project actions that will result in small areas of disturbance along a side channel of the Clark Fork River, including: 1) removal of the existing pond outlet culvert that discharges pond water into a side channel of the Clark Fork River; and 2) filling of a constructed overflow channel that also discharged water into a side channel of the Clark Fork River from a sediment detention pond constructed during recent borrow material excavations. Sediment control measures will be used to prevent fine sediment from entering the side channel. BMPs and sediment control measures installed between construction activities and any open water or drainage way. Sediment control measures including BMPs and sediment detention ponds will be used to prevent fine sediment from entering the Clark Fork River. The relocation of the pond outlet and filling of the overflow channel is expected to reduce sediment loading to the Clark Fork River in the long term. The construction of a new outlet channel is expected to increase aquatic habitat.

8B. The Proposed Action will temporarily reduce the abundance and diversity of fish game species. Racetrack Pond is stocked annually with native native westslope cutthroat trout and sterile rainbow trout and is a popular fishing area. During dewatering of the pond, FWP personnel will capture and remove as many illegally introduced and non-game fish as possible. Fish capture will be done either through electroshocking or use of nets, depending on water depths. Water levels in the pond may reestablish slowly after construction dewatering stops. Depending on water depths over winter, there may be an increased risk of winterkill (due to a lack of dissolved oxygen) to any fish remaining in the pond. After construction activities are complete, FWP will restock Racetrack Pond in spring 2018 with native westslope cutthroat trout and sterile rainbow trout. The Proposed Actions are anticipated to have a long term positive impacts to the aquatic habitat and abundance and diversity of fish game species.

The Proposed Action is not expected to change the abundance or diversity of game animals or bird species in the area. Game animals that are likely to utilize the project area include: white-tailed deer (*Odocoileus virginianus*), pronghorn (*Antilocarpa americana*), ring-necked pheasant (*Phasianus colchicus*), wild turkey (*Meleagris glallopavo*), and ruffed grouse (*Bonasa umbellus*). Game animals will avoid the project area during construction when activity and noise may be elevated, but this will only be a short-term displacement. Long term the Proposed Action is expected to increase the area and quality of habitat for game animals, but not to the extent that abundance or diversity would increase significantly.

8C. The Proposed Action is expected to improve pond and wetland habitat conditions within the project area. The increased habitat and vegetative diversity will provide additional habitat for songbirds, migratory birds, waterfowl, and other nongame species. The project area is currently occupied by a wide range of nongame species including waterfowl, raptors, song birds, amphibians, reptiles and several rodent species. Numerous bird species have been observed in the project area including waterfowl, shorebirds, and many other bird groups that occupy a variety of habitats (Swant 2015, Swant 2016, and Swant pending). An active osprey nest is present on a constructed stand in the southern portion of the project area. Construction activities scheduled to occur in the late fall and early winter are likely to discourage some use of the area by bird species due to noise and general construction activity, but these species will likely use similar habitat located nearby including the Clark Fork River, open water ponds on Dry Cottonwood Creek Ranch, Warm Springs Ponds, and other smaller open water irrigation ponds. The Proposed Action will increase habitat diversity and area, including deep water habitat for diving birds, shallow unvegetated aquatic habitat for dabbler species, vegetated aquatic bed and marsh habitat for rail species, shoreline habitat for shorebirds, and terrestrial habitat for other bird species.

8E. Racetrack Pond is currently stocked with sterile rainbow trout and native westslope cutthroat trout. Movement of fish into and out of the pond is not desired. The current outlet structure is a barrier to fish entering the pond from the Clark Fork River, but it is possible that fish in the pond occasionally escape into the Clark Fork River via

the current outlet pipe. The new outlet structure will be constructed to prevent fish movement into and out of the pond.

Movement of terrestrial wildlife may be temporarily affected during construction. A fence will be installed on the north and south sides of the project area to prevent trespassing on private land. The intent is not to limit wildlife access or movement through the area. Wildlife should be able to move under or over the fence as they do with existing livestock fences that are present in the vicinity of the project area.

Several areas around the pond will be planted with woody vegetation. These areas will be protected from browse by installing individual plant protectors or small exclusionary structures and should not impede wildlife movement.

8F. Sources of existing information for unique, rare, threatened, or endangered animal species included a data request from the MTNHP (MTNHP, 2017a) for Township 06 North, Range 09 West that includes the project area, bird survey report for the Clark Fork River (Swant 2015, Swant 2016, and Swant pending), and FWS Endangered Species Database (USFWS 2017).

The following threatened or endangered species are reported because their mapped habitat range overlaps with the project area:

- Mammals:
  - Wolverine (Gulo gulo) – USFWS Status: Proposed Threatened; Source of reported occurrence: MTNHP 2017a
  - Grizzly bear (Ursus arctos) – USFWS Status: Threatened; Source of reported occurrence: USFWS 2017
  - Canada lynx (Lynx canadensis) – USFWS Status: Threatened; Source of reported occurrence: USFWS 2017
- Fish:
  - Bull trout (Salvelinus confluentus) – USFWS Status: Threatened; Source of reported occurrence: MTNHP 2017a

Wolverine and Canada lynx are typically found in higher elevation, alpine to subalpine, forested habitats (MTNHP, 2017b). Incidental use of the project area or surrounding areas may occur if individuals are moving between higher elevation habitat areas, but this use would likely be infrequent. Grizzly bears use a wider variety of habitats than wolverine or Canada lynx (MTNHP 2017b), but due to the close vicinity of an Interstate roadway and other infrastructure, use of the project area by grizzly bear would likely be incidental as they moved to more desirable habitats.

The Clark Fork River adjacent to the project area is mapped as critical habitat for bull trout (USFWS 2010). Bull trout occur in some tributaries of the Clark Fork River, but no bull trout are known to occur in the Clark Fork River within the vicinity of the project (Respec, 2016). The Proposed Action is not expected to affect aquatic habitat in the Clark Fork River. There are two project actions that will result in small areas of disturbance along a side channel of the Clark Fork River, including: 1) removal of the existing pond outlet culvert that discharges pond water into the side channel of the Clark Fork River; and 2) filling of an overflow channel that also discharged water into a side channel of the Clark Fork River from a sediment detention pond constructed during recent borrow material excavations. Sediment control measures will be used to prevent fine sediment from entering the side channel.

Seventeen (Species of Concern) SOC are reported in the vicinity of the project area, including the following (MTNHP 2017a):

- Mammals:
  - Hoary Bat (Lasiurus cinereus) – State Rank: S3; Global Rank: G3G4
- Birds:

- American White Pelican (Pelecanus erythrorhynchos) – State Rank: S3B; Global Rank: G4
- Bald Eagle (Haliaeetus leucocephalus) – (Species of Special Concern) State Rank: S4; Global Rank: G5
- Black-necked Stilt (Himantopus mexicanus) – State Rank: S3B; Global Rank: G5
- Brown Creeper (Certhia americana) – State Rank: S3; Global Rank: G5
- Clark's Grebe (Aechmophorus clarkii) – State Rank: S3B; Global Rank: G5
- Common Loon (Gavia immer) – State Rank: S3B; Global Rank: G5
- Ferruginous Hawk (Buteo regalis) – State Rank: S3B; Global Rank: G4
- Golden Eagle (Aquila chrysaetos) – State Rank: S3; Global Rank: G5
- Great Blue Heron (Ardea herodias) – State Rank: S3; Global Rank: G5
- Hooded Merganser (Lophodytes cucullatus) – (Proposed Species of Concern) State Rank: S4; Global Rank: G5
- Horned Grebe (Podiceps auritus) – State Rank: S3B; Global Rank: G5
- Long-billed Curlew (Numenius americanus) – State Rank: S3B; Global Rank: G5
- Peregrine Falcon (Falco peregrinus) – State Rank: S3; Global Rank: G4
- Rufous Hummingbird (Selasphorus rufus) – (Proposed Species of Concern) State Rank: S4B; Global Rank: G5
- White-faced Ibis (Plegadis chihi) – State Rank: S3B; Global Rank: G5

- Fish:
  - Native westslope Cutthroat Trout (Oncorhynchus clarki lewisi) – State Rank: S2; Global Rank: G4T4

Hoary bat is the only mammal species of concern reported in the vicinity of the project area. It is a summer resident in Montana and occupies forested areas and forages over water sources in forests or along riparian corridors (MTNHP 2017a and MTNHP 2017b). Hoary bats may incidentally use Racetrack Pond as a foraging site. Most construction work will occur during daylight hours, likely outside of normal foraging hours. Riparian communities along the Clark Fork River likely provide more suitable habitat that would be preferred by this species.

Fifteen bird species of concern were reported to occur in the vicinity of the project area. Six of these species have been observed in the project area or in the Clark Fork River immediately adjacent to the project area, including: American white pelican, bald eagle, common loon, great blue heron, hooded merganser, and peregrine falcon (Swant 2015, Swant 2016, and Swant pending).

Juvenile American white pelicans, noted as non-breeding summer residents, have been observed along the Clark Fork River near Racetrack Pond (Swant 2015, Swant 2016, and Respec 2016). Much of this species' range and breeding habitat occurs outside of Montana and most use in the state is from migrants stopping over on their way to breeding grounds elsewhere (MTNHP 2017b and Respec 2016).

Bald eagles have been observed in or near the Racetrack Pond project area. No active nests have been observed, but there are active nests in other reaches of the Upper Clark Fork River (Swant 2015 and Respec 2016). Bald eagle are year-round residents that typically nest in forested areas along rivers and lakes, fish spawning streams, and have minimum disturbance from human activity (MTNHP 2017b).

Common loons have been occasionally observed using Racetrack Pond during spring months (Swant 2015, Swant 2016, and Respec 2016). This species typically arrives in Montana in mid-March and leaves during late August to October (MTNHP 2017b).

Great blue herons are uncommon at Racetrack Pond. They are more commonly observed in other nearby reaches of the Clark Fork River (Swant 2015, Swant 2016, and Respec 2016). Colonies of this species typically use cottonwood floodplain forests, and less often willows. They are year-round residents in Montana (MTNHP 2017b). There are not currently breeding rookeries along the Clark Fork River, but there have been in the past,

and declines in regenerating cottonwood forest have been noted as a cause for the declining use of the area by this species (Swant 2015 and Respec 2016).

Hooded mergansers have been observed in or near Racetrack Pond (Swant 2015, Swant 2016, and Respec 2016). This species is a year-round resident in western Montana, but is only occasionally observed in the spring and/or fall using the project area (Swant 2015, Respec 2016, and MTNHP 2017b). Breeding habitats include emergent marshes, small lakes, ponds, beaver wetlands, forested creeks and rivers, and swamps. They are typically found in river areas where clear water supports strong fish populations (MTNHP 2017b).

An observation of peregrine falcon was noted as a rare occurrence during 2017 at Racetrack Pond (Swant pending). The year-round resident typically nests on ledges of vertical cliffs where there is unobstructed views, nearby water, and prey (MTNHP 2017b).

Other bird species of concern, species of special concern, or proposed species of concern that have been observed in nearby reaches of the Upper Clark Fork River include Franklin's gull and bobolink (Swant 2015, Swant 2016, and Respec 2016). These species may incidentally use habitat in the project area and their use may be discouraged during construction.

The Proposed Action is anticipated to occur during the fall and winter months. Two of the species most likely to use the pond habitat in the project area, American white pelican and common loon, are migratory species that may start their winter migration prior to the start of construction. Hooded mergansers and great blue heron are also likely to use the pond habitat in the project area and both species may be discouraged from using this habitat during construction. Individuals of the species that are present in the project area during construction would likely move to other nearby open water or riparian habitat along the Clark Fork River and other locations near the project area. Bald eagle and peregrine falcon, year-round residents, likely only incidentally use habitat in the Racetrack Pond project area. Their use of the area may be discouraged during construction, but they range over a larger area where more suitable habitat is available.

The Proposed Action will improve long-term habitat conditions in the pond for diving and wading birds, in shoreline areas around the pond for shorebirds, and in surrounding wetlands and upland habitats for other terrestrial bird species. Improved habitat conditions may lead to increased use of the project area by bird species of concern that have been observed in and around the project area.

Native westslope cutthroat trout is the only fish species of concern reported in the project area (MTNHP 2017a). The species is found in streams and headwater lakes throughout western Montana and populations are at risk due to habitat degradation and loss as well as hybridization with rainbow or Yellowstone cutthroat trout (MTNHP 2017b). Populations of this species in Racetrack pond are stocked by FWP, most recently on May 16, 2017 (FWP 2017). The Proposed Action would have short-term impacts to pond habitat and stocked fish populations, and comments in Section 5B describe measures that will be implemented to minimize impacts to native westslope cutthroat trout during and after construction. Overall, the Proposed Action will increase pond depths, which will provide thermal refuge for native westslope cutthroat trout in the summer and improve over-wintering conditions. The Proposed Action will also increase shoreline vegetation, which will increase insect production and provide additional food sources for trout.

8G. Noise from construction may temporarily discourage typical use of the area by wildlife while equipment is being operated. Columbian ground squirrels (Urocitellus columbianus) are present in the project area and construction activities will displace this species, including active dens. Bull trout are not present in the project area. The Proposed Action is not anticipated to effect critical bull trout habitat in the Clark Fork River. Long-term, the project is intended to improve habitat conditions, including increasing the area of wetland and riparian vegetation communities, increase aquatic habitat, and improving conditions in the surrounding upland habitat that provide diverse habitat and structure for wildlife species.

8H. The MTNHP (2017a) reports two threatened species in the vicinity of Racetrack Pond, wolverine (Gulu gulo) and bull trout (Salvelinus confluentus). Descriptions of potential impacts to these species are described in 8E.

Table 9. Potential Impacts to the Human Environment – Noise and Electrical

Will the proposed action result in potential impacts to:	Unknown	Potentially significant	Minor	None	Can be mitigated	Comment
A. Increases in existing noise levels?			X			9A.
B. Exposure of people to severe or nuisance noise levels?			X			9B.
C. Creation of electrostatic or electromagnetic effects that could be detrimental to human health or property?				X		
D. Interference with radio or television reception and operation?				X		

Comments:

9A. Noise levels would be temporarily increased during the construction phase of the project from the operation of heavy equipment. Construction activities will be limited to daylight hours. The boat launch provides access for non-motorized watercraft only. There could be slight increases to noise from public traffic accessing the fishing access site. The FAS would be for day-use only, and no overnight camping would be allowed on the site.

9B. There are residential properties located to the north and south of the Racetrack Pond property. The northern residential property is approximately 150 feet to the north of the northern property boundary and southern residential property is located approximately 350 feet south of the southern property boundary. The pond will not be extended further to the north except for the northwest corner as requested by the adjacent landowner. The north end of the pond is designed to be a shallow marsh area not conducive for fishing or boating to mitigate potential disturbances for the landowner to the north.

Table 10. Potential Impacts to the Human Environment – Land Use

Will the proposed action result in potential impacts to:	Unknown	Potentially significant	Minor	None	Can be mitigated	Comment
A. Alteration of or interference with the productivity or profitability of the existing land use of an area?				X		
B. Conflicted with a designated natural area or area of unusual				X		

Will the proposed action result in potential impacts to:	Unknown	Potentially significant	Minor	None	Can be mitigated	Comment
scientific or educational importance?						
C. Conflict with any existing land use whose presence would constrain or potentially prohibit the proposed action?				X		
D. Adverse effects on or relocation of residences?				X		

Comments:

Fishing access would be restricted during the course of construction, whereas typically the pond is available to anglers year-round. Construction is anticipated to take 5 to 6 months.

Table 11. Potential Impacts to the Human Environment – Risk and Health Hazards

Will the proposed action result in potential impacts to:	Unknown	Potentially significant	Minor	None	Can be mitigated	Comment
A. Risk of an explosion or release of hazardous substances (including, but not limited to oil, pesticides, chemicals, or radiation) in the event of an accident or other forms of disruption?			X		Yes	11A.
B. Affect an existing emergency response or emergency evacuation plan or create a need for a new plan?				X		
C. Creation of any human health hazard or potential hazard?				X		
D. Will any chemical toxicants be used?			X		Yes	11D.

Comments:

11A. Construction equipment has the potential to leak a variety of hazardous materials including diesel fuel, lubricating oils, and hydraulic fluids from operating equipment and fuel storage tanks. BMPs, visual inspections, and regular maintenance of equipment will be used to prevent such instances when possible, but a minor risk of a leak or spill is possible. Spill kits will be kept onsite while equipment is operational for timely cleanup in the event of a spill. Immediate action will be taken in the event of a spill including excavation and hauling of impacted soils to an appropriate disposal facility, and/or sorbent booms placed on surface water to prevent the migration of

contaminants until it could be removed with a vacuum-type truck and hauled to an appropriate disposal facility. A Storm Water Pollution Prevention Plan (SWPPP) for construction activity will be prepared and submitted to MDEQ prior to initiation of construction to document these measures. If required, a Spill Prevention, Containment, and Countermeasure (SPCC) Plan will be prepared and submitted to the U.S. Environmental Protection Agency (EPA). Physical disturbance of the soil during construction would encourage the establishment of additional noxious weeds on the site. In conjunction with the Powell County Weed District, NRDP would implement an integrated approach to control noxious weeds. The use of herbicides would be in compliance with application guidelines to minimize the risk of chemical spills or water contamination and applied by people trained in safe handling techniques.

11C. The Proposed Action will remove the existing steep banks which will reduce the associated potential hazard.

11D. Chemical herbicides will be used for noxious weed control. The use of herbicides will be in compliance with application guidelines and applied by people trained in safe handling techniques.

Table 12. Potential Impacts to the Human Environment – Community Impact

Will the proposed action result in potential impacts to:	Unknown	Potentially significant	Minor	None	Can be mitigated	Comment
A. Alteration of the location, distribution, density, or growth rate of the human population of an area?				X		
B. Alteration of the social structure of a community?				X		
C. Alteration of the level or distribution of employment or community/personal income?				X		
D. Changes in industrial or commercial activity?				X		
E. Increased traffic hazards or effects on existing transportation facilities or patterns of movement of people and goods?			X			12E.

Comments:

12C. The Proposed Action is anticipated to increase tourism in the area, see **Appendix F, Racetrack Pond Tourism Report**.

12E. The Proposed Action may increase traffic on West River Road. There will be a slight increase in traffic on West River Road during construction activities. Anglers and hikers currently park alongside West River Road when accessing the site. The Proposed Action includes a parking area designed for 11 trucks with trailers and 8 cars and will keep vehicles from parking on West River Road. The Proposed Action would improve public safety

by improving boat launching facilities, providing adequate parking, and improving traffic flow, thereby minimizing vehicle conflicts between visitors.

Table 13. Potential Impacts to the Human Environment – Public Services, Taxes and Utilities

Will the proposed action result in potential impacts to:	Unknown	Potentially significant	Minor	None	Can be mitigated	Comment
A. Will the proposed action have an effect upon or result in a need for new or altered governmental services in any of the following areas: fire or police protection, schools, parks/recreational facilities, roads or other public maintenance, water supply, sewer or septic systems, solid waste disposal, health, or other governmental services? If any, specify.			X			13A.
B. Will the proposed action have an effect upon the local or state tax base and revenues?				X		
C. Will the proposed action result in a need for new facilities or substantial alterations of any of the following utilities: electric power, natural gas, other fuel supply or distribution systems, or communications?				X		
D. Will the proposed action result in increased used of any energy source?				X		
E. Define projected revenue sources			X			13E.
F. Define projected maintenance costs			X			13F.

Comments:

13A. The Proposed Action will require routine maintenance and periodic security visits by FWP personnel, but would be within the existing travel routes and within their regular scope of services.

13E. The Racetrack Pond FAS would be used for day-use only; therefore, no revenue would be collected beyond what is collected for fishing licenses and vehicle licensing fees.

13F. Projected annual costs incurred by the FWP for maintenance, weed control, and staffing for the 2018 fiscal year is anticipated to be $3,000 to $4,000 per year.

Table 14. Potential Impacts to the Human Environment – Aesthetics and Recreation

Will the proposed action result in potential impacts to:	Unknown	Potentially significant	Minor	None	Can be mitigated	Comment
A. Alteration of any scenic vista or creation of an aesthetically offensive site or effect that is open to public view?			X		X	13A.
B. Alteration of the aesthetic character of a community or neighborhood?				X		
C. Alteration of the quality or quantity of recreational/tourism opportunities and settings?			X			13C.
D. Will any designated or proposed wild or scenic rivers, trails or wilderness areas be impacted?				X		

Comments:

14A. The Proposed Action will improve the aesthetic value of the pond by increasing vegetation diversity and replacing areas of bare soil and invasive weeds with native vegetation along the shoreline and trail. The existing view of the pond consists of steep banks bare of vegetation and mineral stockpiles leftover from 2016 construction activities. The Proposed Action with increase vegetation along the pond and give the pond a more natural appearance. Overall the Proposed Action is anticipated to have significant long term positive impacts to the aesthetic value of the area.

14C. The Proposed Action is anticipated to increase the quantity of visitors to the site due to the installation of amenities making it more favorable to anglers, families, and handicapped visitors. FWP will conduct routine maintenance of the site.

Table 15. Potential Impacts to the Human Environment – Cultural and Historical Resources

Will the proposed action result in potential impacts to:	Unknown	Potentially significant	Minor	None	Can be mitigated	Comment
A. Destruction or alteration of any site, structure or object of				X		

Will the proposed action result in potential impacts to:	Unknown	Potentially significant	Minor	None	Can be mitigated	Comment
prehistoric historic, or paleontological importance?						
B. Physical change that would affect unique cultural values?				X		
C. Effects on existing religious or sacred uses of a site or area?				X		
D. Will the project affect historic or cultural resources?				X	X	14D.

Comments:

15d. The Montana State Historic Preservation Office (SHPO) was contacted as part of this EA to complete file records search for the site. No eligible cultural resources were identified within the EA boundary; however, the West Side Irrigation Canal is located adjacent to the site. The canal is greater than 50 years old but was recommended ineligible for the National Registry of Historic Places (NRHP). The canal will not be disturbed, and all personnel working onsite will be instructed to avoid the structure.

3.1 SUMMARY OF SIGNIFICANCE CRITERIA

The table below summarizes significance criteria of the Proposed Action for the Racetrack Pond FAS.

Table 16. Summary Evaluation of Significance Criteria

Will the proposed action, considered as a whole:	Unknown	Potentially significant	Minor	None	Can be mitigated	Comment
A. Have impacts that are individually limited, but cumulatively considerable? (A project or program may result in impacts on two or more separate resources which create a significant effect when considered together or in total.)				X		
B. Involve potential risks or adverse effects which are uncertain but extremely hazardous if they were to occur?				X		
C. Potentially conflict with the substantive requirements of any local, state, or federal law,				X		

Will the proposed action, considered as a whole:	Unknown	Potentially significant	Minor	None	Can be mitigated	Comment
regulation, standard or formal plan?						
D. Establish a precedent or likelihood that future actions with significant environmental impacts will be proposed?				X		
E. Generate substantial debate or controversy about the nature of the impacts that would be created?				X		
F. Is the project expected to have organized opposition or generate substantial public controversy?				X		
G. List any federal or state permits required.						16G.

Comments:

16G. The following permits are required for this project and will be obtained prior to construction activity:

- ACOE, Section 404 of Federal Clean Water Act
- MDEQ Water Protection Bureau, Section 318 of the Water Quality Act, Short Term Water Quality Standards for Turbidity
- MDEQ Water Protection Bureau, General Permit for Storm Water Discharges Associated with Construction Activity
- Montana FWP, Section 124 of the Stream Protection Act
- Powell County Conditional Use Permit
- Powell County Floodplain Permit
- Powell County Sanitation Permit

3.2 CUMULATIVE IMPACTS

The Proposed Action may cause minor temporary impacts to the environment, but the outcome of this FAS would be a benefit to the community and the environment. The Proposed Action will have long term positive impacts to the recreation in the Upper Clark Fork Basin and on the Clark Fork River. The Proposed Action would not have any long term negative cumulative effects on the biological, physical, or human environments. To document these findings, a Montana Environmental Policy Act (MEPA) Tourism Report is also presented in **Appendix F** in order to comply with 23-1-110 MCA for the improvement or development of state park or fishing access site - required public involvement - rules.

4.0 NARRATIVE EVALUATION AND COMMENT

The Proposed Action would improve biological habitat and year-round fishing access at Racetrack Pond through grading of the existing pond, revegetation, and installation FAS ADA accessible amenities. Temporary disturbances to water volume and turbidity of the pond are expected. Dust mitigation will be implemented while heavy equipment is operating. Temporary sediment is also anticipated to increase during construction of the pond outlet channel, including the disturbance of existing wetlands. This alternative will likely create minor disturbances during construction such as noise, diesel exhaust, and the potential for contaminants to spill or leak from heavy equipment and fuel storage tanks. This alternative is expected to have short-term impacts on existing vegetation in the project area, but will ultimately improve native vegetation cover and species diversity.

The Proposed Action intends to improve habitat conditions in Racetrack Pond by creating deeper aquatic habitat to support overwintering of fish and deep water habitat for diving birds. The edges of the pond will be graded to create larger areas of shallow wading habitat, some of which will support aquatic vegetation and increase the area of preferred habitat for shorebirds. The Proposed Action will also increase the area of wetland around the pond and along the newly constructed pond outlet channel. Other concerns include potentially damaging the irrigation canal that borders the site during construction, though the canal would not be disturbed under the proposed action. These risks will be temporary, and once construction is complete they will no longer be a concern. Once the project is completed, a minor burden will be placed on FWP for maintaining the site, and FWP will continue stocking native westslope cutthroat and sterile rainbow trout. There is also the potential that the concrete vault toilet will produce unpleasant odors. The boat launch provides access for non-motorized watercraft only, but there could be slight increases in noise from public traffic accessing the fishing access site.

If the no alternative is chosen, than the site will remain as is and without improvements. The risks associated with this option are continued encroachment by invasive weeds, sloughing of unstable banks, and underutilization by wildlife and anglers. FWP would continue to incur some costs because the pond would continue to be stocked with game fish. Mitigation for risks from no action are limited, as other state and local agencies would be responsible for weed management, and the site would remain a visual scar on the land and underutilized.

Mitigation of risks from the Proposed Action would include the implementation of FWP construction BMPs adhering to regulatory permits for wetlands, water quality, and storm water. The FAS amenities will be designed according to FWP guidelines, which include minimizing odors from the latrine.

Funding has been made available by NRDP. The risks associated with this alternative can be mitigated. Costs to maintain the site would be minimal and within the scope of FWP's current work environment.

5.0 PUBLIC PARTICIPATION

The public will be notified in the following manners to comment on the Racetrack Pond FAS and Habitat improvement project and this current Draft EA including the Proposed Action and alternatives.

- Legal notice will be published twice each in these newspapers: *Independent Record* (Helena; FWP's newspaper of record), *Missoulian* (Region 2 FWP's newspaper of record, and the *Silver State Post* (Deer Lodge, local project area newspaper).
- Public notice will be posted on NRDP's webpage https://dojmt.gov/lands ("Public Notices" the "Notice of Public Comments"); the Draft EA will also be available on that webpage, along with the opportunity to submit comments online.
- Copies of this draft EA may be obtained by mail from Michelle Golden by phoning 406-444-0205 or emailing nrdp@mt.gov.

- Notices will be sent to adjacent landowners and interested parties to ensure their knowledge of the Proposed Action.
- A public meeting to discuss the Racetrack Pond FAS and habitat improvement project and this current Draft EA including the Proposed Action and alternatives will be held at the Racetrack Valley Fire Hall/Racetrack Community Center on August 17, 2017 starting at 7:00 pm. To reach the Race Track Valley Fire Hall/Race Community Center from Interstate 90, take exit 195, Racetrack Rd, head west to the Frontage Road intersection, turn right (north), proceed less than one mile. The Race Track Valley Fire Hall/Race Community Center will be on the right, just north of the Gemback Bar.

This level of public notice and participation is appropriate for a project of this scope with no significant physical or human impacts and only minor impacts that can be mitigated. Public comments on this draft Environmental Assessment will be incorporated into the design plans, as appropriate.

The public comment period will extend for thirty (30) days. Written comments will be accepted until **5:00 p.m. on September 4, 2017** and can be mailed to the address below:

NRDP
PO Box 201425
Helena, MT 59620
Fax (406) 444-0236
Email: nrdp@mt.gov

6.0 EA PREPARATION

1. Based on the significance criteria evaluated in this EA, is an EIS required? **NO**

If an EIS is not required, explain why the EA is the appropriate level of analysis for this Proposed Action.

Based on an evaluation of impacts to the physical and human environment under MEPA, this environmental review revealed no significant negative impacts from the Proposed Action: therefore, an EIS is not necessary and an environmental assessment is the appropriate level of analysis. In determining the significance of the impacts, FWP in cooperation with NRDP assessed the severity, duration, geographic extent, and frequency of the impact, the probability that the impact would occur or reasonable assurance that the impact would not occur. FWP assessed the growth-inducing or growth-inhibiting aspects of the impact, the importance to the state and to society of the environmental resource or value effected, any precedent that would be set as a result of an impact of the Proposed Action that would commit FWP to future actions; and potential conflicts with local, federal, or state laws. As this EA revealed no significant impacts from the Proposed Actions, an EA is the appropriate level of review and an EIS is not required.

2. This EA is prepared for:

Montana Department of Justice
Natural Resource Damage Program
P.O. Box 201425
Helena, MT 59620-1425

Montana Department of Fish, Wildlife and Parks, Region 2
3201 Spurgin Road
Missoula, MT 59804

This EA is prepared by:

Tetra Tech
303 Irene Street
Helena, MT 59601

Geum Environmental Consulting, Inc.
307 State Street
Hamilton, Montana 59840

3. List of agencies or offices consulted during preparation of the EA:

Montana Natural Resource Damage Program
Montana Fish, Wildlife and Parks
    Design and Construction
    Fisheries Division
Montana Department of Environmental Quality
Montana Department of Commerce – Tourism
Montana Natural Heritage Program – Natural Resource Information System (NRIS)
Montana State Historic Preservation Office

7.0 REFERENCES

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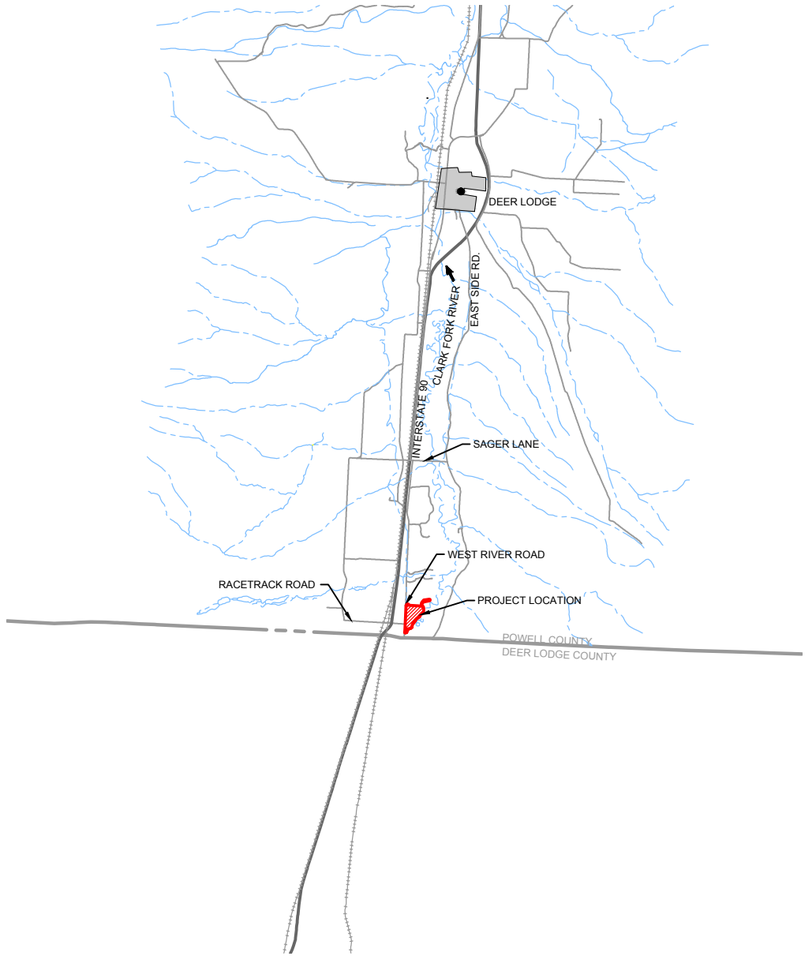
Figures

DRAFT

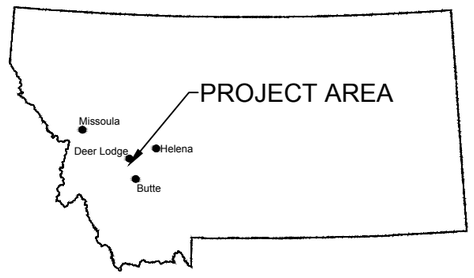
RACETRACK POND FISHING ACCESS SITE AND HABITAT IMPROVEMENT PROJECT POWELL COUNTY, MONTANA

JULY 2017



PREPARED FOR:

Montana Department of Justice
Natural Resource Damage Program



PREPARED BY:

TETRA TECH
303 Irene Street, Helena, MT 59601 (406) 443-5210

Geum Environmental Consulting

SHEET INDEX

G01	COVER
C01	RACETRACK POND SITE PLAN
C02	RACETRACK POND GRADING PLAN
C03	RACETRACK POND SECTIONS AND OUTLET PROFILE
C04	RACETRACK POND AMENITIES PLAN
C05	RACETRACK POND TRAIL AND ROAD PROFILES
C06	RACE TRACK POND TRAIL CROSS-SECTIONS
C07	EXISTING VEGETATION COMMUNITIES
C08	DESIGN HABITAT FEATURES
C09	DESIGN AQUATIC HABITAT FEATURES
D01	RACETRACK POND OUTLET STRUCTURE DETAILS

1 2 3 4 5 6

E D C B A

MAIN ROADWAY
PARKING AREA
CONCRETE VAULT LATRINE
BOAT LAUNCH ACCESS
ADA FISHING PLATFORM
EXISTING PENINSULA, PRESERVE EXISTING VEGETATION
DEEP WATER AQUATIC HABITAT
DEEP WATER AQUATIC HABITAT
RACETRACK POND
MAIN TRAIL
CLARK FORK RIVER
RACETRACK FAS/EA BOUNDARY
RACETRACK FAS/EA BOUNDARY
FEMA 100-YR FLOODPLAIN BOUNDARY
IRRIGATION SUMP
EXISTING TOPSOIL MATERIAL STOCKPILE
POND OUTLET STRUCTURE
POND OUTLET CHANNEL
EXISTING OUTLET
EXISTING CULVERT
EXISTING OUTLET DITCH
CLARK FORK RIVER
EXISTING STREAM BED
FEMA 100-YR FLOODPLAIN BOUNDARY

N

0 75 150 300

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Montana Department of Justice
Natural Resource Damage Program

MARK	DATE	DESCRIPTION	BY
0	6/23/17	ISSUED FOR EA	MLH

MONTANA DEPARTMENT OF JUSTICE

RACETRACK POND FAS AND HABITAT IMPROVEMENTS
POWELL COUNTY MONTANA

RACETRACK POND
SITE PLAN

Project No.:	114-560588
Designed By:	SEF
Drawn By:	SEF
Checked By:	BJB

C01

Bar Measures 1 inch

6/28/2017 9:19 AM - O:\HM\MONTANA DEPT OF JUSTICE\114-560588 - CFR PHASE 7 RACETRACK POND\110-2D CADD\SHEETFILES\C01-SITE PLAN.DWG

1 2 3 4 5 6

E D C B A

D C03 · C C03 · B C03 · E C03 · A C03 · F C03

MAIN ROADWAY

PARKING AREA

CONCRETE VAULT LATRINE

BOAT LAUNCH ACCESS

MAIN TRAIL

EXISTING PENINSULA, PRESERVE EXISTING VEGETATION

DEEP WATER AQUATIC HABITAT

DEEP WATER AQUATIC HABITAT

RACETRACK FAS/EA BOUNDARY

FEMA 100-YR FLOODPLAIN BOUNDARY

IRRIGATION SUMP

POND OUTLET STRUCTURE

POND OUTLET CHANNEL

EXISTING STREAM BED

CLARK FORK RIVER

CLARK FORK RIVER

RACETRACK FAS/EA BOUNDARY

FEMA 100-YR FLOODPLAIN BOUNDARY

N

0 62.5 125 250

LEGEND
CUT AREAS
FILL AREAS

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Natural Resource Damage Program

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RACETRACK POND FAS AND HABITAT IMPROVEMENTS
POWELL COUNTY MONTANA

RACETRACK POND
GRADING PLAN

Project No.:	114-560588
Designed By:	SEF
Drawn By:	SEF
Checked By:	BJB

C02

Bar Measures 1 inch

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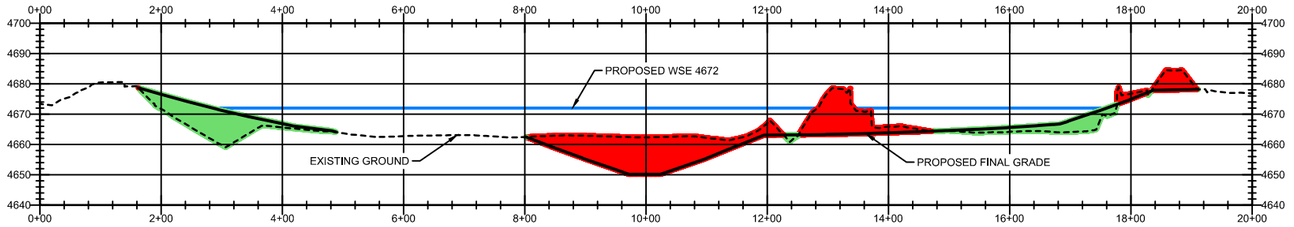

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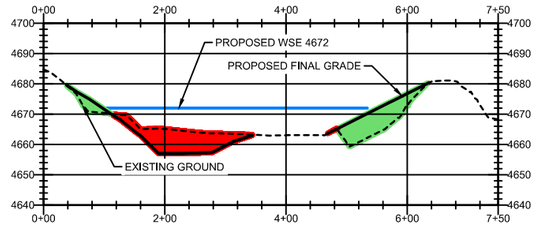

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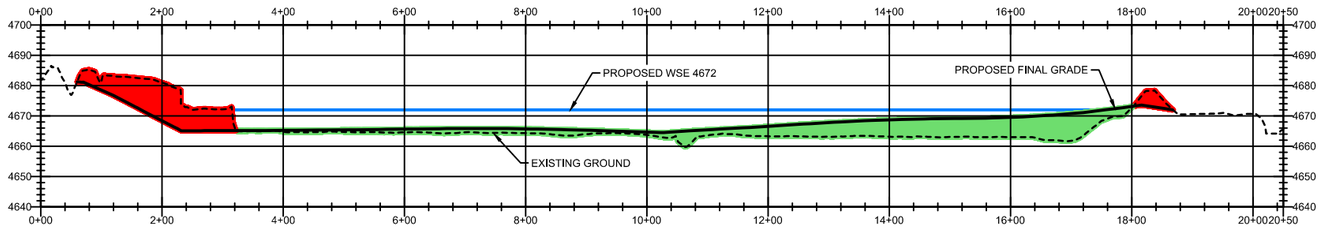

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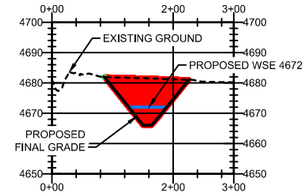

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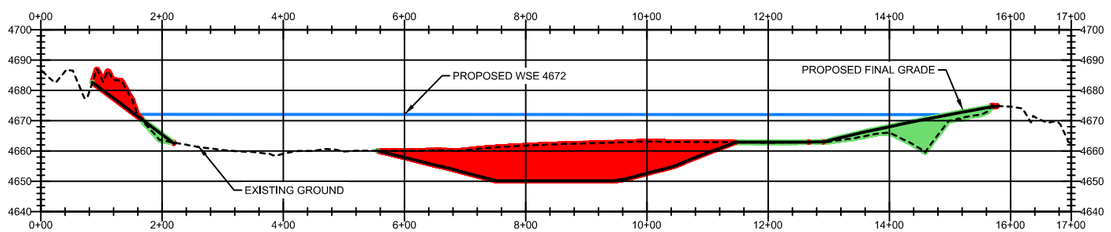

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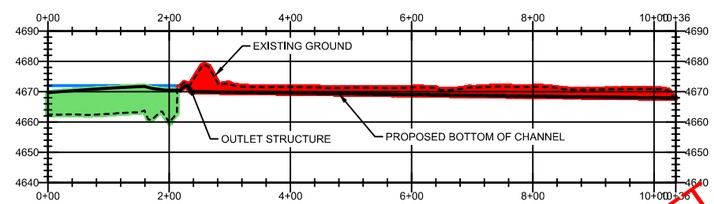

F C02 OUTLET STRUCTURE AND CHANNEL PROFILE

DRAFT
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LEGEND
CUT AREAS
FILL AREAS

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Natural Resource Damage Program

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RACETRACK POND FAS AND HABITAT IMPROVEMENTS
POWELL COUNTY MONTANA

RACETRACK POND
POND SECTIONS AND OUTLET PROFILE

Project No.:	114-560588
Designed By:	SEF
Drawn By:	SEF
Checked By:	BJB

C03

Bar Measures 1 inch

MAIN ACCESS ROAD (14FT)

BARRIERS TO VEHICLE ACCESS. ROCKS OR GUARDRAIL POSTS W/ AIRCTAFT CABLE. (POSTS AND CABLE ALLOW ADMINISTRATIVE ACCESS)

MAIN TRAIL AROUND POND (5FT)

CONCRETE WHEEL STOPS DEFINE PARKING W/O STRIPING

PARKING AREA

ADA ACCESS TRAIL

ADA PARKING

CONCRETE VAULT LATRINE

ADA FISHING PLATFORM

EXISTING PENINSULA, PRESERVE EXISTING VEGETATION

BOAT LAUNCH ACCESS

DEEP WATER AQUATIC HABITAT

VEHICLE ACCESS BARRIERS

RACETRACK FAS/EA BOUNDARY

CLARK FORK RIVER

0 25 50 100

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Montana Department of Justice
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MONTANA DEPARTMENT OF JUSTICE

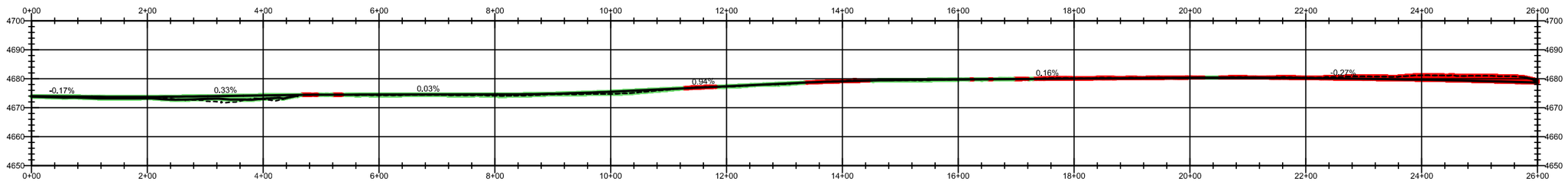
RACETRACK POND FAS AND HABITAT IMPROVEMENTS
POWELL COUNTY MONTANA

RACETRACK POND
AMENITIES PLAN

Project No.:	114-560588
Designed By:	SEF
Drawn By:	SEF
Checked By:	BJB

C04

Bar Measures 1 inch



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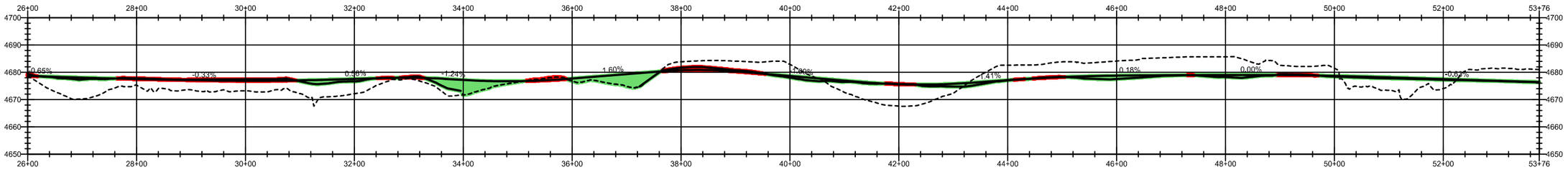

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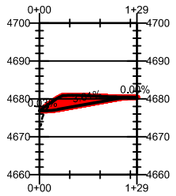

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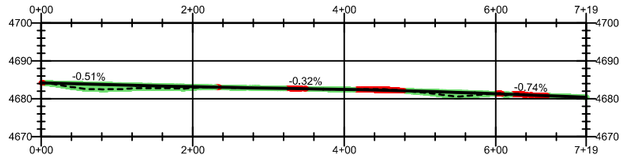

ACCESS ROAD PROFILE

DRAFT
NOT FOR CONSTRUCTION

LEGEND
- CUT AREAS
- FILL AREAS

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MONTANA DEPARTMENT OF JUSTICE

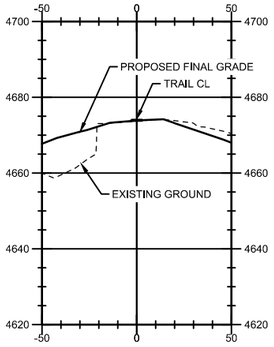
RACETRACK POND FAS AND HABITAT IMPROVEMENTS
POWELL COUNTY MONTANA

RACETRACK POND
TRAIL AND ROAD PROFILES

Project No.:	114-560588
Designed By:	SEF
Drawn By:	SEF
Checked By:	BJB

C05

Bar Measures 1 inch



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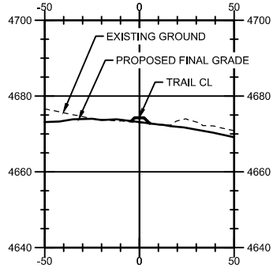

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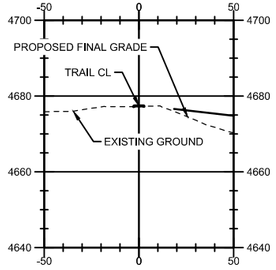

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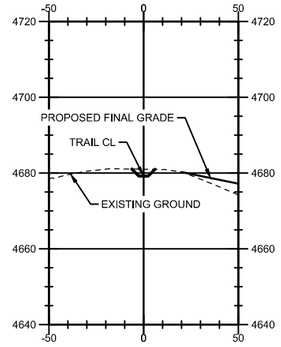

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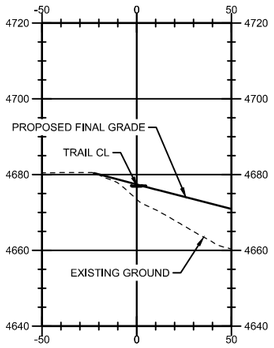

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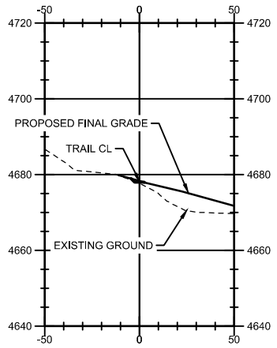

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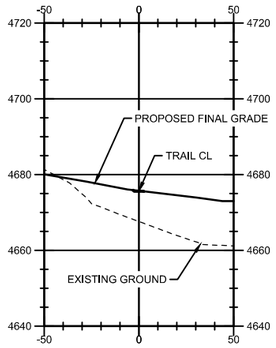

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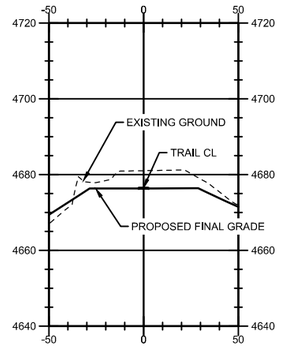

STA 53+76

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303 Irene Street
Helena, Montana 59601
PHONE: (406) 443-5210 FAX: (406) 449-3729

Montana Department of Justice
Natural Resource Damage Program

MARK	DATE	DESCRIPTION	BY
0	6/23/17	ISSUED FOR EA	MLH

MONTANA DEPARTMENT OF JUSTICE

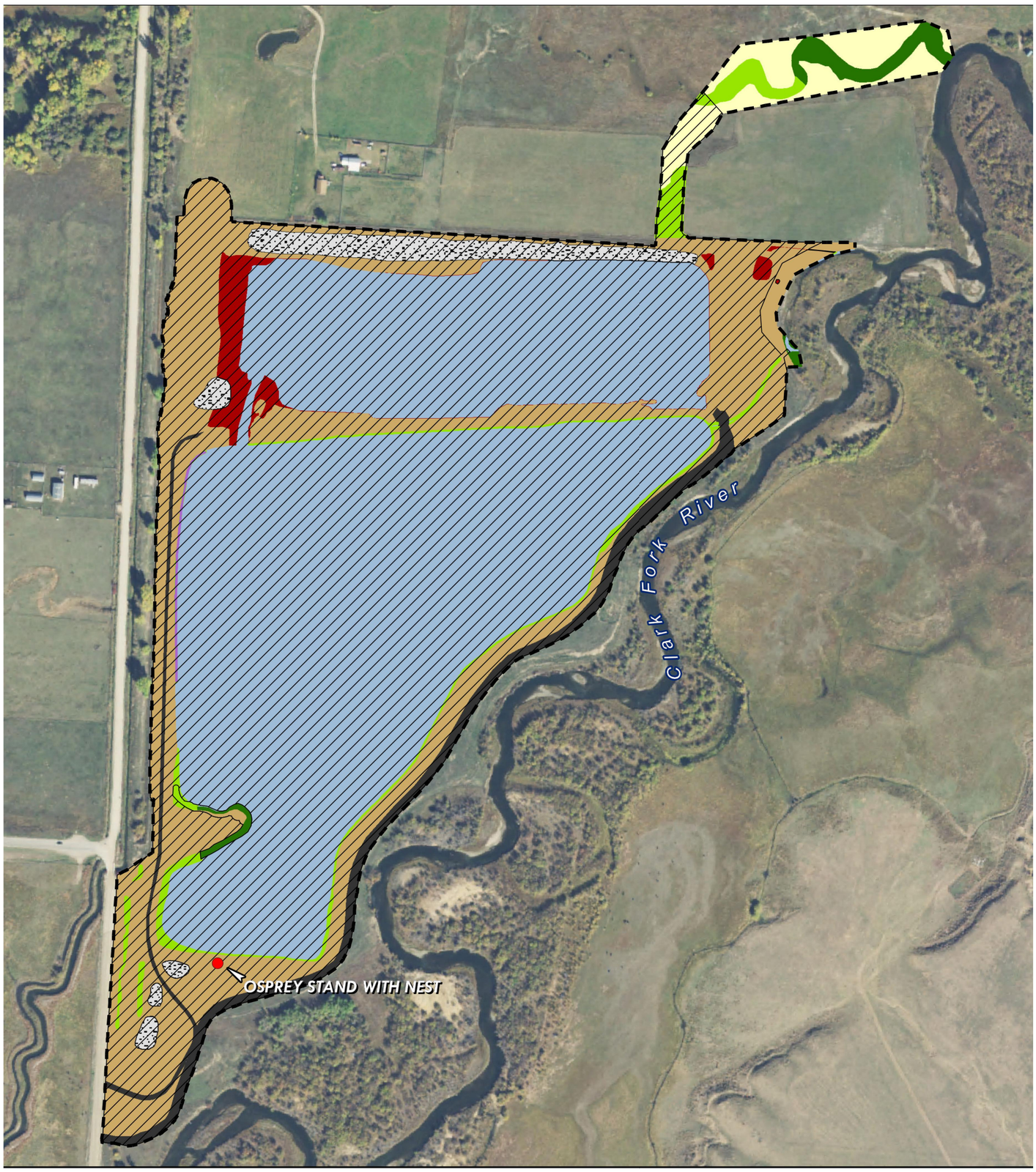
RACETRACK POND FAS AND HABITAT IMPROVEMENTS
POWELL COUNTY MONTANA

RACETRACK POND
TRAIL CROSS-SECTIONS

Project No.:	114-560588
Designed By:	SEF
Drawn By:	SEF
Checked By:	BJB

C06

Bar Measures 1 inch



MAPPED VEGETATION COMMUNITIES & OTHER LAND COVER TYPES

- Aquatic bed wetland
- Herbaceous wetland
- Shrub wetland
- Open water
- Upland non-native
- Hayfield
- Unvegetated surface
- Material stockpile
- Road
- Approximate disturbance extents
- Project area

DRAFT
NOT FOR CONSTRUCTION

N

0 175 350

Bar Measures 1 inch

C07

Checked By:	BJB
Drawn By:	GEUM
Designed By:	GEUM
Project No.:	114-560588

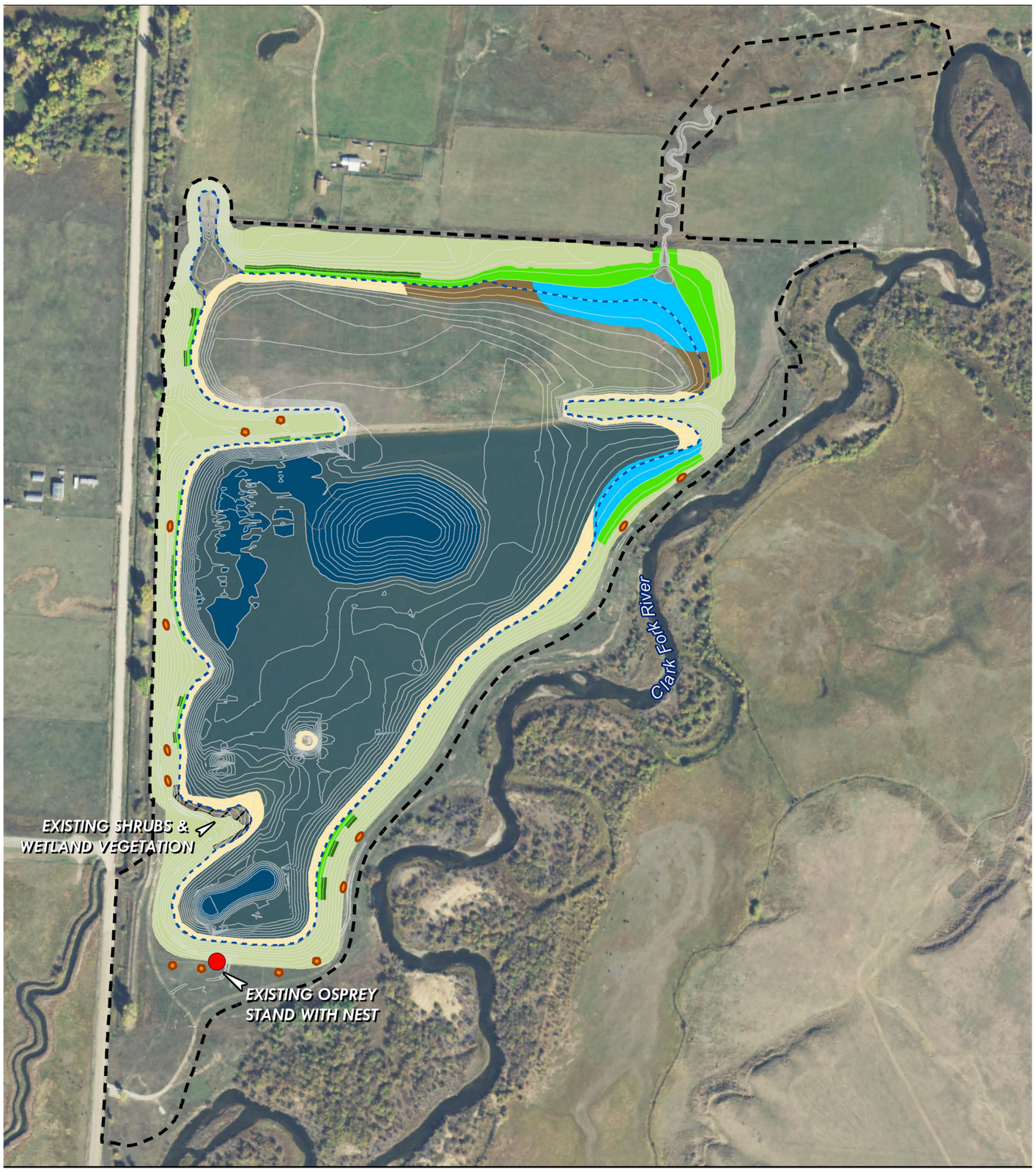
MONTANA DEPARTMENT OF JUSTICE
RACETRACK POND FAS AND HABITAT IMPROVEMENTS
POWELL COUNTY MONTANA

EXISTING
VEGETATION COMMUNITIES

MARK	DATE	DESCRIPTION	BY
0	6/23/17	ISSUED FOR EA	

Montana Department of Justice
Natural Resource Damage Program

TETRA TECH
www.tetratech.com
303 Irene Street
Helena, Montana 59601
PHONE: (406) 443-5210 FAX: (406) 449-3729



RACETRACK POND DESIGN HABITAT FEATURES

- Preserve existing habitat
- Terrestrial habitat (herbaceous)
- Shorebird habitat (shallow mud)
- Shallow, wading bird habitat
- Emergent marsh habitat
- Deep water habitat

PLANTING

- Wetland herbaceous
- Wet shrub
- Dry shrub
- Shade trees

- Project area
- Approximate water surface elevation
- 1ft design contours

N

0 175 350

DRAFT
NOT FOR CONSTRUCTION

Bar Measures 1 inch

C08

Checked By: BJB
Drawn By: GEUM
Designed By: GEUM
Project No.: 114-560588

MONTANA DEPARTMENT OF JUSTICE
RACETRACK POND FAS AND HABITAT IMPROVEMENTS
POWELL COUNTY MONTANA

DESIGN
HABITAT FEATURES

MARK	DATE	DESCRIPTION	BY
0	6/23/17	ISSUED FOR EA	

Montana Department of Justice
Natural Resource Damage Program

TETRA TECH
www.tetratech.com
303 Irene Street
Helena, Montana 59601
PHONE: (406) 443-5210 FAX: (406) 449-3729

HABITAT FEATURES

- Design deep water habitat, greater than 12ft deep (3.91 acres)
- Existing deep water habitat, greater than 12ft (2.51 acres)
- Design shallow water habitat, less than 2ft deep (5.62 acres)
- Existing shallow water habitat, less than 2ft deep (2.34 acres)
- Project area
- Existing pond habitat 2 to 12ft deep

N

0 175 350

DRAFT
NOT FOR CONSTRUCTION

Bar Measures 1 inch

C09

Checked By: BJB
Drawn By: GEUM
Designed By: GEUM
Project No.: 114-560588

MONTANA DEPARTMENT OF JUSTICE
RACETRACK POND FAS AND HABITAT IMPROVEMENTS
POWELL COUNTY MONTANA

DESIGN
AQUATIC HABITAT FEATURES

MARK	DATE	DESCRIPTION	BY
0	6/23/17	ISSUED FOR EA	

Montana Department of Justice
Natural Resource Damage Program

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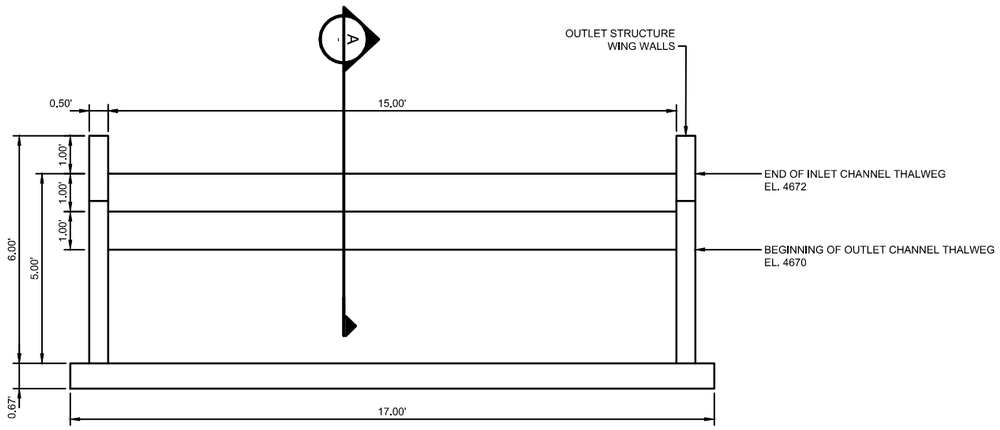
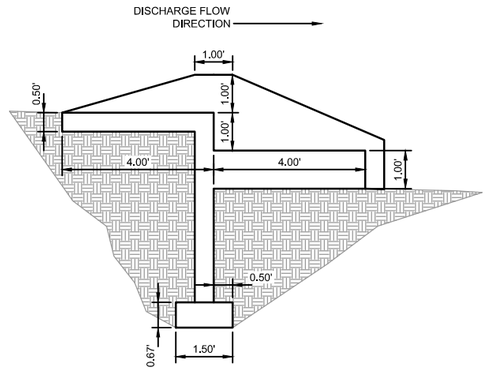


1 POND OUTLET CHANNEL WEIR STRUCTURE PROFILE



A POND OUTLET CHANNEL WEIR STRUCTURE SECTION

DRAFT
NOT FOR CONSTRUCTION

TETRA TECH
www.tetratech.com
303 Irene Street
Helena, Montana 59601
PHONE: (406) 443-5210 FAX: (406) 449-3729

Montana Department of Justice
Natural Resource Damage Program

MARK	DATE	DESCRIPTION	BY
0	6/23/17	ISSUED FOR EA	MLH

MONTANA DEPARTMENT OF JUSTICE

RACETRACK POND FAS AND HABITAT IMPROVEMENTS
POWELL COUNTY MONTANA

RACETRACK POND
OUTLET STRUCTURE DETAILS

Project No.:	114-560588
Designed By:	RWE
Drawn By:	SPK
Checked By:	BJB

D01

Bar Measures 1 inch

Appendix A

HB 495 Checklist

HB 495 Checklist

Date: August 1, 2017 **Person Reviewing: Tom Mostad**

Project Location: Racetrack Pond is located on the Clark Fork River off Interstate 90 at exit 195 along West River Road in Racetrack, Montana in Powell County Section 16, Township 06 N, Range 9 West.

Description of Proposed Work: The Montana Department of Fish Wildlife and Parks (FWP) in cooperation with the Montana Natural Resource Damage Program (NRDP) proposes to improve the Racetrack Pond Area near Racetrack, Montana for the purpose of developing the area into a fishing access site (FAS). The proposed FAS developments include access roads, walking trails, boat launch, parking area including U.S. Americans with Disabilities Act (ADA) accessible parking, and ADA latrine and an ADA fishing access platform. Habitat improvements include regrading of the pond area for the purpose of increasing the quality of shoreline vegetation, wetlands, waterfowl habitat, and aquatic habitat.

In implementing 23-1-110 , MCA, the commission considers the following improvement or development projects to be those that significantly change park or fishing access site features or use patterns:

[ ] (a) new roadways or trails built over undisturbed land;

[ ] (b) new buildings constructed (with the exception of vault latrines and other buildings under 100 square feet);

[**X**] (c) any excavation of 20 cubic yards or greater;

[**X**] (d) new parking lots built over undisturbed land or the expansion of an existing lot that increases the parking capacity by 25% or more;

[**X**] (e) any new shoreline alteration that exceeds a double wide boat ramp or handicapped fishing station;

[**X**] (f) any new construction into lakes, reservoirs or streams;

[ ] (g) any new construction in an area with National Registry quality cultural artifacts (as determined by the state historical preservation office); and,

[ ] (h) any new above ground utility lines.

[ ] (i) any increase or decrease in campsites of 25% or more of the existing number of campsites.

All proposed improvement or development projects will be evaluated on a case-by-case basis to determine if they would significantly change park or fishing access site features or use patterns, including the cumulative effects of a series of individual projects. If any of the above are checked, HB 495 rules apply.

Appendix B

Montana Fish Wildlife And Parks

Best Management Practices

APPENDIX B
MONTANA FISH, WILDLIFE AND PARKS
BEST MANAGEMENT PRACTICES
10-02-02; Updated May 1, 2008

I. ROADS

A. Road Planning and location

1. Minimize the number of roads constructed at the FAS through comprehensive road planning, recognizing foreseeable future uses.

    a. Use existing roads, unless use of such roads would cause or aggravate an erosion problem.

2. Fit the road to the topography by locating roads on natural benches and following natural contours. Avoid long, steep road grades and narrow canyons.

3. Locate roads on stable geology, including well-drained soils and rock formations that tend to dip into the slope. Avoid slumps and slide-prone areas characterized by steep slopes, highly weathered bedrock, clay beds, concave slopes, hummocky topography, and rock layers that dip parallel to the slope. Avoid wet areas, including seeps, wetlands, wet meadows, and natural drainage channels.

4. Minimize the number of stream crossings.

    a. Choose stable stream crossing sites. "Stable" refers to streambanks with erosion-resistant materials and in hydrologically safe spots.

B. Road Design

1. Design roads to the minimum standard necessary to accommodate anticipated use and equipment. The need for higher engineering standards can be alleviated through proper road-use management. "Standard" refers to road width.

2. Design roads to minimize disruption of natural drainage patterns. Vary road grades to reduce concentrated flow in road drainage ditches, culverts, and on fill slopes and road surfaces.

C. Drainage from Road Surface

1. Provide adequate drainage from the surface of all permanent and temporary roads. Use outsloped, insloped or crowned roads, installing proper drainage features. Space road drainage features so peak flow on road surface or in ditches will not exceed their capacity.

    a. Outsloped roads provide means of dispersing water in a low-energy flow from the road surface. Outsloped roads are appropriate when fill slopes are stable, drainage will not flow directly into stream channels, and transportation safety can be met.

    b. For insloped roads, plan ditch gradients steep enough, generally greater than 2%, but less than 8%, to prevent sediment deposition and ditch erosion. The steeper gradients may be suitable for more stable soils; use the lower gradients for less stable soils.

    c. Design and install road surface drainage features at adequate spacing to control erosion; steeper gradients require more frequent drainage features. Properly constructed drain dips can be an economical method of road surface drainage. Construct drain dips deep enough into the sub-grade so that traffic will not obliterate them.

2. For ditch relief/culverts, construct stable catch basins at stable angles. Protect the inflow end of cross-drain culverts from plugging and armor if in erodible soil. Skewing ditch relief culverts 20 to 30 degrees toward the inflow from the ditch will improve inlet efficiency.

3. Provide energy dissipators (rock piles, slash, log chunks, etc.) where necessary to reduce erosion at outlet of drainage features. Cross-drains, culverts, water bars, dips, and other drainage structures should not discharge onto erodible soils or fill slopes without outfall protection.

4. Route road drainage through adequate filtration zones, or other sediment-settling structures. Install road drainage features above stream crossings to route discharge into filtration zones before entering a stream.

D. Construction/Reconstruction

1. Stabilize erodible, exposed soils by seeding, compacting, riprapping, benching, mulching, or other suitable means.

2. At the toe of potentially erodible fill slopes, particularly near stream channels, pile slash in a row parallel to the road to trap sediment. When done concurrently with road construction, this is one method to effectively control sediment movement and it also provides an economical way of disposing of roadway slash. Limit the height, width and length of these "slash filter windrows" so not to impede wildlife movement. Sediment fabric fences or other methods may be used if effective.

3. Construct cut and fill slopes at stable angles to prevent sloughing and subsequent erosion.

4. Avoid incorporating potentially unstable woody debris in the fill portion of the road prism. Where possible, leave existing rooted trees or shrubs at the toe of the fill slope to stabilize the fill.

5. Place debris, overburden, and other waste materials associated with construction and maintenance activities in a location to avoid entry into streams. Include these waste areas in soil stabilization planning for the road.

6. When using existing roads, reconstruct only to the extent necessary to provide adequate drainage and safety; avoid disturbing stable road surfaces. Consider abandoning existing roads when their use would aggravate erosion.

E. Road Maintenance

1. Grade road surfaces only as often as necessary to maintain a stable running surface and to retain the original surface drainage.

2. Maintain erosion control features through periodic inspection and maintenance, including cleaning dips and cross-drains, repairing ditches, marking culvert inlets to aid in location, and clearing debris from culverts.

3. Avoid cutting the toe of cut slopes when grading roads, pulling ditches, or plowing snow.

4. Avoid using roads during wet periods if such use would likely damage the road drainage features. Consider gates, barricades or signs to limit use of roads during wet periods.

II. RECREATIONAL FACILITIES (parking areas, campsites, trails, ramps, restrooms)

A. Site Design

1. Design a site that best fits the topography, soil type, and stream character, while minimizing soil disturbance and economically accomplishing recreational objectives. Keep roads and parking lots at least 50 feet from water; if closer, mitigate with vegetative buffers as necessary.

2. Locate foot trails to avoid concentrating runoff and provide breaks in grade as needed. Locate trails and parking areas away from natural drainage systems and divert runoff to stable areas. Limit the grade of trails on unstable, saturated, highly erosive, or easily compacted soils

3. Scale the number of boat ramps, campsites, parking areas, bathroom facilities, etc. to be commensurate with existing and anticipated needs. Facilities should not invite such use that natural features will be degraded.

4. Provide adequate barriers to minimize off-road vehicle use

B. Maintenance: Soil Disturbance and Drainage

1. Maintenance operations minimize soil disturbance around parking lots, swimming areas and campsites, through proper placement and dispersal of such facilities or by reseeding disturbed ground. Drainage from such facilities should be promoted through proper grading.

2. Maintain adequate drainage for ramps by keeping side drains functional or by maintaining drainage of road surface above ramps or by crowning (on natural surfaces).

3. Maintain adequate drainage for trails. Use mitigating measures, such as water bars, wood chips, and grass seeding, to reduce erosion on trails.

4. When roads are abandoned during reconstruction or to implement site-control, they must be reseeded and provided with adequate drainage so that periodic maintenance is not required.

III. RAMPS AND STREAM CROSSINGS

A. Legal Requirements

1. Relevant permits must be obtained prior to building bridges across streams or boat ramps. Such permits include the SPA 124 permit, the COE 404 permit, and the DNRC Floodplain Development Permit.

B. Design Considerations

1. Placement of boat ramp should be such that boats can load and unload with out difficulty and the notch in the bank where the ramp was placed does not encourage bank erosion. Extensions of boat ramps beyond the natural bank can also encourage erosion.

2. Adjust the road grade or provide drainage features (e.g. rubber flaps) to reduce the concentration of road drainage to stream crossings and boat ramps. Direct drainage flow through an adequate filtration zone and away from the ramp or crossing through the use of gravel side-drains, crowning (on natural surfaces) or 30-degree angled grooves on concrete ramps.

3. Avoid unimproved stream crossings on permanent streams. On ephemeral streams, when a culvert or bridge is not feasible, locate drive-throughs on a stable, rocky portion of the stream channel.

4. Unimproved (non-concrete) ramps should only be used when the native soils are sufficiently gravelly or rocky to withstand the use at the site and to resist erosion.

C. Installation of Stream Crossings and Ramps

1. Minimize stream channel disturbances and related sediment problems during construction of road and installation of stream crossing structures. Do not place erodible material into stream channels. Remove stockpiled material from high water zones. Locate temporary construction bypass roads in locations where the stream course will have a minimal disturbance. Time the construction activities to protect fisheries and water quality.

2. Where ramps enter the stream channel, they should follow the natural streambed in order to avoid changing stream hydraulics and to optimize use of boat trailers.

3. Use culverts with a minimum diameter of 15 inches for permanent stream crossings and cross drains. Proper sizing of culverts may dictate a larger pipe and should be based on a 50-year flow recurrence interval. Install culverts to conform to the natural streambed and slope on all perennial streams and on intermittent streams that support fish or that provide seasonal fish passage. Place culverts slightly below normal stream grade to avoid culvert outfall barriers. Do not alter stream channels upstream from culverts, unless necessary to protect fill or to prevent culvert blockage. Armor the inlet and/or outlet with rock or other suitable material where needed.

4. Prevent erosion of boat ramps and the affected streambank through proper placement (so as to not catch the stream current) and hardening (riprap or erosion resistant woody vegetation).

5. Maintain a 1-foot minimum cover for culverts 18-36 inches in diameter, and a cover of one-third diameter for larger culverts to prevent crushing by traffic.

Appendix C

Wetland Delineation Report

Racetrack Pond Restoration Project

Wetland Delineation Report

Prepared For:
Montana Department of Justice, Natural Resource Damage Program
P.O. Box 201425
Helena, Montana 59620

Prepared By:
Geum Environmental Consulting, Inc.
307 State Street
Hamilton, Montana 59840

June 2017

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1.0 Introduction

A fishing access development and pond restoration project is proposed for Racetrack Pond located southeast of Racetrack, Montana. Geum Environmental Consulting, Inc. (Geum) completed a wetland delineation of the project area on June 6th and 7th, 2017 to support permitting for the proposed project. Figure 1 shows the location of the project area and the evaluation extent for this wetland delineation.

2.0 Methods

Field methods for the wetland delineation followed those described for routine wetland delineations in areas greater than 5 acres in size following the *U.S. Army Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory 1987). Data collection methods and wetland boundary determinations followed methods described in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual Mountains, Valleys, and Coast Region* (USACE 2010) and *Field Indicators of Hydric Soils in the United Sates Version 8.1* (USDA 2017).

Other sources of existing information used to support wetland delineations included:

- Powell and Deer Lodge Counties Area Soil Survey (Soil Survey Staff 2016 and 2015, respectively)
- Montana Wetland and Riparian Framework (MTNHP 2014)
- 2016 National Wetland Plant List (Lichvar et al. 2016)

Wetland delineation data were collected to capture variations in vegetation communities, landscape position, and topography. Sample points were located on three transects within the project area to capture changes in elevation and plant communities. Additional paired points were located on a peninsula on the west side of the pond.

At each sample point, dominant plant species were identified and their absolute percent aerial coverage was estimated. Soils were characterized to a depth of 16 inches using a Munsell Soil Color Chart and standard soil texturing methodology (Munsell 2009 and NRCS 2016). The presence or absence of wetland hydrology was determined using observable indicators. Representative photographs were also taken at each sample point.

The extents of waters of the United States were identified in the project area by locating the ordinary high water mark (OHWM) along the shoreline of the pond. An OHWM is the landward extent of waters of the United States and it was identified using guidance from Title 33 of the Code of Federal Regulations, Part 328 “Definition of Waters of the Unites States”; Regulatory Guidance Letter number 05-05 from the Army Corps of Engineers (2005).

A Trimble GeoXT GPS unit was used to collect location data at each sample point, at representative OHWM locations, and at representative wetland boundary locations. These GPS data were used to digitize the entire extent of the OHWM and wetland boundaries in the project area using ArcGIS software, aerial imagery (USDA NAIP 2013), and detailed topography and elevation data derived from light detecting and ranging (LiDAR) data (Furgo Horizons 2011). Labeled pin flags were left in the field at each sample point and at representative wetland boundaries.

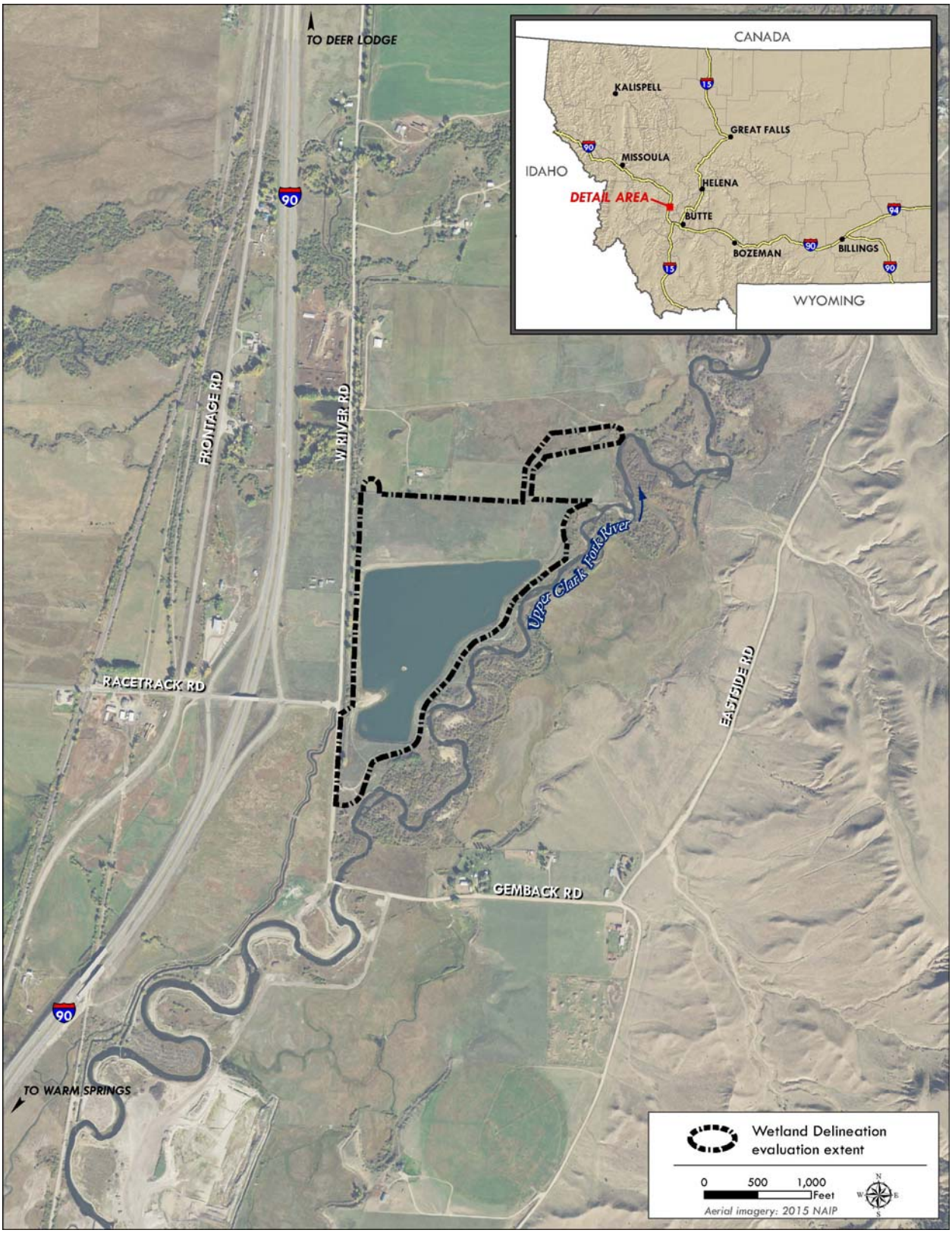

Figure 1. Racetrack Pond project area location.

3.0 Findings

Approximately 55 acres of wetlands and waters of the United States were delineated within the Racetrack Pond project area (Table 1). Delineated wetlands and waters of the United States are categorized and described according to *Cowardin Classification System of Wetlands and Deepwater Habitats* (Cowardin et al. 1979). Table 1 summarizes the acreage of delineated wetlands and waters of the United States in the project area and Figure 2 shows an overview of the delineated wetlands. Figure 3 through Figure 10 show details of the wetland delineation findings. Appendix A includes NWI and hydric soils maps and soil map unit descriptions. Appendix B includes sample point photos. Appendix C includes scanned images of wetland determination field forms.

Table 1. Summary of waters of the United States and wetland area (acres) delineated in the Racetrack Pond project area.

Wetland Type	Existing Area (acres)
Waters of the United States	
Racetrack Pond, Lacustrine, Limnetic, Unconsolidated Bottom, Intermittently Exposed, excavated (L1UBGx)	*50.97*
Outlet channel, Riverine, Lower Perennial, Unconsolidated Bottom, Sand, Semi-permanently Flooded (R2UB2F)	*0.08*
Irrigation ditch, Riverine, Lower Perennial, Unconsolidated Bottom, Mud, Semi-permanently Flooded (R2UB3F)	*0.02*
Side channel of Clark Fork River, Riverine, Lower Perennial, Unconsolidated Bottom, Permanently Flooded (R2UBH)	*0.04*
Waters of the United States Sub-Total	***51.11***
Palustrine Wetlands	
Palustrine Unconsolidated Bottom (PUB)	*1.41*
Palustrine Aquatic Bed (PAB)	*0.03*
Palustrine Emergent Wetland (PEM)	*1.50*
Palustrine Scrub Shrub (PSS)	*0.95*
Palustrine Wetlands Sub-Total	***3.89***
Total area of waters of the United States and wetlands	**55.00**

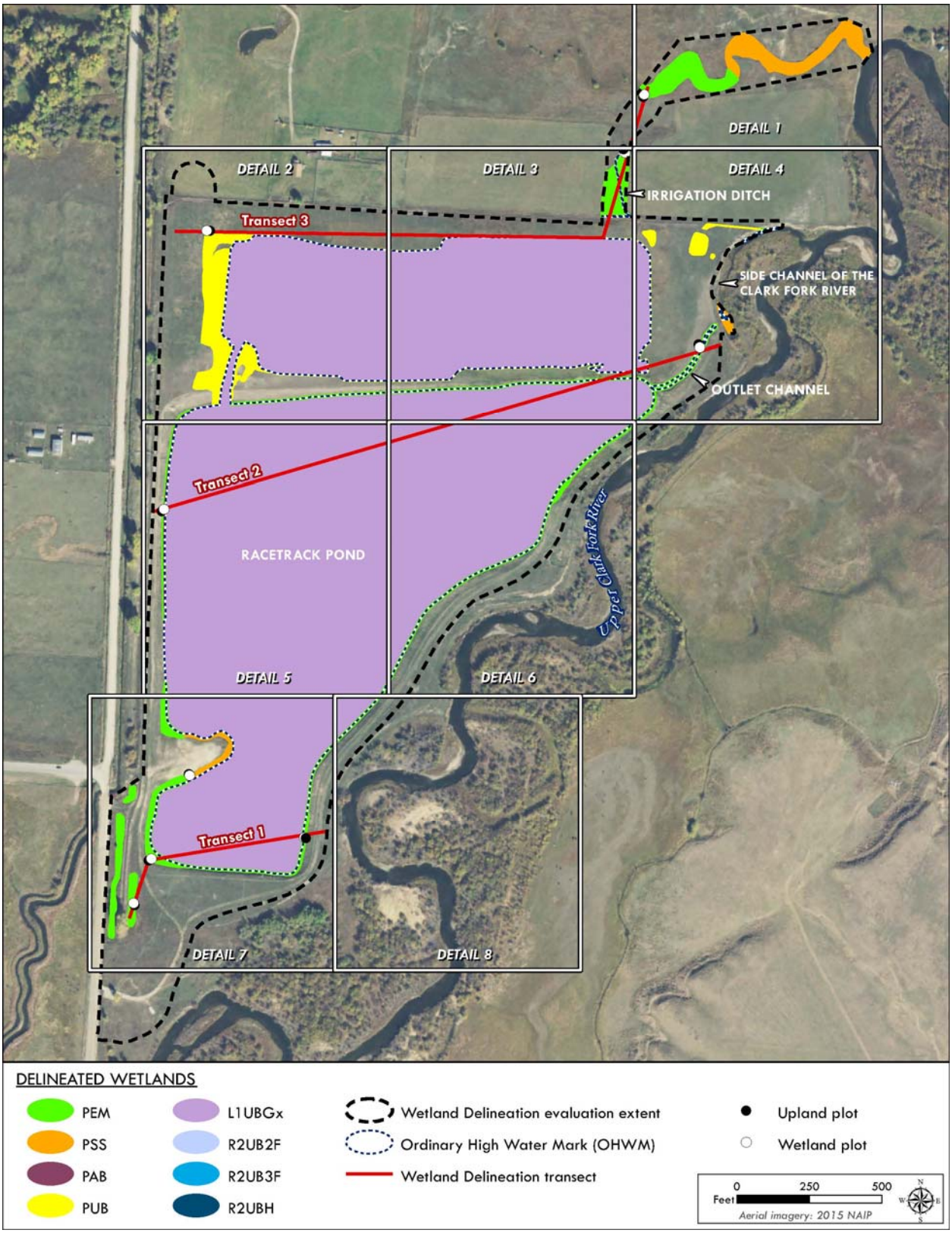

Figure 2. Overview of delineated wetlands within the Racetrack Pond project area.

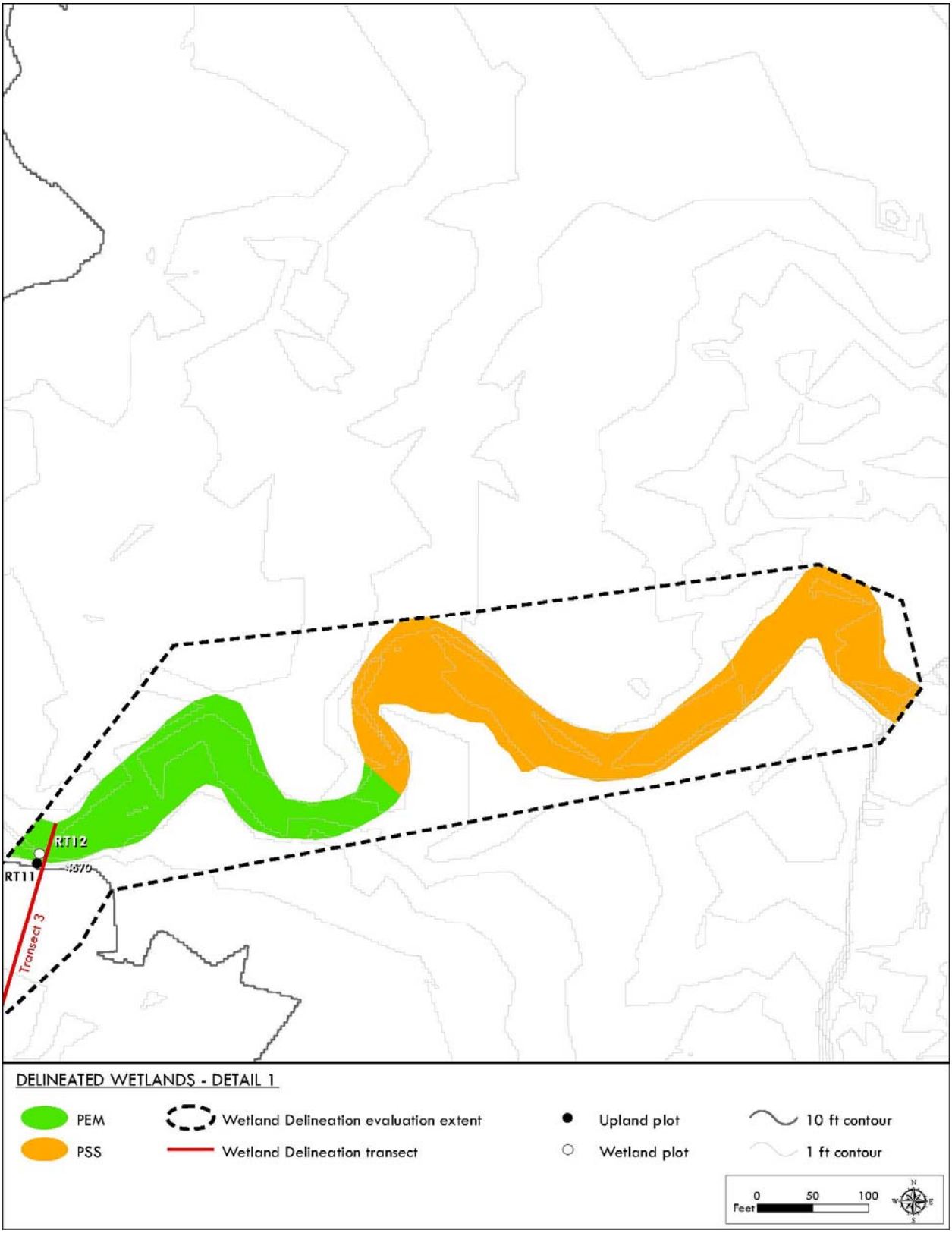

Figure 3. Detail 1 of 8 showing delineated wetlands within the Racetrack Pond project area.

Figure 4. Detail 2 of 8 showing delineated wetlands within the Racetrack Pond project area.

Figure 5. Detail 3 of 8 showing delineated wetlands within the Racetrack Pond project area.

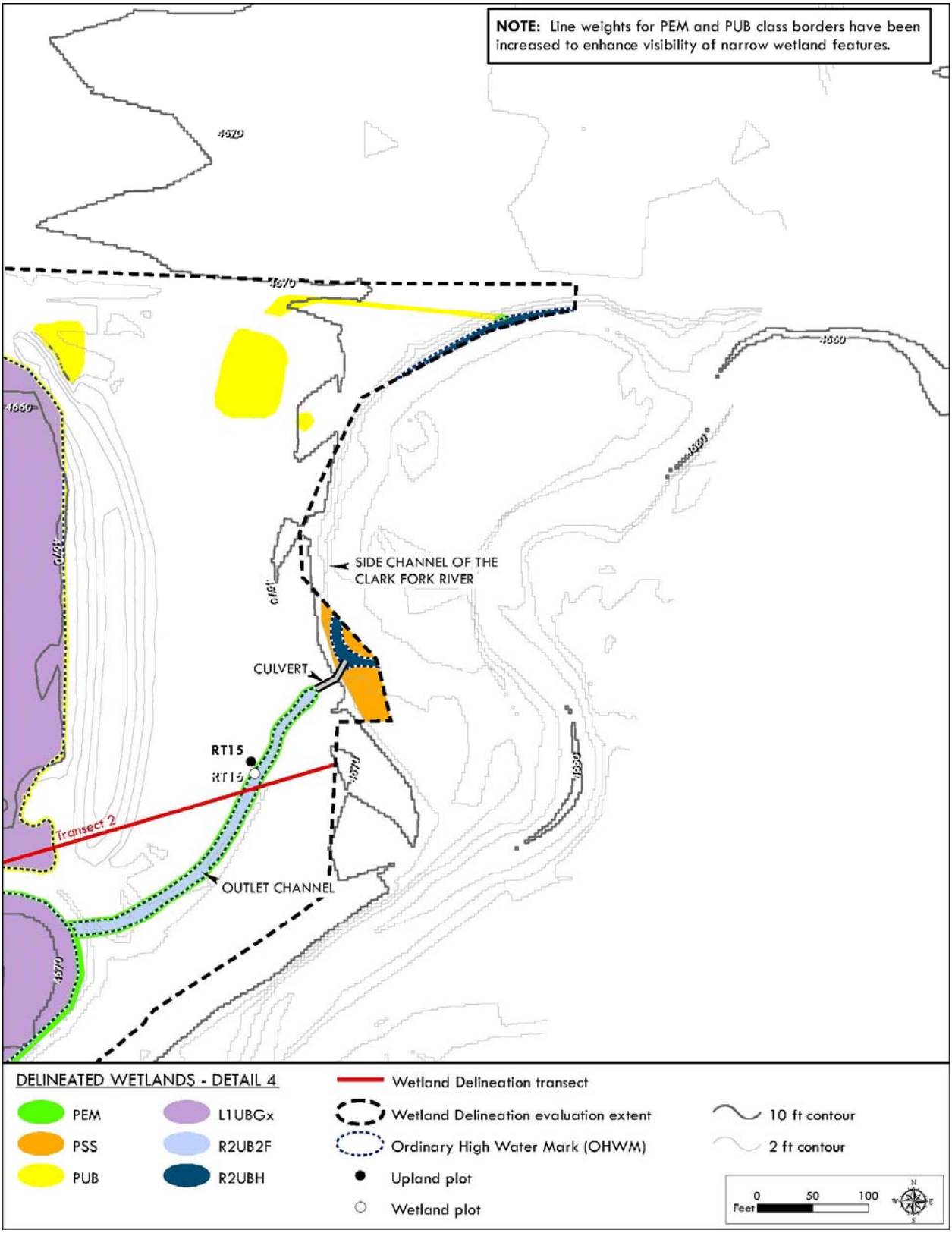

Figure 6. Detail 4 of 8 showing delineated wetlands within the Racetrack Pond project area.

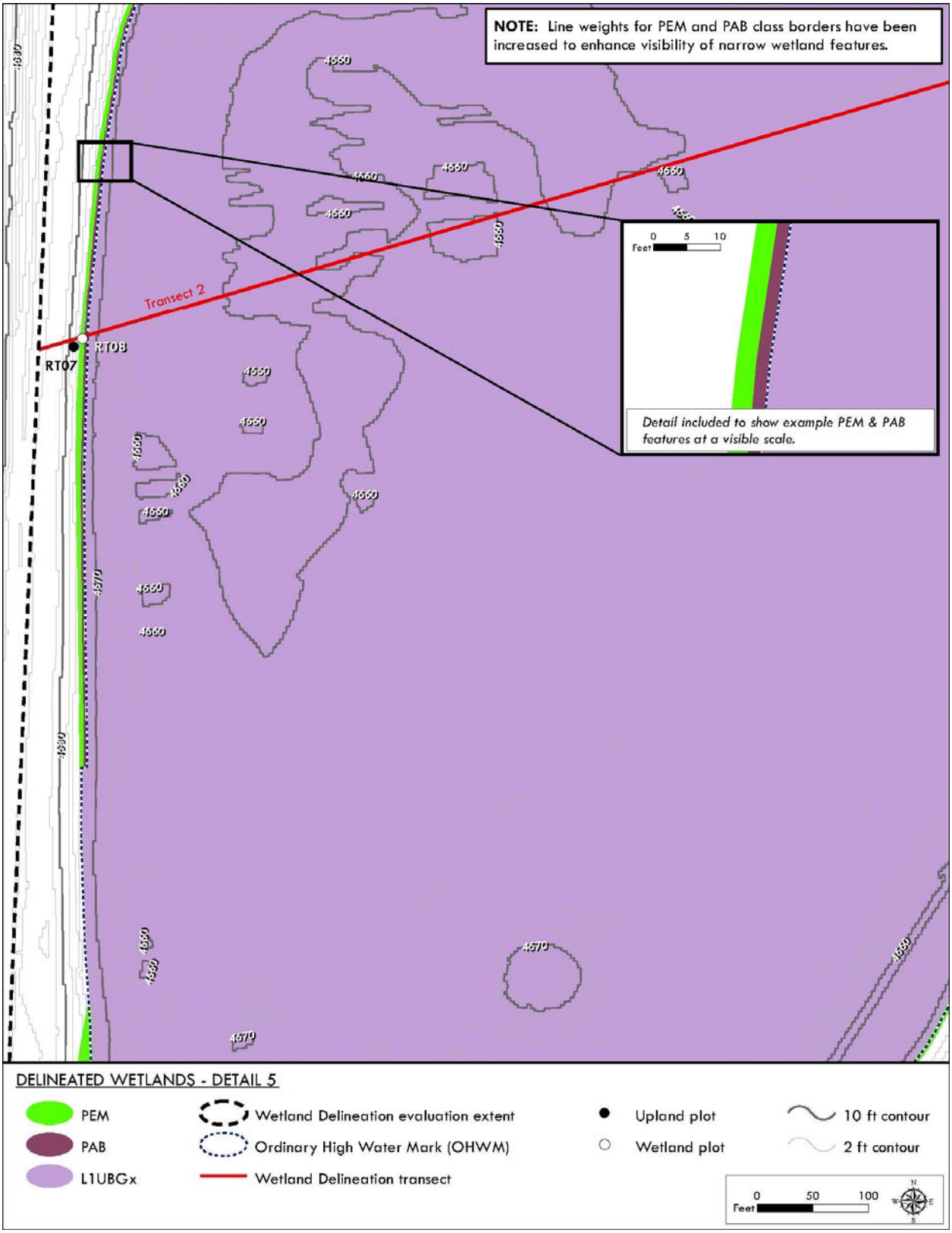

Figure 7. Detail 5 of 8 showing delineated wetlands within the Racetrack Pond project area.

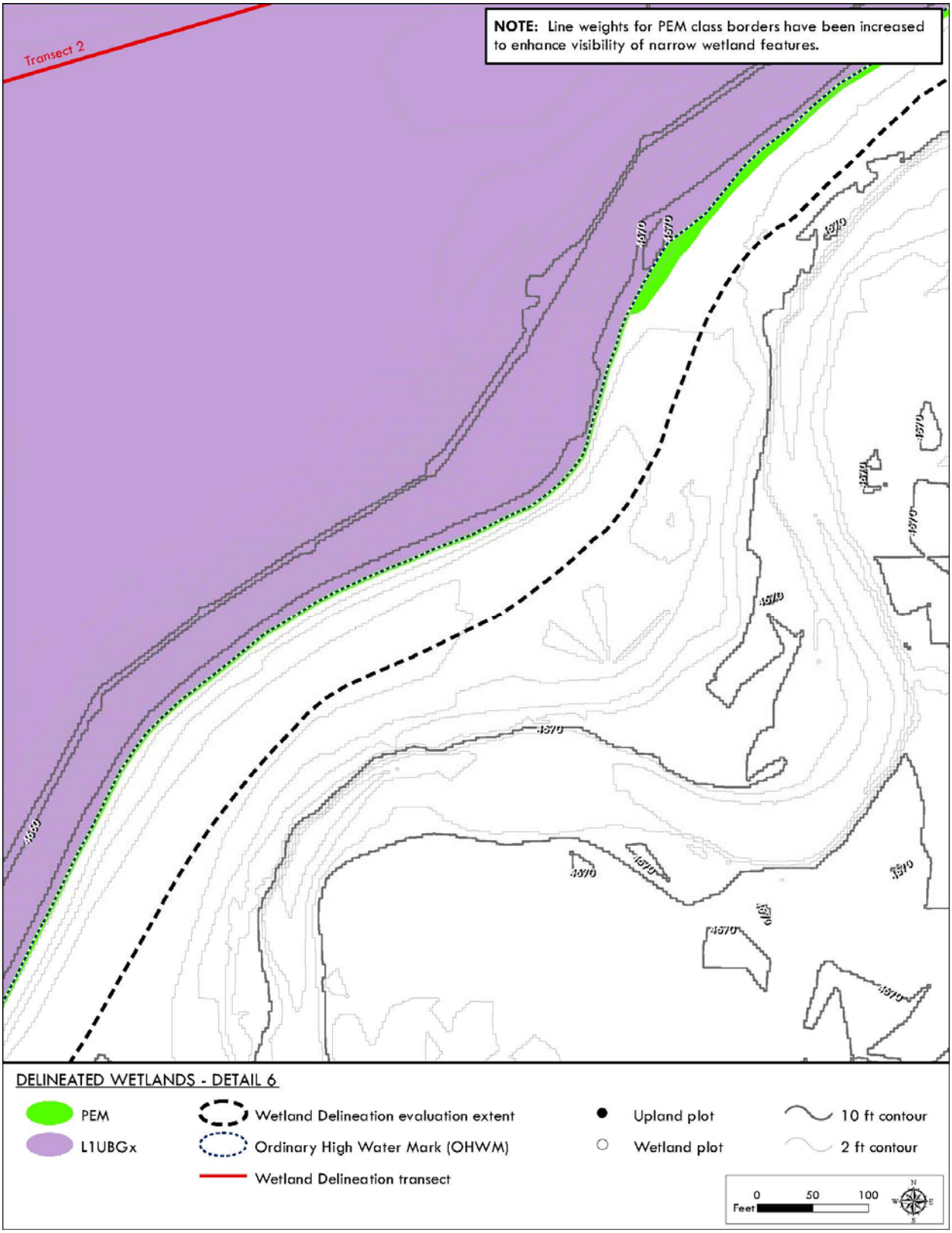

Figure 8. Detail 6 of 8 showing delineated wetlands within the Racetrack Pond project area.

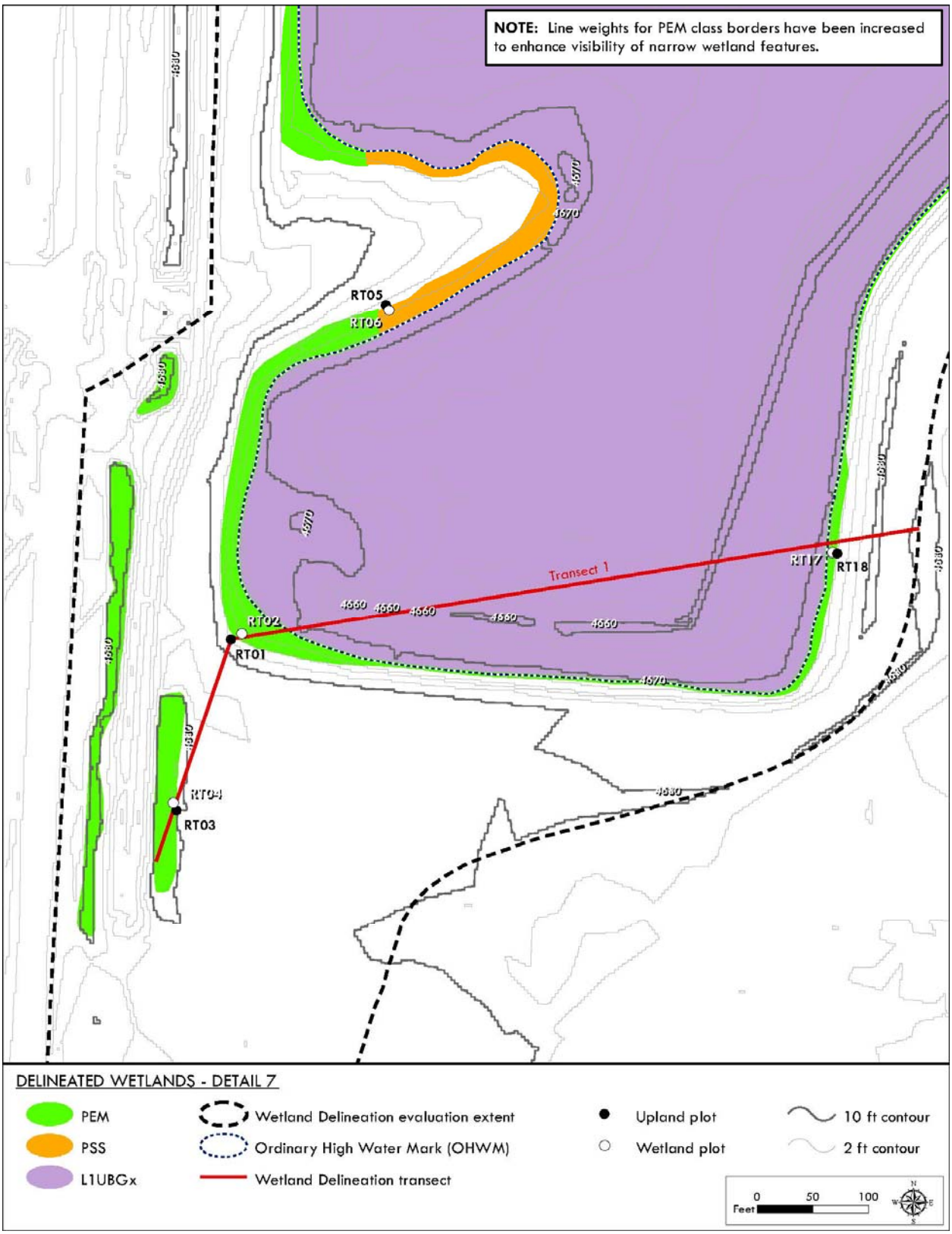

Figure 9. Detail 7 of 8 showing delineated wetlands within the Racetrack Pond project area.

Figure 10. Detail 8 of 8 showing delineated wetlands within the Racetrack Pond project area.

3.1 Waters of the United States

Four areas of waters of the United States were identified in the Racetrack Pond project area including: Racetrack Pond, the outlet channel on the east side of the ponds, an irrigation ditch north of the pond, and a portion of a Clark Fork River side channel. Each of these features is described below.

3.1.1 Racetrack Pond

Racetrack Pond is believed to have been created during the construction of the Interstate 90 Racetrack Exit in the late 1960s and resulted from groundwater infiltration into the gravel pit that was used for borrow to build the exit. In 2016, the Montana Department of Environmental Quality (DEQ) developed an alluvium borrow source north of Racetrack Pond that was used as general fill within the Clark Fork River Phase 5 and 6 Remedial Action Project.

Surface water is present in Racetrack Pond throughout the year. Groundwater is the primary water source for the pond. The pond water elevation is controlled by an outlet culvert and channel located near the northeast corner of the pond. Water depth of the pond averages 8 to 10 feet, and substrate is generally cobble and small gravel. The OHWM, indicated by a line of perennial vegetation around the pond, defines the boundary of the lacustrine wetland. The slope of the shoreline is variable around the pond (Figure 11). Palustrine wetlands described in the following sections, occur adjacent to the lacustrine wetlands in the pond.

Racetrack Pond is assigned the following Cowardin classification: Lacustrine, Unconsolidated Bottom, Gravel, excavated.

Figure 11. The line of perennial vegetation on shorelines of Racetrack Pond indicates the OHWM. Steep slopes of the south side of Racetrack Pond (left photo) and more gradual slopes of the northwest side of Racetrack Pond (right photo).

3.1.2 Pond Outlet

An outlet channel on the northeast side of Racetrack Pond flows through culverts under a gravel access road, through a sand bottom channel, and then through another culvert into a side channel of the Clark Fork River (Figure 6, Figure 12). The straight outlet channel has a gradual slope from the road towards the side channel of the Clark Fork River. Small areas of patchy emergent vegetation encroach into the channel. The OHWM, indicated by a line of perennial vegetation along the outlet channel, is the boundary of this riverine wetland. Palustrine wetlands, described in the following sections, occur adjacent to the outlet channel.

The outlet channel is assigned the following Cowardin classification: Riverine, Lower Perennial, Unconsolidated Bottom, Sand, Semi-permanently flooded.

Figure 12. Racetrack Pond outlet channel on the east side of the pond.

3.1.3 Irrigation Ditch

A portion of an irrigation ditch is located in the northeast portion of the project area. The irrigation ditch has a narrow, gently sloping, mud channel throughout most of its length. The OHWM, indicated by a line of perennial vegetation along the edge of the irrigation ditch, is the boundary of this riverine wetland. Palustrine wetlands, described in the following sections, or uplands occur adjacent to the irrigation ditch channel.

The irrigation ditch is assigned the following Cowardin classifications: Riverine, Lower Perennial, Unconsolidated Bottom, Mud, Semi-permanently flooded.

3.1.4 Clark Fork River Side Channel

A side channel of the Clark Fork River is located in the northeast corner east of the project area. Water flows from the pond outlet channel into a culvert that runs under a berm and through a small section of palustrine scrub shrub before routing flows into the side channel. The side channel also intersects the project area near the fenceline on the north side of the pond. A ditch outflow from a sediment retention basin used during excavation in 2016 enters the Clark Fork River side channel at this location. The OHWM, indicated by a line of perennial vegetation along the side channel, is the boundary of this riverine wetland (Figure 13).

Figure 13. Outlet channel culvert entrance into Clark Fork River side channel (left photo) and view looking north from the outlet channel at the Clark Fork River Side Channel (right photo).

3.2 Palustrine Wetlands

3.2.1 Palustrine Unconsolidated Bottom Wetlands

Palustrine unconsolidated bottom wetlands occur around the edges of the northern portion of Racetrack Pond (Figure 14) and in a drainage channel that routed water out of a sediment retention basin and into a side channel of the Clark Fork River in the northeast corner of the project area. This area was formerly an upland field that was excavated in 2016 to provide borrow material for the Clark Fork River, Phase 5 and 6 Remedial Action Project. The area was considered to have 'atypical, man-induced' wetlands due to the 2016 excavation that lowered the ground surface close to groundwater elevations. These lowered surfaces are similar to other adjacent locations that currently support palustrine emergent wetlands (i.e. sample point RT09). Soils at sample point RT09 included a layer with coated sand grains that met criteria for the Sandy Redox (S5) hydric soil indicator. The water table was observed at 8 inches below the ground surface and soils were saturated at 5 inches below the ground surface, meeting criteria for wetland hydrology indicators of High Water Table (A2) and Saturation (A3).

Figure 14. Wetland boundary between sample points RT09 (wetland) and RT10 (upland) looking east (left photo). Other recently excavated areas in the northern portion of Racetrack Pond that meet wetland criteria (right photo).

3.2.2 Palustrine Aquatic Bed Wetlands

A narrow, discontinuous band of palustrine aquatic bed wetland, approximately 3 feet wide, occurs along the southwest shoreline of Racetrack Pond (near sample point RT08) (Figure 16). The dominant vegetation is *Veronica americana* (American speedwell), an OBL species, passing the Dominance Test for hydrophytic vegetation. Surface water in the aquatic bed wetland is approximately 4 to 6 inches deep, meeting criteria for wetland hydrology. The extent of the palustrine aquatic bed wetland is marked by a transition to deeper water lacustrine wetland that lacks submerged vegetation on the pond side and by a transition to palustrine emergent wetland that is not inundated on the shoreline side.

3.2.3 Palustrine Emergent Wetlands

Palustrine emergent wetlands were delineated along the shoreline on the south side of Racetrack Pond (sample points RT02, RT08, and RT17), along an irrigation ditch in the northeastern part of the project area (sample point RT13), and along the outlet channel on the east side of the pond (sample point RT16). In these locations, the emergent wetlands occur in a band adjacent to the open water and the width varies with the angle of the shoreline slope. Palustrine emergent wetlands were also delineated in low lying swales in the hayfield on the north end of the project area and in excavated depressions on the southwest side of the project area (sample point RT04 and RT12).

The dominant species observed in emergent wetlands include *Alopecurus arundinaceus* (creeping meadow foxtail*), Juncus arcticus* (mountain rush), and *Poa pratensis* (Kentucky bluegrass). Vegetation communities in all palustrine emergent wetlands passed the Dominance Test for hydrophytic vegetation.

Soils vary depending on location and level of disturbance and include sands, loamy sands, sandy clay loams, clay loams, and peat. Soils met criteria for the hydric soil indicators of Black Histic (A3), Hydrogen Sulfide (A4), Depleted Below Dark Matrix (A11), Sandy Redox (S5), Loamy Mucky Mineral (F1), or Redox Dark Surface (F6). In addition, some sample points (RT08 and RT16) met the definition of hydric soils with observed saturation within 6 inches and/or shallow water tables within 12 inches of the soils surface that is of sufficient duration to support anaerobic conditions in the upper part (USDA/NRCS 2017).

Palustrine emergent wetlands along the shoreline of Racetrack Pond are seasonally saturated. Seepage from irrigation ditches located west of the pond supplement emergent wetland hydrology on this side of the pond. Palustrine emergent wetlands adjacent to the pond outlet channel are also seasonally saturated. Low lying swales and wetlands in the hayfield are seasonally flooded and may have shallow surface water early in the growing season. Primary wetland hydrology indicators observed in emergent wetlands include: Surface Water (A1), High Water Table (A2), Saturation (A3), and Hydrogen Sulfide Odor (C1).

Palustrine emergent wetland boundaries are indicated by a topographic slope break that corresponds with a change in the vegetation community to upland vegetation dominated by *Bromus inermis* (smooth brome), *Bromus tectorum* (cheatgrass), *Descurainia sophia* (herb sophia), *Poa pratensis* (Kentucky bluegrass), and *Sisymbrium altissimum* (tall tumble mustard) (Figure 15, Figure 16, and Figure 17). Representative upland sample points include: RT01, RT07, RT03, RT10, RT11, RT14, RT15, and RT18.

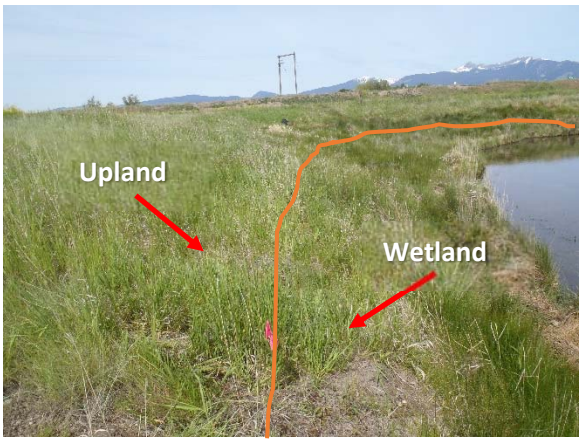

Figure 15. Palustrine emergent wetlands along Racetrack Pond with the orange line representing the wetland boundary between sample points RT01 (wetland) and RT02 (upland) looking west.

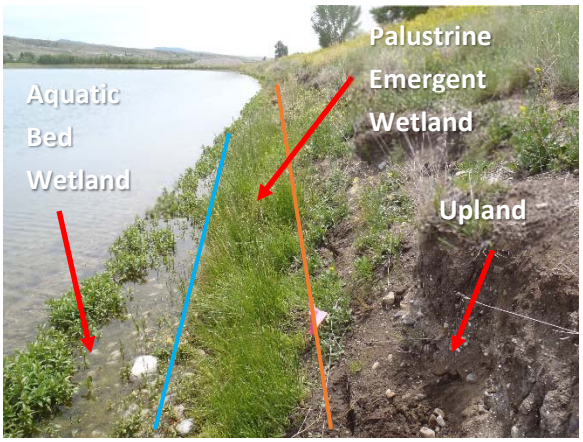

Figure 16. Palustrine emergent wetlands along the western edge of Racetrack Pond with the orange line representing the wetland boundary between sample points RT07 (upland) and RT08 (wetland) looking south. The blue line indicates the break between palustrine emergent wetland and palustrine aquatic bed wetlands.

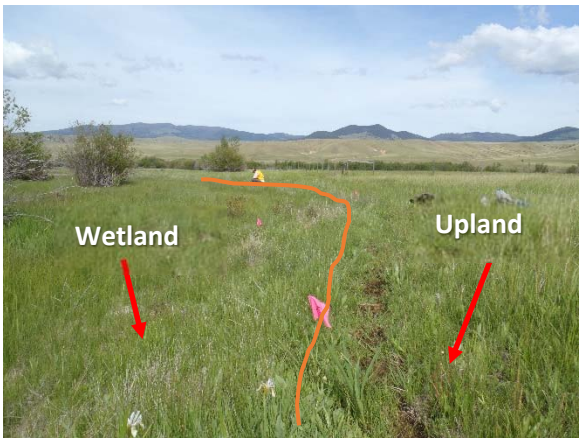

Figure 17. Palustrine emergent wetlands in a low swale in the northeast portion of the project area with the orange line representing the wetland boundary between sample points RT011 (upland) and RT012 (wetland) looking east.

3.2.4 Palustrine Scrub Shrub Wetlands

Palustrine scrub shrub wetlands were delineated along the shoreline of the peninsula on the west side of Racetrack Pond (sample point RT06), in a swale in the northeast portion of the project area, and next to the Clark Fork River side channel east of the pond outlet.

In the shrub layer the dominant species are *Betula occidentalis* (water birch), *Salix bebbiana* (Bebb's willow), *Salix boothii* (Booth's willow), and *Salix drummondiana* (Drummond's willow). The understory is dominated by a mix of native and non-native grasses and forbs. The vegetation community passed the Dominance Test for hydrophytic vegetation.

Observed soils included a layer of sandy loam over a layer of loamy sand with redoximorphic features, and the lower depths were sand mixed with cobbles. Soils met criteria for the hydric soil indicator of Sandy Redox (S5). Saturation (A3), a primary wetland hydrology indicator, was observed within scrub shrub wetlands. Secondary wetland hydrology indicators observed included Geomorphic Position (D2) and passing the FAC-Neutral Test (D5).

Scrub shrub wetlands along Racetrack Pond are seasonally saturated. Scrub shrub wetlands in the swale feature and near the pond outlet are seasonally flooded.

Scrub shrub wetlands along the Racetrack Pond are bound by the OHWM on the lower edge and uplands on the upper edge. The boundary between upland and palustrine scrub shrub wetland along Racetrack Pond is marked by a shift in vegetation to drier, upland species including *Bromus tectorum* (cheatgrass), *Descurainia sophia* (herb sophia), and *Poa pratensis* (Kentucky bluegrass) with sparse cover on gravelly substrate (sample plot RT05) (Figure 18). At scrub shrub wetlands in the swale, the wetland boundary occurs at the top of the slope where the vegetation transitions to upland hayfields.

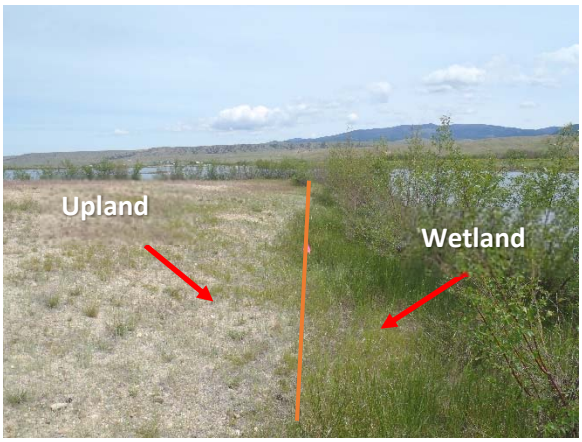

Figure 18. Palustrine scrub shrub wetlands on the west side of Racetrack Pond, with the orange line indicating the wetland boundary between sample points RT05 (upland) and RT06 (wetland).

4.0 References

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Appendix A Additional Maps and Supplemental Information

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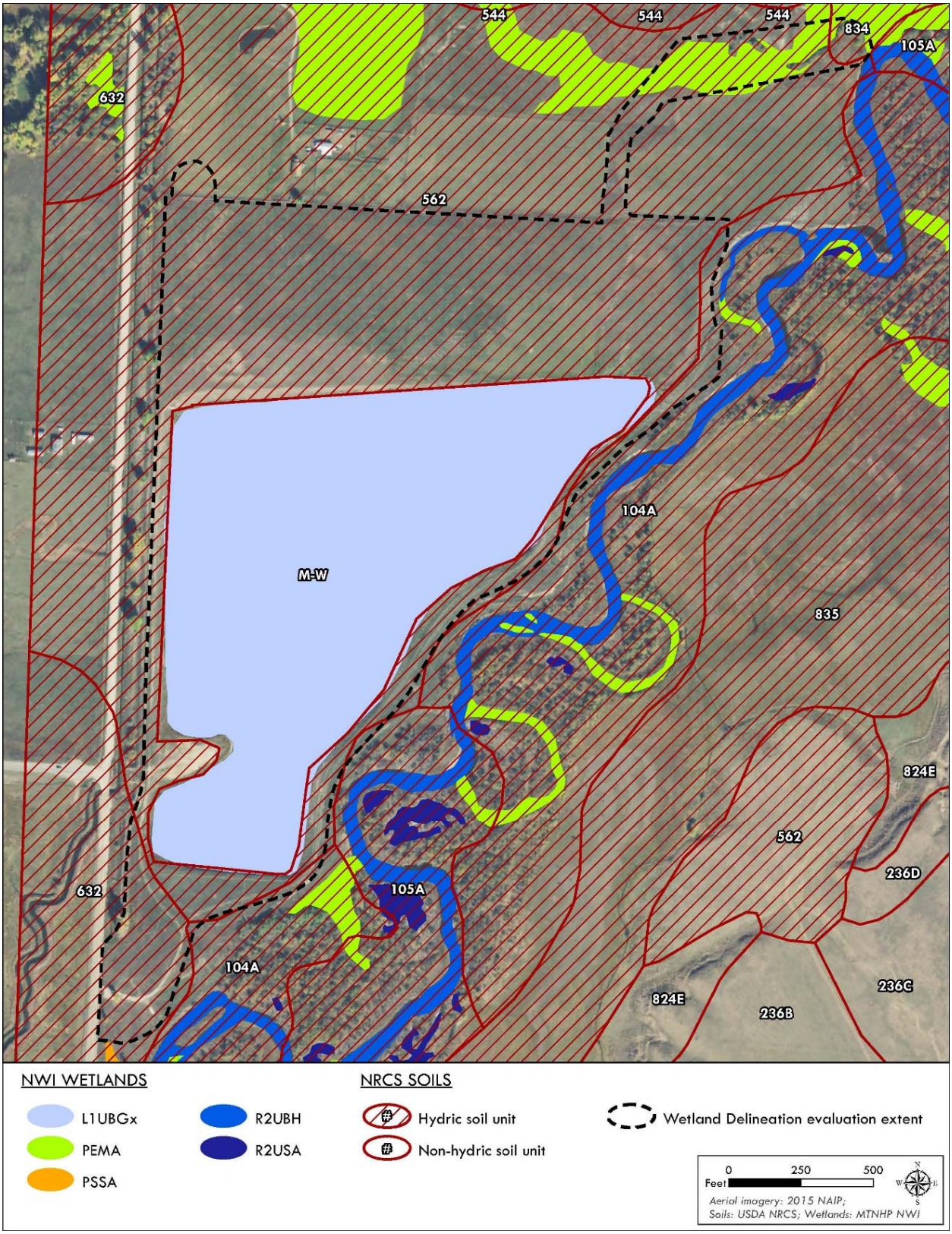

Figure A- 1. Montana Wetland and Riparian Framework and soil map units within the Racetrack Pond project area (MTNHP 2014, Soils Survey Staff 2015, and Soils Survey Staff 2016).

Map Unit Descriptions (MT)

Deer Lodge County Area, Montana

[Data apply to the entire extent of the map unit within the survey area. Map unit and soil properties for a specific parcel of land may vary somewhat and should be determined by onsite investigation.]

104A--Fluvaquentic Endoaquolls-Slickens complex, 0 to 2 percent slopes, severely impacted

Mean annual precipitation: 10 to 14 inches
Mean annual temperature: 39 to 45 degrees F
Frost-free period: 90 to 105 days

Fluvaquentic Endoaquolls and similar soils

Extent: about 75 percent of the unit
Landform(s): flood plains
Slope gradient: 0 to 2 percent
Parent material: alluvium
Restrictive feature(s): none
Seasonal high water table: approximately 18 inches
Flooding hazard: occasional
Ponding hazard: none

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Land capability class, nonirrigated: 7s
Drainage class: poorly drained
Hydric soil: yes
Hydrologic group: C/D
Potential frost action: moderate

Ecological site(s): ---

Representative soil profile:

		Texture	Permeability	Available water capacity	pH	Kw	Kf
Oi	0 to 2 in	Slightly decomposed plant material	rapid		6.1 to 7.3		
C	2 to 8 in	Fine sandy loam	moderately rapid	0.6 to 0.8 in	4.5 to 7.3	.28	.28
Ab	8 to 22 in	Loam	moderate	2.1 to 2.4 in	6.6 to 7.8	.28	.28
Cb1	22 to 26 in	Very fine sandy loam	moderately rapid	0.5 to 0.6 in	7.4 to 8.4	.37	.37
Agb	26 to 38 in	Silty clay loam	moderately slow	1.8 to 2.0 in	7.4 to 8.4	.37	.37
Cb2	38 to 60 in	Gravelly coarse sand	rapid	0.4 to 0.9 in	7.4 to 8.4	.02	.02

Slickens

Extent: about 10 percent of the unit
Landform(s):
Slope gradient: 0 to 2 percent
Parent material:
Restrictive feature(s): none
Seasonal high water table: greater than 60 inches
Flooding hazard: none
Ponding hazard: none

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Land capability class, nonirrigated:
Drainage class:
Hydric soil: no
Hydrologic group:
Potential frost action:

Ecological site(s): ---

Representative soil profile:

Texture	Permeability	Available water capacity	pH	Kw	Kf
none					

Map Unit Descriptions (MT)

Deer Lodge County Area, Montana

[Data apply to the entire extent of the map unit within the survey area. Map unit and soil properties for a specific parcel of land may vary somewhat and should be determined by onsite investigation.]

Minor Components

Slickens: 10 percent of the unit
Aquic Cumulic Haplustolls and similar soils: 5 percent of the unit
Saypo and similar soils: 3 percent of the unit
Canarway and similar soils: 2 percent of the unit
Riverwash: 1 percent of the unit
Mccabe and similar soils: 3 percent of the unit
Water: 1 percent of the unit

Map Unit Descriptions (MT)

Powell County Area, Montana

[Data apply to the entire extent of the map unit within the survey area. Map unit and soil properties for a specific parcel of land may vary somewhat and should be determined by onsite investigation.]

105A--Slickens-Fluvaquentic Endoaquolls complex, 0 to 2 percent slopes, severely impacted

Mean annual precipitation:
Mean annual temperature:
Frost-free period:

Slickens

Extent: about 50 percent of the unit
Landform(s):
Slope gradient: 0 to 2 percent
Parent material:
Restrictive feature(s): none
Seasonal high water table: greater than 60 inches
Flooding hazard: none
Ponding hazard: none

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Land capability class, nonirrigated:
Drainage class:
Hydric soil: no
Hydrologic group:
Potential frost action:

Ecological site(s): ---

Representative soil profile:

Texture	Permeability	Available water capacity	pH	Kw	Kf

none

Fluvaquentic Endoaquolls and similar soils

Extent: about 35 percent of the unit
Landform(s): flood plains
Slope gradient: 0 to 2 percent
Parent material: alluvium
Restrictive feature(s): none
Seasonal high water table: approximately 18 inches
Flooding hazard: occasional
Ponding hazard: none

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Land capability class, nonirrigated: 7s
Drainage class: poorly drained
Hydric soil: yes
Hydrologic group: C/D
Potential frost action: moderate

Ecological site(s): ---

Representative soil profile:

		Texture	Permeability	Available water capacity	pH	Kw	Kf
Oi	0 to 2 in	Slightly decomposed plant material	rapid		6.1 to 7.3		
C	2 to 8 in	Fine sandy loam	moderately rapid	0.6 to 0.8 in	4.5 to 7.3	.28	.28
Ab	8 to 22 in	Loam	moderate	2.1 to 2.4 in	6.6 to 7.8	.28	.28
Cb1	22 to 26 in	Very fine sandy loam	moderately rapid	0.5 to 0.6 in	7.4 to 8.4	.37	.37
Agb	26 to 38 in	Silty clay loam	moderately slow	1.8 to 2.0 in	7.4 to 8.4	.37	.37
Cb2	38 to 60 in	Gravelly coarse sand	rapid	0.4 to 0.9 in	7.4 to 8.4	.02	.02

Map Unit Descriptions (MT)

Powell County Area, Montana

[Data apply to the entire extent of the map unit within the survey area. Map unit and soil properties for a specific parcel of land may vary somewhat and should be determined by onsite investigation.]

Minor Components

Aquic Cumulic Haplustolls and similar soils: 5 percent of the unit
Saypo and similar soils: 3 percent of the unit
Canarway and similar soils: 2 percent of the unit
Riverwash: 1 percent of the unit
Mccabe and similar soils: 3 percent of the unit
Water: 1 percent of the unit

Map Unit Descriptions (MT)

Powell County Area, Montana

[Data apply to the entire extent of the map unit within the survey area. Map unit and soil properties for a specific parcel of land may vary somewhat and should be determined by onsite investigation.]

562--Carten loam, 0 to 4 percent slopes

Mean annual precipitation: 10 to 14 inches
Mean annual temperature: 39 to 45 degrees F
Frost-free period: 90 to 105 days

Carten and similar soils

Extent: about 85 percent of the unit
Landform(s): outwash plains
Slope gradient: 0 to 4 percent
Parent material: alluvium
Restrictive feature(s): none
Seasonal high water table: approximately 33 inches
Flooding hazard: none
Ponding hazard: none

Soil loss tolerance (T factor): 2
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Land capability class, nonirrigated: 4w
Drainage class: somewhat poorly drained
Hydric soil: no
Hydrologic group: C
Potential frost action: moderate

Ecological site(s): Subirrigated (Sb) 10-14" p.z.

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*	*Kw*	*Kf*
A -- 0 to 7 in	Loam	moderate	1.0 to 1.3 in	6.6 to 7.8	.28	.28
Bw -- 7 to 11 in	Loam	moderately slow	0.6 to 0.7 in	7.4 to 8.4	.28	.28
Bk -- 11 to 17 in	Gravelly clay loam	moderately slow	0.8 to 0.9 in	7.4 to 8.4	.15	.32
2C -- 17 to 60 in	Very gravelly loamy sand	rapid	1.3 to 2.1 in	7.4 to 8.4	.05	.15

Blossberg and similar soils

Extent: about 15 percent of the unit
Landform(s): depressions
Slope gradient: 0 to 4 percent
Parent material: alluvium
Restrictive feature(s): none
Seasonal high water table: approximately 18 inches
Flooding hazard: none
Ponding hazard: none

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Land capability class, nonirrigated: 3w
Drainage class: poorly drained
Hydric soil: yes
Hydrologic group: B/D
Potential frost action: high

Ecological site(s):

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*	*Kw*	*Kf*
A -- 0 to 14 in		moderate	2.0 to 2.6 in	6.6 to 7.8	.20	.20
Bg1 -- 14 to 23 in		moderate	1.3 to 1.6 in	7.4 to 8.4	.28	.28
Bg2 -- 23 to 28 in		moderately rapid	0.5 to 0.6 in	7.4 to 8.4	.17	.37
2Cg -- 28 to 60 in		rapid	0.6 to 1.0 in	7.4 to 8.4	.02	.02

Map Unit Descriptions (MT)

Powell County Area, Montana

[Data apply to the entire extent of the map unit within the survey area. Map unit and soil properties for a specific parcel of land may vary somewhat and should be determined by onsite investigation.]

Minor Components

Blossberg and similar soils: 15 percent of the unit

Map Unit Descriptions (MT)

Deer Lodge County Area, Montana

[Data apply to the entire extent of the map unit within the survey area. Map unit and soil properties for a specific parcel of land may vary somewhat and should be determined by onsite investigation.]

632B--Bushong loam, 0 to 4 percent slopes

Mean annual precipitation: 10 to 14 inches
Mean annual temperature: 39 to 45 degrees F
Frost-free period: 90 to 105 days

Bushong and similar soils

Extent: about 85 percent of the unit
Landform(s): stream terraces
Slope gradient: 0 to 4 percent
Parent material: alluvium
Restrictive feature(s): none
Seasonal high water table: approximately 18 inches
Flooding hazard: none
Ponding hazard: none

Soil loss tolerance (T factor): 2
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Land capability class, nonirrigated: 6w
Drainage class: poorly drained
Hydric soil: yes
Hydrologic group: B/D
Potential frost action: moderate

Ecological site(s): Wet Meadow (WM) 15-19" p.z.

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*	*Kw*	*Kf*
Oi -- 0 to 2 in	Slightly decomposed plant material	very rapid		5.8 to 7.0		
A -- 2 to 6 in	Loam	moderate	0.6 to 0.7 in	7.4 to 8.4	.24	.24
Bk -- 6 to 17 in	Gravelly loam	moderate	1.7 to 2.0 in	7.4 to 8.4	.20	.32
2C -- 17 to 60 in	Extremely gravelly sand	rapid	2.2 to 3.0 in	6.6 to 7.8	.02	.02

Minor Components

Canarway and similar soils: 8 percent of the unit
Blossberg and similar soils: 7 percent of the unit

Map Unit Descriptions (MT)

Deer Lodge County Area, Montana

[Data apply to the entire extent of the map unit within the survey area. Map unit and soil properties for a specific parcel of land may vary somewhat and should be determined by onsite investigation.]

834B--Blossberg loam, 0 to 4 percent slopes, rarely flooded

Mean annual precipitation: 10 to 14 inches
Mean annual temperature: 39 to 45 degrees F
Frost-free period: 90 to 105 days

Blossberg and similar soils

Extent: about 85 percent of the unit
Landform(s): flood plains
Slope gradient: 0 to 4 percent
Parent material: loamy alluvium over sandy and gravelly alluvium
Restrictive feature(s): none
Seasonal high water table: approximately 18 inches
Flooding hazard: rare
Ponding hazard: none

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Land capability class, nonirrigated: 5w
Drainage class: poorly drained
Hydric soil: yes
Hydrologic group: B/D
Potential frost action: high

Ecological site(s): Wet Meadow (WM) 10-14" p.z.

Representative soil profile:

		Texture	Permeability	Available water capacity	pH	Kw	Kf
A --	0 to 14 in	Loam	moderate	2.0 to 2.6 in	6.6 to 7.8	.20	.20
Bg1 --	14 to 23 in	Loam	moderate	1.3 to 1.6 in	7.4 to 8.4	.28	.28
Bg2 --	23 to 28 in	Gravelly loam	moderately rapid	0.5 to 0.6 in	7.4 to 8.4	.17	.37
2Cg --	28 to 60 in	Very cobbly sand	rapid	0.6 to 1.0 in	7.4 to 8.4	.02	.02

Minor Components

Dougcliff and similar soils: 4 percent of the unit
Gregson and similar soils: 4 percent of the unit
Mannixlee and similar soils: 4 percent of the unit
Bushong and similar soils: 3 percent of the unit

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Appendix B Sample Point Photos

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Sample Point RT01 – Upland

Sample Point RT02 -- Wetland

Sample Point RT03 -- Upland


Sample Point RT04 -- Wetland


Sample Point RT05 – Upland


Sample Point RT06 – Wetland


Sample Point RT07 -- Upland


Sample Point RT08 -- Wetland


Sample Point RT09 –Wetland


Sample Point RT10 – Upland

Sample Point RT11 -- Upland


Sample Point RT12 -- Wetland


Sample Point RT13 -- Wetland


Sample Point RT14 -- Upland


Sample Point RT15 -- Upland

Sample Point RT16 -- Wetland

Sample Point RT17 – Wetland

Sample Point RT18 – Upland

Appendix C Wetland Determination Forms

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-112.744215

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

Project/Site: Racetrack Pond City/County: Powell County Sampling Date: 06/06/17
Applicant/Owner: Fish, Wildlife & Parks State: MT Sampling Point: RT01
Investigator(s): K. Ramstead Section, Township, Range: S16, T06N, R09W
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope (%): 3
Subregion (LRR): E - Rocky Mtn Range & Forest Lat: 46°16'05.754"N Long: 112°44'39.174"W Datum: WGS84
Soil Map Unit Name: 562 - Carter loam 0-4% slopes NWI classification: none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation NO, Soil No, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____	No X	Is the Sampled Area within a Wetland? Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks: Boundary indicators are higher densities of smooth brome and elevation. Juncus arcticus extends into upland areas.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5x30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5x30 ft)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 5x5 ft)			
1. Bromus inermis	30	Y	UPL
2. Juncus Arcticus	20	Y	FACW
3. Carex sp.	5	N	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	55	= Total Cover	
Woody Vine Stratum (Plot size: 5x30 ft)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species —	x 1 =	
FACW species 20	x 2 =	40
FAC species 5	x 3 =	15
FACU species —	x 4 =	
UPL species 30	x 5 =	150
Column Totals: 55 (A)		205 (B)

Prevalence Index = B/A = 3.73

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ 5 - Wetland Non-Vascular Plants[1]
___ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: Litter covers ~ 50% of sampling point. Carex is likely at least FAC. Side slope appears to have seepage from nearby irrigation ditches which supplement hydrology on slopes.

100-0002

US Army Corps of Engineers Western Mountains, Valleys, and Coast – Version 2.0

SOIL

Sampling Point: RT 01

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 2/2	100	—				sandy clay loam	
2-18+	10YR 2/1	100	—				sandy clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: —

Depth (inches): —

Hydric Soil Present? Yes ____ No X

Remarks: 100-0003

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches): ____

Water Table Present? Yes ____ No X Depth (inches): ____

Saturation Present? (includes capillary fringe) Yes ____ No X Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

US Army Corps of Engineers

Western Mountains, Valleys, and Coast – Version 2.0

46.269109
-112.744175

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

Project/Site: Racetrack Pond City/County: Powell County Sampling Date: 06/06/2017
Applicant/Owner: Fish, Wildlife & Park State: MT Sampling Point: ETO2
Investigator(s): K. Remstead Section, Township, Range: S16, T06N, R09W
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 2.5
Subregion (LRR): E - Rocky Mtn Range/forest Lat: 46°16'08.794"N Long: 112°44'39.029"W Datum: WGS84
Soil Map Unit Name: 562- Carter loam, 0-4% slopes NWI classification: none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X No _____	
Wetland Hydrology Present?	Yes X No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5x30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 5x30 ft)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5x5 ft)			
1. Bromus inermis	5	N	UPL
2. Juncus articus	55	Y	FACW
3. Poa pratensis	3	N	FAC
4. Carex nebrascensis	2	N	OBL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	65 = Total Cover		
Woody Vine Stratum (Plot size: 5x30 ft)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 1.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ 5 - Wetland Non-Vascular Plants[1]
___ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks: litter about 30% of herbaceous plot
100-0004 point
100-0005-0007 - EM wetlands

SOIL

Sampling Point: RT02

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 2/2	100					clay loam	
2-10	10YR 3/1	90	5YR 3/4	10	C	M	sandy clay loam	
10-16+	10YR 2/1	100					sandy clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: —

Depth (inches): ~

Hydric Soil Present? Yes X No ___

Remarks: 0008

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- X Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 9

Wetland Hydrology Present? Yes X No ___

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

Remarks:

US Army Corps of Engineers

Western Mountains, Valleys, and Coast – Version 2.0

-112.744375

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

Project/Site: Racetrack Pond City/County: Powell County Sampling Date: 06/06/2017
Applicant/Owner: Fish, Wildlife and Parks State: MT Sampling Point: PT03
Investigator(s): K. Ramstead Section, Township, Range: S16, T10N, R04W
Landform (hillslope, terrace, etc.): slope Local relief (concave, convex, none): none Slope (%): 3
Subregion (LRR): E - rocky mtn range/forest Lat: 46°16'07.254"N Long: 112°44'39.751"W Datum: WGS 84
Soil Map Unit Name: 1632 - Bushana loam 0-4% slopes NWI classification: none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes X	No _____	

Remarks: Boundary is indicated by topographic break

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5x30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 5x30 ft)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5x5 ft)			
1. Bromus inermis	90	Y	UPL
2. Solidago sp.	3	N	—
3. Poa pratensis	5	N	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	98 = Total Cover		
Woody Vine Stratum (Plot size: 5x30 ft)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species 5	x 3 = 15	
FACU species	x 4 =	
UPL species 90	x 5 = 450	
Column Totals: 95 (A)	465 (B)	

Prevalence Index = B/A = 4.89

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ 5 - Wetland Non-Vascular Plants[1]
___ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: 100-00 14

SOIL

Sampling Point: 2T03

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 3/1	100					silty clay loam	
2-5.5	10YR 3/1	100					Sandy clay loam	
5.5-16+	2.5Y 4/2	100					loamy sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes ___ No X

Remarks: 106_0018

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes X No ___ Depth (inches): 16

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 12

Wetland Hydrology Present? Yes X No ___

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

Remarks:

US Army Corps of Engineers

Western Mountains, Valleys, and Coast – Version 2.0

-112.744394

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

Project/Site: Racetrack Pond 1 City/County: Powell County Sampling Date: 06/06/20

Applicant/Owner: Fish, Wildlife and Parks State: MT Sampling Point: RTO4

Investigator(s): K. Ramstead Section, Township, Range: S11, T10N, R9W

Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 0-5

Subregion (LRR): E Rocky Mtn Range/Forest Lat: 46°16'07.306"N Long: 112°44'39.817"W Datum: NAD 84

Soil Map Unit Name: 632- Bushong loam, 0-4% slopes NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X No _____	
Wetland Hydrology Present?	Yes X No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5x30ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 5x30ft)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5x5ft)			
1. Alopecurus aequalis	25	Y	FAC
2. Solidago sp.	7	N	—
3. Juncus arcticus	35	Y	FACW
4. Typha latifolia	2	N	OBL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	69 = Total Cover		
Woody Vine Stratum (Plot size: 5x30ft)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks: 100-2017 plot- litter about 40% water covering 30% of herb

SOIL

Sampling Point: RT04

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3.5	10YR 2/1	100					sandy clay loam	
3.5-10	10YR 3/1	95	5YR 3/4	5	C	M	sandy clay loam	
10-12	10YR 4/2	70					sand	30% cobble/gravel

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: Cobble

Depth (inches): 12

Hydric Soil Present? Yes X No ___

Remarks: 100-0019

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes X No ___ Depth (inches): 2

Water Table Present? Yes X No ___ Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 0

Wetland Hydrology Present? Yes X No ___

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

Remarks:

US Army Corps of Engineers

Western Mountains, Valleys, and Coast – Version 2.0

46.664455
-112.74371

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

Project/Site: Racetrack Pond City/County: Powell County Sampling Date: 06/06/2017
Applicant/Owner: fish, Wildlife and Parks State: MT Sampling Point: RTOS
Investigator(s): K. Ramsteed Section, Township, Range: S16, T06N, R09W
Landform (hillslope, terrace, etc.): slope Local relief (concave, convex, none): none Slope (%): 2
Subregion (LRR): E rocky mtn range/forest Lat: 46°16'11.767" N Long: 112°44'37.357" W Datum: WGS84
Soil Map Unit Name: 562 - Carter loam 0-4% slopes NWI classification: none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____	No X	Is the Sampled Area within a Wetland? Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks: boundary indicator is change from dense green vegetation with mix of ju to thin grassy slope. Boundary is wavy

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 5x30)			
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 5x30)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5x5)			
1. Unknown forb - not flowering	15	Y	—
2. Descurainia sophia	5	N	UPL
3. Agropyron cristatum	3	N	UPL
4. Poa pratensis	5	N	FAC
5. Bromus tectorum	15	Y	UPL
6. Pascopyrum smithii	5	N	FACU
7.			
8.			
9.			
10.			
11.			
	48 = Total Cover		
Woody Vine Stratum (Plot size: 5x30)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 50

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species —	x 1 =	
FACW species —	x 2 =	
FAC species 5	x 3 =	15
FACU species 5	x 4 =	20
UPL species 28	x 5 =	140
Column Totals: 38 (A)		175 (B)

Prevalence Index = B/A = 4.61

Hydrophytic Vegetation Indicators:
__ 1 - Rapid Test for Hydrophytic Vegetation
__ 2 - Dominance Test is >50%
__ 3 - Prevalence Index is ≤3.0[1]
__ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ 5 - Wetland Non-Vascular Plants[1]
__ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: 100_0021 litter about 15% cover

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SOIL

Sampling Point: RTOS

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	10YR 2/2	100					sandy loam	
1-5	10YR 3/4	100					loamy sand	some cobble
5-11	2.5Y 5/2	30					loamy sand	70% cobbles

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: Cobble

Depth (inches): 11

Hydric Soil Present? Yes _____ No X

Remarks: 100-0022

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

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

Water Table Present? Yes _____ No X Depth (inches): _____

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

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

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-112.743701

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

Project/Site: Racetrack Pond City/County: Powell County Sampling Date: 6/16/2017
Applicant/Owner: Fish, Wildlife and Parks State: MT Sampling Point: RTOW
Investigator(s): V. Ramstead Section, Township, Range: S11E, T10N, R09W
Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): none Slope (%): 1-5
Subregion (LRR): E-Rocky Mtn Range/Forest Lat: 46°16'11.734"N Long: 112°44'37.325"W Datum: WGS84
Soil Map Unit Name: 562 - Carter loam 0-4% slopes NWI classification: none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ND, Soil ND, or Hydrology ND significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ND, Soil ND, or Hydrology ND naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5x30ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 5x30ft)			
1. Salix bebbiana	5	N	FACW
2. Salix boothii	2	N	FACW
3. Salix drummondiana	10	Y	FACW
4. Betula occidentalis	15	Y	FACW
5.			
	32 = Total Cover		
Herb Stratum (Plot size: 5x5 ft)			
1. Bromus carinatus	30	Y	UPL
2. Juncus arcticus	25	Y	FACW
3. Potentilla anserina	3	N	OBL
4. Solidago sp.	2	N	—
5. Poa pratensis	15	N	FAC
6. Sisyrinchium montanum	2	N	FAC
7.			
8.			
9.			
10.			
11.			
	77 = Total Cover		
Woody Vine Stratum (Plot size: 5x30ft)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.75 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:
__ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
__ 3 - Prevalence Index is ≤3.0[1]
__ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ 5 - Wetland Non-Vascular Plants[1]
__ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks: litter in herb plot 25%

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SOIL

Sampling Point: RT 06

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-2	10YR 2/2	100					Sandy loam	
2-7	10YR 4/2	95	7.5YR 4/6	5	C	M	Loamy Sand	
7-15+	10YR 6/1	30					Sand	70% cobbles

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- X Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: Cobble

Depth (inches): 15"

Hydric Soil Present? Yes X No ___

Remarks: 100-0023

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes X No ___ Depth (inches): 13

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 8

Wetland Hydrology Present? Yes X No ___

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

Remarks: WT rose 1" while classifying soil pit

US Army Corps of Engineers

Western Mountains, Valleys, and Coast – Version 2.0

-112.744229

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

Project/Site: Racetrack Pond City/County: Powell County Sampling Date: 06/06/2017
Applicant/Owner: Fish, Wildlife and Parks State: MT Sampling Point: RT07
Investigator(s): K. Ramsteen Section, Township, Range: 31e, T10N, R09W
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 6
Subregion (LRR): E - Rocky Mtn Range & forest Lat: 46°16'20.736"N Long: 112°44'39.224"W Datum: WGS84
Soil Map Unit Name: 567 - Carter loam 0-4% slopes NWI classification: none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 5x30)			
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 5x30)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5x5)			
1. Descurainia sophia	.15	Y	UPL
2. Sisymbrium altissimum	15	Y	FACU
3. Ptesopyrum smithii	15	Y	FACU
4. Lepidium perfoliatum	2	N	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	47 = Total Cover		
Woody Vine Stratum (Plot size: 5x30)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 55

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species 32	x 4 = 128
UPL species 15	x 5 = 75
Column Totals: 47 (A)	203 (B)

Prevalence Index = B/A = 4.32

Hydrophytic Vegetation Indicators:
__ 1 - Rapid Test for Hydrophytic Vegetation
__ 2 - Dominance Test is >50%
__ 3 - Prevalence Index is ≤3.0[1]
__ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ 5 - Wetland Non-Vascular Plants[1]
__ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: 100-0026

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SOIL

Sampling Point: RT 07

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-6.5	10YR 2/1	100					sandy loam	
6.5-10	10YR 4/3	100					loamy sand	
10-17+	2.5Y 5/2	95					loamy sand	
	5YR 5/8	5					appears to be tailings @ 14 inches	layer

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: —

Depth (inches): —

Hydric Soil Present? Yes _____ No X

Remarks: 100-0028

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

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

Water Table Present? Yes _____ No X Depth (inches): _____

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

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

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46.[illegible]
-112.744201

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

Project/Site: Racetrack Pond City/County: Powell County Sampling Date: 06/06/17
Applicant/Owner: fish, Wildlife and Parks State: MT Sampling Point: RTP8
Investigator(s): V. Ramstead Section, Township, Range: S11E, T06N, R09W
Landform (hillslope, terrace, etc.): toe slope Local relief (concave, convex, none): none Slope (%): 0.5
Subregion (LRR): E - Rocky Mtn Range & forest Lat: 46°16'20.801"N Long: 112°44'39.122"W Datum: WGS84
Soil Map Unit Name: 562 - Carter loam 0-4% slopes NWI classification: L1UBGx
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes X	No _____	

Remarks: boundary is topographic break at base of slope. 30% of herb plot is standing water from pond to capture aquatic veg.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 5x30ft)			
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 5x30ft)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 3x5)			
1. Juncus arcticus	70	Y	FACW
2. Poa pratensis	5	N	FAC
3. Veronica americana	20	N	OBL
4. Mentha arvensis	10	N	FACW
5. Rumex sp.	2	N	—
6. unknown graminoid	3	N	—
7.			
8.			
9.			
10.			
11.			
	110 = Total Cover		
Woody Vine Stratum (Plot size: 5x30ft)			
1.			
2.			
	X = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 1.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 20	x 1 = 20
FACW species 80	x 2 = 160
FAC species 5	x 3 = 15
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: 105 (A)	195 (B)

Prevalence Index = B/A = 1.86

Hydrophytic Vegetation Indicators:
__ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index is ≤3.0[1]
__ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ 5 - Wetland Non-Vascular Plants[1]
__ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks: 100-0029

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SOIL

Sampling Point: RT08

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1.5	10YR 2/1	100					Sandy Loam	
1.5-5	10YR 3/2	100					Loamy Sand	
5-14	5Y 6/1	100					Sand	Large cobbles present

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- X Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

0030

Definition of hydric - water table is within 12 inches of soil surface and saturation is within 6 inches of soil surface

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

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

Water Table Present? Yes X No ____ Depth (inches): 5

Saturation Present? (includes capillary fringe) Yes X No ____ Depth (inches): 0

Wetland Hydrology Present? Yes X No ____

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

Remarks:

US Army Corps of Engineers

Western Mountains, Valleys, and Coast – Version 2.0

-112.743782

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

Project/Site: Racetrack Pond City/County: Powell County Sampling Date: 06/06/2017
Applicant/Owner: Fish, Wildlife and Parks State: MT Sampling Point: RT09
Investigator(s): K. Ramstad Section, Township, Range: S16, T10N, R09W
Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): Concave Slope (%): 2.0
Subregion (LRR): E- Rocky Mtn Range/Forest Lat: 46°16'30.379"N Long: 112°44'37.6016"W Datum: WGS84
Soil Map Unit Name: 502 - Carter loam, 0-4% slopes NWI classification: none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation Yes, Soil Yes, or Hydrology Yes significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes X	No _____	

Remarks: Atypical situation, soils, vegetation and hydrology where all disturbed in 2016. This location historically upland pasture, but in 2016 Racetrack Pond was extended into this area as this area was used as a soil borrow source for superfund remediation along the Clark Fork River. Man-induced wetland

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 5x 30ft)			
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 5x30 ft)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5x5 ft)			
1. Sisymbrium altissimum	2	Y	FACU
2. Rubus balsamiferus	0.5	N	FAC
3. Bromus arvensis	0.5	N	UPL
4. unknown grass	0.5	N	—
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	3.5 = Total Cover		
Woody Vine Stratum (Plot size: 5x 30ft)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 96.5

Dominance Test worksheet: sparse vegetation
Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)
Total Number of Dominant Species Across All Strata: _____ (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet: sparse vegetation

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:
__ 1 - Rapid Test for Hydrophytic Vegetation
__ 2 - Dominance Test is >50%
__ 3 - Prevalence Index is ≤3.0[1]
__ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ 5 - Wetland Non-Vascular Plants[1]
X Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks: Sparse vegetation within the sample point as this site was excavated in 2016 as part of superfund remediation work occuring on the Clark Fork River. At an elevation that will support wetland vegetation if left in 100-0038 current state.

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SOIL

Sampling Point: RT09

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 5/2	100					Sand	
4-9	10YR 5/1	80	7.5YR 4/6	20	CS	M	Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- X Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: cobble

Depth (inches): 9

Hydric Soil Present? Yes X No ___

Remarks: 106-0039 Prior to excavation plant area that would have been 5-6 ft higher and be classified as upland soils. Currently, definition of a hydric soil - watertable is within 12 inches of soil surface and saturation is within 6 inches.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes X No ___ Depth (inches): 8

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 5

Wetland Hydrology Present? Yes X No ___

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

Remarks: Excavation has altered hydrology since 2016. Currently area is saturated from seepage and groundwater that fill the excavated area.

US Army Corps of Engineers

Western Mountains, Valleys, and Coast – Version 2.0

-112.743741

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

Project/Site: Racetrack Pond City/County: Powell County Sampling Date: 06/06/2017
Applicant/Owner: Fish, Wildlife and Parks State: MT Sampling Point: PT1O
Investigator(s): K. Ramstead Section, Township, Range: S11E, T10N, R09W
Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): none Slope (%): 3
Subregion (LRR): E-Rocky Mtn Range/Forest Lat: 46°16'30.419"N Long: 112°44'37.466"W Datum: WGS 84
Soil Map Unit Name: 502 - Carter loam 0-4% slopes NWI classification: none.
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation Yes, Soil Yes, or Hydrology Yes significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation no, Soil no, or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes X	No ____	

Remarks: Atypical situation- soils, vegetation and hydrology were all disturbed in 2016. This location was historically upland pasture but in 2016 Racetrack Pond was extended into this area as this area was used as a soil borrow source for Superfund remediation along the Clark Fork River.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 5x30)			
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 5x30)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5x5)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	0 = Total Cover		
Woody Vine Stratum (Plot size: 5x30)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 100%

Dominance Test worksheet: no vegetation
Number of Dominant Species That Are OBL, FACW, or FAC: ____ (A)
Total Number of Dominant Species Across All Strata: ____ (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: ____ (A/B)

Prevalence Index worksheet: no vegetation

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:
__ 1 - Rapid Test for Hydrophytic Vegetation
__ 2 - Dominance Test is >50%
__ 3 - Prevalence Index is ≤3.0[1]
__ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ 5 - Wetland Non-Vascular Plants[1]
__ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: 100-0040. Hydrology that would support wetland vegetation development in the future is lacking.

US Army Corps of Engineers — Western Mountains, Valleys, and Coast – Version 2.0

SOIL

Sampling Point: RT10

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-6	10YR 5/1	100	—				Sand	
6-16+	10YR 5/1	50	—				Sand	50% cobble

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: —

Depth (inches): —

Hydric Soil Present? Yes ____ No X

Remarks: Hydrology that would support hydric soils development is not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches): ____

Water Table Present? Yes ____ No X Depth (inches): ____

Saturation Present? (includes capillary fringe) Yes X No ____ Depth (inches): 12

Wetland Hydrology Present? Yes X No ____

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

Remarks:

US Army Corps of Engineers

Western Mountains, Valleys, and Coast – Version 2.0

46.216248
-112.737877

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

Project/Site: Racetrack Pond City/County: Powell County Sampling Date: 06/06/2017
Applicant/Owner: Fish, Wildlife and Parks - Paul Roff State: MT Sampling Point: PT 11
Investigator(s): K. Vanstaen Section, Township, Range: S16, T10N, R09W
Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0.25
Subregion (LRR): E- Rocky Mtn Forest & Range Lat: 46°16'35.573"N Long: 112°44'16.856"W Datum: WGS84
Soil Map Unit Name: 512 - Carter loam 0-6% slopes NWI classification: none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes X	No ____	

Remarks: Boundary is demarcated by top of slope.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 5x30)			
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 5x30)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5x5)			
1. Plantago eriopoda	35	Y	FACW
2. Trifolium longipes	5	N	FAC
3. Poa arida	35	Y	UPL
4. Sonchus arvensis - basal leaves	10	N	FACU
5. Medicago sativa	3	N	UPL
6. Juncus arcticus	5	N	FACW
7.			
8.			
9.			
10.			
11.			
	93 = Total Cover		
Woody Vine Stratum (Plot size: 5x30)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.5 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species 40	x 2 = 80
FAC species 5	x 3 = 15
FACU species 10	x 4 = 40
UPL species 38	x 5 = 190
Column Totals: 93 (A)	325 (B)

Prevalence Index = B/A = 3.49

Hydrophytic Vegetation Indicators:
__ 1 - Rapid Test for Hydrophytic Vegetation
__ 2 - Dominance Test is >50%
__ 3 - Prevalence Index is ≤3.0[1]
__ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ 5 - Wetland Non-Vascular Plants[1]
__ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: litter covers ~ 1%. Pasture vegetation mix
0044

SOIL

Sampling Point: PT 11

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 2/1	100					Sandy clay loam	
6-19+	7.5YR 4/6	95					loamy Sand	cobbles 15-20%
	10YR 2/1	5						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: —

Depth (inches): —

Hydric Soil Present? Yes ____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches): ____

Water Table Present? Yes X No ____ Depth (inches): 19.5

Saturation Present? (includes capillary fringe) Yes X No ____ Depth (inches): 12

Wetland Hydrology Present? Yes X No ____

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

Remarks:

US Army Corps of Engineers

Western Mountains, Valleys, and Coast – Version 2.0

-112.737871

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

Project/Site: Racetrack Pond City/County: Powell County Sampling Date: 06/06/2017
Applicant/Owner: Fish, Wildlife and Parks - Paul Pelt State: MT Sampling Point: RT 12
Investigator(s): K. Ramstead Section, Township, Range: S16, T10N, R9W
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 0.5
Subregion (LRR): E: Rocky Mtn Range/forest Lat: 46°16'35.6068"N Long: 112°44'16.357"W Datum: WGS84
Soil Map Unit Name: 51e2 - carter loam 0-4% slopes NWI classification: none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks: water not present in old channel until expanded pond in 2016 according to landowner

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5x30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 5x30ft)			
1. Salix bebbiana	7	Y	FACW
2. Betula occidentalis	3	Y	FACW
3. Salix boothi	3	Y	FACW
4. Ribes lacustre	3	Y	FAC
5.			
	16 = Total Cover		
Herb Stratum (Plot size: 5x5ft)			
1. Solidago sp	3	N	—
2. Juncus arcticus	55	Y	FACW
3. Trifolium longipes	1	N	FAC
4. Triglochin maritimum	5	N	OBL
5. Poa pratensis	5	N	FAC
6. Potentilla anserina	2	N	OBL
7. Carex rebrascensis	10	N	OBL
8. Alopecurus arundinaceus	3	N	FAC
9.			
10.			
11.			
	84 = Total Cover		
Woody Vine Stratum (Plot size: 5x30ft)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)
Total Number of Dominant Species Across All Strata: 5 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 1.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:
__ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
__ 3 - Prevalence Index is ≤3.0[1]
__ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ 5 - Wetland Non-Vascular Plants[1]
__ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks: 0045

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SOIL

Sampling Point: RT 12

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0 - 6	10YR 2/1	100					peat	
6-12	10YR 2/1	100					Silty clay loam	mucky mineral

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- X Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- X Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: cobble

Depth (inches): 12

Hydric Soil Present? Yes X No ___

Remarks: Soils at this sampling point do not meet full criteria for either A3 or F1, but a thick layer of peat, underlain by mucky mineral loam with hydrology combined indicate a hydric soil.

0046

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes X No ___ Depth (inches): 1

Water Table Present? Yes X No ___ Depth (inches): 12

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 3

Wetland Hydrology Present? Yes X No ___

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

Remarks:

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112.738099

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

Project/Site: Racetrack Pond City/County: Powell County Sampling Date: 06/07/2017
Applicant/Owner: Fish Wildlife and Parks- Paul Relf State: MT Sampling Point: RT13
Investigator(s): K. Ramstead Section, Township, Range: S16, T10N, R9W
Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0.5
Subregion (LRR): E- Rocky Mtn Range & Forest Lat: 46°16'33.641"N Long: 112°44'17.156"W Datum: WGS 84
Soil Map Unit Name: 562 - Carter loam 0-4% slopes NWI classification: none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation Yes, Soil NO, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks: boundary is marked by ditch which appears to drain area. Area is slightly lower elevation than other side of ditch mixed with some higher elevations that may be small patches of uplands.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5x30ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 5x30ft)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5x5ft)			
1. Dactylis glomerata	30	Y	FACU
2. Bromus carinatus	25	Y	UPL
3. Poa pratensis	25	Y	FAC
4. Medicago sativa	20	N	UPL
5. Eleocharis laevigatum	5	N	FACW
6. Plantago eriopoda	7	N	FACW
7. Potentilla anserina	7	N	OBL
8.			
9.			
10.			
11.			
	119 = Total Cover		
Woody Vine Stratum (Plot size: 5x30ft)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.33 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 7	x 1 = 7
FACW species 12	x 2 = 24
FAC species 25	x 3 = 75
FACU species 30	x 4 = 120
UPL species 45	x 5 = 225
Column Totals: 119 (A)	451 (B)

Prevalence Index = B/A = 3.79

Hydrophytic Vegetation Indicators:
__ 1 - Rapid Test for Hydrophytic Vegetation
__ 2 - Dominance Test is >50%
__ 3 - Prevalence Index is ≤3.0[1]
__ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ 5 - Wetland Non-Vascular Plants[1]
X Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks: OOS2 plot OOS3 veg comm herbaceous plot is done in hay pasture. Many areas outside plot dominated by Rheum pretense Problematic vegetation – manage plant communities- this area is a hay field which is periodically seeded with pasture grasses and forbs. Elevation is low enough. Most of this area has approximately 1 inch of surface water or saturated to surface, and hydric soils are present

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SOIL

Sampling Point: RT13

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1.5	10YR 2/1	100					Peat	
1.5-10	10YR 2/1	100					clay loam	high OM
10-14	10YR 5/2	65	7.5YR 5/8	7%	C	M	clay loam	
	10YR 2/1	28						
14-18+	5G 5/1	80	7.5YR 5/8	20%	C	M	clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- X Hydrogen Sulfide (A4)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

0054, Picture only to 14", will probe to confirm below 14"

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- X Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes X No ___ Depth (inches): 8

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 3

Wetland Hydrology Present? Yes X No ___

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

Remarks: Adjacent to ditch, upland pit across ditch

US Army Corps of Engineers

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46. 117.738122

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

Project/Site: Racetrack Pond City/County: Powell County Sampling Date: 06/07/2017
Applicant/Owner: Fish, Wildlife and Parks - Paul Relf State: MT Sampling Point: DT14
Investigator(s): K. Ramstead Section, Township, Range: 9N6, T06N, R09W
Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-3
Subregion (LRR): E-Rocky Mtn Rangy/Forest Lat: 46°16'33.752"N Long: 112°44'17.238"W Datum: WGS 84
Soil Map Unit Name: 5162 - Karlen loam 0-4% slopes NWI classification: none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks: On this side of ditch wetland extends approximately 5 feet in areas that are slightly lower

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5x30ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 5x30ft)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5x5ft)			
1. Bromus inermis	90	Y	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	90 = Total Cover		
Woody Vine Stratum (Plot size: 5x30ft)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species 90	x 5 = 450
Column Totals: 90 (A)	450 (B)

Prevalence Index = B/A = 5

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ 5 - Wetland Non-Vascular Plants[1]
___ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: pockets of litter that cover about 1% This side of ditch is dominated by Bromus inermis
0055 - herbaceous plot
0056 - veg comm

SOIL

Sampling Point: RT14

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-11	10YR 2/1	100					clay loam	
11-14+	10YR 2/1	70	5YR 4/6	5	C	M	clay loam	
	10YR 4/2	25						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- X Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: —

Depth (inches): —

Hydric Soil Present? Yes X No ___

Remarks: 0057. Definition of a hydric soil - water table within 12 inches of soil surface

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes X No ___ Depth (inches): 11.5

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 9.5

Wetland Hydrology Present? Yes X No ___

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

Remarks:

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46.214221
112.736981

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

Project/Site: Racetrack Pond City/County: Powell County Sampling Date: 06/07/2017
Applicant/Owner: fish, Wildlife and Parks State: MT Sampling Point: RTS
Investigator(s): K. Ramstead Section, Township, Range: S16, T10N, R09W
Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 0-3
Subregion (LRR): E-Rocky Mtn Range & forest Lat: 46°16'27.197"N Long: 112°44'13.132"W Datum: WGS84
Soil Map Unit Name: 562-Carter loam 0-4% slopes NWI classification: none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes ____	No X	

Remarks: pond is marked by berm that follows outlet channel. Dug additional soil pit on berm and confirmed that it have same characteristics as RTS.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 5x30 ft)			
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 5x30A)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5x5A)			
1. Phleum pratense	35	Y	FAC
2. Juncus arcticus	35	Y	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	70 = Total Cover		
Woody Vine Stratum (Plot size: 5x30ft)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 1.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:
__ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
__ 3 - Prevalence Index is ≤3.0[1]
__ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ 5 - Wetland Non-Vascular Plants[1]
__ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks: 0060 - plot
0061 - less community
litter covers 30% of herb plot

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SOIL

Sampling Point: RTS

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 2/1						Sandy clay loam	
3-12	10YR 2/1		5YR 3/4	7	C	M	Sandy clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: compacted fill/cobble

Depth (inches): 12

Hydric Soil Present? Yes X No ___

Remarks:

0062

At 12" is a restrictive layer, compacted fill/cobble

Redox CF's, distinct margins likely relict features

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes ___ No X

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

Remarks:

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

Project/Site: Racetrack Pond City/County: Powell County Sampling Date: 06/07/2017
Applicant/Owner: fish, Wildlife and Parks State: MT Sampling Point: PT16
Investigator(s): K. Ramstead Section, Township, Range: S16, T10N, R09W
Landform (hillslope, terrace, etc.): berm Local relief (concave, convex, none): Concave Slope (%): 1
Subregion (LRR): E-Rocky Mtn Range/Forest Lat: 46.274194 Long: -112.736951 Datum: WGS84
Soil Map Unit Name: 104A-Fluvaquentic Endoaquolls-Stickney 0-2% slop NWI classification: none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks: from bank 1 wetland extends approximately 1 foot on other side of channel

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 5x30ft)			
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5x30ft)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 3x7ft)			
1. Typha latifolia	5	Y	OBL
2. Veronica americana	5	Y	OBL
3. Juncus articus	5	Y	FACW
4. Alopecurus arundinaceus	5	Y	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	20	= Total Cover	
Woody Vine Stratum (Plot size: 5x30ft)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 1.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
__ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
__ 3 - Prevalence Index is ≤3.0[1]
__ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ 5 - Wetland Non-Vascular Plants[1]
__ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes Y No ____

Remarks: litter covers ~40% of herb plot, open water approximately 30% of plot
0063 – herb plot & channel
0064 – herb plot

SOIL

Sampling Point: RT 16

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
			NO SOIL PIT DUG					

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- X Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: —

Depth (inches): —

Hydric Soil Present? Yes X No ___

Remarks: Small soil area of small wetland within 16 inches of soil surface. Plot not dug due to steep slopes of berm of wetland. Digging soil pit would completely slough off area. Definition of hydric soil - saturation is soil surface and water table is within 12 inches

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- X Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes X No ___ Depth (inches): 8

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 6

Wetland Hydrology Present? Yes X No ___

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

Remarks: Water table is estimate based on current water levels in channel. Saturation is based on visible saturated soils on streambank.

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46.209517
112.742094

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

Project/Site: Racetrack Pond City/County: Powell County Sampling Date: 06/07/2017
Applicant/Owner: Fish, Wildlife and Parks State: MT Sampling Point: PT17
Investigator(s): K. Ramstead Section, Township, Range: S16, T06N, R09W
Landform (hillslope, terrace, etc.): slope Local relief (concave, convex, none): none Slope (%): 1.5
Subregion (LRR): E- Rocky Mtn Range/ Forest Lat: 46°16'09.747"N Long: 112° 44' 31.538" Datum: WGS 84
Soil Map Unit Name: 562- Carter loam 0-4% slopes NWI classification: L1UBGx
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____
Is the Sampled Area within a Wetland? Yes X No ____

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5x30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 5x30ft)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 3x7ft)			
1. Juncus arcticus	55	Y	FACW
2. Mentha arvensis	10	N	FACW
3. Poa pratensis	10	N	FAC
4. Bromus inermis	10	N	UPL
5. Cirsium arvense	2	N	FAC
6.			
7.			
8.			
9.			
10.			
11.			
	87 = Total Cover		
Woody Vine Stratum (Plot size: 5x30ft)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 1.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
__ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
__ 3 - Prevalence Index is ≤3.0[1]
__ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ 5 - Wetland Non-Vascular Plants[1]
__ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks: 0065 open water from pond 20%, litter 15

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SOIL

Sampling Point: SP 17

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	10YR 2/1	100					Root + sandy clay loam	
1-5	10YR 2/1	100					sandy clay loam	
5-11	10YR 2/1	90	7.5YR 3/4	5	C	M		
11-14+	10YR 5/1		7.5YR 4/6	20	C	M	loamy sand	Cobbly
			10YR 4/2	5	D	M		Concentrations / Depletions mixed 5-11"

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: Cobble

Depth (inches): 14

Hydric Soil Present? Yes X **No** ___

Remarks: 0066

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes X No ___ Depth (inches): 9

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 7

Wetland Hydrology Present? Yes X **No** ___

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

Remarks: Adjacent to shoreline of pond at bottom of slope

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112.742077

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

Project/Site: Racetrack Pond City/County: Powell County Sampling Date: 06/07/2017
Applicant/Owner: Fish, Wildlife and Park State: MT Sampling Point: PT 18
Investigator(s): K. Ramstead Section, Township, Range: S16, T10N, R09W
Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): none Slope (%): 4
Subregion (LRR): E - Rocky Mtn Pony Forest Lat: 46°16'09.741"N Long: 112°44'31.477"W Datum: WGS84
Soil Map Unit Name: 562 - Carter loam 0-4% slopes NWI classification: L1UBGx
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____	No X	Is the Sampled Area within a Wetland? Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 5x30ft)			
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 5x30ft)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5x5 ft)			
1. Bromus inermis	50	Y	UPL
2. Descurainia sophia	10	N	UPL
3. Poa compressa	10	N	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	70 = Total Cover		
Woody Vine Stratum (Plot size: 5x30ft)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 15

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species 10	x 4 =	40
UPL species 60	x 5 =	300
Column Totals: 70 (A)		340 (B)

Prevalence Index = B/A = 4.86

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ 5 - Wetland Non-Vascular Plants[1]
___ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:
litter 15%
00 68 veg com
00 67 herb plot

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SOIL

Sampling Point: RT 18

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 2/1	100					Sandy Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: compaction layer

Depth (inches): 8

Hydric Soil Present? Yes _____ No X

Remarks:

0269

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

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

Water Table Present? Yes _____ No X Depth (inches): _____

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

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

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Appendix D

Vegetation Communities and Other Land Cover Types in the Racetrack Pond Project Area

APPENDIX D: VEGETATION COMMUNITIES AND OTHER LAND COVER TYPES IN THE RACETRACK POND PROJECT AREA

This appendix summarizes the area of existing vegetation communities and other land cover types that are present in the Racetrack Pond project area. **Sheet C07-Existing Vegetation Communities** shows the locations of mapped vegetated communities and other land cover types in the project area. **Table** 1 provides a summary of the portion of the project area occupied by each vegetation community or land cover type and the expected impact from to each from project actions.

Table D1. Area (acres) of existing and impacted vegetation communities and other land cover types in the Racetrack Pond project area.

Vegetation Community or Land Cover Type	Existing Area (acres)	Estimated Impacted Area (acres)	Estimated Impact - Percent of Existing Area
Vegetation Communities			
Upland non-native	18.21	17.62	96.78%
Hayfield	2.44	0.50	20.57%
Herbaceous wetland	1.49	1.05	70.09%
Shrub wetland	0.95	0.002	0.19%
Aquatic bed	0.03	0.03	100.00%
Sub-total	*23.12*	*19.20*	--
Unvegetated Cover Types			
Open water	51.09	51.04	99.91%
Roads	2.44	2.38	97.46%
Material stockpile	2.43	2.43	100.00%
Unvegetated surface	1.44	1.44	100.00%
Sub-total	*57.40*	*57.29*	--
Total	**80.52**	**53.95**	**--**

Upland Non-Native

Upland non-native vegetation communities are upland areas dominated by non-native species. Includes areas around Racetrack Pond that are fully vegetated and dominated by smooth brome and tall tumble mustard. Patches of more sparsely vegetated upland communities are scattered around the pond and dominated by cheatgrass. Some upland communities around the northern portion of the pond that were more recently disturbed by excavation are dominated by tall tumble mustard. Dominant species include:

- Smooth brome (*Bromus inermis*)
- Cheatgrass (*Bromus tectorum*)
- Herb sophia (*Descurainia sophia*)
- Kentucky bluegrass (*Poa pratensis*)
- Tall tumble mustard (*Sisymbrium altissimum*)

Hayfield

Hayfield vegetation community includes an upland field in the northern portion of the project area, north of Racetrack Pond. The field is seeded with pasture grasses and forbs and the vegetation is cut for hay. Low elevation swales in the field are dominated by wetland herbaceous species. Dominant species include:

- Smooth brome (*Bromus inermis*)
- Kentucky bluegrass (*Poa pratensis*)
- Timothy (*Phleum pratense*)
- Redwool plantain (*Plantago eriopoda*)
- Alfalfa (*Medicago sativa*)
- Arctic rush (*Juncus arcticus*)

Herbaceous Wetland

Herbaceous wetland vegetation communities include emergent wetland dominated by herbaceous wetland species. Herbaceous wetlands occur around the perimeter of the southern portion of Racetrack Pond, along the pond outlet channel, in low elevation swales in the southern portion of the project area, in the northern hayfield, and along the edge of the Clark Fork River side channel. Dominant species include:

- Arctic rush (*Juncus arcticus*)
- Creeping meadow foxtail (*Alopecurus arundinaceus*)
- Common cattail (*Typha latifolia*)
- American speedwell (*Veronica americana*)
- Kentucky bluegrass (*Poa pratensis*)
- Nebraska sedge (*Carex nebrascensis*)
- Sedges (*Carex spp.*)

Shrub Wetland

Shrub wetland vegetation communities are located in a swale in the northern portion of the project area, along the edge of a peninsula in the southern portion of Racetrack Pond and along a side channel of the Clark Fork River. The northern swale may be an old side channel of the Clark Fork River and the shrubs in this area are an older age class than the shrubs present around the edge of Racetrack Pond. Dominant species include:

- Water birch (*Betula occidentalis*)
- Bebb willow (*Salix bebbiana*
- Booth's willow (*Salix boothii*)
- Drummond's willow (*Salix drummondiana*)

Aquatic Bed

Aquatic bed vegetation communities include the narrow fringe of aquatic vegetation along portions of the western edge of the southern portion of Racetrack Pond. Standing water, approximately 4 to 6 inches deep was present during June 2017 in areas of aquatic bed communities. Dominant species include:

- American speedwell (*Veronica americana*)

Several unvegetated land cover types are also present in the Racetrack Pond project area. The open water area of Racetrack Pond is the largest feature in the project area, occupying approximately 51 acres. The northern portion of Racetrack Pond was excavated in 2016 and unvegetated surfaces resulting from the recent excavation are present around the edges of the northern portion of the pond and in other construction areas including a sediment pond in the northwest corner of the project area. Unvegetated material stockpiles are present along the north end of the 2016 excavation area and in the southern portion of the project area near the entrance to the site. Haul roads associated with the 2016 excavation and other access roads are present on both the east and west sides of the pond.

Appendix E

Racetrack Pond Design Habitats

APPENDIX E: RACETRACK POND DESIGN HABITATS

Table E describes the habitat types that will be created by project actions. **Sheet C08 – Design Habitats** shows the design habitats and planting areas in the project area. **Sheet C09 – Existing and Proposed Water Habitats** compares existing and proposed pond depths for deep water habitats (greater than or equal to 12 feet in depth) and shallow water habitats (less than or equal to 2 feet in depth).

Table E1. Racetrack Pond habitat features and design criteria.

Habitat Type	Total Post Project Area (acres)	Description/Design Criteria
Terrestrial habitat	16.6	All habitat from the water surface extending to the top of the pond embankments/slope will be terrestrial habitat. Native shrubs will be planted intermittently within this habitat to increase diversity and provide food and cover for birds and small mammals. Soil would also be placed in this habitat to the extent possible to establish diverse, native herbaceous vegetation.
Shorebird habitat	0.7	Shorebirds are a large group of birds, including killdeer, spotted sandpiper, and American avocet that feed on invertebrates in shallow habitats along shorelines. This habitat will be created through grading of shallow slopes near the water surface along the pond margin and adding soil to some of the saturated shoreline to support invertebrate colonization.
Shallow, wading bird habitat	3.8	This habitat is being created to support wading ducks or dabblers. Dabblers are ducks, such as mallards, that feed at or near the surface and prefer shallow unvegetated habitats. This habitat will be created through grading of shallow slopes below the water elevation around the margin of the pond to create water depths up to 3 feet.
Emergent marsh habitat	2.0	This habitat is being created to support rail species, a family of shorebirds, such as sora, that prefer dense marsh habitats, such as bulrush and sedge, for feeding and breeding. Emergent marsh habitat will be created in the large, shallow wetland area on the northeast end of the pond where herbaceous wetland plants will be installed.
Deep water habitat	5.85	Deep water habitat (>12 feet) will be increased to support fish overwintering and increase habitat for diving birds. Divers are ducks, such as bufflehead and hooded merganser, that dive underwater for food. Diver habitat will be created by excavating some areas to a target a maximum depth of 15 feet.

Appendix F Tourism Report

TOURISM REPORT

MONTANA ENVIRONMENTAL POLICY ACT (MEPA) & MCA 23-1-110

The Montana Department of Fish, Wildlife and Parks has initiated the review process as mandated by MCA 23-1-110 and the Montana Environmental Policy Act in its consideration of the project described below. As part of the review process, input and comments are being solicited. Please complete the project name and project description portions and submit this form to:

Jan Stoddard, Visitor Services Manager
Travel Montana-Department of Commerce
301 S. Park Ave.
Helena, MT 59601

Project Name: Montana Natural Resource Damage Program (NRDP) and FWP for a proposed fishing access site (FAS) at Racetrack Pond, near Racetrack, MT on the Clark Fork River.

Project Description: The NRDP and FWP propose to improve the existing Racetrack Pond area with increased habitat and amenities for inclusion in FWP's system of FASs. Racetrack Pond is located west of the Clark Fork River at Racetrack, Montana, and approximately 8 miles south of the City of Deer Lodge. The site functions as habitat for stocked fish and migrating waterfowl, but is generally underutilized for wetlands and recreation he Proposed Actions include: pond habitat upgrades include regrading approximately 170,000 cubic yards of material and reusing this material as fill resulting in a net zero design plan where no fill is required or left over upon project completion. The existing pond outlet will be upgraded to include a fish barrier and relocation of the outlet channel to an approximately 1,900-foot meandering stream that creates wetland and aquatic habitat opportunities. The proposed FAS developments include access roads, walking trails, boat launch, parking area including ADA accessible parking, and an ADA fishing access platform.

The pond is stocked annually by FWP with westslope cutthroat trout and sterile rainbow trout. Other species present in the pond include: largescale sucker, brown trout, mountain whitefish, and yellow perch (J. Lindstrom, personal communication). Yellow perch were illegally introduced into Racetrack Pond at an unknown date and pose a threat to stocked fish as they compete for food and other resources. The perch also represent a source of fish for other possible illegal introductions. During dewatering of the pond, FWP personnel will capture and remove as many illegally introduced and non-game fish as possible. Fish capture will be done either through electroshocking or use of nets, depending on water depths. After construction activities are complete, FWP will restock Racetrack Pond in spring 2018 with westslope cutthroat trout and sterile rainbow trout.

1. Would this site development project have an impact on the tourism economy?
NO **YES** If YES, briefly describe:

Yes, as described, the project has the potential to positively impact the tourism and recreation industry economy if properly maintained. The opportunity to fish Montana waters and native Montana fish populations is marketed to destination visitors from around the world. This includes emphasizing recreational opportunities (floating, fishing, camping, hiking, and sightseeing) in accessible locations. Racetrack Pond is an essential asset for Montana's outdoor recreation industry.

We are assuming the agency has determined it has necessary funding for the on-going operations and maintenance once this project is complete.

2. Does this impending improvement alter the quality or quantity of recreation/tourism opportunities and settings?
NO **YES** If YES, briefly describe

Yes, as described, the project has the potential to improve quality and quantity of tourism and recreational opportunities if properly maintained. These improvements including access roads, walking trails, a parking area with ADA accessible parking, and an ADA fishing access platform which are critical to the safety and usability by users, including non-resident visitors. We are assuming the agency has determined it has necessary funding for the on-going operations and maintenance once this project is complete.

Signature Jan Stoddard Date: 7/6/17