



Gold Creek
Safety Rest Area Study

Summary Report
December 2017

MONTANA
MDT
DEPARTMENT OF TRANSPORTATION

DOWL

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Acknowledgements

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Executive Summary

The 2014 *Montana Rest Area Plan* identified several potential concerns at the Gold Creek Safety Rest Area relating to the number of oversized vehicle parking spaces and the remaining service life for the parking areas, structures, water systems, and wastewater systems. Facility ventilation, source water capability to meet peak daily demand, and backflow prevention were also issues identified at the site. A substantial capital investment would be required to address the identified concerns. Accordingly, MDT conducted this study to assess potential action alternatives at the eastbound and westbound sites.

Need and Objectives

MDT defined a need to address the existing Gold Creek Safety Rest Area. The current facilities are temporarily closed to the public pending the outcome of this study.

To optimize Rest Area Program investment strategies, MDT sought an alternative that accomplishes the following objectives.

- Minimizes capital and long-term maintenance costs.
- Leverages federal-aid funding and reduces demands for limited state funding.
- Minimizes impacts to physical, biological, and social/cultural resources which could result in costly and time-consuming mitigation and abatement activities.
- Provides safe stopping opportunities spaced by a maximum of approximately one hour of travel time.
- Accommodates public and stakeholder feedback regarding stopping and parking opportunities.
- Aligns with existing MDT plans, policies, and asset management strategies.
- Adheres to FHWA rules, regulations and guidance regarding the operation, maintenance and abandonment of Rest Area facilities.

Public and Stakeholder Involvement

Stakeholder Interviews

Representatives from Motor Carriers of Montana, Granite County Commissioners, and the Powell County Chamber of Commerce participated in interviews in May and June of 2017. Collectively, interview participants expressed:

- an awareness of the safety benefits of truck parking areas;
- support for maintaining a truck parking area at the existing Gold Creek eastbound and westbound sites to perpetuate safe stopping opportunities; and
- rejection of full closure of the Gold Creek facilities.

Written Comments

A total of 21 written comments were received by stakeholders and members of the public before, during, and after the comment period from September 25 to October 25, 2017. A majority of the comments (15 of 21, 71%) supported a reduction in service (the truck parking alternative). These comments noted the need for safe stopping opportunities and truck parking

at the Gold Creek Safety Rest Area sites. Four comments supported complete closure, noting that adequate parking already exists in the area or suggesting MDT add truck parking at the Bearmouth or Anaconda sites. Other comments discussed desired amenities, seasonal travel patterns along the study corridor, and a desire for a full-service safety rest area, which was not an alternative considered by the study.

Alternatives

The Montana Department of Transportation (MDT) evaluated two alternatives for the Gold Creek Safety Rest Area: (1) reduction in service and (2) complete closure of the site.

Alternative 1: Reduction in Service

In accordance with MDT's *Safety Rest Area – Reduction of Service* memorandum, the Reduction in Service alternative would lessen the current functionality of the existing eastbound and westbound Gold Creek Safety Rest Area sites. The reduced service facilities would provide the function and features of a truck parking site. The alternative would entail maintaining entrance/exit ramps and parking areas; removing building facilities and foundations; filling or crushing wastewater tanks; capping associated wastewater piping; decommissioning drainfields; maintaining wells for irrigation and cleaning use; installing vaulted toilets; potential removal of picnic areas, pet amenities, and adjacent walkways; upgrading remaining sidewalks to meet ADA requirements; and reseeding reclaimed areas.

Capital and Maintenance Costs

- Initial capital costs would be lower compared to Alternative 2 ($538,000 vs. $610,000). Long-term maintenance costs would be higher (at approximately $21,000 annually or $520,000 totaled over 20 years, assuming 2% inflation) compared to Alternative 2 (no long-term maintenance costs).

Funding Eligibility

- The reduction in service alternative would be eligible for federal funding because it would continue to provide safe stopping opportunities with parking and vaulted toilet services.

Environmental Risk

- No adverse permanent impacts to prime farmland, geologic resources, surface water, TMDLs, wild and scenic rivers, wetlands, irrigation, floodplains and floodways, air quality vegetation, noxious weeds, general wildlife species, threatened and endangered species, species of concern, and special status species, demographics, economic conditions, land use, recreational resources, cultural resources, noise, or visual resources are anticipated.

Spacing and Corridor Needs

- A truck parking area at Gold Creek would provide additional safe stopping opportunities and positively impact existing facilities in the study area (primarily the Anaconda Rest Area and the Bearmouth Rest Area).

Public/Stakeholder Feedback

- Public and stakeholder sentiment generally supports maintaining the existing Gold Creek eastbound and westbound sites as truck parking areas to perpetuate MDT's investment and provide safe stopping/parking opportunities in the study area.

Alignment with MDT Plans

- Alternative 1 aligns with network evaluation guidelines outlined in the *Montana Rest Area Plan* and would provide continued investment in safe stopping opportunities as outlined in *TranPlanMT* and the *Montana Freight Plan.*

Additional Requirements

- This alternative would not be considered a form of abandonment because it would continue to provide a safe stopping opportunity with parking and vaulted toilet services. Therefore, a supplemental evaluation (justification of abandonment) would not be required to be submitted to FHWA.

Alternative 2: Closure

The second alternative would involve complete demolition of the eastbound and westbound building facilities, parking areas, ramps, water/wastewater systems, and site amenities. Under this scenario, the entire site would be reclaimed and reseeded.

Capital and Maintenance Costs

- Initial capital costs would be higher compared to Alternative 1 ($610,000 vs $538,000). Long-term maintenance costs would be eliminated.

Funding Eligibility

- The cost of safety rest area closures (abandonments) are not eligible for federal-aid funding. Consequently, this alternative would need to be advanced entirely with state funds.

Environmental Risk

- No adverse permanent impacts to prime farmland, geologic resources, surface water, TMDLs, wild and scenic rivers, wetlands, irrigation, floodplains and floodways, air quality general wildlife species, threatened and endangered species, species of concern, and special status species, demographics, economic conditions, land use, recreational resources, cultural resources, noise, or visual resources are anticipated.
- Alternative 2 has a greater environmental risk due to increased potential to encounter contaminated soils and greater likelihood of noxious weed establishment (with all other potential risks equal to Alternative 1).

Spacing and Corridor Needs

- Complete closure would reduce parking and stopping opportunities in the study area. During peak usage periods, some parking needs along this corridor (Anaconda to Bearmouth) would be unmet.

Public/Stakeholder Feedback

- Public and stakeholder sentiment generally opposes complete closure of the sites.

Alignment with MDT Plans

- Although closure of the Gold Creek Safety Rest Area would follow guidelines outlined in the *Montana Rest Area Plan*, it would not provide continued investment in safe stopping opportunities as stated in *TranPlanMT* and the *Montana Freight Plan*.

Additional Requirements

- Alternative 2 triggers an FHWA requirement that MDT perform a supplemental evaluation to demonstrate adequate safety rest area services remain after the abandonment of the Gold Creek Rest Area sites. It is unlikely that MDT could provide adequate justification for Alternative 2 based on truck parking and wastewater treatment demands along the I-90 corridor between the Anaconda Rest Area and the Bearmouth Rest Area.

Conclusions and Recommendations

Based on the analysis conducted for this study, Action Alternative 1 (the reduction in service / truck parking option) is the preferred alternative for the following reasons:

- Existing facilities aren't sufficient to address truck parking needs during peak usage periods (summer months) along the I-90 corridor between the Anaconda Rest Area and the Bearmouth Rest Area.
- Alternative 1 (truck parking option) would provide additional stopping opportunities along this corridor – thus positively impacting parking and wastewater treatment demand at the adjacent Anaconda and Bearmouth Rest Areas.
- All Stakeholder groups expressed support for safe stopping / truck parking opportunities at the Gold Creek Rest Area site.
- All Stakeholder groups rejected Alternative 2 (closure option) for the Gold Creek Rest Area site.
- Public comments overwhelmingly supported the reduction of service option (vs. the closure option).
- Capital construction costs for Alternative 1 (truck parking option) are lower than Alternative 2 (closure option) by approximately $70,000.
- Alternative 1 (truck parking option) is eligible for federal-aid and requires no state match.

- Alternative 2 (closure option) must be funded entirely with state funds (isn't federal-aid eligible).
- While maintenance costs are higher for Alternative 1 (truck parking option), the total amount of state funds required to implement Alternative 1 are lower than Alternative 2 (closure option) by $90,000.
- Alternative 2 (closure option) triggers an FHWA requirement that MDT perform a supplemental evaluation to demonstrate adequate safety rest area services will remain after the abandonment of the Gold Creek Rest Area site.
- It is unlikely that MDT could provide adequate justification for Alternative 2 (closure option) based on truck parking and wastewater treatment demands along the I-90 corridor between the Anaconda Rest Area and the Bearmouth Rest Area.

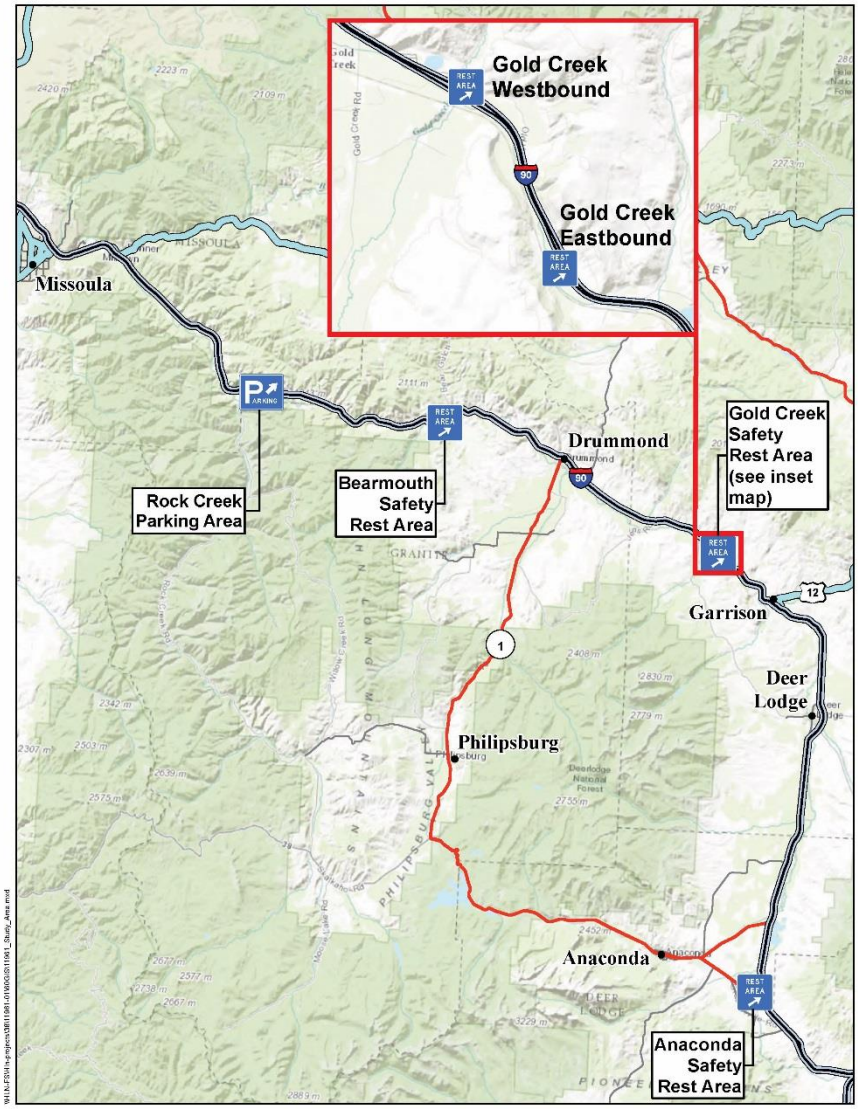
Consequently, this study recommends implementation of Action Alternative 1 (the reduction in service / truck parking option) at the Gold Creek Safety Rest Area sites.

1.0 Introduction

The Montana Department of Transportation (MDT) conducted a rest area study to evaluate two alternatives for the Gold Creek Safety Rest Area: (1) reduction in service and (2) complete closure of the site. The 2014 *Montana Rest Area Plan* identified several potential concerns at the Gold Creek Safety Rest Area relating to the number of oversized vehicle parking spaces and the remaining service life for the parking areas, structures, water systems, and wastewater systems. Facility ventilation, source water capability to meet peak daily demand, and backflow prevention were also issues identified at the site. Of the rest areas in Montana, the Gold Creek eastbound and westbound sites have the 4th and 5th lowest health index scores, respectively, due to these factors. A substantial capital investment would be required to address the identified concerns.

Figure 1 illustrates the Gold Creek Safety Rest Area location in reference to the communities of Drummond and Garrison along Interstate 90 (I-90). Network spacing criteria from the Montana Rest Area Plan characterized the Gold Creek Safety Rest Area as potentially redundant due to its proximity to the Bearmouth Safety Rest Area (approximately 25 miles to the northwest) and the Anaconda Safety Rest Area (approximately 40 miles to the south). The Gold Creek Safety Rest Area was closed in conjunction with the reopening of the newly reconstructed Bearmouth Safety Rest Area in April 2015.

Figure 1: Study Area



2.0 Existing Conditions Analysis

The following sections provide a summary of the Gold Creek Safety Rest Area features and characteristics to help identify opportunities, constraints, and needs within the study area. The analysis is based on existing site-specific data, publicly available data, and information gathered during a site visit conducted on April 19, 2017. The following sections are based on the most current data available, unless otherwise noted. Photographs from the site visit are catalogued in Appendix A.

2.1 Network Spacing and Demand

Spacing

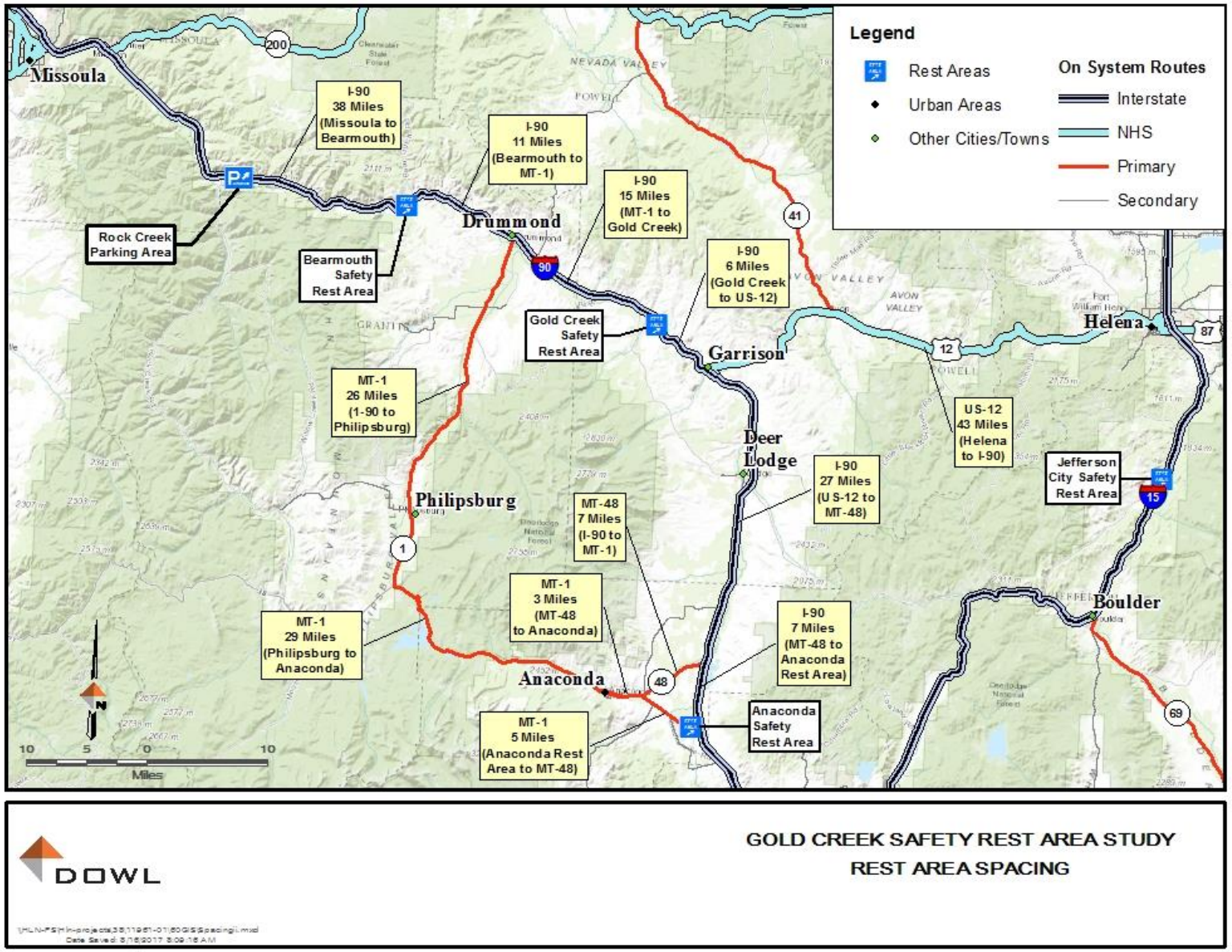
The Montana Rest Area Plan recommends approximately one hour of travel time between safety rest areas. This generally equates to a distance of approximately 70 miles. Table 1 and Figure 2 provide a summary of spacing distances between safety rest areas and urban areas in the vicinity of the Gold Creek Safety Rest Area measured according to the most direct route (i.e., shortest mileage). The analysis considers spacing only along Interstate, National Highway System (NHS), and Primary routes. Currently, the Anaconda and Bearmouth Safety Rest Areas are open year round. The Gold Creek Safety Rest Area is temporarily closed but has operated as a seasonal facility in past years.

Table 1: Gold Creek Safety Rest Area Spacing Analysis

Beginning Location	Ending Location (Mileage and Route)					
	Anaconda (Urban Area)	Anaconda Safety Rest Area	Bearmouth Safety Rest Area	Gold Creek Safety Rest Area	Helena (Urban Area)	Missoula (Urban Area)
Anaconda Safety Rest Area	8 miles (MT-1)					
Bearmouth Safety Rest Area	66 miles (1-90, MT-1)	66 miles (I-90)				
Gold Creek Safety Rest Area	43 miles (I-90, MT-48, MT-1)	40 miles (I-90)	26 miles (I-90)			
Helena (Urban Area)	80 miles (US-12, I-90, MT-48, MT-1)	83 miles (I-15, I-90)	75 miles (US-12, I-90)	49 miles (US-12, I-90)		
Missoula (Urban Area)	104 miles (MT-1, I-90)	104 miles (I-90)	38 miles (I-90)	64 miles (I-90)	113 miles (US-12, I-90)	

Source: DOWL 2017.

Figure 2: Gold Creek Safety Rest Area Spacing Analysis



Key findings regarding spacing between stopping opportunities are summarized below.

- The distance between the Bearmouth and Anaconda Safety Rest Areas is 66 miles, indicating the Gold Creek Safety Rest Area is redundant along Interstate 90.
- Distances slightly exceed 70 miles between Helena and Anaconda, the Anaconda Safety Rest Area, and the Bearmouth Safety Rest Area.
- The presence of the Gold Creek Safety Rest Area has no effect on the distances between Helena and the Anaconda urban area or Anaconda Safety Rest Area as routes to these locations do not pass by the Gold Creek Safety Rest Area.
- The distance between Helena and the Bearmouth Safety Rest Area is only slightly higher than the 70-mile target. A 75-mile distance is not sufficient to warrant an additional full-service safety rest area.

Parking Demand

The American Association of State Highway and Transportation Officials (AASHTO) *Guide for Development of Rest Areas on Major Arterials and Freeways* (1999) provides recommendations for estimating safety rest area usage based on national trends. MDT initiated a research project with the Western Transportation Institute (WTI) to develop guidelines that more accurately reflect conditions specific to Montana. The project culminated in completion of the *Rest Area Use: Data Acquisition and Usage Estimation Report* (2011). The goal of the WTI report was to investigate some of the variables thought to affect safety rest area usage and identify patterns at select study sites for application at all state-maintained safety rest areas in the absence of site-specific data. Using these publications as a foundation, MDT developed a modified demand methodology in the *Montana Rest Area Plan* (2014) to reflect site-specific door count data in place of assumed stopping percentages to identify peak-hour visitation at MDT safety rest areas.

This study uses 2017 traffic volumes and 2016 door count data to calculate updated parking demands at the Anaconda and Bearmouth Safety Rest Areas. Following the methodology outlined in the *Montana Rest Area Plan*, Table 2 presents a summary of the parking demand analysis conducted for the study area. Parking demand calculations are provided in Appendix B.

Table 2: Parking Demand Analysis

Parking Spaces		Anaconda Safety Rest Area	Bearmouth Safety Rest Area (EB)	Bearmouth Safety Rest Area (WB)
Passenger Vehicles	2017 Supply	30	53	51
	2016/2017 Demand	26	15	22
	2016/2017 Deficiency/Surplus	4	38	29
Oversized Vehicles	2017Supply	15	17	21
	2016/2017 Demand	51	34	34
	2016/2017 Deficiency/Surplus	**-36**	**-17**	**-13**

Source: DOWL 2017. Demand calculations use peak daily door count data, average daily traffic, and peak hour traffic volumes collected by MDT in 2016 and 2017. Vehicle mix (i.e., the percentage of passenger vehicles and trucks) is based on percentages reported in the Montana Rest Area Plan. 2016 supply based on striping observed from Google Earth 2016 aerial imagery. Actual parking demand may vary from calculated demand due to variance in multiple input values.

According to the calculations, the Anaconda and Bearmouth Safety Rest Areas supply adequate passenger vehicle parking, but have a deficiency ranging from 13 to 36 oversized vehicle parking spots during peak usage periods.

2.2 Water Rights & Water Systems

Water Rights

The Gold Creek Safety Rest Area has one well associated with each of the eastbound and westbound sites to provide potable and irrigation water to the facilities. The water right for the eastbound well was recently submitted (July 2017) with the Montana Department of Natural Resources and Conservation (DNRC), although it was not recorded in the online database at the time this report was written. It is assumed that the existing well is part of the original water system. If the existing well is proposed for future use, it is recommended that an updated well log be created.

As listed in Table 3, the westbound water right provides for 22.0 gallons per minute (gpm) and 9.94 acre-feet per year (ac-ft/yr) from May 1 to October 31. The DNRC defines the total volume for small groundwater development use as 10 ac-ft/yr. It is recommended that the Gold Creek westbound water right be updated to reflect a pumping rate resulting in the maximum of 10 ac-ft/yr. Well log reports and the westbound water right are provided in Appendix C.

Table 3: Water Right at Gold Creek Safety Rest Area

Water Right Number	Owner	Quantity	Timeframe
76G-111728-00 (Westbound)	Montana Department of Transportation	22.0 gpm/ 9.94 ac-ft/yr	May 1 - October 31

Source: DNRC 2017. Note: Water right for eastbound safety rest area was not recorded in the DNRC database at the time of this report.

Water Supply and Well Data

The Gold Creek sites are considered transient/non-community facilities under the Montana Department of Environmental Quality (DEQ) public water system classification, meaning they serve 25 or more persons per day but do not regularly serve the same persons for at least six months a year. Montana regulations require transient non-community water supplies to monitor for microbiological quality and for nitrates and nitrites.

The eastbound well has a static water level of four to five feet below the surface. The total eastbound well depth is not listed on the well log. No additional information is available for the eastbound well.

The current water supply for the westbound onsite well was first drilled on June 22, 1983. A second replacement well was drilled March 28, 2000. The replacement well produces 40 gpm at a pumping water level of 18 feet. The total westbound well depth is 240 feet, and the static water level in the westbound well is approximately six feet below the ground level.

Based on existing well logs, depth to seasonal high groundwater is estimated to range from four to six feet. The logs indicate that groundwater is located in sandy gravels that dominate the upper 26 feet of the wells. Based on the information presented in the well logs, potable water is located in an unconfined aquifer formation.

Overall the eastbound and westbound wells are in good condition and could continue to be used for irrigation purposes without major modifications. If MDT were to perpetuate these wells for public use, DEQ may require an updated water supply plan and additional treatment based on possible surface/groundwater connection. This assessment is based on the measured static water levels in the onsite wells and the presence of sandy gravel alluvium in the first 25 feet of each well.

2.3 Public Wastewater Systems

The Gold Creek Safety Rest Area sites each utilize a typical septic and drainfield system for wastewater treatment processes. The existing eastbound site has a standard pressure dose system and the westbound site has a conventional-type, gravity-fed treatment system.

The eastbound site utilizes a septic tank that transports the effluent to a lift station which doses a standard pressurized drainfield. The eastbound tank was full at the time of pumping on April 18, 2017, and half to three-quarters full at the time of the site visit on April 19, 2017. It was observed at the site visit that groundwater infiltrates into the collection lines. The 1973 as-built drawings indicate collection lines are a clay type that commonly degrade over time and become a source of infiltration. Additionally, pumping photographs indicate little solid accumulation suggesting dilution from groundwater infiltration.

The lift station portion of the eastbound system consists of two older pumps located in a confined space underground structure. MDT maintenance staff indicated they have had issues

with the lift station in the past. Repairs or maintenance of the pumps require confined space safety entry procedures.

The eastbound drainfield is located southeast of the rest area exit ramp and shows no signs of failure. Additionally, no trees or shrubs encroach on the drainfield that could contribute to future malfunction. Adequate right-of-way is available if future upgrades to the existing drainfield are needed.

The westbound septic tank was full at the time of pumping on April 18, 2017, and empty at the time of the site visit on April 19, 2017. Pumping photographs indicate the presence of solids, confirming that the septic system was probably not pumped at the end of the previous season. The westbound septic tank is in good condition and does not show any groundwater infiltration.

The westbound drainfield is located on the southwestern portion of the site behind the building facility. The drainfield does not show signs of failure and is clear of trees and shrubs.

Appendix D presents drainfield calculations based on current DEQ requirements. If MDT were to perpetuate public wastewater systems at these sites, the following issues must be addressed.

- Calculations indicate the westbound drainfield is not sized adequately to meet current DEQ requirements, as presented in Appendix D. Additionally, effluent levels in the septic tank (prior to pumping) are above the outflow line extending from the septic tank to the drainfield which may indicate a plugged transport line.
- The westbound system would require a new lift station (with lifts and rails to eliminate the current confined space entry concerns) and leak-proof tanks and risers. All risers would be required to be at least two feet above the base flood elevation.
- Federal regulations (23 CFR 650.115(b)) require rest area buildings and related water supply and waste treatment facilities to be located outside the base floodplain, where practicable. Due to the close proximity of the floodplain, a topographical survey and floodplain elevation analysis would be required to determine the actual location of the published floodplain. DEQ requires a 100-foot setback from the 100-year floodplain for any improvements to the drainfield system.
- DEQ non-degradation analysis requires 100-foot setback distances from surface water, four-foot minimum separation between groundwater and the natural ground surface (not including fill), and nitrate levels below the U.S. Environmental Protection Agency threshold of 10 milligrams per liter (mg/L) with treatment. The close proximity to surface water, high groundwater, and typical high nitrate concentrations in rest area wastewater streams may make it difficult to pass DEQ non-degradation analysis standards - should MDT choose to perpetuate existing systems.

2.4 Building Structure

The Gold Creek eastbound and westbound buildings were originally constructed in 1973. In 2017, the estimated remaining service life of the structures is 6 years based on a 50-year design life. Record drawings for the safety rest area structures are provided in Appendix E for reference. The following statements reflect visual observations from the April 2017 site visit.

- The buildings are in sound structural condition. No cracking or separation occurs in either the interior floor or the exposed portion of the exterior foundation stem walls. At the westbound site, cracking is evident along the concrete ramp entering the men's bathroom.
- Exterior siding is in relatively good condition, apart from some observed holes likely caused by woodpeckers or small rodents and an isolated number of loose or splitting siding panels. At the eastbound site, ceramic tile surrounding the water fountain feature is in poor condition with broken and missing sections.
- At each site, the timber framework along the base of the interior plumbing chase is rotting. In some areas, leaking interior plumbing pipe is reinforced with duct tape patching. One section of vent piping is broken or missing at the eastbound site.
- Roofing is in good condition. Observations from inside the buildings indicate no discernable signs of leaks.
- Existing ventilation features are in poor condition due to accumulated dirt, dust, and debris. Odors are not noticeable given that the safety rest area is not currently in operation; however, past documentation and inventories indicate significant odor problems.

2.5 Ramps and Parking Areas

The following section summarizes visual observations of the Interstate 90 entrance/exit ramps and parking areas to identify the general condition of the pavement surface and other associated site features. A copy of the record drawings showing the original construction typical pavement section and alignment profiles for the ramps and parking areas is provided in Appendix E for reference.

Pavement Section

Record drawings indicate the original pavement section of the eastbound and westbound ramps and parking areas consists of the following, for a total thickness of approximately 13.8 inches (1.15 feet):

- 0.20-foot bituminous surface (approximately 2.4 to 2.5 inches);
- 0.20-foot crushed aggregate top surface (approximately 2.4 to 2.5 inches); and
- 0.75-foot crushed aggregate base course (approximately 9.0 inches).

Ramps and parking areas were originally constructed in 1973. As of 2017, the service life of the pavement has been exceeded by 24 years based on a 20-year design life and no known rehabilitation treatments. The Gold Creek Safety Rest Area has operated as a seasonal facility and has not been open year-round for the life of the pavement. However, due to the age of the pavement and no indication of any significant pavement rehabilitation, further investigative testing may be warranted to more accurately assess the existing pavement conditions. Testing could include coring samples to verify depths and materials of the existing pavement section as well as verification of subgrade soils to better evaluate remaining pavement service life.

MDT indicated that a chip seal treatment was applied to the ramps and parking areas in 2008 or 2009. Other than a chip seal treatment, there is no visual evidence of past asphalt pavement overlays or other structural section improvements since paved areas were originally constructed.

Surface Condition

The surface of the pavement is in relatively good condition with signs of some wearing surface aggregate loss and a limited number of transverse cracks. Pavement heaving is evident at the eastbound site along the perimeter of the trailer dump site area due to surfacing tree roots or some other vegetative roots. However, the overall structural integrity of the pavement is not included as a part of this existing conditions assessment.

The original eastbound parking area was constructed with an isolated paved area for a trailer dump site. The paved area still exists, but the sanitary disposal station has been abandoned and the area has been completely paved over. No signs of pavement distress occur in the area of the original disposal station.

MDT provided a pavement review on May 5, 2017, for both the eastbound and westbound sites. The review states that the pavement is in good condition with some aggregate loss in places. MDT estimates rehabilitation may occur in the next few years at a cost of approximately $3.00/square yard (SY) for chip sealing and $5.00/SY for microsurfacing (for a combined total ranging from $75,000 to $125,000). A limited number of cracks would need to be sealed before rehabilitation occurs.

Drainage Patterns

Ponding water and poor drainage can have a negative impact on pavement conditions. Pavement exposed to ponding water deteriorates at a faster rate and becomes brittle. As a result, small fractures occur in the surface and become vulnerable to repeated exposure to moisture, debris, and vehicle forces. As the deterioration worsens, larger cracks appear and allow the foundation to become susceptible to the damaging effects of water as well. The following section summarizes visual observations of general drainage patterns for the ramps and parking areas.

Record drawings indicate the eastbound parking area has positive longitudinal grade for the length of the site, which is consistent with observations during the site visit. Based on review of record drawings and visual observation, the eastbound parking area has an adequate pavement surface drainage pattern. The curb cut openings along the car parking area show some signs of minor ponding and debris buildup. Eastbound ramps have positive cross slopes that also allow for adequate pavement surface drainage.

Based on review of record drawings and visual observation, the westbound parking area lacks adequate pavement surface drainage. The pavement along the northern portion of the parking area shows signs of standing water with a few areas of localized pavement cracking. There is approximately 940 lineal feet of concrete pin-down curb along the northern perimeter of the

parking area that may be inhibiting surface water from draining off the adjacent pavement area into the drainage ditch immediately to the north. This visual observation is consistent with the review of record drawings that show the longitudinal grade of the WB parking area as flat (0.00% grade) and at a low point in the profile between two adjacent vertical curves. Additionally, there are signs of standing water and large amounts of sediment buildup along the gutter flowline at the southwest corner of the westbound car parking area. The lack of parking lot gradient, small curb cut opening, and sediment buildup along the outlet of the curb cut are contributing factors to the lack of adequate pavement drainage at this location. MDT maintenance personnel confirmed that ponding does occur at these locations. The westbound ramps have positive cross slopes that allow for adequate pavement surface drainage.

Curbing

The pin-down curb located along the northern edge of the westbound parking area and extending along portions of the ramps is in very poor condition with exposed ends of rusted rebar in numerous locations. Approximately 330 lineal feet of concrete pin-down curb occurs along the western perimeter of the old trailer dump area at the eastbound parking area. This pin-down curb is also in poor condition with exposed ends of rusted rebar in numerous locations.

Striping

The widths of two measured truck parking stalls are approximately 13 feet at the eastbound site. This is less than the standard 15-foot width per the MDT Traffic Manual. Of the two car parking stalls measured in the field, widths range from 9 feet to 10 feet. Americans with Disabilities Act (ADA) parking requirements are addressed separately in Section 2.7.

At the westbound site, the widths of two measured truck parking stalls are approximately 10 feet. This is less than the standard 15-foot width per the MDT Traffic Manual. Of the two car parking stalls measured in the field, widths both meet the standard 10-foot width.

Signage

Ramp and parking area signage range from good to fair condition. At both sites, the “Wrong Way” and “Do Not Enter” signs were recently installed in 2014. The majority of the other road signs along the sites were installed in 1995. They are generally in good condition but starting to show some signs of wear. The eastbound “Pet Area” sign has been vandalized.

Ramp Slope

The Interstate 90 eastbound entrance ramp gore area may have grade breaks in excess of the maximum values outlined in MDT design guidelines. The eastbound Interstate 90 mainline and the entrance ramp converge at a point where the horizontal curves arc in opposing directions. This type of geometric layout tends to create cross slope rollover challenges since the superelevation cross slopes for the mainline and the ramp are acting in opposite directions from each other in this critical transition zone. Cross slope rollover criteria states that the algebraic difference between the transverse slope of the Interstate 90 mainline and the transverse slope of the ramp lane and/or gore should not exceed the following maximum values:

- Up to the physical nose: The cross slope rollover should not exceed a range of 4% to 5%.
- From physical nose to gore nose: The cross slope rollover should not exceed 8%.

Similar conditions do not occur at the westbound ramp. Additional assessment of eastbound ramp slope may be warranted should MDT choose to maintain the sites as truck parking areas. This assessment did not collect existing cross slope measurements for either the Interstate 90 mainline or the entrance ramps.

2.6 Site Amenities

The following section summarizes general condition of exterior site amenities. Record drawings showing the original construction of the picnic shelters, exhibit cases, and picnic tables are provided in Appendix E for reference.

Picnic Areas

Picnic facilities at both sites include roofed picnic shelters containing table/bench units with concrete bases and wood plank tops and bench seats served by adjacent concrete walkways. Additionally, a number of freestanding concrete table/bench units are located on concrete slabs within landscaped areas not adjacent to paved walkways.

Concrete picnic tables are generally in sound structural condition. The concrete table and bench supports do not show evidence of significant cracking. The wood plank table tops and bench seats are bolted down to the concrete slabs, and the connections are in good condition. The paint on the majority of the wood planks is showing significant signs of chipping and peeling.

Shelter roofs show signs of damage, decking is dried out and cracking, and fallen tree branches are common. Picnic shelters are in sound structural condition; however, some of the base plate and side plate roof post connections are rusty and dried out. Shelters are constructed on four-inch concrete slabs with two-foot square by three-foot deep footings for the roof posts. Some cracking occurs in the concrete slabs (occurring more frequently at the eastbound site), with rusted rebar exposed in one slab at the eastbound site.

Informational Signage

Signage is in poor condition in some cases, including informational kiosks and historical site markers. These features exhibit chipping/peeling paint, faded/worn marker text, damaged display cases, and rusting post connections.

The rock/stone bases for the “First Discovery of Gold in Montana” historical markers are also in poor condition. The base at the eastbound site is starting to break apart and showing signs of major deterioration. The paint is faded and some parts of the sign are not legible.

Pet Areas

Both the eastbound and westbound sites have two unfenced pet areas designated by signage. Pet areas are generally located along the ramps, within drainage swales, and adjacent to

wetlands. Moving pet areas to new locations may be warranted should MDT choose to maintain the sites as truck parking areas. New pet area locations may allow the opportunity to provide a greater buffer between the pet area sites, traffic movements, and environmentally sensitive areas.

Benches

Both sites provide freestanding benches not associated with picnic areas. The metal supports and connections of the wooden benches generally are in sound structural condition. However, horizontal timber slats are faded and the paint is chipping and peeling. Several of the wood slats are split and heavily splintered and in need of replacement.

Light Fixtures

Exterior pole-mounted light fixtures are the original mercury vapor luminaires on either 20-foot or 30-foot poles. The 30-foot high poles are generally located along the edges of the parking area; poles and luminaires are in good condition. The operational condition of the lights is not included as part of this existing conditions assessment.

2.7 Accessibility

The following section summarizes exterior feature compliance with ADA and associated implementing guidelines and standards. Accessibility of building facilities is not included, as these are anticipated to be demolished under both action alternatives considered for this study. Appendix F includes measurements and mapping showing measurement locations.

Pedestrian Ramps

Eastbound and westbound sites each have a single pedestrian ramp transitioning from the parking area to pedestrian access routes leading to site facilities. Field observations identified the following issues.

- The eastbound ramp cross slope and landing cross slope exceed acceptable limits, and the ramp does not have a detectable warning device.
- The westbound pedestrian ramp transition is not flush with the parking area surface and does not have a detectable warning device.

Accessible Parking Spaces

Section 208.2 of the 2010 ADA Standards requires at least one accessible parking space for parking areas providing up to 25 total parking spaces. For every six or fraction of six accessible parking spaces, at least one must be a van parking space. Field observations identified the following characteristics.

- The eastbound parking area has 20 total passenger vehicle spaces and two accessible spaces, in compliance with requirements noted above. One parking space fails to provide an international symbol of accessibility parking sign. Similar to

the westbound site, this site lacks a van-accessible parking space with accompanying signage and adjacent access aisle.

- The westbound parking area has 19 total passenger vehicle spaces and one accessible space, in compliance with requirements noted above. However, the accessible parking space is not van accessible, is not signed for van accessibility, and does not provide an adjacent access aisle.

Picnic Areas

Both eastbound and westbound sites provide two picnic shelters each containing four concrete table/bench units with adjacent pedestrian access routes. Additional picnic table/bench units located in vegetated areas not served by pedestrian access routes are not accessible and are not included in this assessment.

According to the final rule on outdoor developed areas (36 CFR part 1191, Appendix C, Section F245), for sites providing more than two picnic areas, 20 percent (and not less than two) must be accessible. None of the picnic areas are accessible because picnic shelters fail to provide adequate clear space on all usable sides of the table and picnic tables are slightly lower than the required table height and do not provide a wheelchair space with knee and toe clearance.

Benches

Multiple freestanding benches constructed with metal cylindrical legs and wooden slat seats are provided at both sites. These features are not compliant with requirements outlined in the 2010 ADA Standards for the following reasons.

- Eastbound benches fail to provide any back support.
- Westbound benches fail to meet requirements for seat depth, seat height, and back support dimensions.

Pedestrian Access Routes

Concrete sidewalks traverse the eastbound and westbound sites providing access to building facilities and picnic areas. Concrete walkways are spalling in some locations and significant heaving and uplifting occurs along numerous stretches of walkways creating vertical discontinuities and trip hazards at both the eastbound and westbound sites.

Measurements reflect the most direct access route to the building pad and picnic shelters at approximately 20-foot intervals. The assessment included the following.

- Of the 25 access route measurements collected at the eastbound site, seven are noncompliant due to excessive cross slope, vertical discontinuities, and insufficient clear width due to overgrown vegetation.
- Of the 13 access route measurements collected at the westbound site, four are noncompliant due to trip hazards and excessive cross slopes.
- At both sites, MDT has employed patching and grinding to remove vertical surface discontinuities, resulting in compliant surfaces in these locations.

2.8 Safety Rest Area Maintenance

MDT Maintenance staff indicated that the majority of historical maintenance efforts have been related to preparation work for seasonal opening. Pre-season maintenance efforts have typically included painting, tree trimming, cleaning roof gutters, septic tank pumping, and overall site cleanup to address fallen tree limbs, animal waste, and garbage.

Maintenance efforts have also addressed occasional malfunctioning of the eastbound wastewater lift station and drainage issues in the westbound parking area. Since the Gold Creek Safety Rest Area has historically served as a seasonal site, snow plowing and removal has not been a major component of maintenance efforts.

2.9 Environmental Conditions

The following sections summarize existing environmental resources information within the study area gathered from April to May 2017 from previously published documents, websites, GIS data, and field site visit. The following environmental resources may pose potential constraints for future reduction in service or site closure.

- **Physical Resources**: Soil Resources and Prime Farmland, Geologic Resources, Surface Waters, Total Maximum Daily Loads, Wild and Scenic Rivers, Wetlands, Irrigation, Floodplains and Floodways, Air Quality, Hazardous Substances
- **Biological Resources**: Vegetation, Noxious Weeds, General Wildlife Species, Threatened and Endangered Species, Species of Concern, and Special Status Species
- **Social and Cultural Resources**: Demographics, Economic Conditions, Land Use, Recreational Resources, Cultural Resources, Noise, Visual Resources

Appendices G through M provide supporting environmental data.

Physical Resources

Soil Resources and Prime Farmland

The Natural Resources Conservation Service (NRCS) soil survey (MT644) for Powell County indicates the vast majority of both sites include soils comprised primarily of alluvium material. Most of these soils are not designated as prime farmland or farmland of statewide importance; however, a very small portion of soils just north of the westbound off-ramp is designated as prime farmland. This portion is part of MDT right-of-way and is not currently farmed.

Geologic Resources

Montana geological maps show surficial sedimentary deposits (Qs) make up both sites. These deposits include alluvium, fan, and terrace gravels; gravel deposits on pediment surfaces; landslide and travertine deposits (Pleistocene and Holocene); and till, glacial lake, and outwash deposits (Pleistocene). Surficial soils consist of silt, clay, sand, and gravel associated with the alluvium formation.

According to Montana Bureau of Mines and Geology mapping, no faults are mapped within or near the two sites. The sites are located within a Seismic Hazard Zone that is prone to strong ground motion; however, very few earthquakes have been documented in the area.

Surface Waters

Two surface waters occur in proximity to the two sites. The Clark Fork River is located directly adjacent to the eastbound site limits. The Clark Fork River is a large, perennial river and considered a jurisdictional water under the Clean Water Act (i.e., within the U.S. Army Corps of Engineers regulatory jurisdiction).

At the westbound site, Carten Creek, which flows north to south toward the Clark Fork River, has been realigned into two separate channels along the northern limits of the site. One channel flows east along the safety rest area northern limits before it is diverted into a man-made ditch for field irrigation east of the rest area. The second ditch flows west along the safety rest area northern limits and discharges into a pond west of the safety rest area. Both ditches eventually discharge water back into the Clark Fork River. Given the connection to the Clark Fork River, Carten Creek is a potentially jurisdictional water under the Clean Water Act.

Total Maximum Daily Loads (TMDL)

The eastbound and westbound sites are located within the Upper Clark Fork Watershed (hydrologic unit code (HUC) 17010201) and within the Clark Fork River TMDL Planning Area. DEQ lists the Clark Fork in this area as impaired and not fully supporting for drinking water, primary contact recreation, and aquatic life. Causes of impairment include alterations in stream-side or littoral vegetative cover, arsenic, cadmium, copper, iron, lead, low-flow alterations, mercury, nitrogen, phosphorus, substrate habitat alterations, and sedimentation/siltation. TMDLs have been completed for all impairments except those related to stream and habitat alterations.

Wild and Scenic Rivers

The National Wild and Scenic Rivers System was created by Congress in 1968 to preserve certain rivers with outstanding natural, cultural, and recreational values in a free-flowing condition for the enjoyment of present and future generations. There are no wild or scenic rivers within or adjacent to the eastbound or westbound sites. The closest wild and scenic river is the Flathead River, approximately 75 miles north of the westbound site.

Wetlands

Large shrub-scrub/forested wetland complexes occur at both the eastbound and westbound sites. The wetland complexes at both sites are primarily comprised of willow (*Salix* sp.), sedge (*Carex* sp.), and black cottonwood (*Populus balsamifera*), and generally surround the building structures and parking lots at both sites. Hydrology likely comes from a high water table at both the eastbound and westbound sites. The assessment did not include a wetland delineation or hydric soil/wetland boundary determination.

U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) mapping shows no wetland designations at the eastbound site. At the westbound site, freshwater forested/shrub

wetland and freshwater emergent wetland are designated just north of the parking area. Montana Natural Heritage Program (MTNHP) mapping includes forested and shrub/scrub riparian vegetation at both locations.

Irrigation

No irrigation ditches or canals occur at either site. Carten Creek flows along the northern limits of the westbound site and is eventually diverted into a man-made irrigation ditch just east of the site. This ditch provides stock water and flood irrigation for the field directly east of the site.

Floodplains and Floodways

Federal Emergency Management Agency (FEMA) issued flood insurance rate map (FIRM) 3000591125B indicates one floodplain zone, (Zone A), along the Clark Fork River. Zone A is defined as the 100-Year Flood event, with no base flood elevations determined. The FEMA FIRM map indicates a small portion of the eastbound site directly adjacent to the Clark Fork River is within the floodplain; however, most of the site (including the parking area and building structures) is just outside of the floodplain at a slightly higher elevation. Interstate 90 acts as a flood barrier near the westbound site, completely removing it from the floodplain.

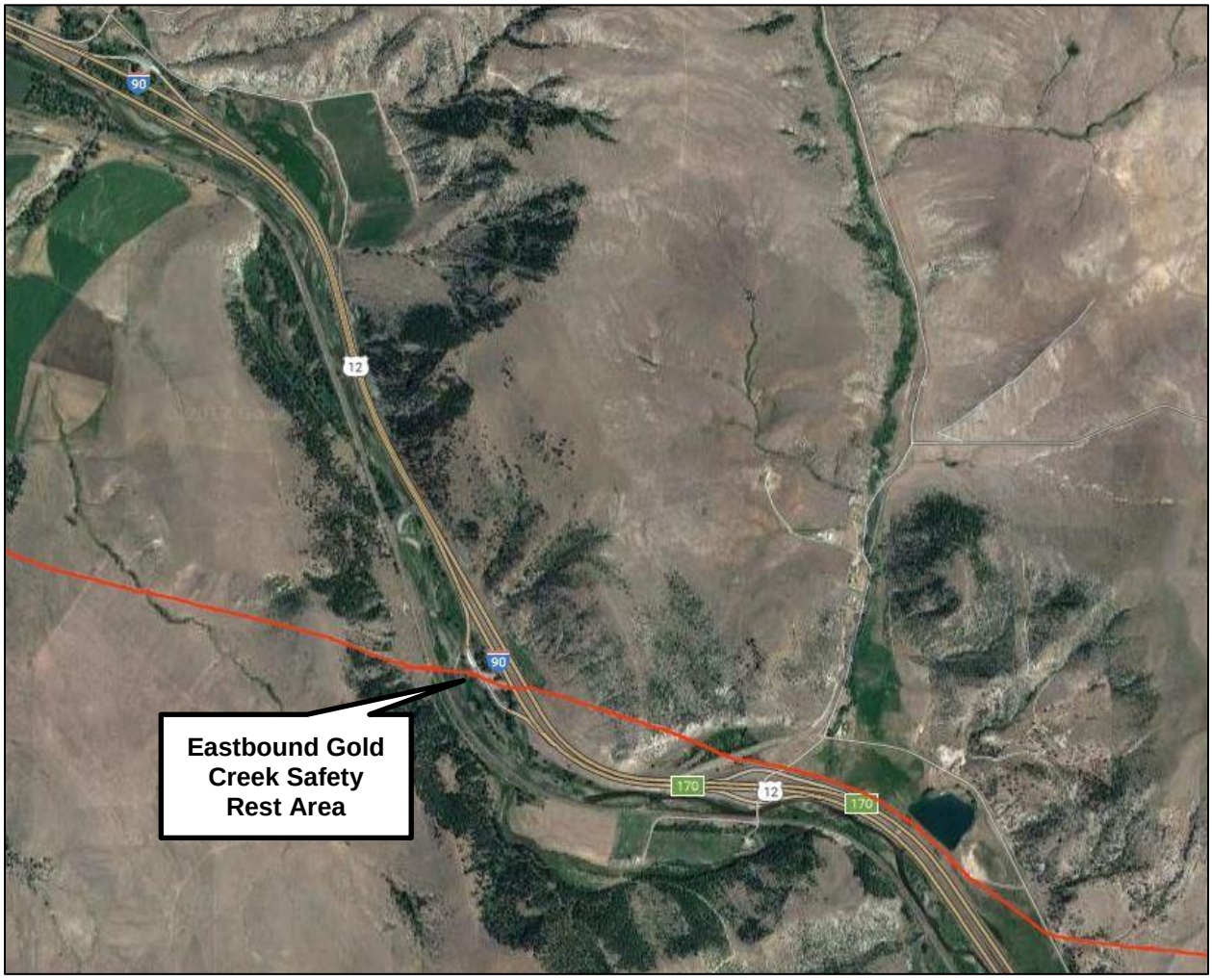
Air Quality

The U.S. Environmental Protection Agency (EPA) has established National Ambient Air Quality Standards (NAAQS) for six criteria pollutants, including carbon monoxide, nitrogen dioxide, ozone, particulate matter (PM10 and PM2.5), sulfur dioxide, and lead. The EPA designates communities that do not meet NAAQS as “non-attainment areas.” The eastbound and westbound sites are not located in a non-attainment area for any criteria pollutants. Additionally, there are no nearby non-attainment areas.

Hazardous Substances

Based on available DEQ information, there are no underground storage tank (UST) sites, petroleum release fund claims, hazardous waste handler sites, abandoned or inactive mine sites, or open cut permits within or directly adjacent to the two sites. The National Pipeline Mapping System shows one pipeline designated as a hazardous liquid pipeline crossing the eastbound site from east to west. The pipeline is designated as part of the Yellowstone Pipeline and is owned by Phillips 66 (Figure 3).

Figure 3: Phillips 66 Yellowstone Pipeline



Source: National Pipeline Mapping System 2017; https://www.npms.phmsa.dot.gov/.

The eastbound site is located directly adjacent to the Clark Fork River Operable Unit (CFR OU). The CFR OU is part of the Milltown Reservoir/Clark Fork River Superfund Site and includes the Clark Fork River from its headwaters near Warm Springs Creek to the decommissioned Milltown Reservoir, just east of Missoula. The primary sources of contamination are tailings mixed with soil in the streambanks and historic floodplain. Contamination includes heavy metals (cadmium, copper, zinc, and lead) and arsenic. If MDT pursues closure or reduction of service at this site, soils testing may be required to determine if contaminated soils are located within the MDT right-of-way. If testing results indicate contamination, contractors will need to follow safe handling procedures and identify appropriate disposal methods if contaminated soil (or soil residue) is encountered.

The hazardous materials assessment collected and tested building and picnic shelter samples at both sites to determine the presence of asbestos-containing materials. Testing used polarized light microscopic (PLM) techniques with dispersion staining for identification of mineral forms of

asbestos. Of the 28 representative samples collected on May 8 and May 14, 2017, no materials contain asbestos quantities.

The assessment also inspected painted and glazed surfaces for the presence of lead-containing materials using an x-ray fluorescence spectrum analyzer. Results indicate multiple surfaces meet or exceed the federal threshold level of 1.0 milligram per square centimeter (mg/cm^2). Specifically, surfaces testing positive for lead at both the eastbound and westbound sites include white ceramic tiles and white painted ceilings located in the interior of the men's and women's restrooms. Samples do not represent every positive surface or location.

Biological Resources

Vegetation

The Gold Creek Safety Rest Area is located within the Deer Lodge-Philipsburg-Avon Grassy Intermontane Hills and Valleys ecoregion of the Middle Rockies. This ecoregion is composed of stream terraces, foothills, and floodplains. Vegetation within this ecoregion is mapped as foothills prairie, with corridors of riparian vegetation found along the Clark Fork River and its tributaries.

Both sites are located within the Clark Fork River corridor. MTNHP mapping shows both are located on land cover designated as Human Land Use – Developed – Interstate. Land cover designations adjacent to the site include:

- Open Water/Wetland and Riparian Systems – Wet Meadow – Alpine Montane Wet Meadow;
- Grassland Systems – Montane Grassland – Rocky Mountain Lower Montane, Foothill, and Valley Grassland;
- Shrubland, Steppe, and Savanna Systems – Sagebrush Steppe – Montana Sagebrush Steppe; and
- Human Land Use – Agriculture – Cultivated Crops.

Observed plant species at both sites include several mature black cottonwoods (*Populus balsamifera*) and numerous cottonwood saplings, smooth brome (*Bromus inermis*), a number of willow species (*Salix* sp.), crested wheatgrass (*Agropyron cristatum*), common dandelion (*Taraxacum officinale*), sedge species (*Carex* sp.), red osier dogwood (*Cornus sericea*), common yarrow (*Achillea millefolium*), mullein (*Verbascum thapsus*), Rocky Mountain juniper (*Juniperus scopulorum*), mountain ash (*Sorbus aucuparia*), water birch (*Betula occidentalis*), and ponderosa pine (*Pinus ponderosa*). Vegetation directly surrounding the building structures includes landscape grasses and some ornamental plants.

Noxious Weeds

The Powell County Vegetation Management Plan 2016-2018 lists spotted knapweed (*Centaurea stoebe or maculosa*), leafy spurge (*Euphorbia esula*), houndstongue (*Cynoglossum officinale*), yellow toadflax (*Linaria vulgaris*), Canada thistle (*Cirsium arvense*), and sulfur cinquefoil (*Potentilla recta*) as the most abundant noxious weed species in the county. Table 4 indicates noxious weeds identified during the site visit.

Table 4: Noxious Weeds Found within the Study Area Vicinity

Common Name	Scientific Name	Montana Priority[1]
Canada thistle	*Cirsium arvense*	2B
Cheatgrass	*Bromus tectorum*	3
Houndstongue	*Cynoglossum officinale*	2B
Spotted knapweed	*Centaurea stoebe or maculosa*	2B

Source: DOWL 2017; Montana Noxious Weed Management Plan, Montana Department of Agriculture 2017.
[1]Priority 2B: Weeds are abundant in Montana and widespread in many counties. Management criteria will require eradication or containment where less abundant. Priority 3: These plants are not noxious weeds but have the potential to have significant negative impacts.

General Wildlife Species

Mammals

The Clark Fork River is an important wildlife corridor for mammals. The abundant forested and shrub/scrub riparian and wetland vegetation found within both sites provides suitable habitat for a number of mammal species moving up and down the river corridor. According to the MTNHP database, mammal species include but are not limited to white-tailed deer (*Odocoileus virginianus*), mule deer (*Odocoileus hemionus*), raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), porcupine (*Erethizon dorsatum*), bobcat (*Lynx rufus*), beaver (*Castor Canadensis*), muskrat (*Ondatra zibethicus*), coyote (*Canis latrans*), northern river otter (*Lontra Canadensis*), and meadow vole (*Microtus pennsylvanicus*) are known to occur in the general area. MDT Missoula District Maintenance staff also noted the presence of black bears (*Ursus americanus)* at the sites.

Amphibians and Reptiles

Amphibian species known to occur within the study area and vicinity include but are not limited to the Columbia spotted frog (*Rana luteiventris*) and the long-toed salamander (*Ambystoma macrodactylum*). Reptile species, such as common garter snake (*Thamnophis sirtalis*) and gopher snake (*Pituophis catenifer*), are likely to occur at both sites; however, no occurrences are documented on the MTNHP database.

Birds

Large riparian and wetland complexes at both sites include mature cottonwood trees and various shrub species that provide abundant suitable nesting habitat for bird species. Site visit observations included several small nests at both sites. More than 110 species of birds are documented with the potential to occur within the sites. These species include representative songbirds, birds of prey, waterfowl, owls, and shorebirds.

Fisheries

The closest surface water that supports fisheries is the Clark Fork River, approximately 0.04 miles south of the eastbound site. According to Montana Fish, Wildlife, and Parks (FWP) Montana Fisheries Information System (MFISH) database, the stretch of river near the site supports a number of fish species including brown trout (*Salmo trutta*), largescale sucker (*Catostomus macrocheilus*), longnose dace (*Rhinichthys cataractae*), longnose sucker

(*Catostomus catostomus*), mountain whitefish (*Prosopium williamsoni*), slimy sculpin (*Cottus cognatus*), and rainbow trout (*Oncorhynchus mykiss*). Less common and rare species include westslope cutthroat trout (*Oncorhynchus clarkii lewisi*) and bull trout (*Salvelinus confluentus*). The ephemeral Carten Creek found near the westbound site, flows into a man-made irrigation ditch and is not considered suitable habitat for aquatic species.

Threatened and Endangered Species

USFWS Information for Planning and Consultation (IPaC) lists four threatened species and one potentially threatened species as potentially occurring within the vicinity of the eastbound and westbound sites. These species include yellow-billed cuckoo (*Coccyzus americanus*), bull trout (*Salvelinus confluentus*), Canada lynx (*Lynx canadensis*), grizzly bear (*Ursus arctos horribilis*), and North American wolverine (*Gulo gulo luscus*). In addition, the Clark Fork River is designated critical habitat for bull trout.

MTNHP shows Canada lynx and bull trout as potentially occurring within the vicinity of the Gold Creek Safety Rest Area, likely due to designated critical habitat in the vicinity. However, suitable habitat for these species is not found within the rest area limits. Given the large cottonwood stands within and adjacent to both sites, there is potential for yellow-billed cuckoo to occur in or pass through the area. In addition, because both locations are found within the riparian zone along the Clark Fork River, there is potential for grizzly bear to migrate through the area.

Species of Concern and Special Status Species

Nine Montana species of concern/special status species are documented within the vicinity of the eastbound and westbound sites. These species include fisher (*Pekania pennant*), fringed myotis (*Myotis thysanodes*), hoary bat (*Lasiurus cinereus*), bald eagle (*Haliaeetus leucocephalus*), bobolink (*Dolichonyx oryzivorus*), golden eagle (*Aquila chrysaetos*), great blue heron (*Ardea Herodias*), long-billed curlew (*Numenius americanus*), and westslope cutthroat trout (*Oncorhynchus clarkii lewisi*).

Given the habitat found within both site limits (riparian and wetland forest and shrub/scrub), species such as fringed myotis and hoary bat may have the potential to occur within the study area, likely foraging.

Bald eagles are protected under the Bald and Golden Eagle Protection Act. Site visit observations included one active bald eagle nest (confirmed when a bald eagle carried fish to the nest) approximately 0.4 mile southeast of the eastbound parking lot. The Montana FWP Bald Eagle Nest Database also recorded a nest at the same location. Site visit observations do not include any bald eagle nests at the westbound site, and the FWP database shows no recorded nests in the vicinity of this site.

According to the Montana Sage Grouse Habitat Conservation Map, neither site is located within sage grouse core habitat, connectivity habitat, or general habitat.

Social and Cultural Resources

Demographics

According to U.S. Census Bureau population estimates, Powell County has seen a slight population decline in the last six years from 7,027 in 2010 to 6,858 in 2016. Montana Department of Commerce 2060 population projections show the population in Powell County continuing to decline to 6,344 by 2060.

This analysis does not assess the presence of Environmental Justice populations because any options proposed for the Gold Creek Safety Rest Area would have no new effects on the adjacent surrounding area.

Economic Conditions

The Powell County economic base includes construction, accommodation and food services, health care, retail trade and agriculture. According to the U.S. Census Bureau, in 2015 Powell County had a very low unemployment rate of 2.2% compared to Montana's unemployment rate of 6.2%.

Land Use

Property maps for Powell County show land surrounding both sites as privately owned. No lands under federal or state jurisdiction, other than the Clark Fork River, were identified within the direct vicinity. Land use is primarily agriculture, with some commercial and residential uses. The Montana Rail Link railroad parallels the eastbound site on the south side of the Clark Fork River.

Recreational Resources

The only identified recreational resource within the immediate vicinity of the sites is the Clark Fork River. There are no other state or federal public lands, public parks, or recreational fields, within or immediately surrounding either site. Recreation use of the Clark Fork River includes fishing, boating, swimming, and wildlife viewing. A gate at the eastbound site provides access to the river; however, river access at this location is across private land and there is no signage at the gate indicating public river access.

No properties using National Land and Water Conservation Fund Act (LWCFA) Section 6(f) grants are located within or adjacent to the eastbound and westbound sites.

Cultural Resources

Given that all potential alternatives are expected to remain within the previously-disturbed sites, a cultural resources investigation is not warranted. The structures associated with both sites were built in 1973 and are less than 50 years old.

Noise

The closest noise-sensitive receptor is a residence approximately 0.24 mile northwest of the westbound site. No other noise-sensitive receptors are within 0.25 mile of either site.

Visual Resources
Immediate views at both sites include the paved parking area and building structures surrounded by a forest and shrub/scrub wetland and riparian complex. Views of Interstate 90 are also directly visible from both sites. At the eastbound site, adjacent views of the Clark Fork River, the Montana Rail Link, agricultural fields, and conifer-covered hillslopes are also seen. Views adjacent to the westbound site include agricultural fields and conifer/grass covered hillslopes.

3.0 Public and Stakeholder Involvement

MDT invited stakeholders and members of the public to participate in the planning process by providing input on stopping opportunities in the study area. Specific outreach methods are described in the following sections. Additional information is provided in Appendix N.

3.1 Study Website and Study Posters

MDT hosted a website at http://www.mdt.mt.gov/pubinvolve/goldcreek/ to provide information about the safety rest area study. The website provided information about how to submit comments, study contacts, a list of frequently asked questions (FAQs), and the study schedule. Related links provided access to the *Montana Rest Area Plan* and the online Montana Rest Area Map. The website also provided draft documents for public review and comment.

At the beginning of the study period and during the public review period, MDT placed posters in locations throughout the study area. Posters illustrated the rest area study location, explained the study focus, and provided links to the study website and comment form. Posters locations are listed in Table 5.

Table 5: Public Review Poster Locations

Locations	
• Avon Family Café • Garrison Junction General Store • Drummond Town Pump • Bearmouth Rest Area (EB and WB) • Anaconda Rest Area	• Bonner Travel Plaza • Powell County Courthouse • Granite County Courthouse • Rocker Truck Stop/Town Pump • Haugan Weigh Station

3.2 Team Meetings

MDT subject matter experts met regularly during the study to discuss progress, methods, results, draft documents, public input, and other issues or concerns. The study team served in an advisory capacity and reviewed study documentation before publication. A full list of team members may be found in the acknowledgments section of this report. Meeting minutes are included in Appendix N.

3.3 Survey Summaries

The study team reviewed responses from the Anaconda, Bearmouth, and 2015 Biennial surveys to identify information about user perceptions of rest area facilities within the study vicinity and

statewide. Key findings relating to the Gold Creek Safety Rest Area study are summarized below. Additional survey information is provided in Appendix N.

Anaconda and Bearmouth Surveys

- During a period when the Gold Creek Safety Rest Area was closed, nearly 76% of Bearmouth Safety Rest Area patrons were satisfied with rest area spacing on the I-90 segment within the Gold Creek study area. This supports MDT's consideration of reduction in service at the Gold Creek Safety Rest Area.
- Restroom use and stretching/walking were patrons' primary purposes for stopping at the Anaconda and Bearmouth Safety Rest Areas. Assuming similar needs at the Gold Creek Safety Rest Area, these purposes could be accommodated by providing a truck parking area.

2015 Biennial Stakeholder and Public Survey

- Half of survey respondents indicated a need for additional facilities, equipment, or services at statewide rest areas.
- Improving rest areas received an average priority ranking, which was lower relative to other improvement options presented in the survey. Rest areas were also ranked third out of seven categories for improvement cuts should funding decline.
- Together, these results suggest public support for maintaining some level of service at the Gold Creek Safety Rest Area, while supporting MDT's consideration of reduction in service.

In conclusion, public and stakeholder survey results support MDT's consideration of a reduction in service at the Gold Creek Safety Rest Area (i.e., conversion from a full-service safety rest area to a truck parking area with a vaulted toilet). Survey results do not support complete closure of the safety rest area.

3.4 Stakeholder Interviews

Team members contacted 20 stakeholder representatives to request input on the study. Of these, representatives from the Motor Carriers of Montana, Granite County Commissioners, and the Powell County Chamber of Commerce participated in interviews in May and June of 2017. Members of the study team asked stakeholder representatives to provide input on stopping opportunities in the study area and opinions on the two alternatives considered for this study (reduction in service to a truck parking area or complete site closure).

Collectively, interview participants expressed:

- an awareness of the safety benefits of truck parking areas;
- support for maintaining a truck parking area at the existing Gold Creek eastbound and westbound sites to perpetuate safe stopping opportunities; and
- rejection of full closure of the Gold Creek facilities.

Additional interview information is provided in Appendix N.

3.5 Written Comments

The study website, newspaper advertisements, a press release, and social media postings on the MDT Facebook page encouraged members of the public to submit comments on the study. Examples of these efforts are included in Appendix N.

A total of 21 written comments were received before, during, and after the review period for the draft study which extended from September 25 to October 25, 2017. A majority of comments (15 of 21) supported a reduction in service over complete closure. These comments noted the need for safe stopping opportunities and truck parking in the current location of the Gold Creek Safety Rest Area sites. Four comments supported complete closure, noting that adequate parking already exists in the area or suggesting MDT add truck parking at the Bearmouth or Anaconda sites. Other comments discussed desired amenities, seasonal travel patterns along the study corridor, and a desire for a full-service safety rest area, which was not an alternative considered for the study. Comments are contained in Appendix N and are organized by the date received.

4.0 Need and Objectives

MDT defined a need to address the existing Gold Creek Safety Rest Area eastbound and westbound sites. The current facilities are temporarily closed to the public pending the outcome of this study.

To optimize Safety Rest Area Program investment strategies, MDT sought an alternative that accomplishes the following objectives.

- Minimizes capital and long-term maintenance costs.
- Leverages federal-aid funding and reduces demands for limited state funding.
- Minimizes impacts to physical, biological, and social/cultural resources which could result in costly and time-consuming mitigation and abatement activities.
- Provides safe stopping opportunities spaced by a maximum of approximately one hour of travel time.
- Accommodates public and stakeholder feedback regarding stopping and parking opportunities.
- Aligns with existing MDT plans, policies, and asset management strategies.
- Adheres to FHWA rules, regulations and guidance regarding the operation, maintenance and abandonment of Rest Area facilities.

5.0 Alternatives

5.1 Alternative Identification

MDT considered two action alternatives to achieve identified objectives for the existing eastbound and westbound Gold Creek Safety Rest Area sites.

Alternative 1: Reduction of Service

In accordance with MDT's *Safety Rest Area – Reduction of Service* memorandum, this alternative would lessen the current functionality of the existing eastbound and westbound Gold Creek Safety Rest Area sites. The reduced service facilities would provide the function and features of a truck parking site.

To reduce capital and long-term maintenance costs, the premise of this alternative is to maintain and/or rehabilitate existing site features only to the degree consistent with similar truck parking facilities across the state and, as required, to meet safety and regulatory requirements (such as ADA requirements). Additional improvements to the eastbound and westbound sites (such as upgraded lighting or other features) could be considered at the time MDT pursues a future project but are not reflected in this study. This alternative includes the following primary elements.

Maintain entrance/exit ramps and parking areas.
Existing pavement would remain in service to provide access to truck parking areas. MDT would remove raised median islands to facilitate winter maintenance and apply a chip seal treatment to the entire surface to preserve/maintain pavement areas.

Remove building facilities and foundations.
MDT would demolish and remove the existing building structures and concrete foundations.

Fill or crush wastewater tanks.
MDT would fill or crush existing underground wastewater tanks to eliminate future risk of collapse.

Cap associated wastewater piping and decommission drainfields.
MDT would cap existing wastewater transport piping approximately five to ten feet from building structures and abandon existing drainfields in place.

Maintain wells for irrigation and cleaning use (not as a public water source).
MDT would maintain existing water wells to serve irrigation and cleaning needs at the sites. MDT would not provide potable water for public use.

Install vaulted toilets.
MDT would install vaulted toilets and new storage tanks, which would require periodic pumping.

Remove picnic areas, pet amenities, and adjacent walkways.
Although existing picnic shelters are structurally sound, MDT does not typically provide picnic and pet amenities at truck parking areas. For consistency with the level of service provided at similar sites across the state, MDT may remove these amenities and adjacent walkways.

Upgrade remaining walkways to meet ADA requirements.
To comply with ADA requirements, MDT would upgrade remaining walkways adjacent to parking areas and vaulted toilets.

Reseed reclaimed areas.
MDT would reclaim and reseed all locations no longer in service (e.g., areas formerly occupied by building structures, picnic shelters, and walkways). Revised record drawings will show all abandoned site features, including piping and drainfield locations.

Alternative 2: Closure

The second alternative would involve complete demolition of the eastbound and westbound building facilities, parking areas, ramps, water/wastewater systems, and site amenities. Under this scenario, the entire site would be reclaimed and reseeded. It is anticipated that some paving work and shoulder shaping would be required to reconstruct asphalt wedges along the outside shoulder of the I-90 mainline where ramp pavement would be removed by saw cutting during the demolition process. Revised record drawings will show all abandoned site features, including piping and drainfield locations.

Alternatives Eliminated from Consideration

MDT determined that the no-action alternative is not viable. Water and wastewater systems have exceeded their service life. Additionally, the water systems at both eastbound and westbound sites are considered poor in terms of capability to meet peak daily demand and backflow prevention. Needed improvements to wastewater systems would be difficult for the reasons outlined in Section 2.3 of this report. Of the rest areas in Montana, the Gold Creek eastbound and westbound sites have the 4th and 5th lowest health index scores, respectively, due to these factors. Additionally, the facilities are not compliant with ADA accessibility requirements and have not been maintained in recent years. A substantial capital investment would be required to address the identified deficiencies.

MDT also determined that rehabilitation of the existing safety rest area is not a viable alternative due to spacing redundancy in the corridor, risks and costs associated with upgrading the water and wastewater systems, and safety rest area program funding constraints.

5.2 Screening

In consideration of MDT's *Safety Rest Area – Reduction of Service* memorandum, the study team identified the following seven screening criteria to evaluate the two action alternatives.

Capital and Maintenance Costs

MDT must weigh initial capital costs associated with demolition and site improvements with long-term maintenance costs associated with perpetuating service at the Gold Creek sites. Appendix O contains spreadsheets detailing anticipated cost items for each alternative and long-term costs inflated over the 2037 planning horizon. Costs are presented in 2017 dollars and represent combined totals for the eastbound and westbound sites.

Alternative 1 (Reduction in Service):

- Initial capital costs would be lower compared to Alternative 2 ($538,000 vs. $610,000).
- Long-term maintenance costs would be higher (at approximately $21,000 annually or $520,000 totaled over 20 years, assuming 2% inflation) compared to Alternative 2.

Alternative 2 (Closure):

- Initial capital costs would be higher compared to Alternative 1 ($610,000 vs $538,000).
- Long-term maintenance costs would be eliminated under this alternative.

Funding Eligibility

Certain MDT activities are typically eligible for federal funding (such as capital improvements to highway infrastructure); whereas others must be funded from state sources (such as maintenance costs). As outlined in the FHWA non-regulatory supplement (NS 23 CFR 752), the cost of safety rest area abandonment is not eligible for federal-aid funding. Accordingly, the closure alternative would be ineligible for federal funding and would need to be entirely supported by state funds. The reduction in service alternative would be eligible for federal funding because it would continue to provide a safe stopping opportunity with parking and vaulted toilet services.

Environmental Risk

MDT desires to avoid or minimize environmental resource impacts resulting from a future project at the Gold Creek sites. Associated mitigation and abatement activities can result in increased costs, schedule delays, and elevated project risk for MDT. Potential risks and associated screening outcomes are discussed below.

Physical Resources

Alternative 1 (Reduction in Service):

- No adverse permanent impacts to prime farmland, geologic resources, surface water, TMDLs, wild and scenic rivers, wetlands, irrigation, floodplains and floodways, and air quality are anticipated.
- Contaminated soils may exist within the MDT right-of-way at the eastbound site. Ground-disturbing activities are necessary at this location and include removal of the building facilities and wastewater infrastructure. Encounters with contaminated soils would likely be minimal. However, contractors will need to follow safe handling procedures and identify appropriate disposal methods if contaminated soil (or soil residue) is encountered.
- The presence of lead-based paint on interior restroom building surfaces would require proper handling and disposal during building demolition.
- The screening outcome is **neutral** (○) due to the limited risk potential of encountering contaminated soils (with all other potential risks equal to Alternative 2).

Alternative 2 (Closure):

- No adverse permanent impacts to prime farmland, geologic resources, surface water, TMDLs, wild and scenic rivers, wetlands, irrigation, floodplains and floodways, and air quality are anticipated.
- Contaminated soils may occur within MDT right-of-way at the eastbound site. Ground-disturbing activities are necessary at this site and include complete demolition of the rest area site – thus resulting in a greater risk of encountering

contaminated soils. Contractors will need to follow safe handling procedures and identify appropriate disposal methods if contaminated soil (or soil residue) is encountered.
- The presence of lead-based paint on interior restroom building surfaces would require proper handling and disposal during building demolition.
- The screening outcome is **negative** (**-**) due to the greater potential for encountering contaminated soils (with all other potential risks equal to Alternative 1).

Biological Resources

Alternative 1 (Reduction in Service):
- No adverse permanent impacts to vegetation, noxious weeds, general wildlife species, threatened and endangered species, species of concern, and special status species are anticipated.
- The screening outcome is **neutral** (○) due to the limited likelihood of noxious weed establishment (with all other potential risks equal to Alternative 2).

Alternative 2 (Closure):
- No adverse permanent impacts to general wildlife species, threatened and endangered species, species of concern, and special status species are anticipated.
- Ground-disturbing activities to the entire site may increase the spread of noxious invasive weeds if native seeding does not establish.
- The screening outcome is **negative** (**-**) due to the greater likelihood of noxious weed establishment (with all other potential risks equal to Alternative 1).

Social and Cultural Resources

Alternative 1 (Reduction in Service):
- No adverse permanent impacts to demographics, economic conditions, land use, recreational resources, cultural resources, noise, or visual resources are anticipated.
- The screening outcome is **neutral** (○) due to limited risks associated with social and cultural resources (equal to Alternative 2).

Alternative 2 (Closure):
- No adverse permanent impacts to demographics, economic conditions, land use, recreational resources, cultural resources, noise, or visual resources are anticipated.
- The screening outcome is **neutral** (○) due to equal risks associated with social and cultural resources (equal to Alternative 1).

Spacing and Corridor Needs

Although the Gold Creek Safety Rest Area is redundant along I-90 due to its proximity to the Bearmouth and Anaconda Safety Rest Areas, the distance between stopping opportunities on other routes within the study area (such as from Helena to Phillipsburg) slightly exceeds MDT's one-hour target.

Alternative 1 (Reduction in Service):

- A truck parking area at Gold Creek would provide additional safe stopping opportunities and positively impact existing facilities in the study area (primarily the Anaconda Rest Area and the Bearmouth Rest Area). Accordingly, the screening outcome is **positive** (✚).

Alternative 2 (Closure):

- Complete closure would reduce parking and stopping opportunities in the study area. During peak usage periods, some parking needs along this portion of the I-90 corridor (Anaconda to Bearmouth) would be unmet. Accordingly, the screening outcome is **negative** (-).

Public/Stakeholder Feedback

This screening criterion considers feedback provided through the MDT 2015 Biennial Survey, stakeholder interviews conducted for this Gold Creek Safety Rest Area study, and public comments provided by mail, email, and telephone.

Alternative 1 (Reduction in Service):

- Public and stakeholder sentiment generally supports maintaining the existing Gold Creek eastbound and westbound sites as truck parking areas to perpetuate MDT's investment and provide safe stopping/parking opportunities in the study area. Accordingly, the screening outcome is **positive** (✚).

Alternative 2 (Closure):

- Public and stakeholder sentiment generally opposes complete closure of the sites. Accordingly, the screening outcome is **negative** (-) screening.

Alignment with MDT Plans

A number of MDT plans provide guidance and outline goals, strategies, and best practices for MDT's safety rest areas.

The *Montana Rest Area Plan* outlines a series of guidelines to aid the Statewide Rest Area Prioritization Plan Committee and MDT Districts in managing rest area infrastructure and making investment decisions. The process for considering reduction of service decisions is further defined in the MDT *Safety Rest Area – Reduction of Service* memorandum.

TranPlanMT, the statewide long-range transportation, recognizes the value that safety rest areas offer in providing safe stopping opportunities for motorists along Montana's highways. TranPlanMT defines a safety strategy to: "Continue improvements to the safety rest area program to provide safe stopping locations for the traveling public."

The *Montana Freight Plan* discusses rest area conditions, trends, performance, and forecasts. Given continued public and freight movement demand for safe, clean, and functional rest and parking areas, the plan outlines MDT's intention to evaluate current and future availability of services to provide safe stopping opportunities where needed.

Alternative 1 (Reduction in Service):

- Alternative 1 would reduce service in accordance with network evaluation guidelines outlined in the *Montana Rest Area Plan* and provide continued investment in safe stopping opportunities as stated in *TranPlanMT* and the *Montana Freight Plan.* Accordingly, the screening outcome is **positive** (✚).

Alternative 2 (Closure):

- Although closure of the Gold Creek Safety Rest Area would follow guidelines outlined in the *Montana Rest Area Plan*, it would not provide continued investment in safe stopping opportunities as stated in *TranPlanMT* and the *Montana Freight Plan*. Accordingly, the screening outcome is **negative** (-).

Additional Requirements

In 1992, FHWA issued a non-regulatory supplement (NS 23 CFR 752) addressing abandonment of Interstate rest areas. It noted the following pertinent points. The full text of the supplement is provided in Appendix P.

- A state may abandon an Interstate rest area provided there is a well-documented evaluation demonstrating that the rest areas to remain are adequate in both number and size to satisfy the needs of the traveling public.
- Recognizing the possibility that, in some instances, the driver or rider in a truck may have need for these facilities, exceptions which would permit rest areas for trucks without handicapped provisions should not be granted.
- The question of whether or not parking areas in rest areas, which lack other facilities, should continue to be available for use is an operational consideration and thus a state decision. The decision should be made on an individual basis depending on the circumstances. Retention could be a safety benefit. On the other hand if activities in these sites are or become nuisances, closure may be the only acceptable solution.
- If it is agreed there is a reasonable expectation that the site will be used for highway purposes at some time in the future, no further action is required. If, however, it is determined the site will never be used for such purposes disposal of the excess property to comply with OMB Circular A-102, Attachment N, Section 3, Real Property, will be necessary.
- A state may be permitted to retain the land on which an abandoned rest area is situated. Any use of an abandoned rest area should not be of a permanent nature so that it could revert to rest area usage if a future need should develop.
- The abandoned, but not disposed of, rest areas should be properly maintained and any activities occurring at the closed rest area, whether lawfully or by trespassers, should not be detrimental to the operation of the Interstate system.

Alternative 1 (Reduction in Service):

- This alternative would not be considered a form of abandonment because it would continue to provide a safe stopping opportunity with parking and vaulted toilet

services. The screening outcome is **positive** (✚) because supplemental evaluation would not be required.

Alternative 2 (Closure):

- This alternative would be considered a form of abandonment because it would eliminate all services. An evaluation would need to be submitted demonstrating adequate remaining safety rest areas within the study area. MDT would need to maintain or dispose of the property as appropriate. The screening outcome is **negative** (-) because supplemental evaluation would be required.

Summary of Screening Results

Table 6 summarizes costs, funding eligibility, and screening outcomes for the two action alternatives.

Table 6: Screening Summary

Screening Criteria			Action Alternative 1 Reduction in Service	Action Alternative 2 Closure
A	Costs	*Capital*	**$538,000**	**$610,000**
		Maintenance	Annual cost of **$21,000** and cumulative cost of **$520,000** through 2037	$0
B	Funding Eligibility	*Federal*	**$538,000** –eligible for federal funding per NS 23 CFR 752	**$0** – not eligible for federal funding per NS 23 CFR 752
		State	Long-term maintenance (annual cost of **$21,000** and cumulative cost of **$520,000** through 2037, assuming 2% inflation)	Demolition/reclamation costs (**$610,000**)
C	Environmental Risk	*Physical Resources*	○ Limited risk potential to encounter contaminated soils (with all other potential risks equal to Alternative 2).	− Greater potential to encounter contaminated soils (with all other potential risks equal to Alternative 1).
		Biological Resources	○ Limited likelihood of noxious weed establishment (with all other potential risks equal to Alternative 2).	− Greater likelihood of noxious weed establishment (with all other potential risks equal to Alternative 1).
		Social/ Cultural Resources	○ Limited risks associated with social and cultural resources (equal to Alternative 2).	○ Limited risks associated with social and cultural resources (equal to Alternative 1).
D	**Spacing and Corridor Needs**		+ Would provide safe stopping opportunities and augment parking facilities in the study area.	− Would reduce parking and stopping opportunities in the study area.
E	**Public/Stakeholder Feedback**		+ Public/stakeholder support for maintaining the existing Gold Creek sites as truck parking areas.	− Public/stakeholder opposition to complete closure of the sites.
F	**Alignment with MDT Plans**		+ Would provide continued investment in safe stopping opportunities.	− Would not provide continued investment in safe stopping opportunities.
G	**Additional Requirements**		+ Supplemental evaluation would not be required.	− Supplemental evaluation would be required.

Notes:

- All costs represent combined totals for the eastbound and westbound sites.
- A ✚ symbol indicates a **positive screening outcome**. The alternative is considered desirable due to:
  - anticipated lack of adverse environmental impacts and lower risk of environmental mitigation/abatement;
  - ability to meet corridor needs;
  - positive public/stakeholder feedback;
  - alignment with MDT plans; and
  - no additional FHWA requirements.
- A ○ symbol indicates a **neutral screening outcome**. The screening criterion does not assist MDT in selecting between the two action alternatives, resulting in no effect on the screening result.
- A - symbol indicates a **negative screening outcome**. The alternative is considered less desirable due to:
  - anticipated adverse environmental impacts and/or higher risk of environmental mitigation/abatement;
  - inability to meet corridor needs;
  - negative public/stakeholder feedback;
  - conflict with MDT plans; and
  - additional FHWA requirements.

6.0 Conclusions and Next Steps

Based on the analysis conducted for this study, Action Alternative 1 (the reduction in service / truck parking option) is the preferred alternative for the following reasons:

- Existing facilities aren't sufficient to address truck parking needs during peak usage periods (summer months) along the I-90 corridor between the Anaconda Rest Area and the Bearmouth Rest Area.
- Alternative 1 (truck parking option) would provide additional stopping opportunities along this corridor – thus positively impacting parking and wastewater treatment demand at the adjacent Anaconda and Bearmouth Rest Areas.
- All Stakeholder groups expressed support for safe stopping / truck parking opportunities at the Gold Creek Rest Area site.
- All Stakeholder groups rejected Alternative 2 (closure option) for the Gold Creek Rest Area site.
- Public comments overwhelmingly supported the reduction of service option (vs. the closure option).
- Capital construction costs for Alternative 1 (truck parking option) are lower than Alternative 2 (closure option) by approximately $70,000.
- Alternative 1 (truck parking option) is eligible for federal-aid and requires no state match.
- Alternative 2 (closure option) must be funded entirely with state funds (isn't federal-aid eligible).
- While maintenance costs are higher for Alternative 1 (truck parking option), the total amount of state funds required to implement Alternative 1 are lower than Alternative 2 (closure option) by $90,000.

- Alternative 2 (closure option) triggers an FHWA requirement that MDT perform a supplemental evaluation to demonstrate adequate safety rest area services will remain after the abandonment of the Gold Creek Rest Area site.
- It is unlikely that MDT could provide adequate justification for Alternative 2 (closure option) based on truck parking and wastewater treatment demands along the I-90 corridor between the Anaconda Rest Area and the Bearmouth Rest Area.

Consequently, this study recommends implementation of Action Alternative 1 (the reduction in service / truck parking option) at the Gold Creek Safety Rest Area sites.

Appendix A: Photo Log

This photo log illustrates conditions observed during a site visit conducted on April 18, 2017, at the Gold Creek Safety Rest Area westbound (WB) and eastbound (EB) sites. Photo categories include water/irrigation systems; public wastewater systems; building structure; environmental conditions; ramps and parking areas; site amenities; and accessibility. This photo log does not provide a comprehensive account of all conditions within the study area. Conditions were visually inspected; no testing of the site was conducted during collection of these photos.

Contents

Water/Irrigation Systems 2
Public Wastewater Systems 4
Building Structure 10
Environmental Conditions 14
Ramps and Parking Areas 20
Site Amenities 29
Accessibility 31

Water/Irrigation Systems



Photo 1: Westbound well exhibiting corrosion on outside of well casing.



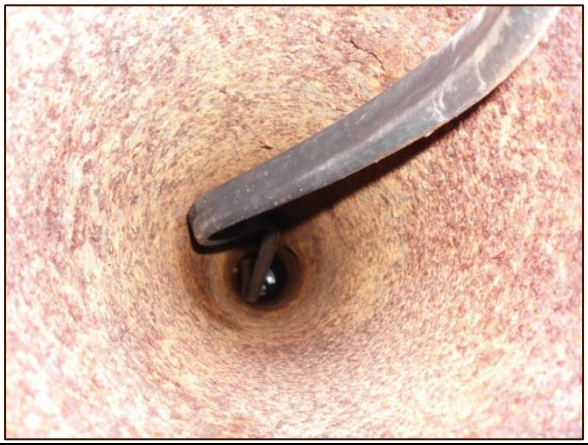


Photo 2 and Photo 3: Westbound well exhibiting corrosion on inside of well casing.





Photo 4 and Photo 5: Westbound mechanical room with aged pressure tanks and water filter.





Photo 6 and Photo 7: Eastbound well exhibiting corrosion typical for age.





Photo 8 and Photo 9: Eastbound mechanical room with newer pressure tank.

Public Wastewater Systems





Photo 10 and Photo 11: Westbound septic tank exhibiting no cracking or spalling of concrete.



Photo 12: Westbound drainfield area.



Photo 13: Westbound septic tanks.



Photo 14: Westbound septic tank prior to pumping; wastewater elevation above outflow line.



Photo 15: Eastbound septic tank location.



Photo 16: Eastbound septic tank prior to pumping; limited solids indicator of ground water infiltration.



Photo 17: Eastbound septic tank approximately half full; wastewater elevation below outflow elevation.



Photo 18: Eastbound manhole with groundwater flow from abandoned RV line.



Photo 19: Eastbound lift station.



Photo 20: Eastbound distribution box.

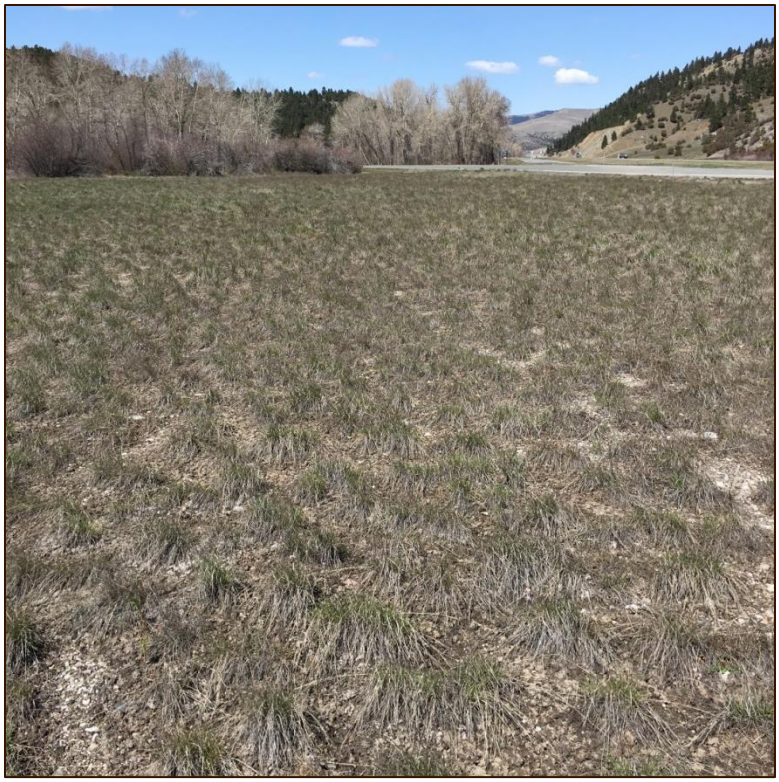


Photo 21: Eastbound drainfield.

Building Structure



Photo 22: Front of rest area building structure at westbound site.

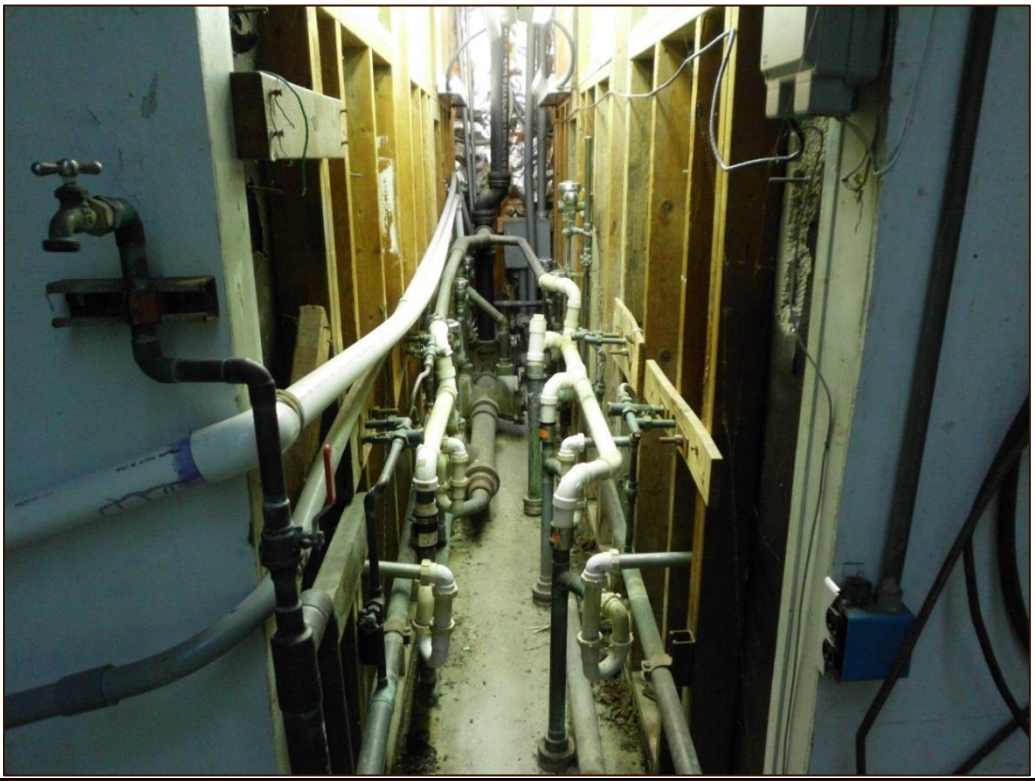


Photo 23: Interior view along plumbing chase at westbound site.

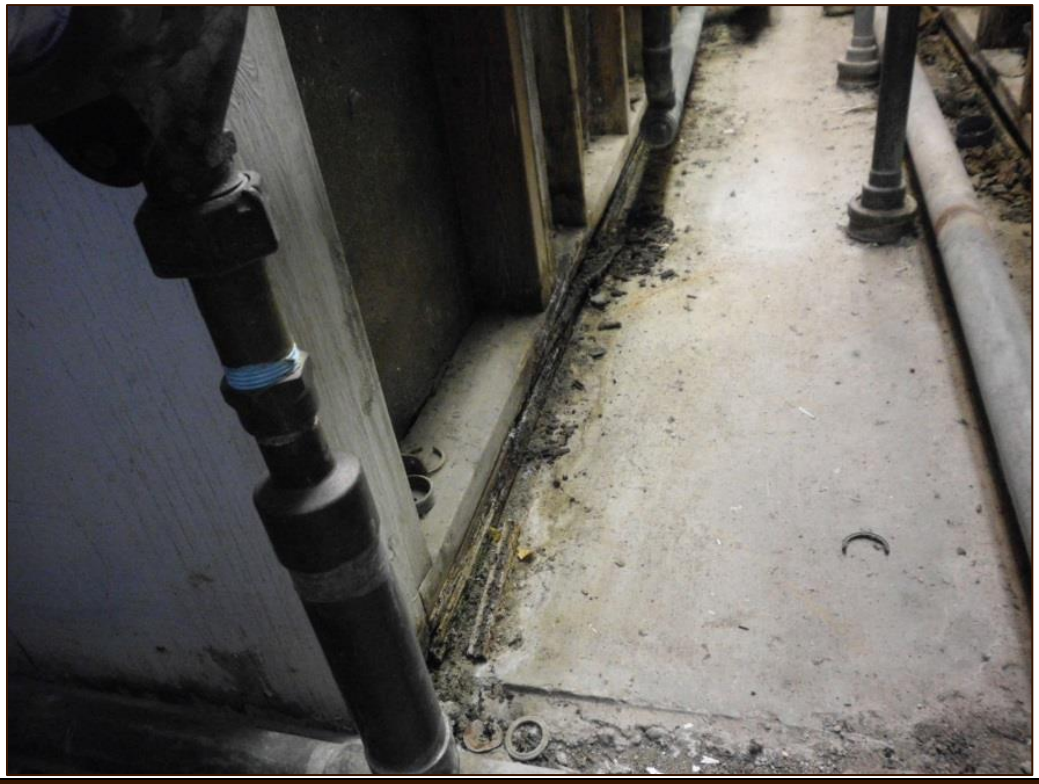


Photo 24: Rotting timber framework along plumbing chase at westbound site.



Photo 25: Cracked concrete along entrance to men's restroom at westbound site.





Photo 26 and Photo 27: Ventilation fan (interior left/exterior right) at the westbound site.



Photo 28: Front of rest area building structure at eastbound site.



Photo 29: Broken plumbing and rotting timber framing along plumbing chase at eastbound site.

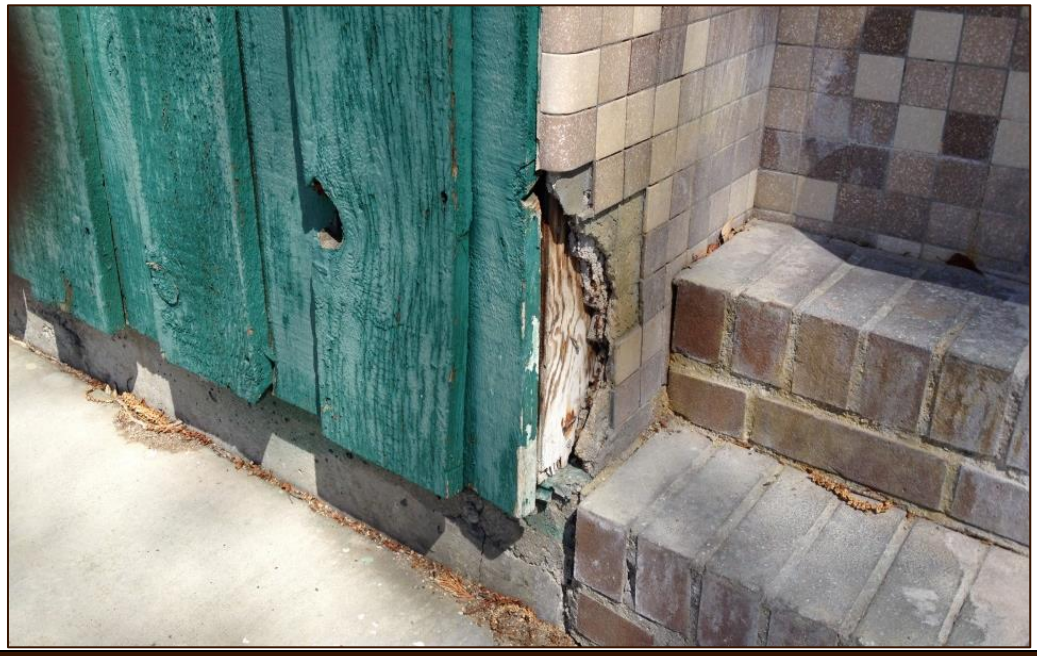


Photo 30: Siding and broken ceramic tile around water fountain feature at eastbound site.

Environmental Conditions



Photo 31: Shrub/scrub and forest wetland south of westbound entrance ramp.



Photo 32: Shrub/scrub and forest wetland and ponding water north of westbound entrance ramp.



Photo 33: Carten Creek channel paralleling the westbound site on north side.



Photo 34: Willow and cottonwood dominated vegetation along Carten Creek on north side of westbound site.



Photo 35: Mature black cottonwoods surrounding the facilities at westbound site.



Photo 36: Petroleum pipeline marker for Phillips 66 pipeline crossing eastbound site.



Photo 37: Access gate at south right-of-way fence for eastbound site.

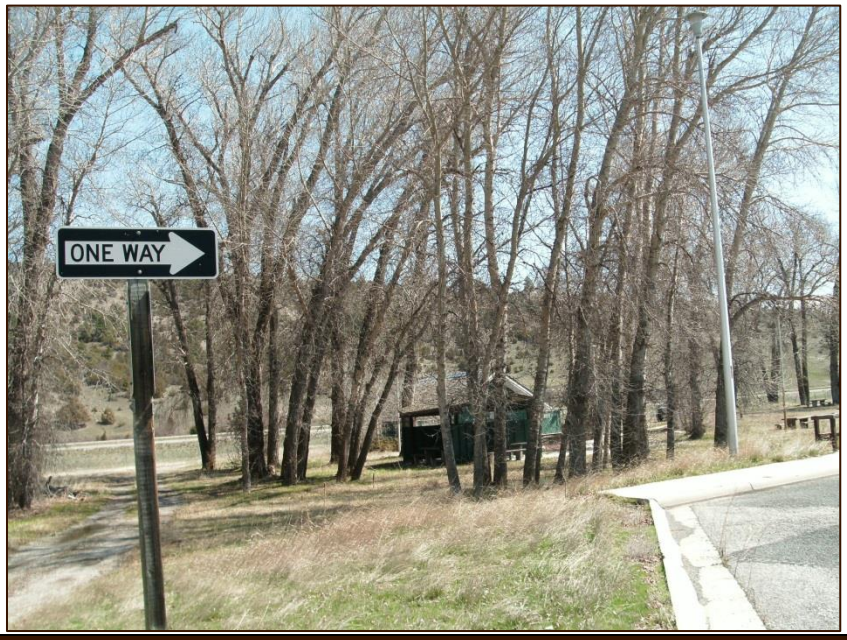


Photo 38: Mature black cottonwoods surrounding facilities at eastbound site.



Photo 39: Shrub/scrub riparian and wetland vegetation south of eastbound exit ramp.



Photo 40: Large grove of adolescent black cottonwoods north of eastbound exit ramp.



Photo 41: High flow channels of Clark Fork River directly south of eastbound parking lot.



Photo 42: Shrub/scrub and forest riparian and wetland vegetation along eastbound entrance ramp.

Ramps and Parking Areas



Photo 43: Aggregate loss in pavement along exit ramp at westbound site.



Photo 44: Aggregate loss in pavement along entrance ramp at westbound site.



Photo 45: General view of road signing along exit ramp at westbound site.

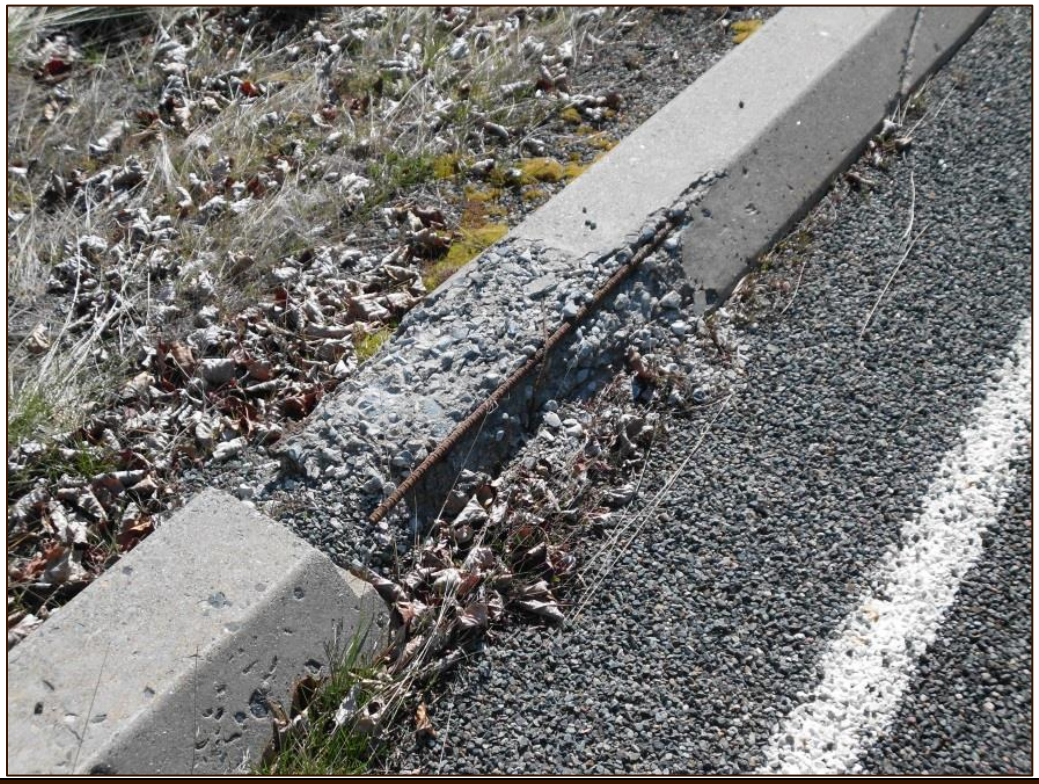


Photo 46: Deteriorating pin-down curb along north side of ramps and parking area at westbound site.





Photo 47 and Photo 48: Recently installed "DO NOT ENTER" AND "WRONG WAY" signs at westbound site (Installed 2014). Typical for both westbound and eastbound sites.





Photo 49 and Photo 50: Older road signs at westbound site (Installed 1995). Typical for both eastbound and westbound sites.

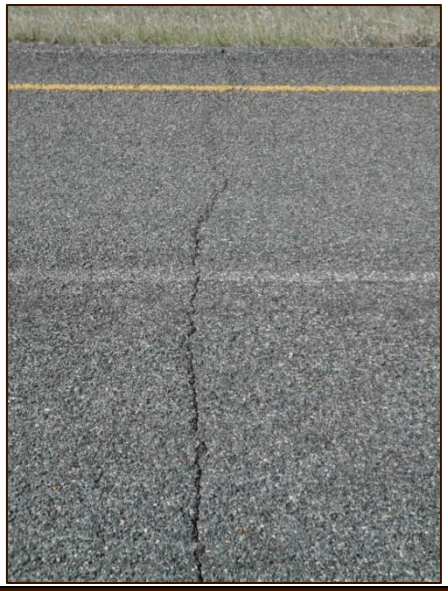




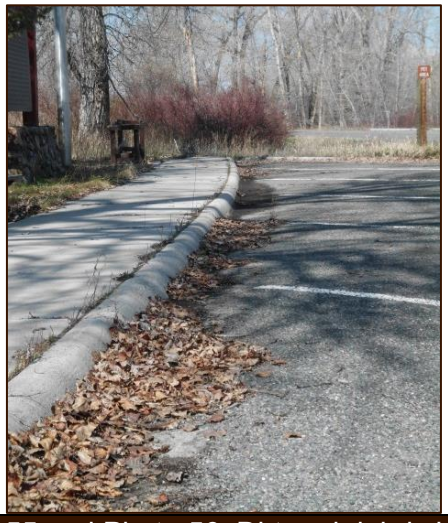
Photo 51 and Photo 52: Pavement cracking along exit ramp at westbound site.



Photo 53: Observed signs of standing water, aggregate loss, and localized cracking in pavement along north end of parking area at westbound site looking west.



Photo 54: Observed signs of standing water and aggregate loss in pavement along north end of parking area at westbound site looking east.



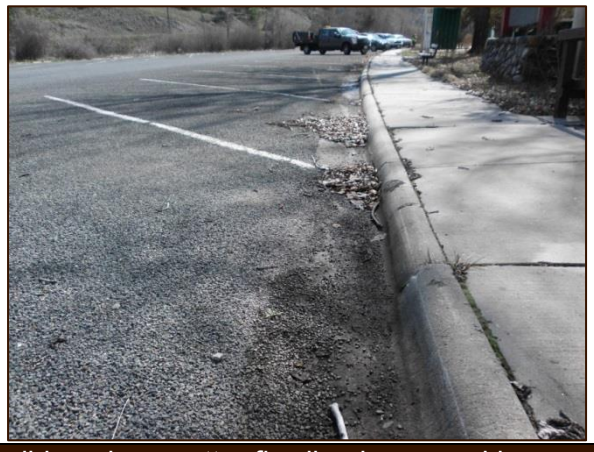


Photo 55 and Photo 56: Dirt and debris buildup along gutter flowline in car parking area at westbound site. Observed signs of standing water.

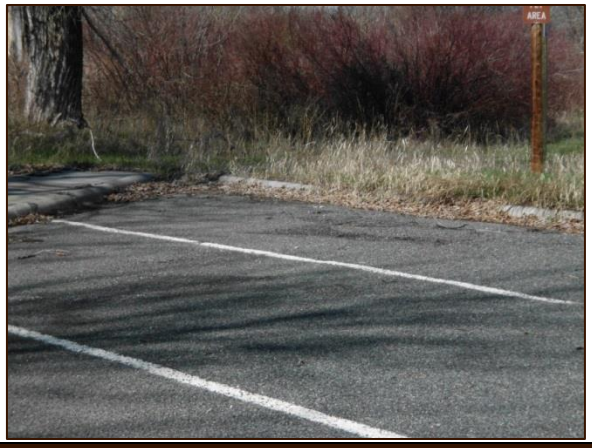




Photo 57 and Photo 58: Dirt and debris build-up at curb cut outlet in car parking area at westbound site.



Photo 59: Location of old trailer/RV dump station area at eastbound site.



Photo 60: Pavement cracking within parking area at eastbound site.



Photo 61: Vandalized sign at eastbound site.



Photo 62: Raised channel island at eastbound site. Typical for both sites.



Photo 63: Parking area pavement at eastbound site.

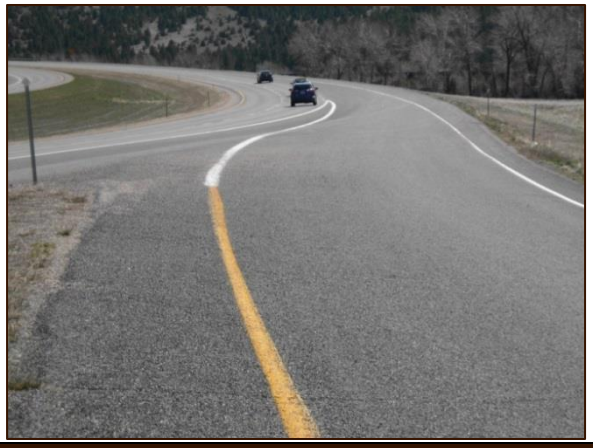



Photo 64 and Photo 65: Gore area along entrance ramp at eastbound site.




Photo 66 and Photo 67: Deteriorating pin-down curb and heaving pavement along perimeter of old trailer dump area at eastbound site.

Site Amenities



Photo 68: Picnic shelter at westbound site.



Photo 69: Steel plate connections to Glulam beams for picnic shelter at westbound site.



Photo 70: Base of timber fence post connection to slab under westbound site picnic shelter.



Photo 71: Rust observed on side plate connection at base of westbound picnic shelter roof post.

Accessibility



Photo 72: Pedestrian ramp at westbound site.



Photo 73: Accessible parking space at westbound site.



Photo 74: Picnic shelter area at the westbound site.



Photo 75: Bench at westbound site.



Photo 76: Pedestrian access route adjacent to parking area at westbound site looking west.

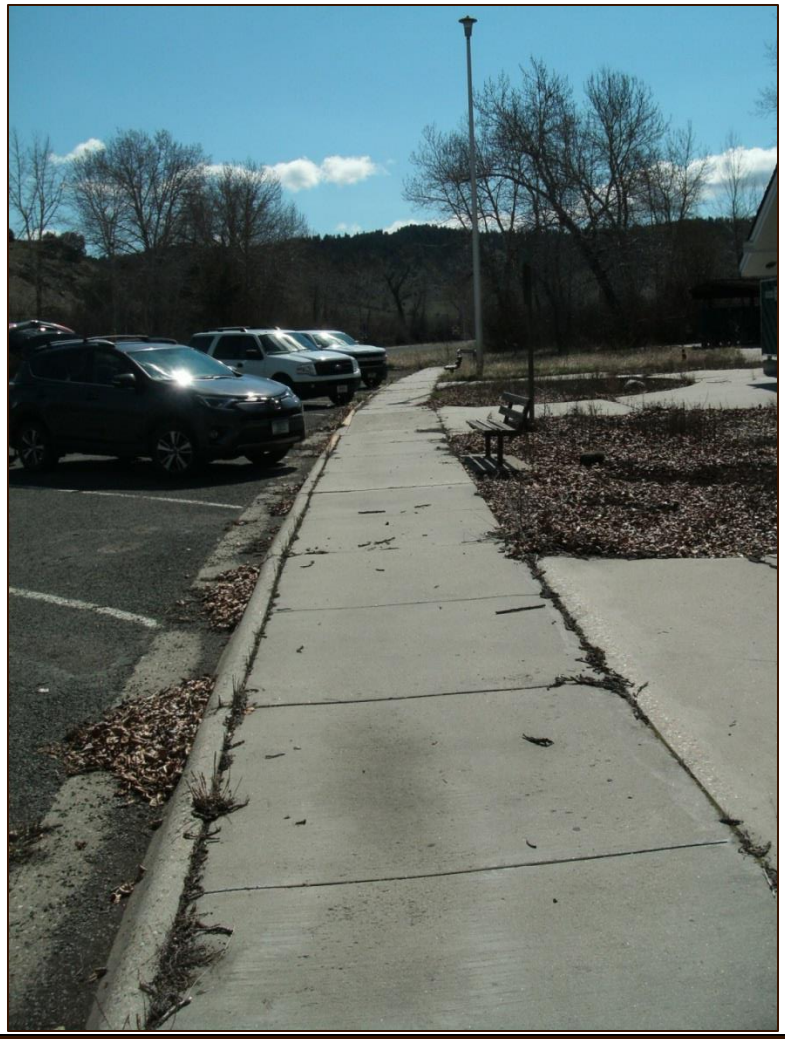


Photo 77: Pedestrian access route adjacent to parking area at westbound site looking east.



Photo 78: Pedestrian ramp and accessible parking space at eastbound site.



Photo 79: Picnic shelter area at eastbound site.



Photo 80: Bench at eastbound site.



Photo 81: Pedestrian access route to picnic shelter at eastbound site.



Photo 82: Pedestrian access route adjacent to parking area at eastbound site.



Photo 83: Pedestrian access route leading to existing building at eastbound site.



Photo 84: Vertical surface discontinuity and excessive cross slope grade caused by tree root at eastbound site.



Photo 85: Observed evidence of grinding to remove vertical surface discontinuities at eastbound site.

Appendix B: Parking Demand Calculations

Anaconda Rest Area -					Peak Daily Door Count
	Description	Variable	Existing (2016/2017) DAY	Existing (2016/2017) NIGHT	2016/2017 Notes
DATA	Peak Daily Door Count	PDD	3,822	3,822	2016 Door Count Data Provided by MDT
	Peak Daily People	PDP	1,911	1,911	PDP = PDD / 2 (Section 4.5.1 Patron/Door Count Correlation)
	Average Daily Traffic	ADT	1,854	1,854	Count data collected by MDT 7/1/2017 to 7/31/2017 at rest area entrance.
	Peak Hour Volume	PHV	257	58	Count data collected by MDT 7/1/2017 to 7/31/2017 at rest area entrance. PHV for day identified from 9AM to 4PM; PHV for night identified from 12AM to 6AM
	Peak Day Peak Hour People	PHP	265	60	PHP = PDP * (PHV / ADT)
	Peak Day Peak Hour Vehicles Stopping at Rest Area	PHV_p	177	40	PHV_p = PHP / UV
	Percentage of Cars in the Mainline Traffic Stream During Daytime/Nighttime Periods	$D_{c\%}$	79.71%	79.71%	$D_{c\%}$ = (AADT - $AADT_t$) / AADT; applies percentages used in MT Rest Area Plan.
	Percentage of Trucks in the Mainline Traffic Stream During Daytime/Nighttime Periods	$D_{t\%}$	14.20%	40.58%	Guideline #3 Day = ($AADT_t$ / AADT) * 0.7 Night = ($AADT_t$ / AADT) * 2.0
	Number of Cars Stopping at Rest Area	D_c	141	32	D_c = $D_{c\%}$ * PHV_p
	Number of Trucks Stopping at Rest Area	D_t	26	17	D_t = $D_{t\%}$ * PHV_p
	Total Vehicles Stopping at Rest Area During Peak Hour (Factored)	D_2	167	49	D_2 = D_c + D_t
	Average Dwell Time for Cars (Minutes)	VHS_c	11	NA	Research from Greycliff (East) Rest Area
	Average Dwell Time for Trucks (Minutes)	VHS_t	34	188	
	Restroom Users Per Vehicle	UV	1.5	1.5	Guideline #9
CALCULATED PARKING SPACES	Parking Spaces for Cars (Day Controls)	N_c	26	NA	N_c = (PHV_p * $D_{c\%}$ * VHS_c) / 60
	Parking Spaces for Trucks (Night Controls)	N_t	NA	51	N_t = (PHV_p * $D_{t\%}$ * VHS_t) / 60

Bearmouth (East) Rest Area -					Peak Daily Door Count
	Description	Variable	Existing (2016/2017) DAY	Existing (2016/2017) NIGHT	2016/2017 Notes
DATA	Peak Daily Door Count	PDD	2,352	2,352	2016 Door Count Data Provided by MDT
	Peak Daily People	PDP	1,176	1,176	PDP = PDD / 2 (Section 4.5.1 Patron/Door Count Correlation)
	Average Daily Traffic	ADT	901	901	Count data collected by MDT 7/1/2017 to 7/31/2017 at rest area entrance.
	Peak Hour Volume	PHV	117	29	Count data collected by MDT 7/1/2017 to 7/31/2017 at rest area entrance. PHV for day identified from 9AM to 4PM; PHV for night identified from 12AM to 6AM
	Peak Day Peak Hour People	PHP	153	38	PHP = PDP * (PHV / ADT)
	Peak Day Peak Hour Vehicles Stopping at Rest Area	PHV_p	102	25	PHV_p = PHP / UV
	Percentage of Cars in the Mainline Traffic Stream During Daytime/Nighttime Periods	$D_{c\%}$	79.12%	79.12%	$D_{c\%}$ = (AADT - $AADT_t$) / AADT; applies percentages used in MT Rest Area Plan.
	Percentage of Trucks in the Mainline Traffic Stream During Daytime/Nighttime Periods	$D_{t\%}$	14.61%	41.75%	Guideline #3 Day = ($AADT_t$ / AADT) * 0.7 Night = ($AADT_t$ / AADT) * 2.0
	Number of Cars Stopping at Rest Area	D_c	81	20	D_c = $D_{c\%}$ * PHV_p
	Number of Trucks Stopping at Rest Area	D_t	15	11	D_t = $D_{t\%}$ * PHV_p
	Total Vehicles Stopping at Rest Area During Peak Hour (Factored)	D_2	96	31	D_2 = D_c + D_t
	Average Dwell Time for Cars (Minutes)	VHS_c	11	NA	Research from Greycliff (East) Rest Area
	Average Dwell Time for Trucks (Minutes)	VHS_t	34	188	
	Restroom Users Per Vehicle	UV	1.5	1.5	Guideline #9
CALCULATED PARKING SPACES	Parking Spaces for Cars (Day Controls)	N_c	15	NA	N_c = (PHV_p * $D_{c\%}$ * VHS_c) / 60
	Parking Spaces for Trucks (Night Controls)	N_t	NA	34	N_t = (PHV_p * $D_{t\%}$ * VHS_t) / 60

Bearmouth (West) Rest Area -					Peak Daily Door Count
	Description	Variable	Existing (2016/2017) DAY	Existing (2016/2017) NIGHT	2016/2017 Notes
DATA	Peak Daily Door Count	PDD	3,402	3,402	2016 Door Count Data Provided by MDT
	Peak Daily People	PDP	1,702	1,702	PDP = PDD / 2 (Section 4.5.1 Patron/Door Count Correlation)
	Average Daily Traffic	ADT	1,228	1,228	Count data collected by MDT 7/1/2017 to 7/31/2017 at rest area entrance.
	Peak Hour Volume	PHV	159	28	Count data collected by MDT 7/1/2017 to 7/31/2017 at rest area entrance. PHV for day identified from 9AM to 4PM; PHV for night identified from 12AM to 6AM
	Peak Day Peak Hour People	PHP	220	39	PHP = PDP * (PHV / ADT)
	Peak Day Peak Hour Vehicles Stopping at Rest Area	PHV_p	147	26	PHV_p = PHP / UV
	Percentage of Cars in the Mainline Traffic Stream During Daytime/Nighttime Periods	$D_{c\%}$	79.12%	79.12%	$D_{c\%}$ = (AADT - $AADT_t$) / AADT; applies percentages used in MT Rest Area Plan.
	Percentage of Trucks in the Mainline Traffic Stream During Daytime/Nighttime Periods	$D_{t\%}$	14.61%	41.75%	Guideline #3 Day = ($AADT_t$ / AADT) * 0.7 Night = ($AADT_t$ / AADT) * 2.0
	Number of Cars Stopping at Rest Area	D_c	117	21	D_c = $D_{c\%}$ * PHV_p
	Number of Trucks Stopping at Rest Area	D_t	22	11	D_t = $D_{t\%}$ * PHV_p
	Total Vehicles Stopping at Rest Area During Peak Hour (Factored)	D_2	139	32	D_2 = D_c + D_t
	Average Dwell Time for Cars (Minutes)	VHS_c	11	NA	Research from Greycliff (East) Rest Area
	Average Dwell Time for Trucks (Minutes)	VHS_t	34	188	
	Restroom Users Per Vehicle	UV	1.5	1.5	Guideline #9
CALCULATED PARKING SPACES	Parking Spaces for Cars (Day Controls)	N_c	22	NA	N_c = (PHV_p * $D_{c\%}$ * VHS_c) / 60
	Parking Spaces for Trucks (Night Controls)	N_t	NA	34	N_t = (PHV_p * $D_{t\%}$ * VHS_t) / 60

		Night									Day															
Date	DW	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Total
070117	S	40	34	22	24	23	45	43	43	107	136	240	227	199	191	224	157	110	103	67	57	50	63	95	31	2331
070217	S	39	21	28	42	32	46	28	36	86	125	213	183	196	177	154	106	117	119	91	54	42	37	36	30	2038
070317	M	24	32	16	14	13	17	23	35	56	103	137	162	145	178	128	109	120	91	89	66	49	44	28	29	1708
070417	T	44	18	10	18	15	24	30	46	68	93	141	145	107	132	121	139	128	98	84	52	29	29	31	27	1629
070517	W	17	16	9	2	19	22	30	35	71	99	164	159	149	194	165	114	168	101	46	33	44	26	22	25	1730
070617	T	58	10	9	21	18	21	17	32	89	144	171	193	169	147	141	141	100	107	78	66	45	39	28	28	1872
070717	F	25	21	11	14	26	23	20	34	89	109	195	231	220	164	134	152	145	122	89	83	31	53	34	42	2067
070817	S	29	29	24	15	14	38	43	52	72	143	206	187	247	200	136	107	130	101	100	78	50	45	36	42	2124
070917	S	43	24	14	26	10	18	26	31	85	107	141	192	257	238	161	140	133	122	75	62	35	46	38	38	2062
071017	M	24	12	11	10	17	21	29	42	81	139	179	132	174	156	138	151	106	88	80	34	29	20	33	16	1722
071117	T	6	12	24	3	7	24	42	27	67	125	145	165	141	109	164	101	109	49	69	50	47	47	30	34	1597
071217	W	30	27	22	31	20	40	50	47	87	118	128	193	158	160	160	103	119	125	68	62	52	36	57	47	1940
071317	T	15	14	11	22	27	28	15	77	94	104	163	168	219	163	189	154	99	77	64	50	21	40	37	23	1874
071417	F	52	38	23	14	10	31	38	39	81	108	137	178	169	191	215	183	123	127	83	44	64	41	44	28	2061
071517	S	26	27	5	26	27	16	52	46	99	122	138	132	131	159	156	135	107	97	97	48	30	39	46	37	1798
071617	S	40	32	19	23	12	21	52	30	77	90	129	192	202	224	208	166	128	87	73	50	24	40	30	31	1980
071717	M	19	9	18	5	12	23	17	60	71	99	169	159	208	208	121	170	124	91	74	56	28	19	24	13	1797
071817	T	14	23	12	9	24	35	29	38	79	123	134	166	188	153	181	118	103	98	71	83	43	28	49	58	1859
071917	W	27	41	4	11	13	25	47	50	72	121	120	137	143	171	147	116	99	91	50	57	25	22	17	13	1619
072017	T	19	13	15	7	10	34	20	53	57	100	154	171	175	178	129	122	122	87	72	73	30	30	15	35	1721
072117	F	26	9	10	11	9	21	23	56	73	130	124	181	168	178	161	144	85	85	87	55	58	32	26	41	1793
072217	S	12	15	17	21	27	14	19	39	92	134	157	148	203	195	155	143	117	152	76	77	61	47	54	35	2010
072317	S	27	19	9	14	27	24	32	42	66	89	144	190	185	148	166	135	129	112	81	63	51	41	47	36	1877
072417	M	26	21	12	21	20	32	26	28	64	130	152	212	180	147	142	111	75	70	90	44	53	43	22	30	1751
072517	T	16	22	20	23	29	19	29	32	72	102	147	169	153	157	167	144	111	76	83	64	64	37	35	26	1797
072617	W	32	18	9	19	13	15	54	51	69	102	138	185	152	171	131	146	90	86	53	47	49	29	25	22	1706
072717	T	21	11	8	14	20	39	36	56	56	109	127	202	153	131	138	143	75	115	63	59	35	55	39	20	1725
072817	F	31	25	27	19	17	21	26	38	69	112	131	174	194	163	150	141	144	90	89	45	49	25	40	38	1858
072917	S	28	24	29	19	22	19	46	44	118	130	136	152	167	161	174	152	109	80	71	54	57	30	46	34	1902
073017	S	27	19	17	25	10	13	30	36	78	98	156	201	177	161	144	103	150	130	85	73	49	21	35	27	1865
073117	M	12	19	21	15	23	17	31	46	47	116	184	140	186	142	122	111	100	91	83	31	31	43	36	23	1670
Month Total :		849	655	486	538	566	786	1003	1321	2392	3560	4800	5426	5515	5247	4822	4157	3575	3068	2381	1770	1325	1147	1135	959	57483
Percent :		1%	1%	1%	1%	1%	1%	2%	2%	4%	6%	8%	9%	10%	9%	8%	7%	6%	5%	4%	3%	2%	2%	2%	2%	
ADT :		27	21	16	17	18	25	32	43	77	115	155	175	178	169	156	134	115	99	77	57	43	37	37	31	1854

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
DW Totals :	9822	8648	6882	6995	7192	7779	10165
# Days :	5.0	5.0	4.0	4.0	4.0	4.0	5.0
ADT :	1964	1730	1721	1749	1798	1945	2033
Percent :	17%	15%	12%	12%	13%	14%	18%

	Total	Percent
Weekday (Mon-Fri) :	37496	65%
ADT :	1786	
Weekend (Sat-Sun) :	19987	35%
ADT :	1999	

		Night									Day															
Date	DW	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Total
070117	S	20	20	12	10	13	25	17	29	50	74	78	107	79	98	57	48	49	52	39	43	52	27	26	26	1051
070217	S	18	11	13	7	5	3	14	22	31	31	72	61	78	78	64	65	75	49	44	27	29	18	24	12	851
070317	M	5	7	7	6	5	1	5	17	23	45	61	72	54	77	76	57	59	30	29	22	26	29	21	15	749
070417	T	11	8	11	6	8	5	5	18	25	42	52	66	56	50	49	60	47	39	28	27	18	10	11	8	660
070517	W	10	8	9	5	0	7	17	27	43	43	64	85	77	95	65	79	74	55	52	27	33	9	18	27	929
070617	T	13	12	8	4	14	13	22	43	27	57	69	75	79	79	83	78	83	48	38	40	25	14	28	15	967
070717	F	10	13	12	13	9	9	18	17	52	49	79	84	84	85	76	88	87	36	41	42	29	18	18	25	994
070817	S	23	10	5	9	7	9	8	39	55	61	60	93	103	76	75	71	89	60	48	32	35	22	24	28	1042
070917	S	16	12	2	10	11	5	7	10	40	42	43	71	76	117	79	60	64	60	44	40	21	25	12	10	877
071017	M	8	6	5	3	6	13	22	24	23	40	50	75	61	64	78	52	67	42	37	15	32	12	19	16	770
071117	T	6	12	16	5	4	6	12	24	40	53	67	65	70	77	50	87	65	60	36	43	22	15	20	15	870
071217	W	18	17	3	3	6	14	17	22	34	47	69	87	58	77	70	74	52	49	30	33	19	19	23	19	860
071317	T	20	8	15	6	3	11	10	32	34	36	66	66	89	77	69	84	45	51	34	38	22	22	28	19	885
071417	F	15	19	16	14	11	19	9	19	35	50	64	80	82	72	66	72	90	67	56	31	31	40	26	16	1000
071517	S	16	17	8	11	8	7	21	31	36	57	81	74	66	77	71	104	59	55	66	38	30	36	28	20	1017
071617	S	12	18	9	4	1	1	7	15	30	32	52	69	103	92	99	73	49	67	36	40	34	24	29	4	900
071717	M	15	5	6	4	3	11	13	22	39	48	51	88	75	75	61	83	60	55	31	34	15	22	28	6	850
071817	T	13	15	4	4	6	13	10	25	41	52	69	83	73	67	65	55	77	55	43	29	33	18	16	21	887
071917	W	14	3	13	7	3	9	8	17	31	62	64	77	77	72	73	61	55	48	21	27	35	13	15	13	818
072017	T	7	7	8	12	0	4	15	23	46	42	60	75	87	84	77	75	75	71	35	35	15	23	17	14	907
072117	F	29	15	2	8	12	11	8	18	39	50	66	70	96	97	119	69	96	47	61	33	38	20	15	18	1037
072217	S	5	17	10	3	3	6	18	20	45	47	60	80	94	71	63	64	57	52	23	43	31	41	13	8	874
072317	S	18	8	5	11	4	5	6	18	35	43	59	66	69	71	66	73	71	58	27	41	21	32	19	10	836
072417	M	12	5	6	4	3	5	14	18	38	54	63	79	70	57	68	62	62	64	39	46	30	26	20	11	856
072517	T	17	3	16	5	2	10	14	28	43	43	64	73	89	81	81	58	62	43	36	40	25	18	32	16	899
072617	W	15	10	6	3	9	13	5	23	50	66	71	57	67	77	74	61	57	36	49	36	16	14	24	13	852
072717	T	14	8	5	3	4	8	22	25	51	50	68	76	82	59	66	70	75	49	44	30	20	29	19	25	902
072817	F	25	10	11	8	11	9	19	22	30	65	77	82	73	91	86	89	63	55	50	35	27	19	24	17	998
072917	S	15	16	10	13	20	7	23	32	33	53	52	79	66	107	75	62	64	40	40	35	17	25	16	12	912
073017	S	4	16	11	11	6	7	13	14	43	48	46	87	79	88	102	64	65	48	44	46	28	28	18	12	928
073117	M	19	8	8	7	7	4	12	19	30	53	67	74	68	72	65	76	70	61	37	25	27	32	24	16	881
Month Total :		443	344	272	219	204	270	411	713	1172	1535	1964	2376	2380	2460	2268	2174	2063	1602	1238	1073	836	700	655	487	27859
Percent :		2%	1%	1%	1%	1%	1%	1%	3%	4%	6%	7%	9%	9%	9%	8%	8%	7%	6%	4%	4%	3%	3%	2%	2%	
ADT :		14	11	9	7	7	9	13	23	38	50	63	77	77	79	73	70	67	52	40	35	27	23	21	16	901

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
DW Totals :	4392	4106	3316	3459	3661	4029	4896
# Days :	5.0	5.0	4.0	4.0	4.0	4.0	5.0
ADT :	878	821	829	865	915	1007	979
Percent :	16%	15%	12%	12%	13%	14%	18%

	Total	Percent
Weekday (Mon-Fri) :	18571	67%
ADT :	884	
Weekend (Sat-Sun) :	9288	33%
ADT :	929	

		Night									Day															
Date	DW	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Total
070117	S	10	19	11	13	13	18	14	27	67	80	103	131	141	116	124	94	77	63	43	33	32	25	36	19	1309
070217	S	7	12	6	12	18	9	19	38	70	79	108	159	145	123	139	127	83	66	52	44	33	25	12	11	1397
070317	M	21	12	3	20	9	14	9	29	45	69	102	132	114	101	95	82	81	51	32	32	39	20	7	4	1123
070417	T	5	11	11	10	13	12	4	24	54	59	103	98	82	99	85	70	62	49	38	22	21	13	7	13	965
070517	W	14	18	8	6	4	8	17	35	60	78	101	133	141	119	80	101	82	62	63	44	23	20	15	13	1245
070617	T	12	5	5	9	8	16	11	37	68	76	117	117	136	132	102	93	72	54	27	42	26	18	18	15	1216
070717	F	13	10	18	4	8	12	12	23	65	66	114	97	128	141	89	101	92	75	55	58	24	26	24	18	1273
070817	S	12	12	8	19	12	9	13	28	45	104	99	138	107	105	112	71	89	51	84	36	37	23	40	15	1269
070917	S	15	19	25	9	10	12	26	40	56	79	130	128	154	144	131	125	103	75	100	60	42	47	18	25	1573
071017	M	28	6	11	16	12	18	27	34	45	77	98	108	120	120	105	89	78	47	29	28	16	21	21	6	1160
071117	T	13	10	5	5	17	12	26	46	55	85	100	87	101	98	100	88	62	63	45	37	21	19	20	14	1129
071217	W	10	8	8	14	6	0	18	32	69	75	117	119	112	96	98	86	77	70	59	44	25	24	25	14	1206
071317	T	17	5	6	9	14	2	18	40	69	87	78	146	117	88	99	116	93	53	54	49	33	24	17	26	1260
071417	F	11	5	10	19	18	12	20	30	43	85	84	113	137	111	100	89	75	60	51	37	20	16	15	15	1176
071517	S	6	12	7	13	14	14	12	31	35	79	117	98	115	106	105	87	64	52	58	41	33	30	18	22	1169
071617	S	17	8	7	5	14	15	17	35	56	84	143	143	140	120	120	121	92	78	51	70	44	27	27	18	1452
071717	M	22	20	7	5	8	20	27	34	58	112	108	127	119	125	113	80	56	47	52	48	30	29	17	9	1273
071817	T	13	15	8	13	7	6	12	34	52	83	110	128	121	114	94	92	72	54	38	25	22	14	15	20	1162
071917	W	8	4	16	6	3	19	7	35	44	92	119	131	119	100	98	80	90	64	55	34	29	32	26	18	1229
072017	T	18	15	16	10	7	13	22	42	55	102	107	115	120	110	106	78	85	64	58	23	17	22	15	7	1227
072117	F	12	20	5	5	5	20	17	49	43	88	115	128	122	104	98	83	93	57	45	51	30	16	16	8	1230
072217	S	16	7	12	10	9	16	14	26	60	77	80	107	113	103	91	94	75	63	46	48	31	21	17	17	1153
072317	S	20	7	6	3	2	10	14	31	59	84	116	132	107	107	88	105	86	73	54	51	39	31	23	19	1267
072417	M	27	13	1	9	13	14	27	35	42	91	88	127	114	110	79	84	83	49	47	39	32	17	13	4	1158
072517	T	6	11	5	10	7	13	21	32	40	63	109	103	105	82	85	76	68	53	35	43	28	22	21	5	1043
072617	W	13	8	7	10	5	12	25	40	79	97	91	112	116	114	105	78	61	63	49	29	31	17	22	22	1206
072717	T	11	9	5	7	7	16	23	19	56	73	117	141	93	123	91	94	80	60	49	35	30	22	21	14	1196
072817	F	10	10	3	8	15	13	20	35	49	70	107	126	113	98	98	99	76	64	51	48	41	29	19	12	1214
072917	S	10	10	14	5	5	15	10	23	47	62	96	104	124	109	89	91	44	63	51	45	37	31	24	21	1130
073017	S	11	8	19	11	7	14	11	27	43	78	115	125	133	125	126	101	88	92	60	33	48	37	37	20	1369
073117	M	19	12	8	11	15	20	11	24	64	74	116	131	123	128	102	80	77	55	40	27	22	24	23	20	1226
Month Total :		427	341	281	306	305	404	524	1015	1693	2508	3308	3784	3732	3471	3147	2855	2416	1890	1571	1256	936	742	629	464	38005
Percent :		1%	1%	1%	1%	1%	1%	1%	3%	4%	7%	9%	10%	10%	9%	8%	8%	6%	5%	4%	3%	2%	2%	2%	1%	
ADT :		14	11	9	10	10	13	17	33	55	81	107	122	120	112	102	92	78	61	51	41	30	24	20	15	1228

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
DW Totals :	7058	5940	4299	4886	4899	4893	6030
# Days :	5.0	5.0	4.0	4.0	4.0	4.0	5.0
ADT :	1412	1188	1075	1222	1225	1223	1206
Percent :	19%	16%	11%	13%	13%	13%	16%

	Total	Percent
Weekday (Mon-Fri) :	24917	66%
ADT :	1187	
Weekend (Sat-Sun) :	13088	34%
ADT :	1309	

Appendix C: Well Log Reports and Westbound Water Right

MONTANA WELL LOG REPORT

This well log reports the activities of a licensed Montana well driller, serves as the official record of work done within the borehole and casing, and describes the amount of water encountered. This report is compiled electronically from the contents of the Ground Water Information Center (GWIC) database for this site. Acquiring water rights is the well owner's responsibility and is NOT accomplished by the filing of this report.

Other Options

Return to menu
Plot this site in State Library Digital Atlas
Plot this site in Google Maps
View field visits for this site
View water quality for this site
View scanned well log (6/16/2009 12:29:23 PM)

Site Name: GOLD CREEK REST AREA WESTBOUND
GWIC Id: 5792

Section 1: Well Owner(s)

1) MONTANA DEPARTMENT OF TRANSPORTATION (MAIL)
PO BOX 7039
MISSOULA MT 59801 [06/25/1999]
2) STATE OF MONTANA (MAIL)
2701 PROSPECT
HELENA MT 59620 [06/22/1983]

Section 2: Location

Township	Range	Section	Quarter Sections
10N	10W	30	SE¼ SE¼ SW¼ SW¼

County: POWELL
Geocode:

Latitude	Longitude	Geomethod	Datum
46.5852	-112.9058	MAP	NAD27

Ground Surface Altitude: 4200
Ground Surface Method:
Datum Date:
Addition:
Block:
Lot:

Section 3: Proposed Use of Water

PUBLIC WATER SUPPLY (1)

Section 4: Type of Work

Drilling Method: CABLE
Status: NEW WELL

Section 5: Well Completion Date

Date well completed: Wednesday, June 22, 1983

Section 6: Well Construction Details

Borehole dimensions

From	To	Diameter
0	63.6	6

Casing

From	To	Diameter	Wall Thickness	Pressure Rating	Joint	Type
-2	35	6				19 LB STEEL
13.6	63.6	4		220.00		PVC

Completion (Perf/Screen)

From	To	Diameter	# of Openings	Size of Openings	Description
43.6	63	4		1/4	SLOTS

Annular Space (Seal/Grout/Packer)

From	To	Description	Cont. Fed?
0	8	BENTONITE	

Section 7: Well Test Data

Total Depth: 63.6
Static Water Level: 5.3
Water Temperature:

Pump Test *

Depth pump set for test _ feet.
37 gpm pump rate with _ feet of drawdown after 4 hours of pumping.
Time of recovery _ hours.
Recovery water level _ feet.
Pumping water level 12.9 feet.

** During the well test the discharge rate shall be as uniform as possible. This rate may or may not be the sustainable yield of the well. Sustainable yield does not include the reservoir of the well casing.*

Section 8: Remarks

Section 9: Well Log

Geologic Source

211CLRD - COLORADO SHALE OR FM. (OF COLORADO GROUP)

From	To	Description
0	3	DARK BROWN SANDY CLAY
3	28	BROWN SANDY GRAVEL
28	31	TAN GRAVELLY CLAY
31	35	BROWN SILTY GRAVEL WITH BOULDERS
35	63.6	GRAY SHALE

Driller Certification

All work performed and reported in this well log is in compliance with the Montana well construction standards. This report is true to the best of my knowledge.

Name:
Company: MT DEPT OF HIGHWAYS
License No: WWC-225
6/22/1983

Date Completed:

Form No. 603 (Rev. 7/76) BUTTE 077 10N 10W SOLD

STATE OF MONTANA

GOLD CREEK REST AREA WEST BOUND

File No. POWELL

RECEIVED

JAN 17 1984

MONT. DEPT. of NATURAL

Department of Natural Resources and Conservation

024694

Pink-Well Owner
Gold-Driller

WELL LOG REPORT

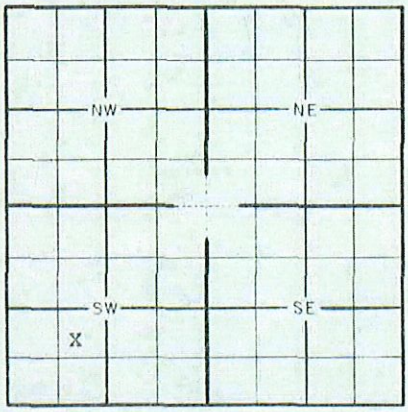
State law requires that this form be filed by the water well driller within 60 days after completion of the well, and Form 602, Notice of Completion of Groundwater Development, be filed by the well owner within 60 days after the water has been put to beneficial use.

1. WELL OWNER
Name DEPARTMENT OF HIGHWAYS, STATE OF MONT
CORE DRILL SECTION

2. CURRENT MAILING ADDRESS
2701 PROSPECT
HELENA, MT 59620

3. PROPOSED USE X domestic (includes lawn and garden); ____ stock; ____ municipal; ____ industrial; ____ irrigation; ____ other (specify) REST AREA SUPPLY

4. WELL LOCATION



____ ¼ NE ¼ SW ¼ SW ¼ Section 30
T. 10N R. 10W
N or S E or W
OR, Lot ____ Block ____
Subdivision ____
City ____ County Powell
Elevation ____ Accuracy: ____ ±10'; ____ ±50'; ____ ±100';

5. DRILLING METHOD X cable, ____ bored, ____ forward rotary, ____ reverse rotary, ____ jetted, ____ other (specify) ____

6. WELL CONSTRUCTION AND COMPLETION

Size of drilled hole	Size and weight of casing	From (feet)	To (feet)	Perforations ____ and/or Screen ____ Kind Size	From (feet)	To (feet)
6-5/8	6" I.D. 19 lb ft	+2.0	35.0			
6	4" plastic 220 PSI	13.6	63.6	1/4" Slot	43.6	63.0

Was casing left open end? X Yes, ____ No
Was a packer or seal used? ____ Yes, X No
If so, what material ____
Was the well gravel packed? ____ Yes, X No
Was the well grouted? X Yes, ____ No
To what depth? 8'
Material used in grouting Bentonite
Well head completion: Pitless adapter ____
12 in. above grade ____, other ____
(if other, specify) ____
Pump horsepower ____, pump type ____
Pump intake level ____ feet below land surface
Power (electric, diesel, etc.) ____

7. WATER LEVEL
Static water level 5.3 feet below land surface
If flowing, closed-in pressure ____ psi
____ gpm flow through ____ inch pipe
Controlled by: ____ valve, ____ reducers, ____ other
(if other, specify) ____

8. WELL TEST DATA X pump ____ bailer ____ other
(if other, specify) ____
Pumping level below land surface:
12.9 ft. after 4 hrs. pumping 37 gpm
____ ft. after ____ hrs. pumping ____ gpm

9. WAS WELL PLUGGED OR ABANDONED? ____ Yes X No
If yes, how? ____

10. DATE STARTED June 20, 1983
DATE COMPLETED June 22, 1983

11. WELL LOG

Depth (ft.) From	To	Formation
0.0	3.0	Dark brown sandy clay
3.0	28.0	Brown sandy gravel
28.0	31.0	Tan gravelly clay
31.0	35.0	Brown silty gravel with boulders
35.0	63.6	Grey shale
		Bottomed hole at 63.6'

(use separate sheet if necessary)

12. DRILLER'S CERTIFICATION
This well was drilled under my jurisdiction and this report is true to the best of my knowledge.

01/16/84
Date

DEPARTMENT OF HIGHWAYS
Firm Name CORE DRILL SECTION
2701 PROSPECT HELENA, MT 59620
Address

M: 5792
M-63160

Signature [signature] 225
License No.

MONTANA WELL LOG REPORT

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Other Options

Return to menu
Plot this site in State Library Digital Atlas
Plot this site in Google Maps

Site Name: DEPARTMENT OF TRANSPORTATION * GOLD CREEK REST AREA West Bound New well
GWIC Id: 211002

Section 1: Well Owner(s)

1) DEPARTMENT OF TRANSPORTATION (MAIL)
BOX 7039
MISSOULA MT 59801 [03/28/2000]

Section 2: Location

Township	Range	Section	Quarter Sections
10N	10W	30	SE¼ SW¼

County POWELL **Geocode**

Latitude	Longitude	Geomethod	Datum
46.58527	-112.90564	NAV-GPS	NAD83

Ground Surface Altitude **Ground Surface Method** **Datum Date**

Addition **Block** **Lot**

Section 3: Proposed Use of Water

PUBLIC WATER SUPPLY (1)

Section 4: Type of Work

Drilling Method: ROTARY
Status: NEW WELL

Section 5: Well Completion Date

Date well completed: Tuesday, March 28, 2000

Section 6: Well Construction Details

Borehole dimensions

From	To	Diameter
0	240	6

Casing

From	To	Diameter	Wall Thickness	Pressure Rating	Joint	Type
-2	35	6				STEEL
20	240	6				PVC

Completion (Perf/Screen)

From	To	Diameter	# of Openings	Size of Openings	Description
80	240	6			STEEL

Annular Space (Seal/Grout/Packer)

From	To	Description	Cont. Fed?
0	20	BENTONITE	

Section 7: Well Test Data

Total Depth: 240
Static Water Level: 18
Water Temperature:

Air Test *

40 gpm with drill stem set at 238 feet for 1 hours.
Time of recovery 1 hours.
Recovery water level 18 feet.
Pumping water level _ feet.

** During the well test the discharge rate shall be as uniform as possible. This rate may or may not be the sustainable yield of the well. Sustainable yield does not include the reservoir of the well casing.*

Section 8: Remarks

Section 9: Well Log

Geologic Source

211CRCK - CARTER CREEK FORMATION (OF COLORADO GROUP)

From	To	Description
0	2	TOP SOIL
2	26	GRAVEL SAND
26	240	SHALEY LIME BEDROCK

Driller Certification

All work performed and reported in this well log is in compliance with the Montana well construction standards. This report is true to the best of my knowledge.

Name: TERRY LINDSAY
Company: LINDSAY DRILLING CO INC
License No: WWC-253
Date Completed: 3/28/2000

STATE OF MONTANA
DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION
1424 9TH AVENUE P.O.BOX 201601 HELENA, MONTANA 59620-1601

GENERAL ABSTRACT

Water Right Number: 76G 111728-00 GROUND WATER CERTIFICATE
Version: 1 -- ORIGINAL RIGHT
Version Status: ACTIVE

Owners: MONTANA, STATE OF DEPT OF TRANSPORTATION
REAL ESTATE SERVICES SECTION
PO BOX 201001
HELENA, MT 59620-1001

Priority Date: MAY 5, 2000 at 11:55 A.M.

Enforceable Priority Date: MAY 5, 2000 at 11:55 A.M.

Purpose (use): INSTITUTIONAL
LAWN AND GARDEN
REST AREA FACILITIES

Maximum Flow Rate: 22.00 GPM

Maximum Volume: 9.94 AC-FT

Maximum Acres: 1.15

Source Name: GROUNDWATER

Source Type: GROUNDWATER

Point of Diversion and Means of Diversion:

ID	Govt Lot	Qtr Sec	Sec	Twp	Rge	County
1		SESW	30	10N	10W	POWELL

Period of Diversion: MAY 1 TO OCTOBER 31
Diversion Means: WELL
Well Depth: 240.00 FEET
Static Water Level: 18.00 FEET
Casing Diameter: 4.63 INCHES
Pump Size: 3.00 HP

GOLD CREEK REST AREA - WEST BOUND

Purpose (Use): INSTITUTIONAL
Volume: 7.06 AC-FT
Period of Use: MAY 1 to OCTOBER 31

Place of Use:

ID	Acres	Govt Lot	Qtr Sec	Sec	Twp	Rge	County
1			SESW	30	10N	10W	POWELL

Purpose (Use): LAWN AND GARDEN
Volume: 2.88 AC-FT
Period of Use: MAY 1 to OCTOBER 31

Place of Use:

ID	Acres	Govt Lot	Qtr Sec	Sec	Twp	Rge	County
1	1.15		SESW	30	10N	10W	POWELL
Total:	1.15						

GOLD CREEK REST AREA - WEST BOUND

MONTANA WELL LOG REPORT

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Other Options

Go to GWIC website
Plot this site in State Library Digital Atlas
Plot this site in Google Maps
View hydrograph for this site
View field visits for this site

Site Name: MDOT * GOLD CR REST AREA EASTBOUND
GWIC Id: 201236

Section 1: Well Owner(s)

1) MONTANA DEPARTMENT OF TRANSPORTATION (MAIL)
BOX 426
DRUMMOND MT 59832 [07/03/2002]

Section 2: Location

Township	Range	Section	Quarter Sections
09N	10W	5	NW¼ SW¼ NE¼ SW¼

County
POWELL

Geocode

Latitude	Longitude	Geomethod	Datum
46.5606	-112.8856	NAV-GPS	NAD27

Ground Surface Altitude	Ground Surface Method	Datum	Date
4230			7/3/2002

Measuring Point Altitude	MP Method	Datum	Date Applies
4231.85			7/3/2002

Addition **Block** **Lot**

Section 3: Proposed Use of Water

PUBLIC WATER SUPPLY (1)

Section 4: Type of Work

Drilling Method: Unassigned

Section 5: Well Completion Date

Date well completed: Unknown

Section 6: Well Construction Details

There are no borehole dimensions assigned to this well.
There are no casing strings assigned to this well.
There are no completion records assigned to this well.

Annular Space (Seal/Grout/Packer)

There are no annular space records assigned to this well.

Section 7: Well Test Data

There are no well test data details assigned to this well.

Section 9: Well Log

Geologic Source

112SNGR - SAND AND GRAVEL (PLEISTOCENE)

Lithology Data

There are no lithologic details assigned to this well.

Driller Certification

All work performed and reported in this well log is in compliance with the Montana well construction standards. This report is true to the best of my knowledge.

There is no certification data for this well.

Appendix D: Drainfield Calculations

Gold Creek Safety Rest Area
Drainfield Sizing and Design

Upgrades to the westbound and eastbound public wastewater systems would be required should MDT choose to perpetuate these systems at the Gold Creek Safety Rest Area sites. The following calculations outline anticipated DEQ requirements.

Daily Design Flow

Per the 2014 Montana Rest Area Plan: peak average people per day = 1,525 people per day

Design application rate: Water usage per person 2.5 gallons per day (gpd)/person.

(1,525 people per day * 2.5 gpd/person) = 3,812.5 gpd of effluent flow.

TOTAL = 3,813 gallons (each site)

Westbound Sand Mound Requirements

Based on soils information of sandy loam soils for the basal area, DEQ specifies an application rate of 0.5 gpd/square foot (sf).

The proposed effluent flow rate equates to 3,813 gpd. An application rate of 0.5 gpd/sf was used for sizing purposes as well as a Level II treatment discount factor of 50% for advanced treatment.

Use: 3,813 gpd / 0.5 gpd/sf = 7,626 sf
7,626 sf * 0.5 discount factor = 3,813 sf
TOTAL = 3,813 sf required

Sand Mound Area: 100 feet by 40 feet required.

Eastbound Onsite Drainfield Requirements

Based on soils information of sandy loam soils, DEQ specifies an application rate of 0.5 gpd/sf.

The proposed effluent flow rate equates to 3,813 gpd. An application rate of 0.5 gpd/sf was used for sizing purposes as well as a Level II treatment discount factor of 50% for advanced treatment.

Use: 3,813 gpd / 0.5 gpd/sf = 7,626 sf
7,626 sf * 0.5 discount factor = 3,813 sf
TOTAL = 3,813 sf required

Lateral Requirements:
(3,813 sf) / (3-foot trench "infiltrator") = 1,271 lineal feet

Total = 1,271 lineal feet required

Total Drainfield Area and 100% Replacement Area:

Drainfield

Use: 1,271 lineal feel / 100 feet = ~13 laterals
100-foot-long, 2.0-inch drainfield laterals
3.0-foot-wide "infiltrator" gravelless drainfield septic chambers
"Standard depth trench" at 7.0 feet on center (minimum).

12 laterals (13 laterals – 1 lateral for end lateral) * 7-foot on center = 84 feet in width

Total Drainfield Area = 100 feet x 84 feet

Replacement Area

DEQ does not allow discount factor of 50% for replacement area; replacement area would be double the size of drainfield area.

Use: 26 laterals (7,626 sf – without the 50% discount factor)
100-foot-long, 2.0-inch drainfield laterals
3.0-foot-wide "infiltrator" gravelless drainfield septic chambers
"Standard depth trench" at 7.0 feet on center (minimum).

26 laterals * 7-foot on center = 182 feet in width

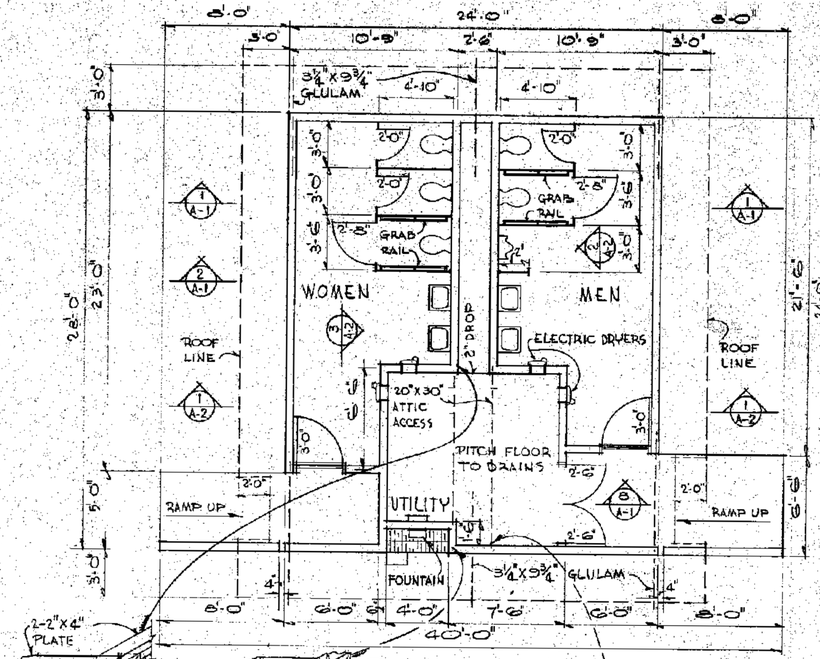
Total Replacement Area = 100 feet x 182 feet

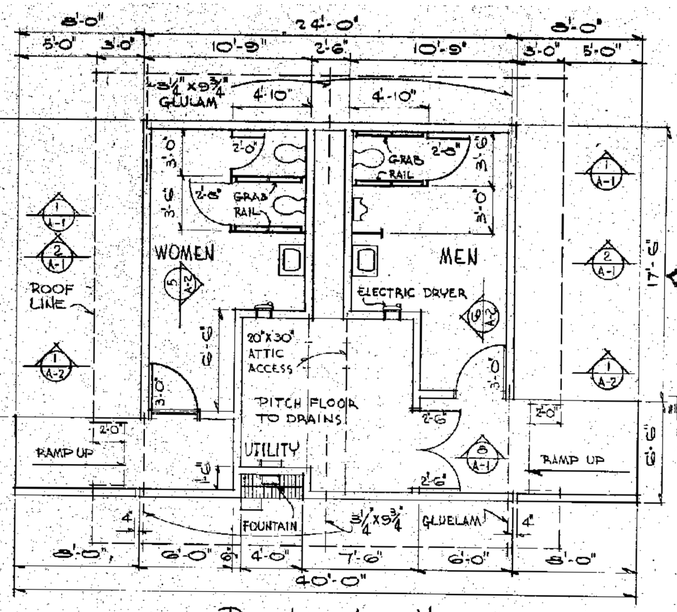
Non-Degradation

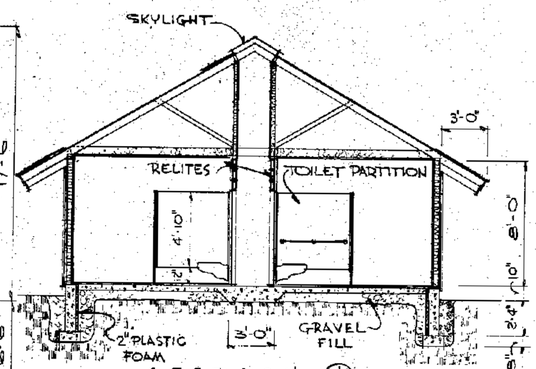
Due to the close proximity to surface water, high groundwater and high nitrate concentrations in the wastewater stream, DEQ nitrate, phosphorus and surface water non-degradation analysis will be very difficult to pass for these sites.

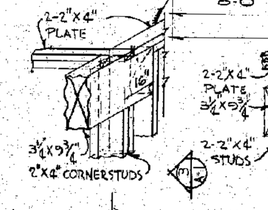
Appendix E: Record Drawings

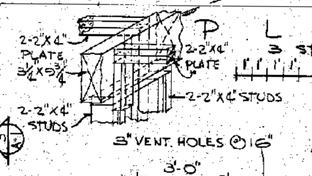
Record drawings indicate the eastbound and westbound buildings are wood frame structures constructed on perimeter footings and typical four-inch concrete slabs and perimeter stem walls on footings. At each site, the concrete slab thickens to 12 inches along a three-foot span width down the middle of the building under the interior walls and plumbing chase.

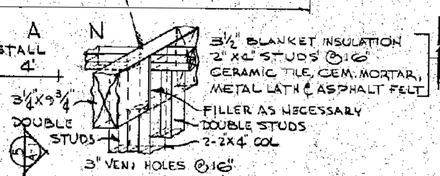


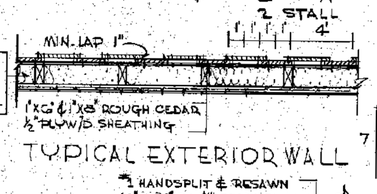


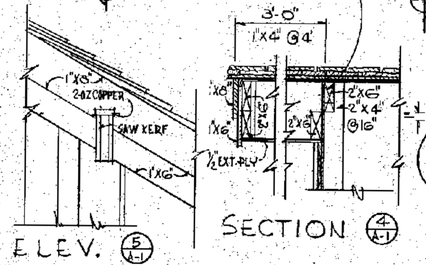


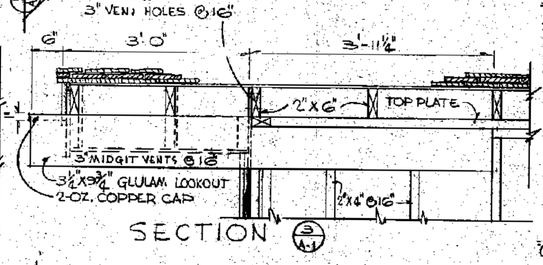


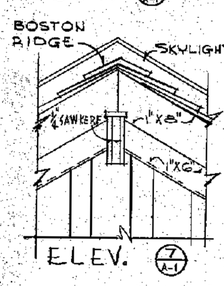


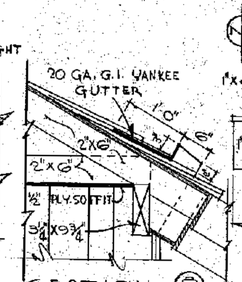


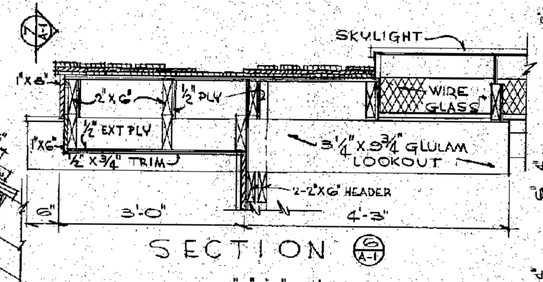






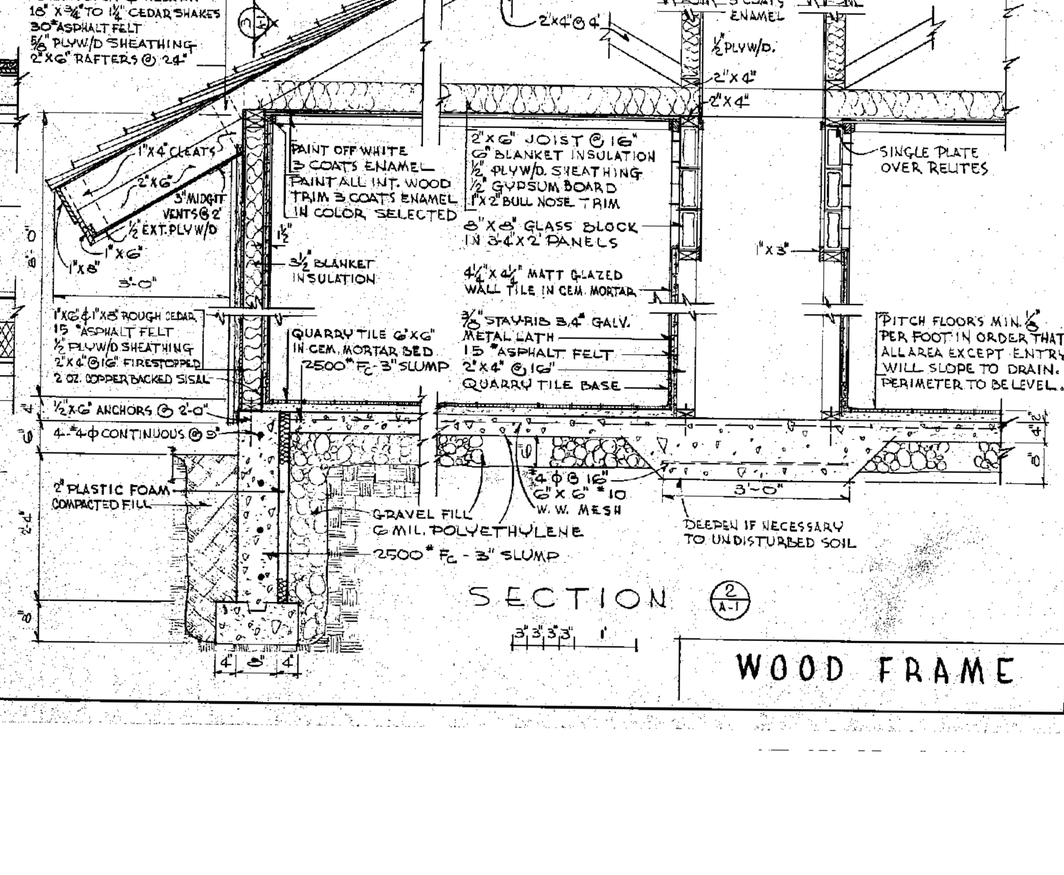






ALL EXTERIOR WOOD EXPOSED TO BE STAINED 2 COAT'S HEAVY BODY OIL BASE EXTERIOR STAIN. (DO NOT STAIN ROOF SHAKES)

PAINT EXTERIOR & INTERIOR METAL DOORS FRAMES, AND OTHER FERROUS METAL 3 COATS GLOSS ENAMEL INCLUDING PRIME COAT.

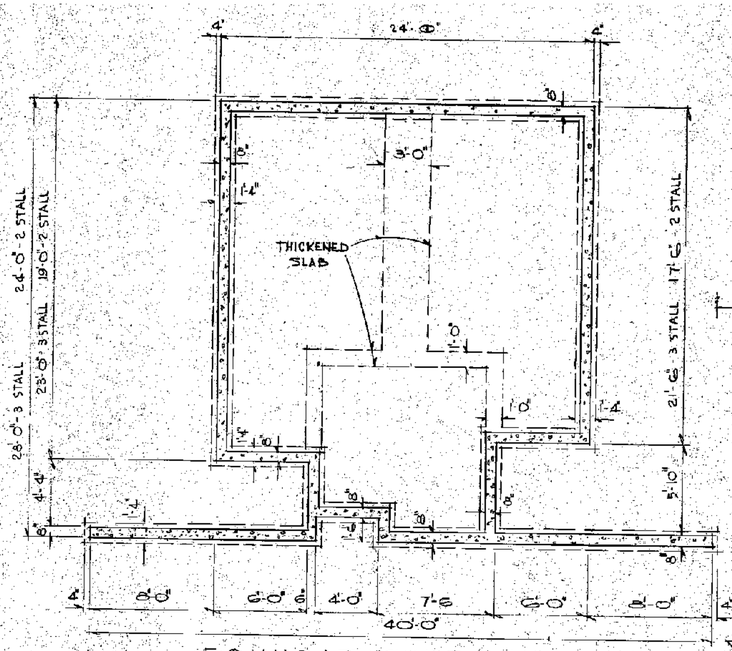


MONTANA STATE HIGHWAY COMMISSION
JACOBSON & SHOPE, ARCHITECTS

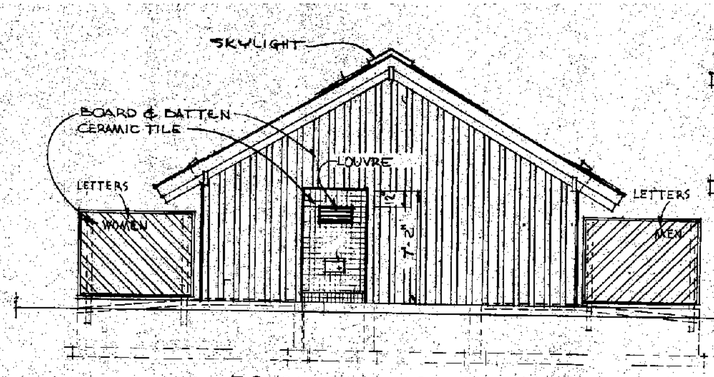
COMFORT STATIONS

A-1

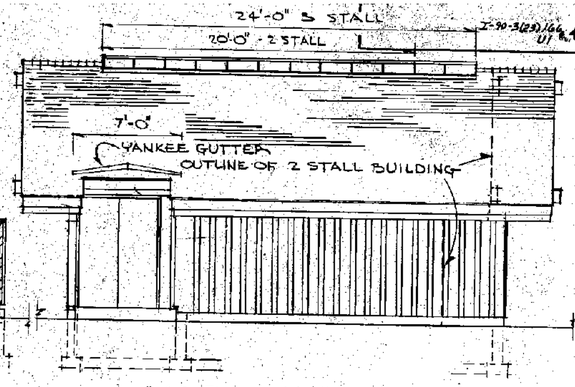
WOOD FRAME



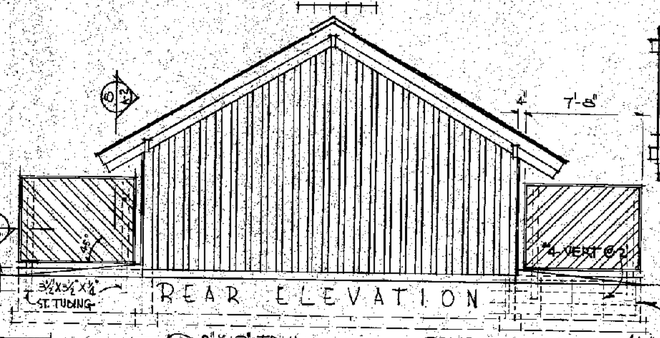
FOUNDATION PLAN



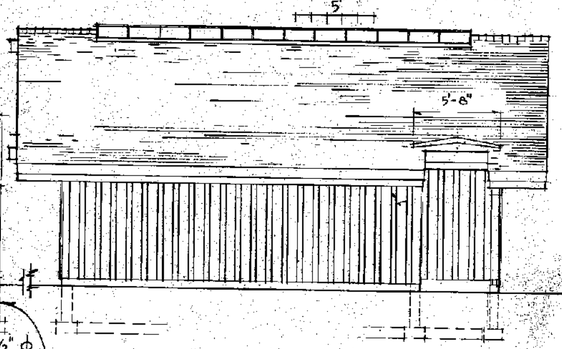
FRONT ELEVATION



SIDE ELEVATION

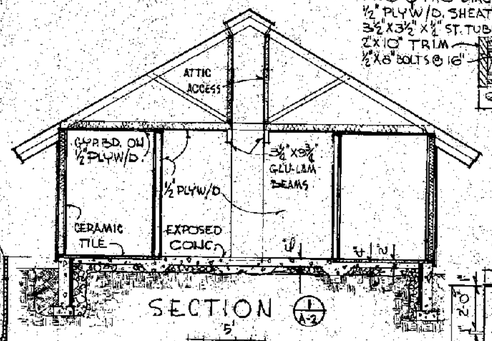


REAR ELEVATION

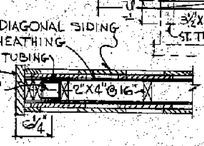


SIDE ELEVATION

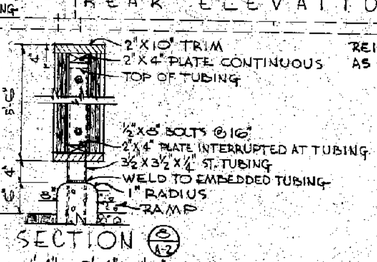
REINF. STUB WALL FDN. W/ ½" ϕ AS SHOWN ON THIS ELEVATION



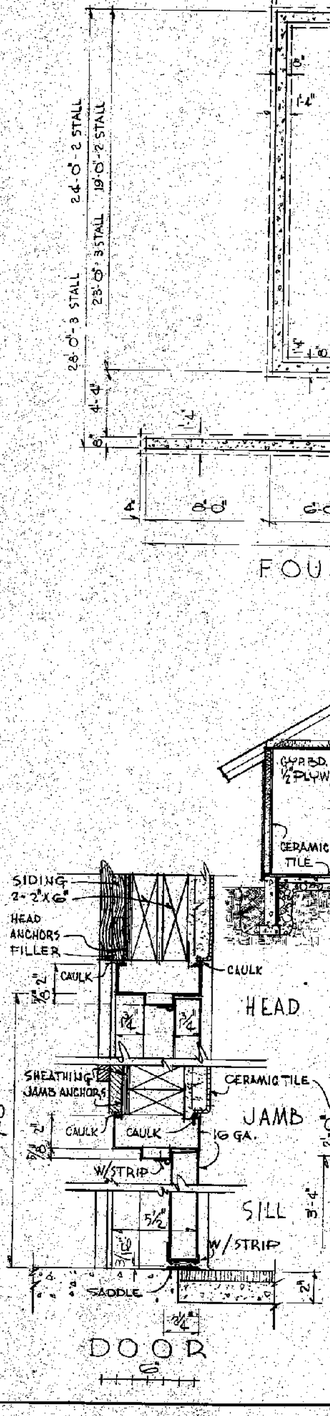
SECTION (1/A-2)



SECTION (7/A-2)

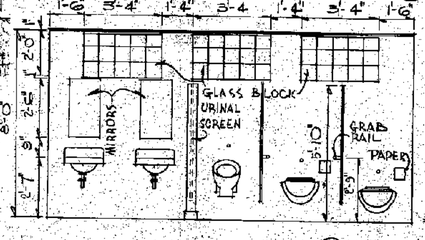


SECTION (6/A-2)

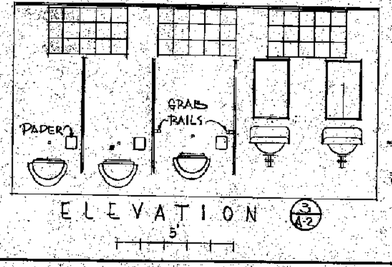


DOOR

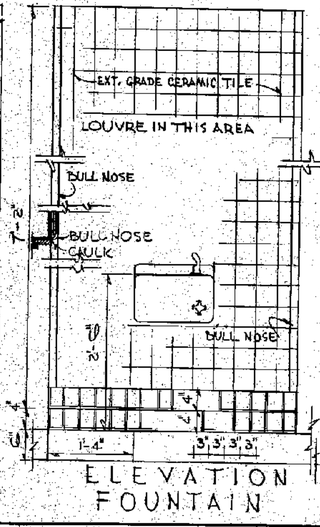
RELITE



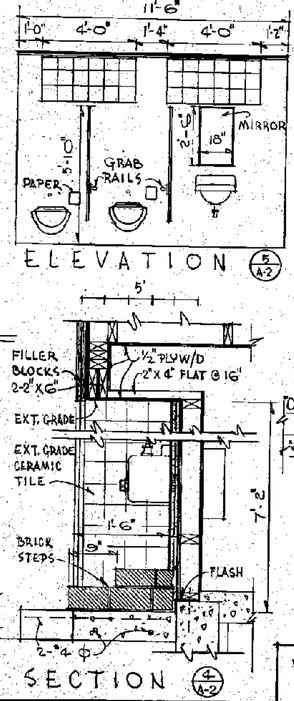
ELEVATION (2/A-2)



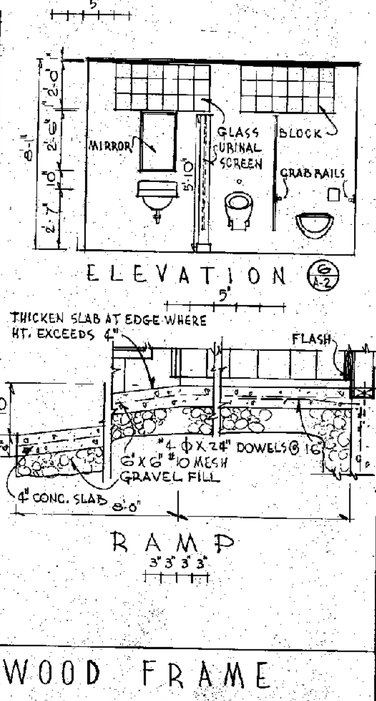
ELEVATION (3/A-2)



ELEVATION FOUNTAIN



ELEVATION (4/A-2)



ELEVATION (5/A-2)

RAMP

3" 3" 3" 3"

MONTANA STATE HIGHWAY COMMISSION
JACOBSON & SHOPE, ARCHITECTS

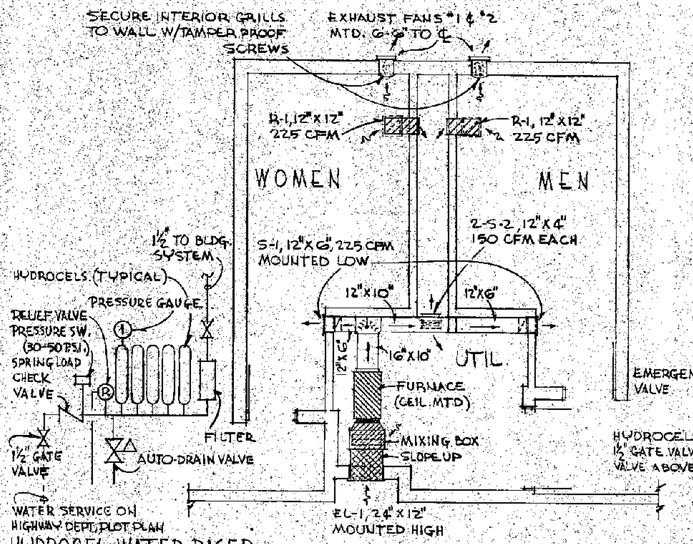
COMFORT STATIONS

A-2

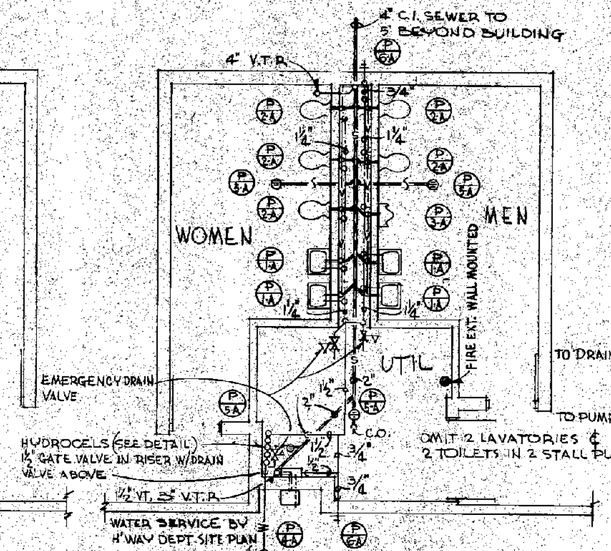
WOOD FRAME

MONTANA STATE HIGHWAY COMMISSION
JACOBSON & SHOPE, ARCHITECTS

M-E, I COMFORT STATION

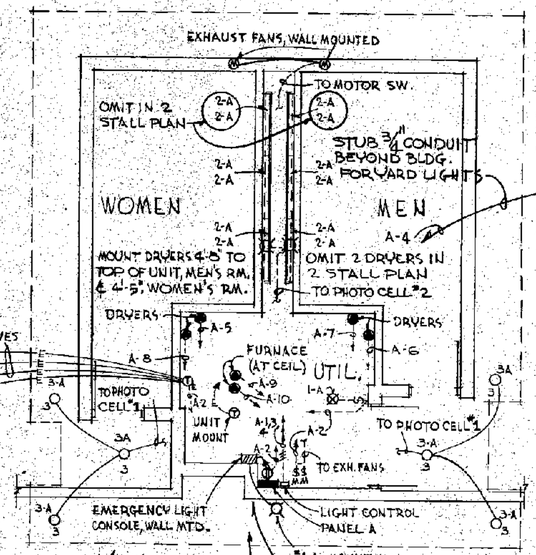


HYDROCEL WATER RISER

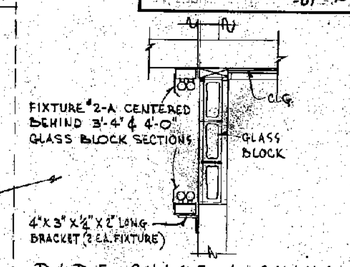


HEATING PLAN

PLUMBING PLAN



POWER PLAN



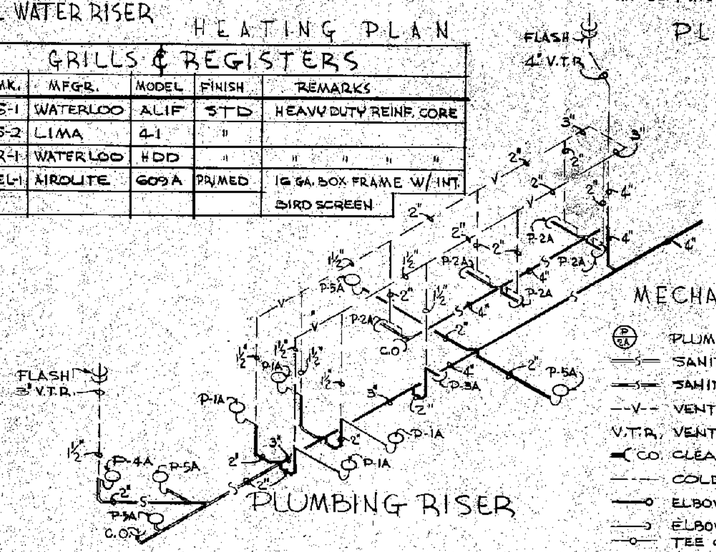
PIPE CHASE LIGHING

SEE SITE PLAN FOR PANEL RISER

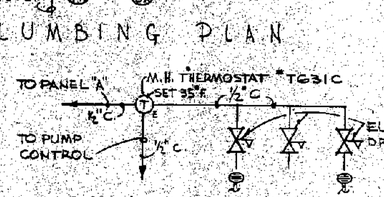
ACCEPTABLE GRILL & REGISTER OTHER MFGR.
S-1 KRUEGER 1500F
TITUS CT 1500F
S-2 KRUEGER 777
US REGISTER 413
R-1 KRUEGER 480H
TITUS G-1
EL-1 KRUEGER XY50
AMERICAN LWP 130

GRILLS & REGISTERS

MK.	MFGR.	MODEL	FINISH	REMARKS
S-1	WATERLOO	ALIF	STD	HEAVY DUTY REINF. CORE
S-2	LIMA	4-1	"	
R-1	WATERLOO	HDD	"	" " " "
EL-1	AIROLITE	609A	PRIMED	16 GA. BOX FRAME W/INT. BIRD SCREEN



PLUMBING RISER



EMERGENCY DRAIN SYSTEM

PLUMBING FIXTURE SCHEDULE

MARK	DESCRIPTION	PIPE SIZE (IN) C.W	H.W	WASTE	VENT
P-1A	LAVATORY	½	½	1½	1½
P-2A	WATER CLOSET	1	—	4	2
P-3A	URINAL	¾	—	2	1½
P-4A	DRINKING FOUNTAIN	½	—	1½	1½
P-5A	FLOOR DRAIN	—	—	2	—
P-6A	WALL HYDRANT	¾	—	—	—

MECHANICAL LEGEND

- P/6A — PLUMBING FIXTURE
- SANITARY SEWER ABOVE GRADE
- SANITARY SEWER BELOW GRADE
- V — VENT
- V.T.P. — VENT THRU. ROOF
- C.O. — CLEAN OUT
- COLD WATER
- ELBOW TURNED UP
- ELBOW TURNED DOWN
- TEE OUTLED UP
- TEE OUTLED DOWN
- WALL HYDRANT
- CAPPED CONNECTION
- SUPPLY AIR DUCT
- RETURN AIR DUCT
- FRESH AIR DUCT
- EXHAUST DUCT
- DRAIN VALVE, ELECTRICALLY OPERATED

FIXTURE SCHEDULE

DES.	SYMBOL	FIXTURE MFGR.	CAT. NO.	LOCATION	TYPE	LAMP TYPE	NO
1-A	☒	GEN. ELECT.	5740-7	CEIL.	SURFACE	150 W	1
2-A	☒	CRESCENT	SCF-240	"	"	F40WW	2
3-A	○	MARCO *	MR262-TB	EAVE	RECESS	H-100DX-38-4	1
4-A	☒	EXIDE ☒	72979	WALL	SURFACE	PAR 36	1

NOTES
* W/HPF INTEGRAL BALLAST FOR -20°F & TAMPER PROOF.
☒ WEATHER PROOF WITH GASKET.
ALL FIXTURES 120 V.

ACCEPTABLE OTHER LIGHT FIXTURE MANUFACTURERS
1-A - BRYANT 5228, PASS-SEYMOUR 110
2-A - KEYSTONE 96C-H-CR, HEWLITE WP 248 RS
3-A ARTMETAL MIR-F-R2, HOLOPHANE R-700-M120
4-A - BIG BEAM 2A6-L-100, DUALLITE ALC-30

ELECTRICAL LEGEND

- NO. OF HASH MARKS SHOWS NO OF CONDUCTORS IN CONDUIT. NO HASH MARKS SHOWS 2 CONDUCTORS
- CONDUIT CONCEALED
- CONDUIT EXPOSED
- ELECTRICAL CONTROL
- SPECIAL CABINET
- LIGHT FIXTURE, FLUORESCENT
- LIGHT FIXTURE, MERCURY VAPOR, WALL MT.
- SWITCH
- SWITCH, MOTOR
- OUTLET, DUPLEX
- OUTLET, MOTOR
- OUTLET, THERMOSTAT
- OUTLET, SPECIAL PURPOSE
- T_E THERMOSTAT FOR EMERGENCY DRAIN
- PANEL
- HOME RUN TO PANEL (NO. OF ARROWS SHOWS NO. OF CIRCUITS)

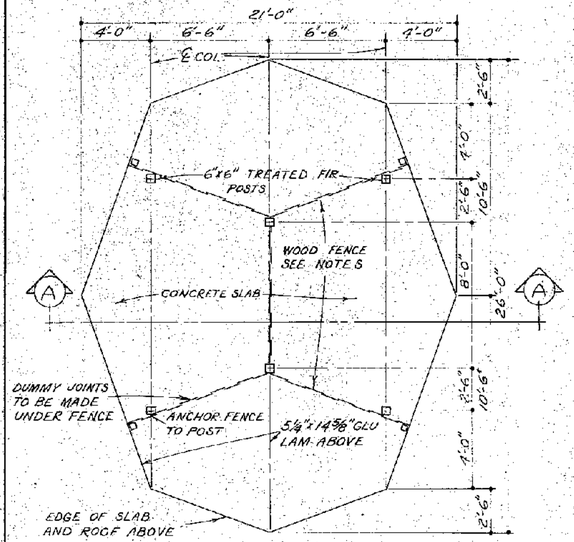
PANEL "A"

SIZE WIRE IN CKT. #4 ACCORDING TO LENGTH OF RUN

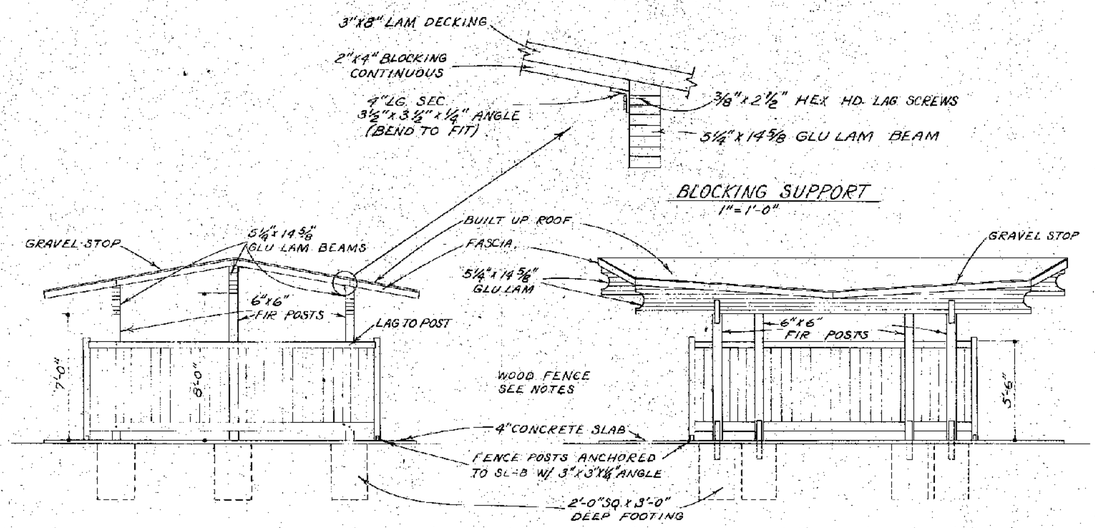
	125A 2P MAIN		
1	20A 2P	20A 2P	2
3	20A 2P	40A 2P	4 #8 THW
#10 THW 5	30A 2P	30A 2P	6 #10 THW
#10 THW 7	30A 2P	30A 2P	8 #10 THW
#6 THW 9	50A 2P	30A 2P	10 #10 THW
11	15A 2P	50A 2P	12 #6 THW
SPARE	50A 2P	50A 2P	SPACE

CIRCUITS #6 & #8 ARE SPARES FOR 2 STALL PLAN
IF PUMP SIZE REQUIRES USE LARGER BREAKER ON CIRCUIT #11 AND PROPORTIONALLY LARGER CONDUCTORS

WOOD FRAME



PLAN ¼"=1'-0"



BLOCKING SUPPORT
1"=1'-0"

FRONT ELEVATION ¼=1'-0"

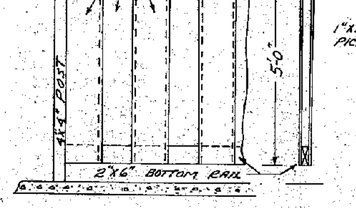
SIDE ELEVATION ¼"=1'-0"

GENERAL NOTES & SPECIFICATIONS

1. SITE WORK - DO NO MORE STRIPPING, CLEARING AND GRUBBING NOR EXCAVATION THAN IS NECCESSARY TO COMPLETE THE WORK OUTLINED IN THESE SPECIFICATIONS. GET ENGINEER'S APPROVAL. REMOVE FROM THE SITE AND DISPOSE OF ALL EXCESS STRIPPED OR EXCAVATED MATERIAL NOT REUSED IN NEW CONSTRUCTION AS DIRECTED BY THE ENGINEER
2. CONCRETE - ALL SHALL BE CLASS "DD" WIRE MESH 6x6 # 4 GAUGE. CURING COMPOUND; ALL EXPOSED CONCRETE, TYPE AS APPROVED BY THE ENGINEER. BROOM FINISH FOR ALL SLABS
3. CARPENTRY - SEE DETAILS AND NOTES ON THIS SHEET FOR MATERIALS IN GENERAL. LAMINATED CONSTRUCTION - BEAMS; 2400 f WEST COAST DOUGLAS FIR - LOCK DECK; IDAHO WHITE PINE, FIR OR LARCH. CUT BEAMS TO SHAPE AND LENGTH. FURNISH ALL WOOD TO WOOD CONNECTORS. BEAMS AND DECK COMPLETELY FACTORY PRE-FINISHED. PHENOLIC WATERPROOF ADHESIVE FOR ALL LAMINATED CONSTRUCTION. FENCE, POSTS, RAILS AND BOARDS ALL REGAWN CEDAR SIMILAR TO "GAP 'N LAP" DESIGN. SEE FENCE DETAIL
4. MOISTURE PROTECTION - 4 MIL POLYETHYLENE UNDER ALL CONCRETE SLABS TAKING CARE NOT TO TEAR OR PIERCE. SHEET METAL; 24 GAUGE GALVANIZED IRON. ROOFING REQUIRMENTS, GRAVEL SURFACE, ASBESTOS FELT APPLIED OVER DECK IN ACCORDANCE WITH JOHNS-MANVILLE SPECIFICATION NO. 601, ~ THESE REFERENCED SPECIFICATIONS ESTABLISH THE STANDARDS OF QUALITY REQUIRED BUT ARE NOT RESTRICTIVE. MATERIALS OF THE SAME TYPE PRODUCED BY APPROVED MANUFACTURERS MAY BE SUBSTITUTED, APPROVED MANUFACTURERS ARE, JOHNS MANVILLE, RUBEROID, PHILIP CAREY, AND BARRETT.
5. PAINTING AND STAINING - SUBMIT COMPLETE DESCRIPTIVE LITERATURE AND/OR SAMPLES OF ALL MATERIALS PROPOSED FOR USE. OBTAIN APPROVAL OF ALL MATERIALS BEFORE PROCEEDING WITH WORK. ALL EXPOSED WOOD; 2 COATS SEMI-TRANSPARENT STAIN. GALVANIZED IRON; 1 COAT OF PITTSBURGH IRONHIDE, 2 COATS OF PITTSBURGH SUNPROOF HOUSE PAINT. ALL OTHER METAL; 1 COAT OF PRIMER UNLESS SHOP PRIMED, 2 COATS PITTSBURGH SUNPROOF HOUSE PAINT. OTHER ACCEPTABLE MANUFACTURERS ARE BENJAMIN MOORE, SHERWIN WILLIAMS, GLIDDEN OR APPROVED EQUAL.
6. ALL "H" PLATES, ANGLE IRONS, PLATES AND CONNECTION PLATES SHALL BE OF STRUCTURAL STEEL FOR BRIDGES & BUILDINGS IN ACCORDANCE WITH ASTM NO. A 36. PRIME AND PAINT AS SET FORTH IN ITEM 5 ABOVE.
7. REFER TO MONTANA HIGHWAY DEPARTMENT SPECIAL PROVISIONS FOR GENERALLY APPLICABLE SPECIFICATIONS.

NOTE - COLOR OF PENETRATING SEMI-TRANSPARENT STAIN FOR ALL BEAMS, POSTS AND RAILS SHALL BE OLYMPIC STAIN NO. 711 OR A CORRESPONDING COLOR BY COLUMBIA, DUTCH BOY OR AN APPROVED EQUAL. THE COLOR OF PENETRATING SEMI-TRANSPARENT STAIN FOR THE SCREEN FENCE PANELS, AND THE DECKING SHALL BE OLYMPIC STAIN NO. 723 OR A CORRESPONDING COLOR BY COLUMBIA, DUTCH BOY OR AN APPROVED EQUAL.

ALL SCREWS AND BOLTS TO BE CROMIUM COATED OR SOME OTHER APPROVED RUST RESISTANT COATING.
NAILS FOR SCREEN FENCE AND OTHER EXPOSED AREAS SHALL BE GALVANIZED.

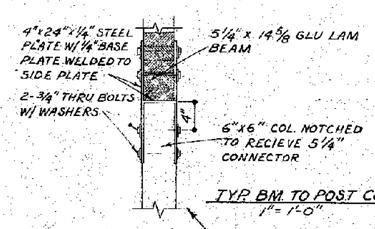


ELEVATION VIEW END VIEW

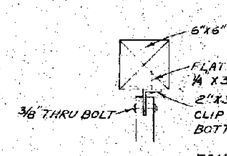


TOP VIEW

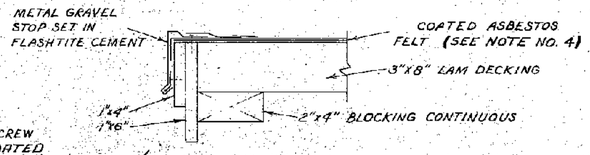
FENCE DETAIL



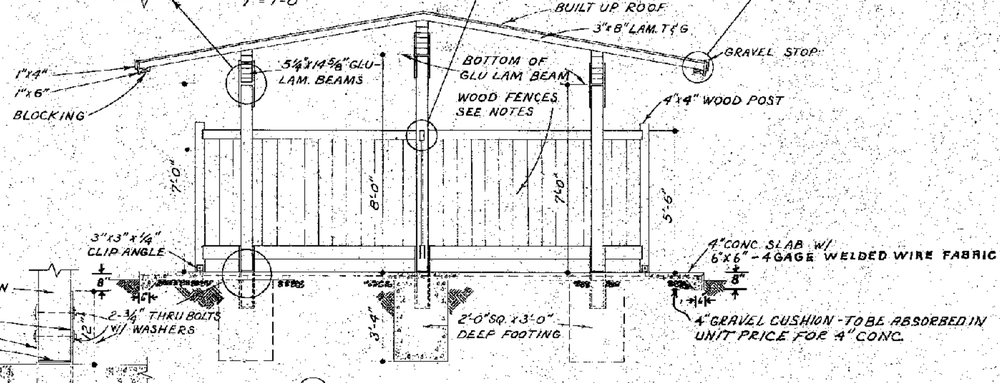
TYP BM TO POST CONN.
1"=1'-0"



FENCE CONN.
1½"=1'-0"



TYP ROOF FASCIA DETAIL
3"=1'-0"



Ⓐ CROSS SECTION ⅜"=1'-0"

TYP COL. BASE DET
1"=1'-0"

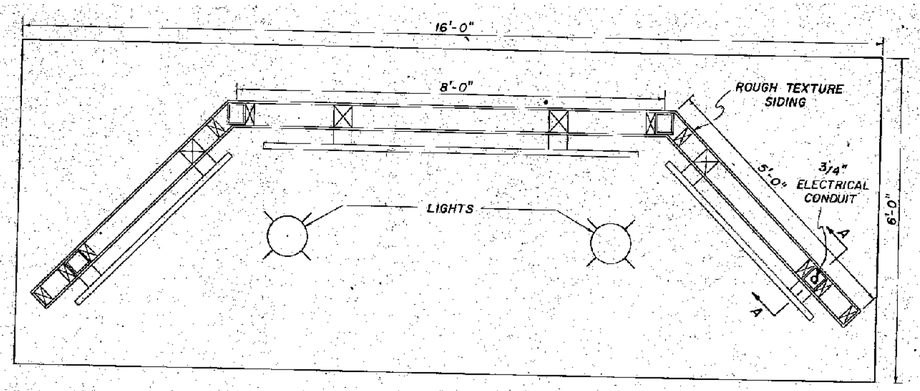
FOUR-TABLE PICNIC SHELTER

MONTANA HIGHWAY DEPARTMENT

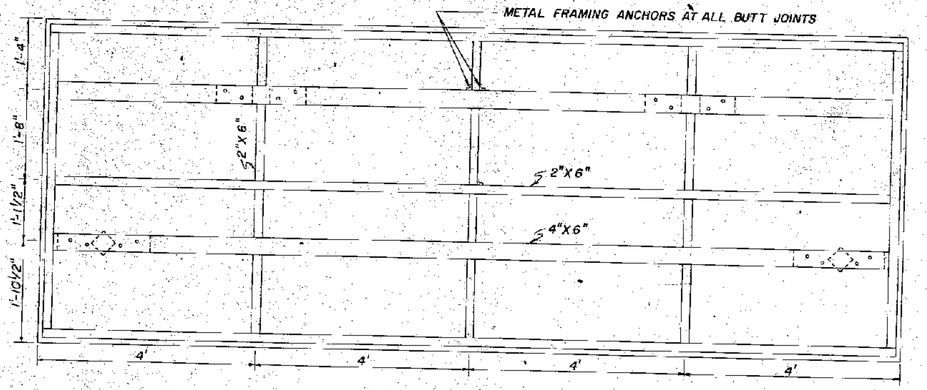
SCALE AS SHOWN

DETAIL

STATE	PROJECT NO.	SHEET NO.
MONTANA	I-90-3(23)166 U-1	47 of 66

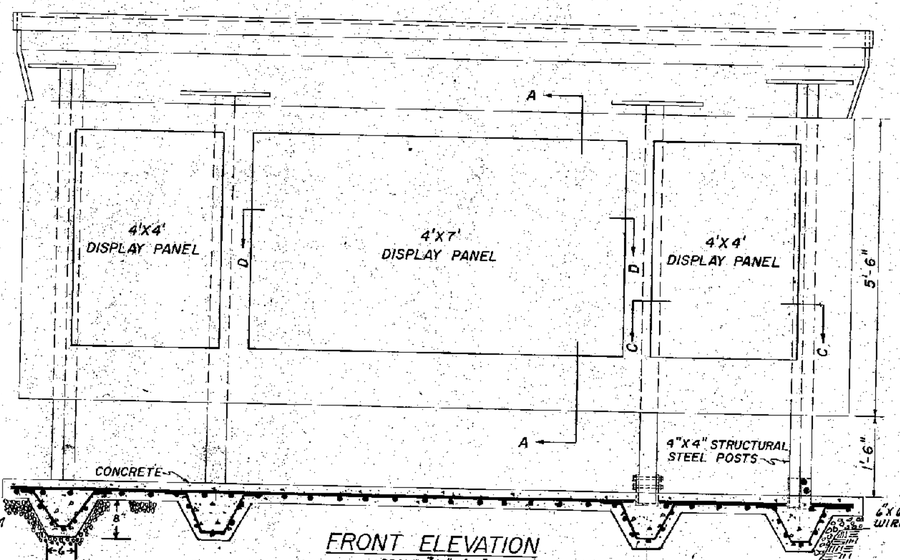


PLAN VIEW
SCALE 3/4"= 1'-0"

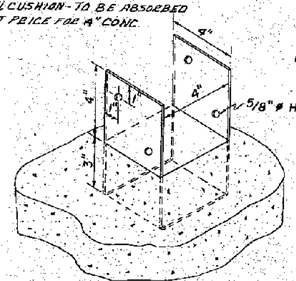


PLAN VIEW OF ROOF
SCALE 3/4"= 1'-0"

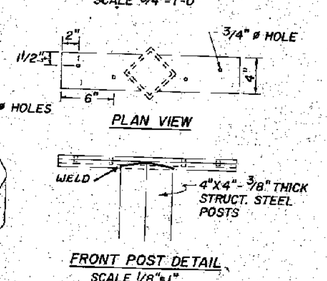
-NOTE-
SEE SHEET NO. A6 FOR SPECIFICATIONS FOR TYPE OF FINISH ON SCREWS, BOLTS, NAILS AND IRON. ALL IRON PLATES, ANGLES, BRACKETS AND POSTS SHALL MEET ASTM NO. A36. (SEE SPECIFICATIONS ON SHEET NO 48)



FRONT ELEVATION
SCALE 3/4"= 1'-0"

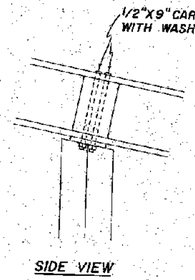


POST BASE

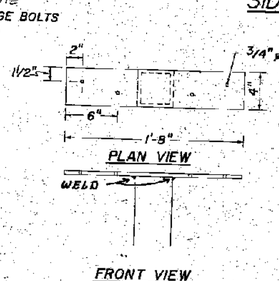


PLAN VIEW

FRONT POST DETAIL
SCALE 1/8"=1"



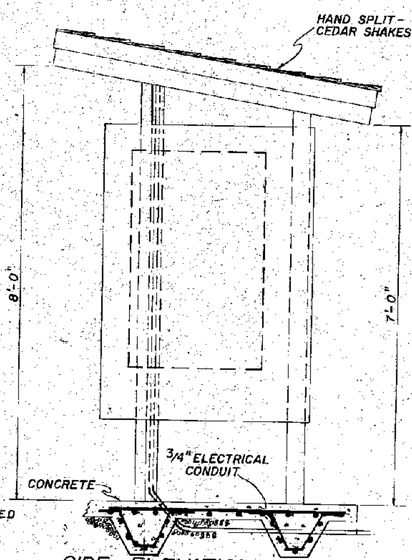
SIDE VIEW



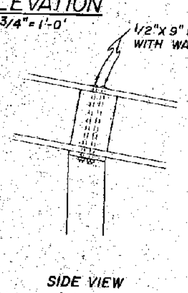
PLAN VIEW

FRONT VIEW

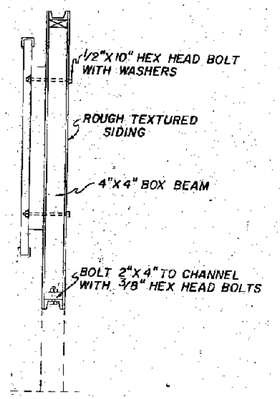
REAR POST DETAIL
SCALE 1/8"=1"



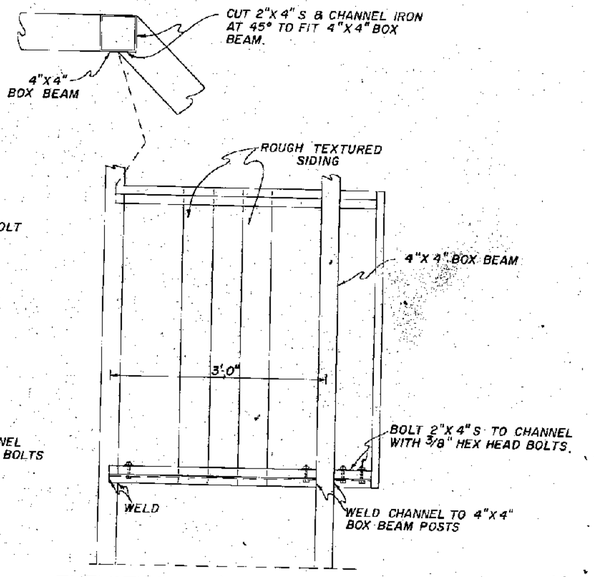
SIDE ELEVATION
SCALE 3/4"= 1'-0"



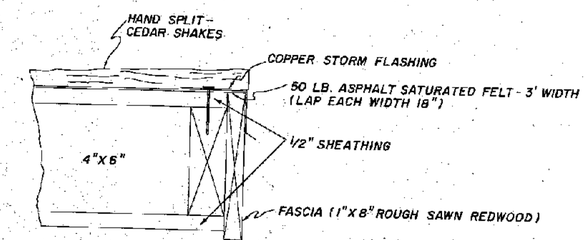
SIDE VIEW



SECTION A-A



ELEVATION VIEW OF WING PANEL
SCALE 3/4"= 1'-0"



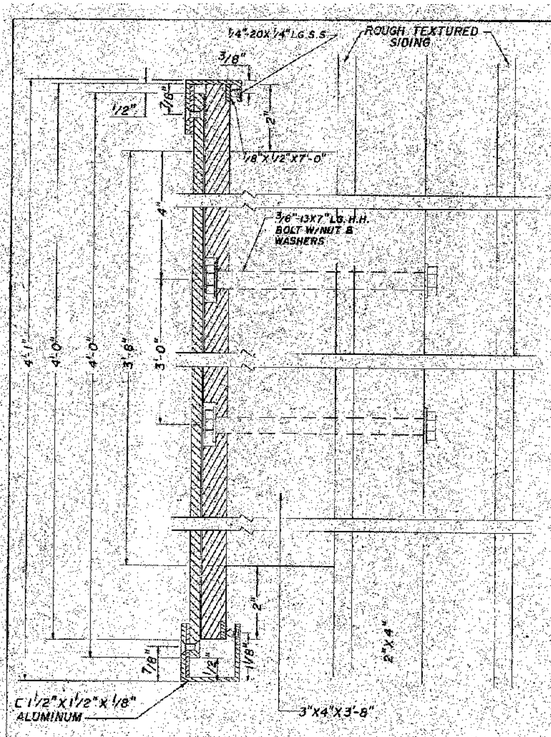
DETAIL OF ROOF X-SEC.
SCALE 1/4"= 1"

EXHIBIT CASE

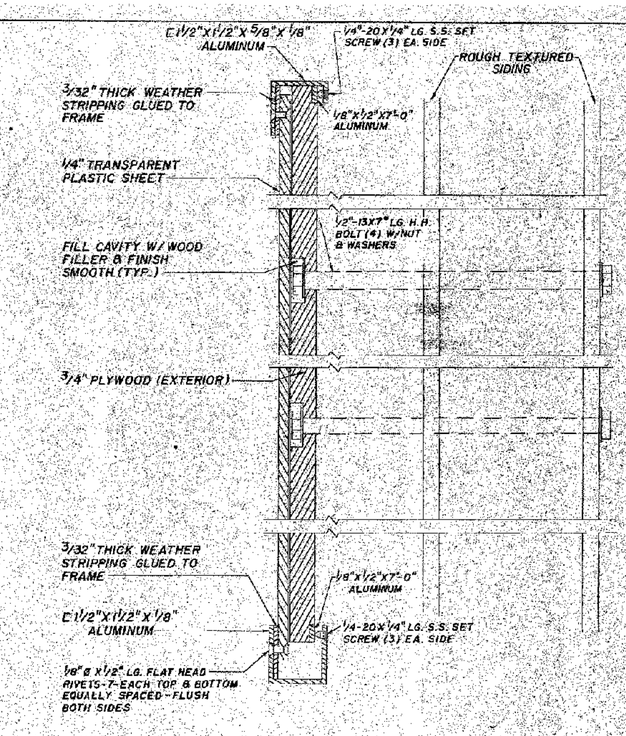
DETAIL SHEET-1

DETAIL

STATE	PROJECT NO.	SHEET NO.
MONTANA	I-90-3(23)166U1	480466



SECTION A-A



SECTION B-B

BILL OF MATERIALS FOR DISPLAY BOARD (4'X7')

NO. REQ'D.	ITEMS
1	C 1 1/2"X1 1/2"X5/8"X1/8"X7'-0 3/8" ALUM. CHANNEL
1	C 1 1/2"X1 1/2"X1/8"X7'-0 3/8" ALUM. CHANNEL
2	L 1 1/2"X1 1/2"X1/8"X4'-1" ALUM. ANGLE
2	1/8"X1/2"X7'-0" ALUM. FLAT
1	3/4"X4'-0"X7'-0" PLYWOOD SHEET (EXTERIOR)
1	1/4"X4'-0"X7'-0" TRANPARENT PLASTIC SHEET
12	#14X1/2" LG. FLAT HEAD WOOD SCREWS
6	1/4"-20X1/4" LG. STAINLESS STEEL SET SCREWS
22	1/8"#X1/2" LG. FLAT HEAD RIVETS
2	1/2"-13X7" LG. HEX HEAD BOLT W/HEX NUTS & WASHERS
	3/32" THICK WEATHER STRIPPING (AS REQUIRED)

BILL OF MATERIALS FOR TWO DISPLAY BOARDS (4'X4')

NO. REQ'D.	ITEMS
2	C 1 1/2"X1 1/2"X 5/8"X 1/8"X 4'-0 3/8" ALUM. CHANNEL
2	C 1 1/2"X1 1/2"X1/8"X4'-0 3/8" ALUMINUM CHANNEL
4	L 1 1/2"X1 1/2"X1/8"X4'-1" ALUMINUM ANGLE
4	1/8"X1/2"X4'-0" ALUMINUM FLAT
2	3/4"X4'-0"X4'-0" PLYWOOD SHEET (EXTERIOR)
2	1/4"X4'-0"X4'-0" TRANSPARENT PLASTIC SHEET
24	#14X1/2" LG. FLAT HEAD WOOD SCREWS
12	1/4"-20X1/4" LG. STAINLESS STEEL SET SCREWS
44	1/8"#X1/2" LG. FLAT HEAD RIVETS
4	1/2"-13X7" LG. HEX HD. BOLT W/HEX NUTS & WASHERS
	3/32" THICK WEATHER STRIPPING (AS REQUIRED)

ALL LUMBER, HARDWARE, MATERIALS AND LABOR AS REQUIRED TO COMPLETE THE INFORMATION DISPLAY SHALL BE INCLUDED.

PAINTING - ALL WOOD PARTS SHALL BE PAINTED WITH TWO (2) COATS OF SEMI-TRANSPARENT STAIN COLOR TO BE COMPATIBLE AND BLEND IN WITH THE SITE, SUBJECT TO APPROVAL OF ENGINEER.

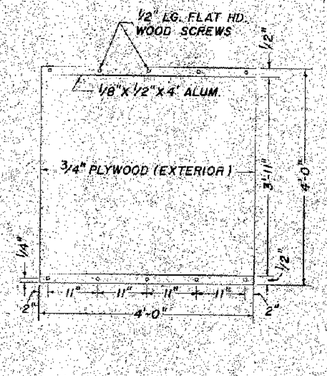
LUMBER - SHALL BE CONSTRUCTION GRADE FIR

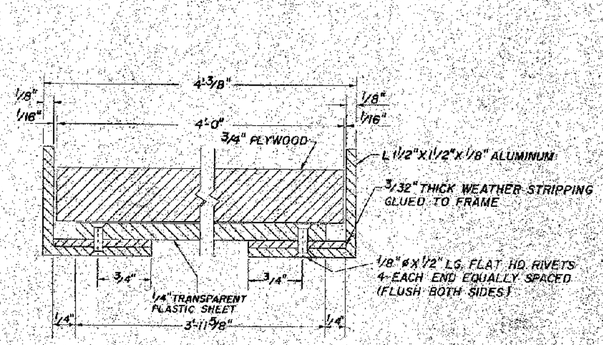
LIGHT FIXTURES - SHALL BE 100-150 WATT WITH SHALLOW HOUSING, APPROX. 3" WITH ALUMINUM LENSE GUARD AND HAVE TAMPER-PROOF STAINLESS STEEL ALLEN-HEAD SCREWS; EQUIVALENT TO MARCO CAST ALUMINUM CAT. NO. 500-W2C-AH.

BILL OF MATERIALS FOR SUPPORT STRUCTURE

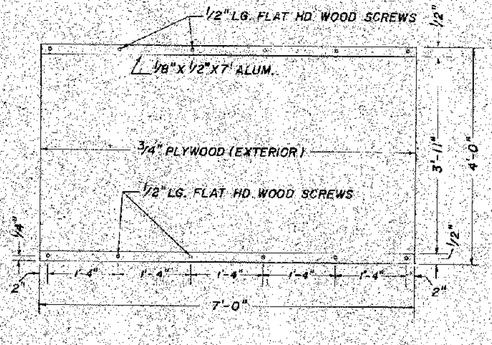
NO. REQ'D.	SIZE	DESCRIPTION
		LUMBER
8	1/2"X4'X8'	EXTERIOR PLYWOOD SHEATHING FOR ROOF
9	7/16"X4'X8'	GROOVED ROUGH TEXTURED HARDBOARD PANEL SIDING PRE-STAINED (IVY COLOR)
2	4"X6"X16'	ROOF BEAMS
4	4"X4"X6'	DISPLAY BOARD SUPPORTS (INSIDE OF WALL PANEL)
3	2"X6"X16'	ROOF STRINGERS
20	2"X4"X6'	ROOF FRAMES AND PANEL FRAMES
6	3"X4"X3'-8"	SPACER BETWEEN DISPLAY BOARD & WALL OF PANEL
2	1"X6"X6'	REDWOOD FASCIA
2	1"X8"X16'	REDWOOD FASCIA
1	SQUARE	HAND SPLIT CEDAR SHAKES
		IRON
4	4"X4"X7'-10"	STRUCTURAL STEEL TUBE FOR POSTS
36 LIN. FT.	2"X4"	CHANNEL IRON FOR PANEL FRAME SUPPORTS
4	1/4"X4"X20"	IRON PLATE FOR ROOF SUPPORTS ON TOP OF POSTS
4	1/2"X7"X4"X7"	4 INCHES WIDE, IRON BRACKET FOR POST BASE BRACE
		HARDWARE
12	1/2"X10"	HEX HEAD BOLTS, TO SECURE BULLETIN DISPLAY BOARDS THROUGH WALL PANEL
16	1/2"X10"	HEX HEAD BOLTS TO HOLD ROOF TO POST PLATES
30	3/8"X4"	CARRIAGE BOLTS TO FASTEN 2"X4" PANEL FRAME TO CHANNEL IRON
8	1/2"X6"	HEX HEAD BOLTS TO FASTEN POST TO IRON BASE PLATES IN CONC.
15	LINEAL FEET	ELECTRICAL CONDUIT

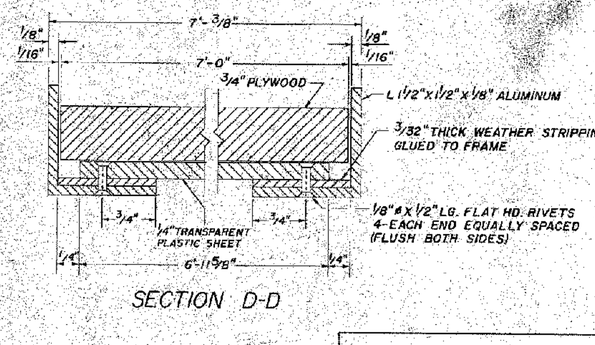
ALL METAL FRAMING ANCHORS, NAILS, SCREWS AND HARDWARE NECESSARY OR REQUIRED TO COMPLETE THE DISPLAY SHALL BE FURNISHED.





SECTION C-C

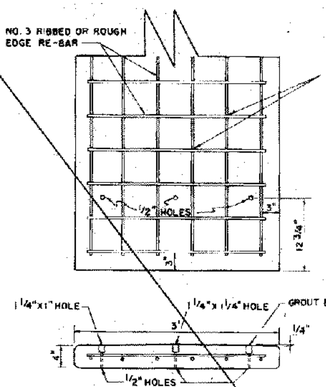


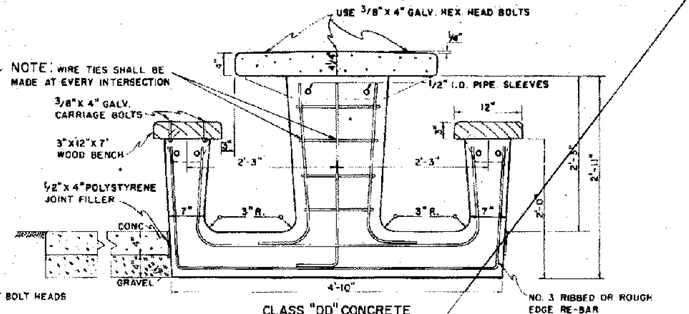


SECTION D-D

EXHIBIT CASE

STATE	PROJECT NO.	SHEET NO.
MONTANA	I-90-3(23)166 0-1	49 of 66



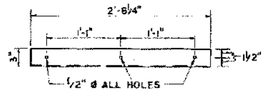


CLASS "DD" CONCRETE

END ELEVATION

CLASS "DD" CONCRETE

TABLE TOP



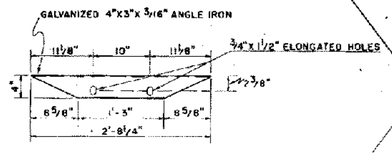
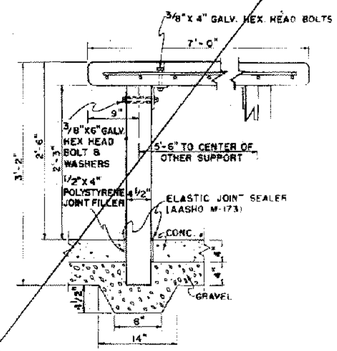


TABLE TOP SUPPORT



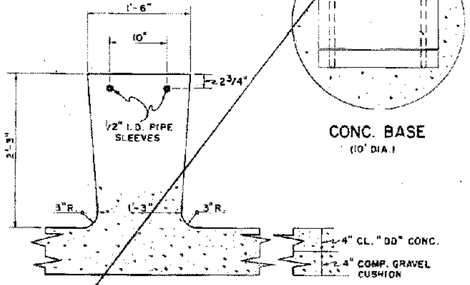
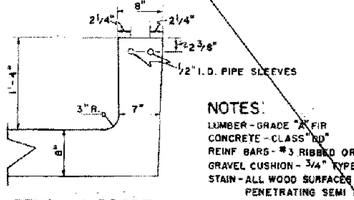


TABLE SUPPORT DETAIL

CONC. BASE

(10" DIA.)



BENCH SUPPORT DETAIL

NOTES:
LUMBER - GRADE "A" FIR
CONCRETE - CLASS "DD"
REINF. BARS - #3 RIBBED OR ROUGH EDGE RE-BAR
GRAVEL CUSHION - 3/4" TYPE "A" GR. 5
STAIN - ALL WOOD SURFACES TO BE STAINED WITH PENETRATING SEMI TRANSPARENT OLYMPIC STAIN 711 OR EQUAL.

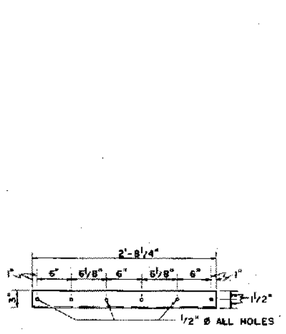
VOID

PICNIC TABLE - CONC. TOP

DETAIL DRAWING	
REFERENCE: STANDARD SPEC. SECT.	SHEET NO.
APPROVED:	

REVISED

EFFECTIVE

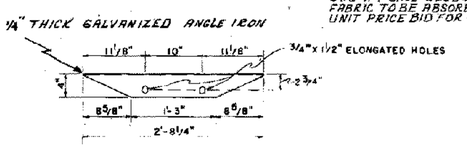


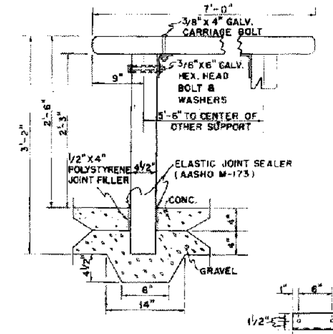
CLASS "DD" CONCRETE

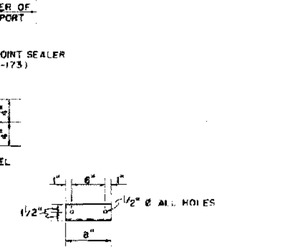
END ELEVATION

6"x6" x 4 GAGE WELDED WIRE FABRIC TO BE ABSORBED IN UNIT PRICE BID FOR 4" CONC.

BOTTOM OF GRAVEL CUSHION FOR TABLE SUPPORT.







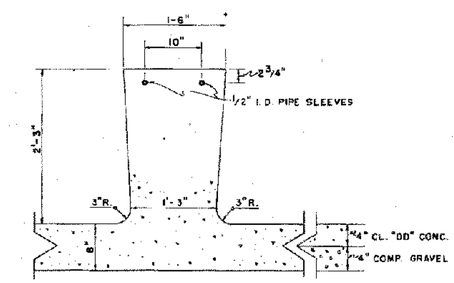
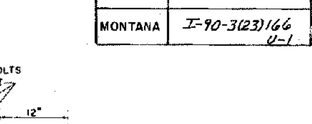
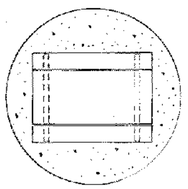


TABLE SUPPORT DETAIL

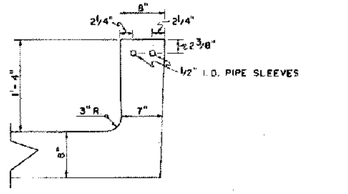


NOTES:
LUMBER - GRADE "A" FIR
CONCRETE - CLASS "DD"
REINF. BARS #3 RIBBED OR ROUGH EDGE RE-BAR
GRAVEL CUSHION - 3/4" TYPE "A" GR. 5
STAIN - ALL WOOD SURFACES TO BE STAINED WITH PENETRATING SEMI TRANSPARENT OLYMPIC STAIN 711 OR A SIMILAR COLORED STAIN BY COLUMBIA, DUTCH BOY OR AN APPROVED EQUAL.



CONC. BASE

(10" DIA.)



BENCH SUPPORT DETAIL

PICNIC TABLE — PLANK TOP

DETAIL DRAWING	
REFERENCE: STANDARD SPEC. SECT.	SHEET NO.
APPROVED:	

REVISED

FED. ROAD DIST. NO.	STATE	F.A.P.	FISCAL YEAR	SHEET NO.	TOTAL SHEET
8	MONT.	I-90-3(33)166	16		202

3454 610 1-57-31

NOTE: R/W LINE IS CONTROL OF ACCESS LINE UNLESS OTHERWISE NOTED.

FRONT. RD.
Δ = 0° 30'
D = 0° 30'
T = 50.0'
E = 0.1'
L = 100.0'
R = 11,460.0

NOTE:
FOR RAMP B, CURVE DATA SEE SHEET NO. 40

FOR CONT. OF FRONT. RD. ℄, R/W, & PROFILE SEE SHTS 33 & 34

WEST BOUND LANE
Δ = 16°45'45" RT.
D = 0°30'20"
T = 1669.8'
E = 122.5'
L = 3315.6'
R = 11,334.0'
S = 2%

400 410 420 430

MP 47

STA 409+54.2 COR TO W.B. T.10N. R.11W. / STA 416+45.5 W.B. T.10N. R.10W.

P.C. 409+54.0 — P.T. 410+54.0 — P.I. 412+90.9

STA. 413+49.9 BEGIN TAPER (OFFSET 12')

SEC. 30 / SEC. 25

P.C. 419+22.9 — STA 420+00 W.B. R/W

Δ = 86°14' LT.
D = 12°00'
T = 447.1
E = 176.65
L = 718.6'
R = 477.5

END TAPER P.C. 422+49.9 BEGIN RAMP B, (OFFSET 30')

OBLITERATE N 67°08' 30" E

427+00 W.B. R/W

36"x 50' R.C.B.

P.C. 428+41.3

P.I. 424+10.0

STA 428+83.8 4' CHAIN LINK FENCE

℄ W.B.

SUBEXCAVATION

R/W 375'

NEW METAL GATE — R/W MON. — ROAD APP. — R/W — NEW 4 WIRE FARM FENCE — S 66° 09' 30" E

P.T. 402+85.4 — C/A FENCE — SUBEXCAVATION

P.C. 410+04.0

S 66° 39' 30" E

50:1 TAPER

S 67° 48' 15" E

P.T.

P.C. 422+43.3

214' W.B. DIA.

EXISTING R/W

117° 31'

COUNTY ROAD

"CENTER LINE" SIGN.

HISTORIC MARKER (RELOCATE TO REST AREA SEE SPEC PROVISIONS)

S 61° 52' 45" E

℄ E.B.

29° 10'

HWY. MARKER — HWY. SIGN — SIGN POST

U.S. NO. 10 P.T.W.

S 63° 04' 30" E

NEW GD RAIL

CONTROL OF ACCESS FENCE

EXIST. RANDOM RIPRAP

CLARK FORK

SEC. 30 / SEC. 31

EAST BOUND LANE
Δ = 158° 45" RT.
D = 0° 10'
T = 358.8'
L = 1.9'
L = 717.5'
R = 34,380.0'
S = N.C.

STA 407+00 FRONT RD. NEW 24'+44' ALT. CR. 2 C.Y. GULLY EXC. F.E.T.S. LT. ℄ RT.

STA 407+00 S.B. NEW 24' RCB CL. 2 DRAIN 186 C.Y. CULV. EXC. F.E.T.S. LT. ℄ RT.

P.C. 408+82.1

STA 409+27.8 FRONT RD. NEW 24'+32' ALT. SPR. 6 C.Y. GULLY EXC. F.E.T.S. LT. ℄ RT.

P.T. 415+59.6

STA 414+30.4 W.B. NEW 24'+10' RCB 13 C.Y. CULV. EXC. F.E.T.S. LT. ℄ RT.

STA 417+39.8 E.B. 39.5' LT. TO COR. (NOT FOUND)

STA 417+90 FRONT RD. NEW 36'+70' ALT. CR. 11 C.Y. GULLY EXC. F.E.T.S. LT. ℄ RT.

STA 423+00 FRONT RD. NEW 36'+70' ALT. CR. 11 C.Y. GULLY EXC. F.E.T.S. LT. ℄ RT.

STA 428+356.8 E.B. 973.9 COR TO E.B.

443+20 W.B. LT. REMOVE 36'+30' ALT. 37 C.Y. CULV. EXC.

EXISTING R/W

W.B. TYPICAL SECT NO. 2

NEW GD. RAIL RT. ℄ E.B.

STA 401+00 APPR. RD. 10 C.Y. ADD'L. EXC. RD. APP. LT.

W.B. TYPICAL SECTION NO. 1

E.B. TYPICAL SECTION NO. 1

W.B. TYPICAL SECTION NO. 2

OBLITERATE ROADWAY STA 423+70 W.B. LT. 207 SQ. YDS.

STA 423+90 TO 424+18 E.B. 370 C.Y. ADD'L EXC. REMOVE COUNTY ROAD

STA 389+00 TO 408+50 W.B. 3990 C.Y. SUBEXC. INCL. IN MAINLINE QUANTS.

STA 424+37 TO 427+00 W.B. 36,108 C.Y. SUBEXC. INCLUDES RAMP B. INCL. IN MAINLINE QUANTS.

-0.36% W.B. — 800' V.C. — W.B. + 400 = 9600

E.B. + 0000

+0.21% E.B. — +0.38% W.B. — W.B. + 300 = 9000

+0.40% — W.B. — E.B. + 750 = 0924

20 10 4200 90

BENCH MARK
ALUM. CAP STAMPED
"USC&GS 1972"
ELEV. 4098.72

BENCH MARK
ALUM. CAP STAMPED
"USC&GS 1972"
ELEV. 4096.78

BENCH MARK
ALUM. CAP STAMPED
"USC&GS 1972"
ELEV. 4102.04

BENCH MARK
ALUM. CAP STAMPED
"USC&GS 1972"
ELEV. 4098.49

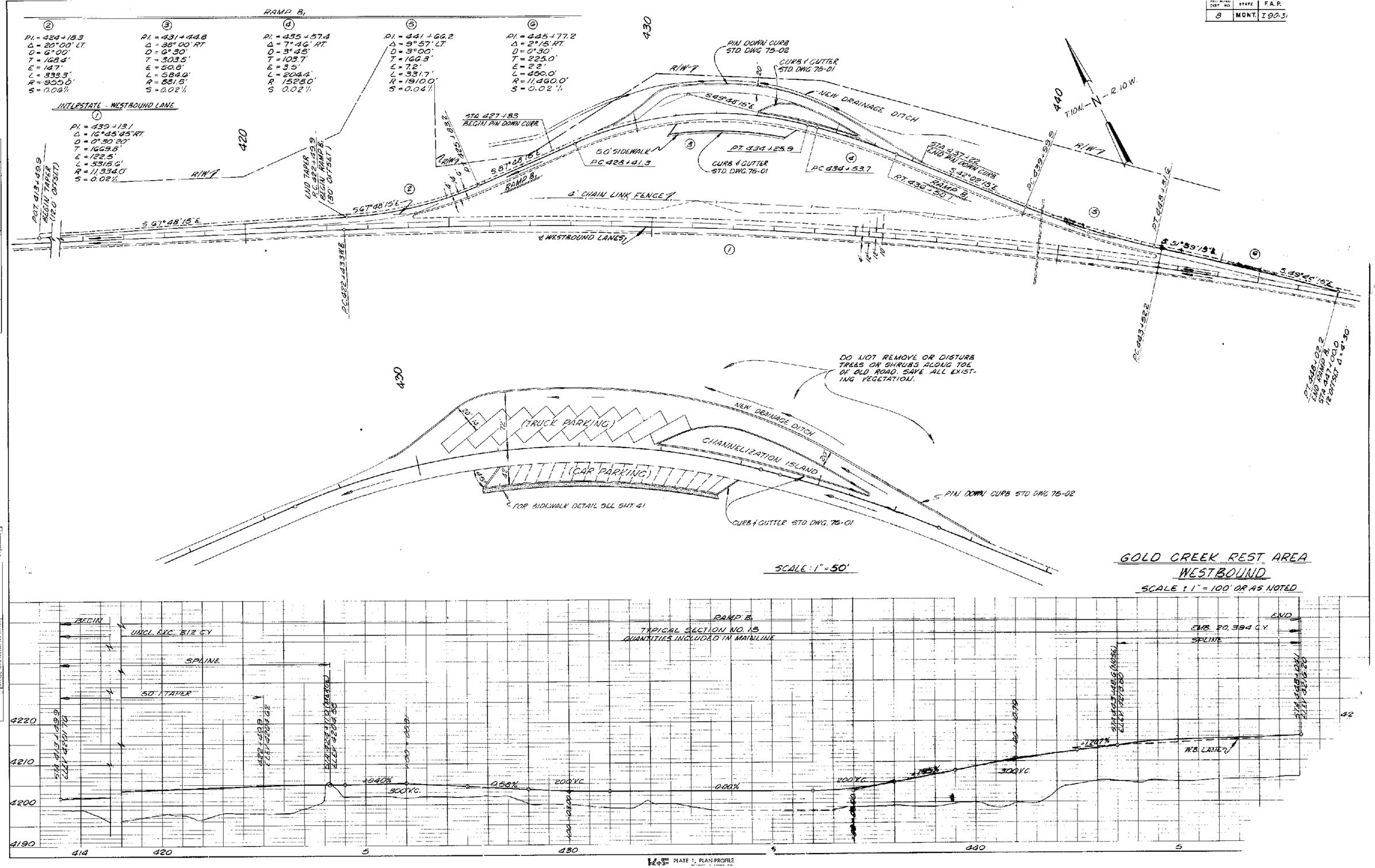
400 5 410 5 420 5 430

PLAN — SURVEYED, PLOTTED, ALIGNMENT CHECKED, ET. OK WAS CHECKED, NOTE BOOK, NO., BY, DATE

PROFILE — SURVEYED, PLOTTED, ALIGNMENT CHECKED, R.W.S. NOTED, STRUCTURE NOTES CHKD, NOTE BOOK, NO., BY, DATE

K+E PLATE 1, PLAN-PROFILE

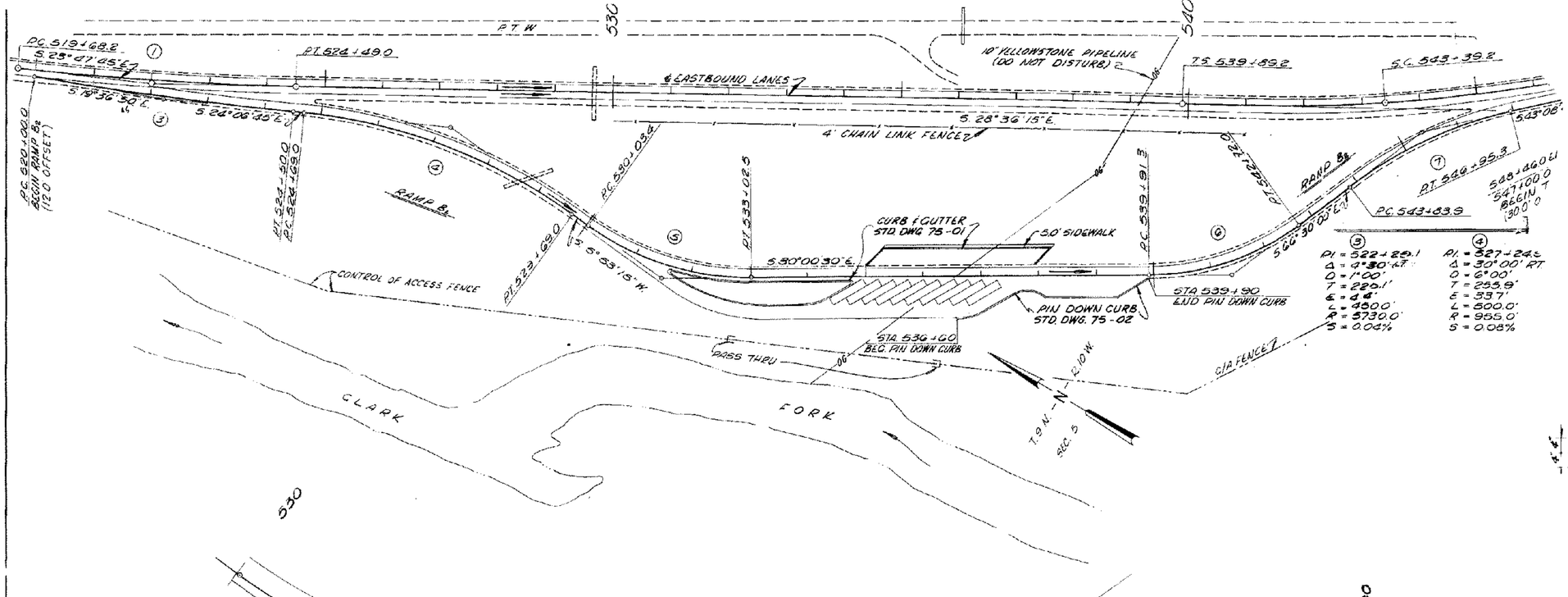
FED. ROAD DIST. NO.	STATE	F.A.P.
8	MONT.	I90-3

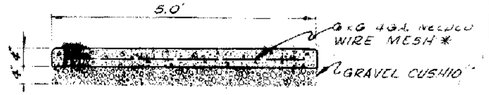


PLAN
NOTE BOOK NO.
SURVEYED
PLOTTED
ALIGNMENT CHECKED
R.M. NOTED
STRUCTURE NOTATIONS CHECKED
BY
DATE

PROFILE
NOTE BOOK NO.
SURVEYED
PLOTTED
GRADES CHECKED
B.M. NOTED
STRUCTURE NOTATIONS CHECKED
BY
DATE

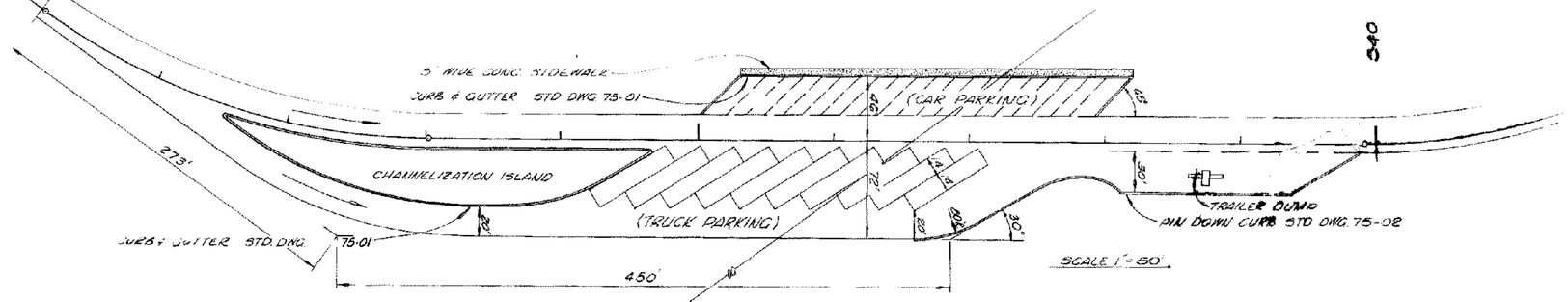
K+E PLATE 1, PLAN-PROFILE





* INCLUDED IN UNIT PRICE BID PER SQ. YD. OF CONCRETE SIDEWALK

SIDEWALK DETAIL
STD. DWG. 76-01



SCALE 1"=50'

GOLD CREEK REST AREA
EASTBOUND
SCALE: 1" = 100' OR AS NOTED

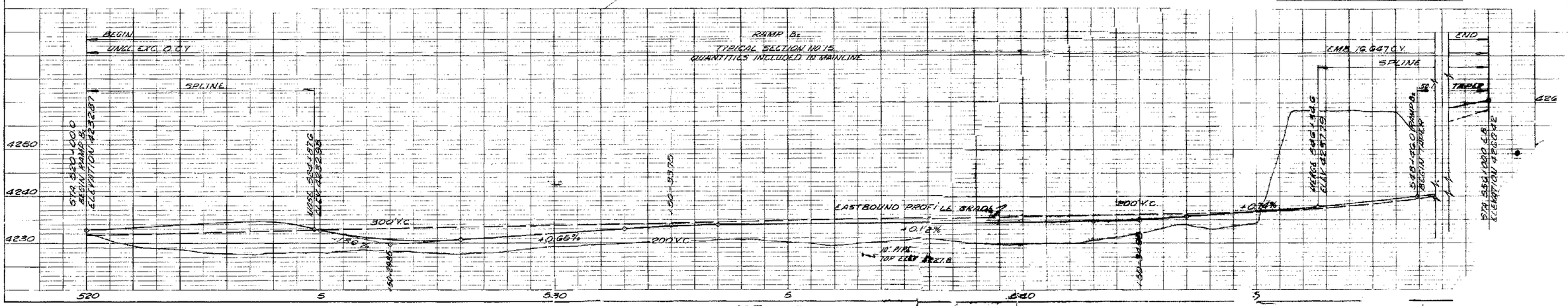


PLATE 1. PLAN-PROFILE
KEUFFEL & ESSER CO.

FED. ROAD DIST. NO.	STATE	F.A.P.	FISCAL YEAR	SHEET NO.	TOTAL SHEET
8	MONT.	I-90-3(23)166	17	202	

PLAN

SURVEYED
DRAWN
ALIGNMENT CHECKED
NOTE BOOK
NO.
BY
DATE
REMARKS
RT. OF WAY CHECKED

PROFILE

SURVEYED
DRAWN
GRADES CHECKED
NOTE BOOK
NO.
BY
DATE
REMARKS
STRUCTURES CHKD.

NOTE: FOR REST AREA DETAILS SEE SHEETS 40-66

NOTE: FOR RAMP B, CURVE DATA SEE SHEET NO. 40

NOTE: THE R/W LINE IS THE CONTROL OF ACCESS LINE UNLESS OTHERWISE NOTED.

P.O.S.T. 450+57.0 E.B. PWR. LINE (2 GROUND 3 WIRE) 53.6' CLEAR

T. 10 N. - R. 10 W.

STA 430+00 WB R/W | STA 434+00 RD WB R/W | 375'

PT 434+25.9

PC 434+53.7

PT 436+58.1

SEC. 30 / SEC. 31

STA 433+42.8 WB
3989.6' WB TO C SEC. 31

SUBEXCAVATION

40' CHAIN LINK FENCE

S 39°39'30" E

569.9' WB TO E.B.

WIRE CROSSING

EXISTING R/W

SUBEXCAVATION

S 61°52'45" E

HWY. 316 W

36"x 87" RCP

U.S. NO. 10 P.T.W.

CONTROL OF ACCESS FENCE

DETOUR NO. 1
SEE PLAN SHEET NO. 37

CLARK FORK RIVER

B.N. RY. R/W

EXISTING R/W

GOLD CREEK

E.N.RY. R/W

WEST BOUND LANE
Δ = 16°45'45" RT.
D = 0°30'20"
T = 1669.8'
E = 172.5'
L = 3315.6'
R = 11,334.0'
S = 2%

STA 439+42.0 E.B.
REMOVE 42" RCP
36"x 87" RCP
35 C.Y. CONC. EXC.

STA 439+70.0 W.B.
NEW 24"x 76" RCP
CL. & DRAIN
9 C.Y. CONC. EXC.
F.E.T.S. LT. & RT.

STA 439+99.9

439+15 / 440

441+80 W.B. R/W

442+00 W.B. R/W

450

440

460

PT 445+02.2
END RAMP B
STA 447+00.0
120' OFFSET Δ=4°30'

S 61°59'15" E

S 49°44'15" E

PT 443+51.6

PC 443+82.2

S 49°53'45" E

R/W

175'

130'

P.C.C. 453+58.9 W.B. R/W

NOTE:
WEST BOUND
Δ = 33°05'30"
Dc = 2°00'
Lc = 1604.6'
Ts IN = 908.1'
Ts OUT = 1053.9'
θs = 3°00'
Ls = 300.0'
Yc = 5.2'
Xc = 299.9'
S = 0.06%

2=1364.189

SUBEXCAVATION

S 61°52'45" E

S 49°53'45" E

STAKED & PROJECTED
EAST BOUND
Δ = 47°04'30"
Dc = 2°00'
Lc = 2053.8'
Ts = 1398.4'
θs = 3°00'
Ls = 300.0'
Yc = 5.2'
Xc = 299.9'
S = 0.06%

Ts 448+50.9 E.B. (STK'D)
Ts 448+25.4 E.B. (PROJ.)

SC. 451+29.9 E.B. (STK'D)
SC. 451+25.4 E.B. (PROJ.)

W.B. TYPICAL SECTION NO. 2
E.B. TYPICAL SECTION NO. 1

W.B. TYPICAL SECTION NO. 3
E.B. TYPICAL SECTION NO. 3

STA 427+00.0 TO 433+00 W.B.
1100 LIN. FT.
40' CHAIN LINK FENCE

STA 429+09 TO 435+75 (RAMP B)
280 C.Y. ADD'L. EXC.
CHANNEL CHANGE

STA 451+10 TO 460+00
4467 C.Y. SUBEXC.
INCL. IN MAINLINE QUANTS.

NO V.C.

+0.32%

+0.40% E.B.

-0.83% W.B.

W.B.

NO V.C. E.B.
300' V.C. W.B.

+0.24% E.B.+W.B.

+0.24% E.B.+W.B.

W.B. STA 445+00 = 4194.49

W.B. STA 455+00 = 4199.69

BENCH MARK
ELEV. 4197.87
STA 439+50 E.B.

BENCH MARK
ELEV. 4201.27
STA 449+50 E.B.

BENCH MARK
ELEV. 4197.87
STA 459+50 E.B.

20
10
4200
90

430 5 440 5 450 5 460

U.S. - PLATE 1 PLAN-PROFILE

FED. ROAD DIST. NO.	STATE	F.A.P.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	MONT.	I-90-3(123)168		18	202

NOTE: FOR DETOUR ROAD THIS AREA SEE SHT. 37.

3 POWER - 2 GROUND
WIRE X-ING. 39.5' CLEAR

NOTE: R/W LINE IS CONTROL OF ACCESS LINE UNLESS OTHERWISE NOTED.

NOTE: AT EQUATION PROJECTED ℄ OF EASTBOUND LANES IS 4' RIGHT OF STAKED, PROJECTED ℄ OF MEDIAN IS 2' RIGHT OF STAKED AND ℄ W.B. REMAINS AS STAKED.

T.10 N. - R.10 W.

SEC. 32 / SEC. 31

PI 462+23.6 (PROJ.) E.B. PT 462+20.3
55
4' RT (PROJ.)
S 61°52'45" E
S 14°48'15" E
S 89°53'45" E
130'
400
W.B. PT 464+07.2
400-00 W.B. R/W
FAC. 467+50 W.B. R/W
OUTLET DITCH BY OTHERS
R/W
130'
100'
15'
MP 168
EXISTING R/W
CONTROL OF ACCESS FENCE
IRR. CH. CH.
24"x100' R.C.P.
CONC. DIVISION BOX (PROVIDE FOR OVERFLOW DITCH TO RIVER)
EXIST. HWY. R/W
B.N.RR R/W
CLARK FORK
C.S. 471+63.5 W.B.
℄ S 471+79.2 E.B. (STKD.)
℄ S 471+79.2 E.B. (PROJ.)
℄ S 474+19.2 W.B.
℄ S 474+52.9 E.B. (STKD.)
℄ S 474+52.9 E.B. (PROJ.)
℄ S 475+42.6 W.B.
℄ MED. AH
475+42.6 ℄ MED. AH
470
FARM ROAD
473+00 W.B. R/W
ST. 471+63.5 W.B. R/W BEGIN 50' DOZER TRAIL CONST. PERMIT
30'
60'
50'
SUBEXCAVATION
478+10 R/W
482+00 END 50' DOZER TRAIL CONST. PERMIT
DOZER TRAIL
R/W
SUBEXCAVATION
C/A FENCE
CASTING R/W
STA. 487+00 R/W TIE TO EXIST R/W
STK'D ℄ PROJ.
Δ = 14°59'30" LT.
D = 0°45'
T = 1,005.3'
E = 66.7'
L = 1998.9'
R = 7,640.0'
S = 0.02%
SEC. 488+39.25 (STK'D) R/W (PROJ.)
SEC. 488+39.25 (PROJ.) E.B.
190
195
CONTROL OF ACC.
S 12°43'15" E
165-11-05
NEW 8" PERF. DRAIN
ABANDONED 18" C.M.P.
CONTROL OF ACCESS FENCE
EXIST R/W
RIVER
CHANNEL WIDENING (SEE X-SECTIONS)
STA. 485+00.0 BEGIN 40' CONST PERMIT FOR CHANNEL WIDENING B.N.RR. STA. 2987+11.2
85°46'55"
C.M. ST.P.&P. R.R.
490

WESTBOUND
Δ = 35°05'30"
D = 2°00'
Lc = 1604.6'
T&N = 908.1'
T OUT = 1053.9'
θs = 9°00'
Ls = 300.0'
Xs = 299.9'
Ys = 5.2'
S = 0.00%

EASTBOUND
STK'D. & PROJ.
Δ = 47°04'30"
Dc = 2°00'
Lc = 2053.8'
Ti = 1398.4'
θs = 3°00'
Ls = 300.0'
Xs = 5.2'
Ys = 299.9'
S = 0.00%

STA. 463+45 E.B. REMOVE EXIST. 24"x100' R.C.P. 32 C.Y. CULV. EXC.
STA. 481+00 NEW 2'-10"x 154' VEH. UNDERPASS STD DWG. 55.04 0.138" THICK 230 C.Y. CULV. EXC. 2:1 BEVEL ENDS LT. & RT. INVERT PAVING STD DWG. 51.03 ALT. B
STA. 473+58 C.B. REMOVE EXIST. 24"x90" R.C.P. (IRRIG) 45 C.Y. CULV. EXC.
STA. 478+20 NEW 24"x 78' R.C.P. CL. B DRAIN 119 C.Y. CULV. EXC. KEYS LT. & RT.
STA. 483+50 E.B. NEW 36"x 196' C.S.P. IRR (0.079) 85 C.Y. CULV. EXC. CONC. COLLAR KEYS RT. STD DWG. 73-02 45 C.Y. CL. 20 CONC.

PLAN
SURVEYED
PLOTTED
NOTE BOOK
GRADES CHECKED
R.M. NO.
STRUCTURE NO.
ALIGNMENT CHECKED
RT. OF WAY CHECKED
BY
DATE

PROFILE
SURVEYED
PLOTTED
NOTE BOOK
GRADES CHECKED
R.M. NO.
STRUCTURE NO.
BY
DATE

W.B. TYPICAL SECTION NO. 3
E.B. TYPICAL SECTION NO. 3
℄ MEDIAN TYPICAL SECTION NO. 5
℄ MEDIAN TYPICAL SECTION NO. 6
3075.0' LIN. FT. NEW GD. RAIL RT. - E.B.
1035.0' LIN. FT. NEW GD. RAIL LT. - W.B.
3050 LIN. FT. NEW MEDIAN GUARD RAIL

STA. 469+66.0 TO STA. 473+32.0
IRRIGATION DITCH
973 C.Y. ADDL. EXC.

VERTICAL EQUATION
TANGENT ELEVATIONS
E.B. STA. 474+82.9 ELEV. 4222.80
W.B. STA. 475+62.6 ELEV. 4222.80
℄ MED. STA. 475+62.6 ELEV. 4223.86
(100.0' TRANSITION PROFILE GRADE TO ℄ MEDIAN)

EQUA
474+82.9 E.B. STAKED
474+82.9 E.B. PROJ.
475+62.6 ℄ MED. AH
(-1.19 STK'D PROJ.)
(-.79)

STA. 455+50 TO 502+00 E.B.
SPECIAL ROCK PLACEMENT
SEE X-SECTIONS

STA. 481+00
3.5 C.Y. BEDDING MAT'L
VEHIC. UNDERPASS
STD DWG. 54-03

STA. 485+50 TO 491+75
4900 C.Y. CHANNEL EXC.
CHANNEL WIDENING
(INCL. IN MAINLINE MASS.)

+0.24% E.B. & W.B.
NO V.C.
+0.380% E.B.
+0.362% W.B.
E.B.
W.B.
800' V.C.
+0.352% ℄ MED.
+2.72% ℄ MEDIAN
1600' V.C.
B.N.RY. PROFILE
Q 50 = 9100 CFS. HIGHWATER PROFILE
FLOWLINE APPROX. RIVER PROFILE
8" PERF. DRAIN
30%

BENCH MARK
T.P. 92 : AT
STA. 464+87 E.B.
ELEV. 4215.98

STA. 465+32 TO 484+37
16,886 C.Y. SUBEXC
INCL. IN MAINLINE QUANTS.

BENCH MARK
T.P. 97 : AT
STA. 484+08
ELEV. 4224.08

4250
40
30
20
10
4200
460
5
470
480
490

K&S PLATE 1, PLAN-PROFILE

FED. ROAD DIST. NO.	STATE	FAP	FISCAL YEAR	SHEET NO.	TOTAL SHEET
8	MONT.	I-90-3(25)166		20	202

NOTE: FOR DETOUR ROAD THIS AREA SEE SHT. 37.

NOTE: R/W LINE IS CONTROL OF ACCESS LINE UNLESS OTHERWISE NOTED.

NOTE: AT EQUATION, PROJECTED ℄ OF E.B. LANES IS 40' RT. OF STAKED; PROJECTED ℄ MEDIAN IS 20' RT. OF STAKED; ℄ W.B. REMAINS AS STAKED.

PLAN — SURVEYED, PLOTTED, NOTE BOOK, GRADES CHECKED, NOTE BOOK, MO. — BY, DATE, ALIGNMENT CHECKED, BY, DATE, ℄ OF WAY CHECKED, BY, DATE

PROFILE — SURVEYED, PLOTTED, NOTE BOOK, GRADES CHECKED, NOTE BOOK, MO. — BY, DATE, S. BLOCK OF NOTATIONS CHECKED, BY, DATE

490 — EXISTING R/W — 205' — 492+30 R/W TIE TO EXIST R/W — CONTROL OF ACCESS FENCE — 120' — NEW 8" PERF. DRAIN — INLET

500 — STK'D. & PROJ. Δ = 14°59'30" LT. D = 0°45' T = 1006.3' L = 1998.9' R = 7640.0' S = 0.02% — 538.11 SEC. COR. T 10 N R 10 W / 10 1/4 COR. T 9 N R 10 W — R/W — EXISTING R/W — 120' — 32' — 3/4 — 3/6 — S. 14°48'15" E. — S. 29°47'45" E. — 62°31'30" — NEW GUARD RAIL — CONTROL OF ACCESS FENCE — EXISTING R/W — 40' CONST. PERM'T FOR CHANNEL WIDENING — 492+50 END CH. WIDENING — 8 N.R.R. STA. 2979.37.1 — 91°30'24" — 8. N. RY. — C.M.St.P.&P.R.R. — CHANNEL WIDENING (SEE CROSS-SECTIONS) — 40' — 10' — 3/6 — 1 — 36

STK'D. & PROJ. Δ = 14°59'30" LT. D = 0°45' T = 1006.3' L = 1998.9' R = 7640.0' S = 0.02% — PT. 504+31.4 (STK'D) R/W (PROJ.) — PT. 504+33.7 (PROJ.) — 120' — 140' ℄ MED. — 123' ℄ W.B. — R/W MON — S. 29°47'45" E. — PT. 514+97.9 (STK'D.) — S. 29°47'45" E. — ℄ E.B. — P.C. 519+68.2 — EXISTING RIPRAP — P.T.W. U.S. NO. 10 — 26°42'08" — P.O.C. CLARK 500+57.9 — FORK RIVER — RR R/W — EXISTING R/W — OUTLET DITCH — CONTROL OF ACC. FENCE — P.T. 515+36.2 (PROJ.)

510 — P.O.T. 509+54.2 ℄ MED. BK. (PROJ.) — P.O.T. 509+53.6 MED. BK. (STK'D) R/W — P.O.T. 509+98.1 E.B. AH. (STK'D) R/W — P.O.T. 509+98.9 E.B. AH. (PROJ.) — P.C. 508+98.1 E.B. AH. (PROJ.) — P.O.T. 508+98.1 E.B. AH. (PROJ.) — P.I. 511+98.2 (STK'D.) — P.I. 512+36.5 (PROJ.) — 514+60 W.B. R/W — 300' — EXISTING R/W — DITCH BLOCK — WP 1241

520 — 519+100 W.B. R/W — 300' — R/W

STA. 485+50 TO 495+16 NEW 8'x10' C.S.P. PERF. DR. 0 C.Y. CUL. EXC. 625 C.Y. FILTER MAT'L. STD. DWG. S4.04

STA. 495+16 NEW 8'x10' C.S.P. ALONG TRK. DR. ONE BURIED 90° CL. 33 C.Y. CULV. EXC. CONN. TO PERF. DR. LT. SQ. RT.

STA. 506+00 NEW 24"x126" RCP CL. 2 DRAIN 109 C.Y. CULV. EXC. F.E.T.S. LT. 90 END RT

STK'D. & PROJ. EASTBOUND LANE Δ = 6°00 D = 1°00' T = 300.3' E = 7.9 L = 600.0' R = 5730.0' S = 0.04%

517+00.0 E.B. NEW 24"x78" RCP CL. 2 DRAIN 30 C.Y. CULV. EXC. F.E.T.S. LT. & RT.

517+06 W.B. NEW 24"x74" R.C.P. CL. 2 DRAIN 27 C.Y. CULV. EXC. F.E.T.S. LT. & RT.

HAUL 421,130 M.YDS.

℄ MEDIAN TYPICAL SECTION NO. 6

℄ MEDIAN TYPICAL SECTION NO. 8

W.B. TYPICAL SECTION NO. 1

E.B. TYPICAL SECTION NO. 7

E.B. TYPICAL SECTION NO. 1

3075.0 LIN. FT. NEW GUARD RAIL RIGHT - E.B.

4600.0 LIN. FT. NEW MEDIAN GUARD RAIL

STA. 502+00 C.C. TO 507+00 E.B. SPECIAL RUCK PLACEMENT SEE X-SECTIONS.

STA. 517+00 E.B. 25 C.Y. ADD'L EXC. OUTLET DITCH RT.

STA. 516+96 W.B. 2 C.Y. ADD'L EXC. DITCH BLOCK LT.

VERTICAL EQUATION

℄ MED. STATION 509+54.2 = ELEVATION 4230.27
E.B. STATION 509+98.1 = ELEVATION 4230.21
W.B. STATION 509+00.0 = ELEVATION 4230.21
-0.06 TRANSITION PROFILE GRADE TO INSIDE SHLDR. OF E.B. & W.B. LANES.)

4250 — 40 — 30 — 20 — 10 — 4200

-2.50% — 1600 V.C. — 800' V.C. — +0.107% — +0.10% — NO V.C. — +0.193% E.B. — +0.197% W.B.

8' PERF. DRAIN — 8 N.R.Y. PROFILE — 0.50 - 9100 C.F.S. HIGHWATER PROFILE — FLOW LINE APPROX RIVER PROFILE — 0.50 - 9100 C.F.S. HIGHWATER PROFILE

EQUA 509+54.2 MED. BK. (PROJ.) 509+53.6 MED. BK. (STK'D) 509+98.1 E.B. AH. (STK'D) 509+97.8 E.B. AH. (PROJ.) 508+98.1 E.B. AH. (PROJ.) +1.50 +1.51

EQUA 509+54.2 MED. BK. (PROJ.) 509+53.6 MED. BK. (STK'D) 509+00.0 W.B. AH. (STK'D) 509+53.8 W.B. AH. (PROJ.) +1.54

BENCH MARK I.P. 35' RT. STA. 490+91.4 ELEV. 4228.95

BENCH MARK I.P. 50' RT. STA. 500+00.0 ELEV. 4229.42

BENCH MARK I.P. 50' RT. STA. 510+00.0 ELEV. 4228.76

490 — 5 — 500 — 5 — 510 — 5 — 520

K+S PLATE 1. PLAN-PROFILE

FED. ROAD DIST. NO.	STATE	F.A.P.	FISCAL YEAR	SHEET NO.	TOTAL SHEET
	MONT.	I-90-3(23)166	21	202	

PLAN — SURVEYED / PLOTTED / CROSS SECT. CHECKED / FIN. DY WAY CHECKED / NOTE BOOK / NO. / DATE / BY

NOTE:
FOR RAMP B₂ CURVE DATA
SEE SHEET NO. 21

EAST BOUND
Δ = 4°48'30"
D = 1°00'
T = 240.6'
E = 5.0'
L = 480.8'
R = 5730.0'
S = 60M.P.H.

STA 524+00 W.B. R/W
532+00 W.B. R/W
539+50 W.B. R/W
537+50 W.B. R/W
535+75 W.B. R/W
549+00 R/W 310'
542+50.3 W.B.
S.C. 546+50.3 W.B.
325'
300'
180'
150'
100'
NEW R/W
EXISTING R/W
OLD ABANDONED HIGHWAY
R/W MON.
UNDER HOLE
TOP OF PIPE EL. 4253.27
24" R.C.P.
STOCK-PILE
T9N - R5W SEC. 5
ADV. SIGN
℄ W.B.
℄ E.B.
SUBEXCAVATION
TOP EL. 4228.14
10" YELLOWSTONE PIPE LINE DO NOT DISTURB
TOP EL. 4228.76
C. VENT
VENT EL. 4228.01
TOP EL. 4228.17
S. 29° 47' 45" E.
U.S. NO. 10 P.T.W.
PARK SIGN
MEDIAN DRAIN DITCH
P.T. 524+49.0
S. 19° 36' 30" E.
S. 22° 06' 45" E.
S. 22° 24' 15" E.
S. 29° 47' 45" E.
S. 43° 08' 45" E.
S. 5° 55' 15" W.
S. 50° 00' 30" E.
S. 60° 30' 00" E.
4' CHAIN LINK FENCE
DRAIN DITCH
OUTLET DITCH
RAMP B₂
P.C. 520+00.0 RECNT. RAMP B₂ 20° OFFSET Δ = 4° 30'
P.I. 522+08.8
P.T. 524+50.0
P.C. 524+69.0
P.C. 530+03.4
P.T. 533+02.5
P.T. 539+91.3
T.S. 539+91.3
P.C. 543+93.9
T.S. 543+93.9
P.T. 546+93.9
S.C. 543+39.2
P.C. 545+46.0 RECNT. RAMP B₂ 30° OFFSET
545+00 E.B. 300' TAPER BEGIN OFFSET 30.0
50:1 TAPER
CL/A FENCE
CLARK FORK RIVER
EXISTING R/W
R.R. R/W
TOP OF PIPE EL. 4227.89
FOR REST AREA DETAILS SEE SHEETS 40 THRU 66
STA 525+63.0 ℄ NEW 24" C.S.P. 20 DEGR. SKEW 20 LIN. FT. 24" C.S.P. 10 C.Y. CULV. EXC. FET'S LT. & RT.
STA 529+03.3 ℄ NEW 24" C.S.P. 20 DEGR. SKEW 20 LIN. FT. 24" C.S.P. 2 C.Y. CULV. EXC. FET'S LT. & RT.
STA 535+20.0 NEW 24" C.S.P. 0 DEGR. SKEW 20 LIN. FT. 24" C.S.P. CULV. EXC. FET'S LT. & RT.
STA 535+68.0 N.B. REMOVE EXIST. 24" X 69' R.C.P. 24 C.Y. CULV. EXC.
NOTE: STA. 540+10 - 10" HIGH PRESSURE YELLOWSTONE OIL LINE X-ING DO NOT DISTURB

EAST BOUND LANE		WEST BOUND LANE	
Δ	= 58°49'00" LT	Δ	= 51°37'30" LT
Dc	= 2°30'	Dc	= 3°00'
Ls	= 350'	Ls	= 400'
Ts	= 146.8'	Ts	= 1252.4'
Es	= 34.1'	Es	= 27.3.9'
Qs	= 4°22'30"	Qs	= 6°00'
Lc	= 200.2.7'	Lc	= 1520.8'
Xc	= 349.8'	Xc	= 399.6'
Yc	= 8.9'	Yc	= 14.0'
S	= 7%	S	= 8%

E: 2421.3312
P: 1909.8593

PROFILE — SURVEYED / PLOTTED / GRADES CHECKED / B. M.'S NOTED / STRUCTURE NOTATIONS CHECKED / NOTE BOOK / NO. / DATE / BY

EB. TYPICAL SECTION NO. 2
WB. TYPICAL SECTION NO. 1
EB. TYPICAL SECTION NO. 1
EMBT. 565,623 C.Y. — UNCL. EXC. 394,823 C.Y.
WB. TYPICAL SECTION NO. 2
EB. TYPICAL SECTION NO. 4

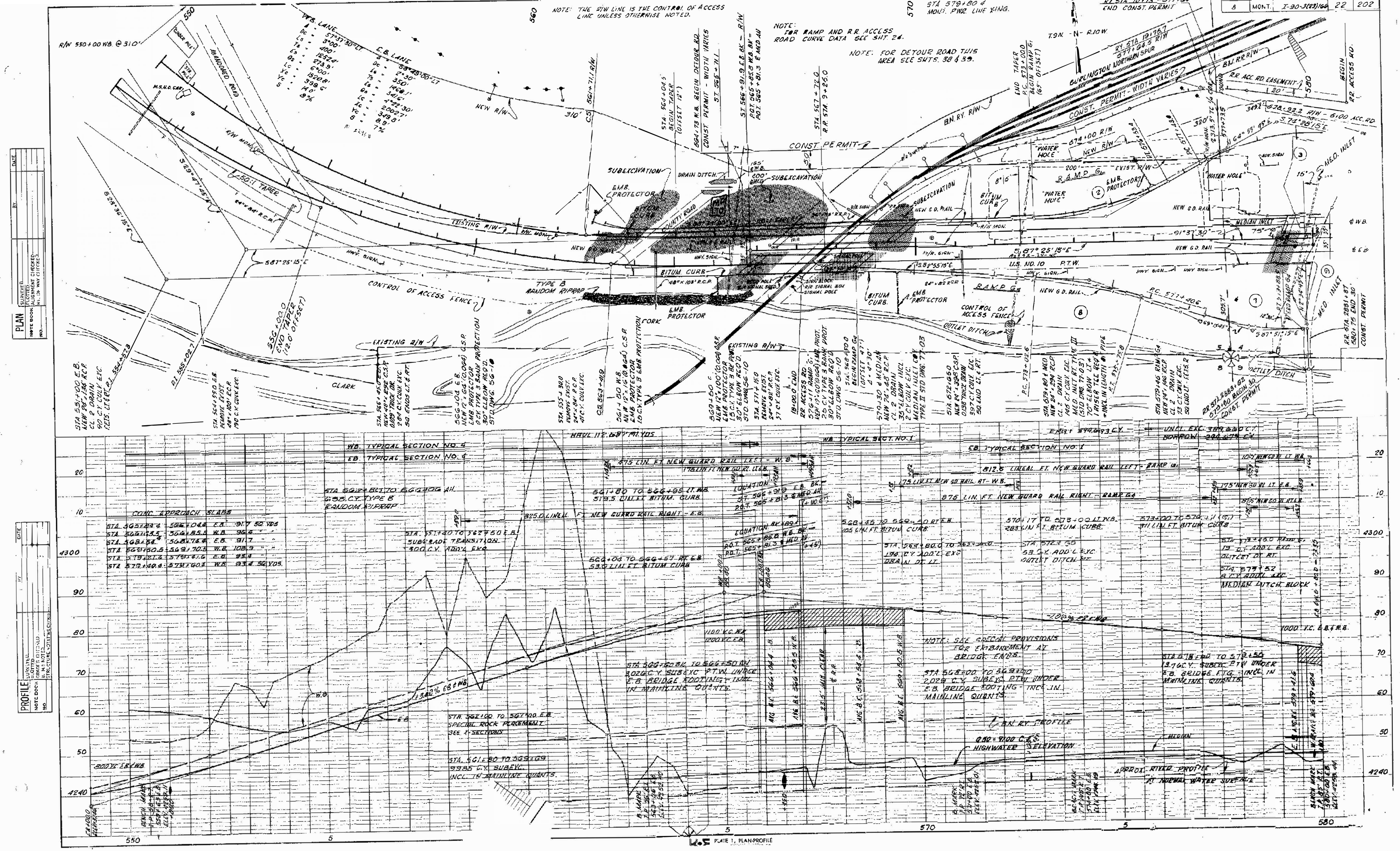
STA 527+32 TO 528+81 RAMP B₂
33 C.Y. ADD'L. EXC.
OUTLET DITCH

STA 528+97 B₂ TO 529+69 E.B.
57 C.Y. ADD'L. EXC.
ORIAL DITCH

STA 529+69 TO 535+20
2800 C.Y. ADD'L. EXC.
MEDIAN DITCH

STA 530+00 TO 532+00
1100 LIN. FT.

EB = + 0.193 %
WB = + 0.191 %
Q30 = 9100 C.F.S. HIGHWATER ELEV.
800' VC
800' VC
WB
EB
STA 529+60 TO 531+00
2905 CY SUBEXC.
INCL IN MAINLINE QUANTS
TOP OF PIPE ELEVATION 4228.0 YELLOWSTONE PIPE LINE 10"
STA 539+20 TO 542+00 RAMP B₂
1811 CY SUBEXCAVATION
INCL IN MAINLINE QUANTS
WB-60 STAKE
EB-60 STAKE
BENCH MARK I.P. 90' LT. 330+19 E.B. ELEV. 4298.81
BENCH MARK I.P. 90' LT. 330+19 E.B. ELEV. 4298.81
BENCH MARK I.P. 107' LT. 540+20 E.B. ELEV. 4243.51
520
530
540
550



8	MONT.	I-90-3(23)166	22	202

PLAN
SURVEYED
PLOTTED
NOTE BOOK ALIGNMENT CHECKED
NO. RT. OF WAY CHECKED
BY DATE

PROFILE
SURVEYED
PLOTTED
NOTE BOOK GRADES CHECKED
NO. B.M. NOTED
STRUCTURE NOTATIONS CHECKED
BY DATE

8	MONT.	I-90-5(23)166	7	202

SUMMARY NO. 6

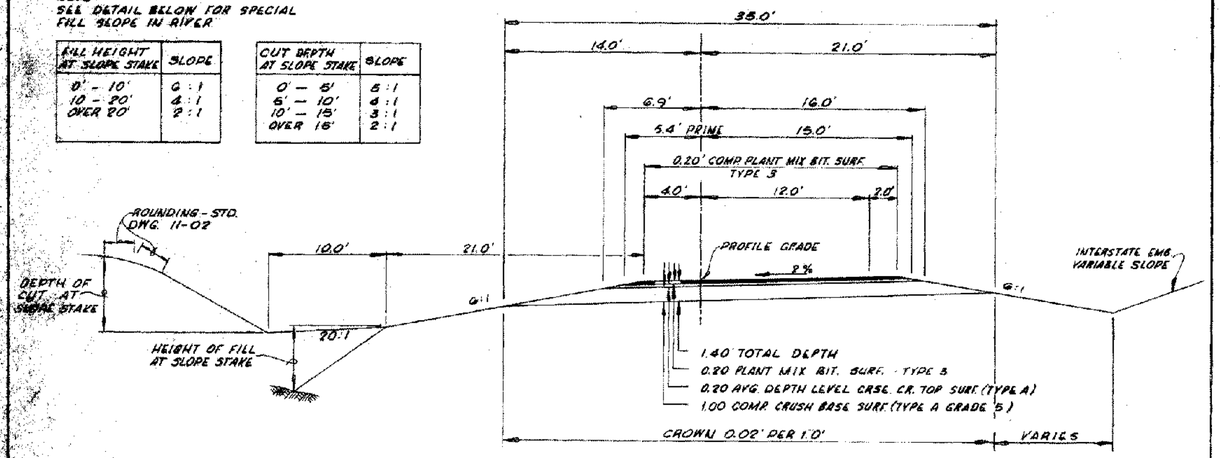
RAMP B2
STA. 379+88.2 TO 396+00

TYPICAL SECTION NO 13

NOTE:
SEE DETAIL BELOW FOR SPECIAL FILL SLOPE IN RIVER

FILL HEIGHT AT SLOPE STAKE	SLOPE
0' - 10'	6:1
10 - 20'	4:1
OVER 20'	2:1

CUT DEPTH AT SLOPE STAKE	SLOPE
0' — 5'	5:1
5' — 10'	4:1
10' — 15'	3:1
OVER 15'	2:1



QUANTITIES

	AGGREGATE: TYPE 3 PLANT MIX BIT. SURF.	AGGREGATE: TYPE A CRUSH TOP SURF	AGGREGATE: TYPE A CRUSHED BASE CRSE. GRADE 5	BITUMINOUS MATERIAL: PLANT MIX SURF.	BITUMINOUS MATERIAL: PRIME	TACK
AREA SQ. FT.	3.8	4.3	29.0			
SQ. YDS. PER STA.	213.3			SQ. YDS PER STA.	213.3	226.7
CU. YDS. PER STA.	14.1	15.9	107.4	TONS PER STA.	1.9	0.3
TONS PER STA.	*28.6	23.4	171.8	GALS. PER STA.		

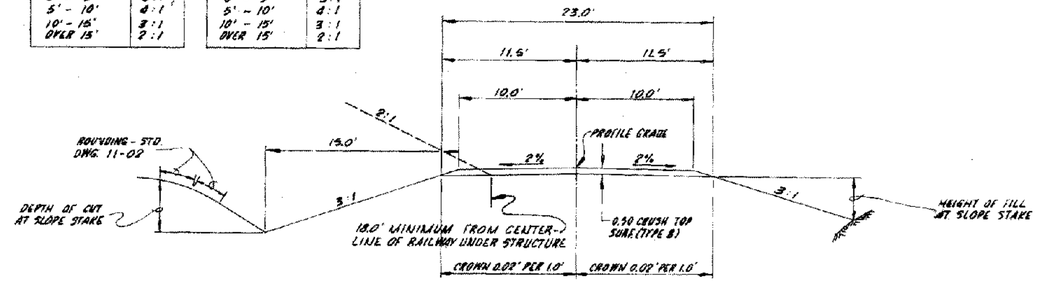
* INCLUDES WEIGHT OF PLANT MIX BITUM. MAT'L.

TYPICAL SECTION NO. 14

RAILROAD ACCESS ROAD
STA. 8+00 TO 18+00

FILL HEIGHT AT SLOPE STAKE	SLOPE
0' - 5'	6:1
5' - 10'	4:1
10' - 15'	3:1
OVER 15'	2:1

CUT DEPTH AT SLOPE STAKE	SLOPE
0' - 5'	5:1
5' - 10'	4:1
10' - 15'	3:1
OVER 15'	2:1



QUANTITIES

AGGREGATE

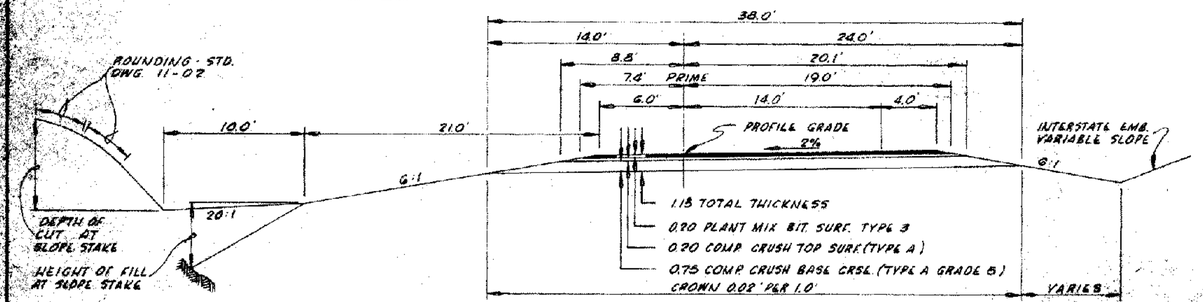
	CRUSHED TOP SURF.
AREA SQ. FT.	10.8
CU YDS. PER STA.	40.0
TONS PER STA.	64.0

REST AREA
RAMPS B, & B2

TYPICAL SECTION NO. 15

FILL HEIGHT AT SLOPE STAKE	SLOPE
0' - 10'	6:1
10' - 20'	4:1
OVER 20'	2:1

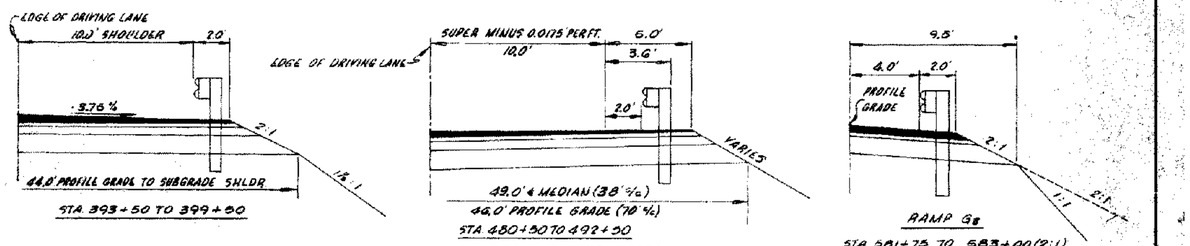
CUT DEPTH AT SLOPE STAKE	SLOPE
0' - 5'	5:1
5' - 10'	4:1
10' - 15'	3:1
OVER 15'	2:1



QUANTITIES

	AGGREGATE: PLANT MIX BIT. SURF TYPE 3	AGGREGATE: CRUSHED TOP SURF. TYPE A	AGGREGATE: CRUSHED BASE CRSE TYPE A	BITUMINOUS MATERIAL: PLANT MIX SURF.	BITUMINOUS MATERIAL: PRIME
AREA SQ. FT.	5.0	5.5	25.1		
SQ. YDS. PER STA.	200.0			SQ. YDS PER STA.	200.0	293.3
CU. YDS. PER STA.	13.5	20.4	93.0	TONS PER STA.	2.4	0.4
TONS PER STA.	*37.5	32.6	148.8			

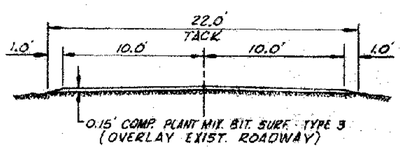
*INCLUDES WEIGHT OF PLANT MIX BIT. MAT'L.



SPECIAL SHOULDER DETAIL
NO SCALE

TYPICAL SECTION NO. 16

STA. 29+28 TO 98+44.2 FRONT RD
(BETWEEN PHOSPHATE & WARM SPRING)



NOTE: 120 TONS OF CRUSHED TOP SURF. TYPE A" INCLUDED FOR LEVELING COURSE WHERE REQUIRED.

QUANTITIES

	PLANT MIX BITUM SURF. TYPE 3	BIT. MAT'L.	TACK
AREA SQ. FT.	3.2		
SQ. YDS. PER STA.	293.3	293.3	244.4
CU. YDS. PER STA.	11.9		
TONS PER STA.	* 23.4	1.5	
GALS. PER STA.			24.4

* INCLUDES WEIGHT OF PLANT MIX BIT. MAT'L.

SUMMARY NO. 10

DIST. NO.	STATE	F. A. P.	YEAR	NO.	SHEET
8	MONT.	I-90-3(23)166	12		202

CULVERTS (ALTERNATES)

STATION	ALTERNATE A — UNI-CLASS PIPE — SIZE		ALTERNATE B — UNI-CLASS R.C.P. — SIZE		ALTERNATE C — UNI-GAUGE — SIZE		GRADE ELEVATION	HEIGHT OF COVER	FILL SECTION — LEFT	FILL SECTION — RIGHT	SKEW ANGLE	CULV. REG. C.Y.	REMARKS
	24	30	24	30	24	30							
	THICKNESS		CLASS		THICKNESS								
	0.075	0.105	3	2	0.075	0.105							
355+00		60		60		60		2	1:1.25	1:1.25	0	8	MEDIAN (L-TYPE)
407+00		44		44		44		2	1:1.5	1:1.5	0	7	FRONTAGE ROAD
415+27.8		52		52		52		2	1:1.5	1:1.5	0	6	FRONTAGE ROAD
423+00.0		70		70		70	70	2	1:1.5	1:1.5	28°LT	11	FRONTAGE ROAD
62+35		78		78		78		2	3:1	6:1	0°&22½	25	
TOTAL		230		230		230						24	I 90-3(23)166

EMBANKMENT PROTECTOR (SEE DWG 56-10)

STATION	LINEAL FEET — 12" CSP 0.064"	SQ YDS — TYPE 3 ANCHORED	REMARKS
561+80 WB	16	1.5	LT OF STATION
564+08 EB	44	0	90° ELBOW RT
564+68 EB(REV)	62	1.5	30° ELBOW RT
569+50 EB	100	1.5	90° ELBOW RT
576+11 RAMP G1	60	2.5	90° ELBOW LT
582+28 WB	94	1.5	15° ELBOW LT
621+50 WB	70	1.5	15° ELBOW LT
624+38 EB	20	1.5	15° ELBOW LT
TOTAL	406	11.5	I 90-3(23)166

BITUMINOUS CURB (SEE DWG 75-01)

STATION FROM	TO	LINEAL FEET	REMARKS
561+90	566+58	518.5	LT OF WESTBOUND
564+04	566+87	83.0	RT OF EASTBOUND
568+65	569+50	104.0	RT OF EASTBOUND
570+79	571+00	28.0	LT OF WESTBOUND
575+00	576+11	87.1.2	LT OF RAMP G1
581+98	582+28	93.0	LT OF WESTBOUND
TOTAL		1566.5	I 90-3(23)166

NEW METAL GUARD RAIL (WOOD POSTS) (STD DWG 70-02, 05, 06, 08)

STATION FROM	STATION TO	LIN. FT. NEW METAL GUARD RAIL LT.	LIN. FT. NEW METAL GUARD RAIL RT.	UNITS BRIDGE APPROACH SECT. TYPE I LT.	UNITS BRIDGE APPROACH SECT. TYPE I RT.	REMARKS
387+50	405+50		1800.0			EASTBOUND - INCLUDE TERMINAL SECTIONS NOS 1 & 2 OUTSIDE SHOULDER
450+00	481+00.0	700.0				WESTBOUND - INCLUDE TERMINAL SECTION NO. 1 & 2 " "
480+00.0	—	—	—			EASTBOUND
309+42.2 RK	309+42.2 RK		307.5.0			ADJACENT EASTBOUND - INCLUDE TERMINAL SECTIONS NO 1 & 2 OUTSIDE SHOULDER
	31+04.8 B					EASTBOUND
552+49.0	556+89.0 RK		875.0		1	EASTBOUND - INCLUDE TERMINAL SECTION NO 1 OUTSIDE SHOULDER
566+30.1	566+19.5 RK	175.0		1		EASTBOUND " " " " 1 INSIDE "
568+32.0 RK	577+39.0 RK		875.0		1	EASTBOUND " " " " 2 OUTSIDE "
582+14.0 RK	581+09.5 RK	475.0		1		WESTBOUND " " " " 2 OUTSIDE "
609+89.0 RK	578+19.5 RK	812.5		1		RAMP G1 " " " " 1 OUTSIDE "
579+33.0 RK	577+83.0		125.0		1	WESTBOUND " " " " 1 INSIDE "
578+42.2	579+36.7 RK		87.5		1	EASTBOUND " " " " 1 OUTSIDE "
577+65.9	576+85.0 RK	175.0		1		EASTBOUND " " " " 1 INSIDE "
576+84.9	576+60.9 RK	100.0		1		WESTBOUND " " " " 2 OUTSIDE "
581+05.2 RK	582+17.9	87.5		1		WESTBOUND " " " " 1 OUTSIDE "
580+99.2 RK	582+09.2		125.0		1	WESTBOUND " " " " 1 INSIDE "
580+25.8 RK	582+13.8		125.0		1	EASTBOUND " " " " 1 OUTSIDE "
581+17.5	580+75.0		90.5			RAMP G8 " " " " 1 & 2 OUTSIDE SHOULDER
625+75.0	629+50.0 RK		350.0		1	EASTBOUND - INCLUDE TERMINAL SECTION NO 1 OUTSIDE SHOULDER
627+50.0	627+50.0 RK	175.0		1		EASTBOUND - " " " " 1 INSIDE "
629+48.8 RK	629+41.0	87.5		1		WESTBOUND - " " " " 1 OUTSIDE "
627+85.0 RK	627+35.0		175.0		1	WESTBOUND - " " " " 1 INSIDE "
629+85.0 RK	629+76.0		90.0.0		1	EASTBOUND - " " " " 1 & 2 OUTSIDE "
TOTAL		2781.5	4835.0	5	9	I 90-3(23)166

ADDITIONAL SURFACING (INCLUDED IN SURFACING SUMMARY)

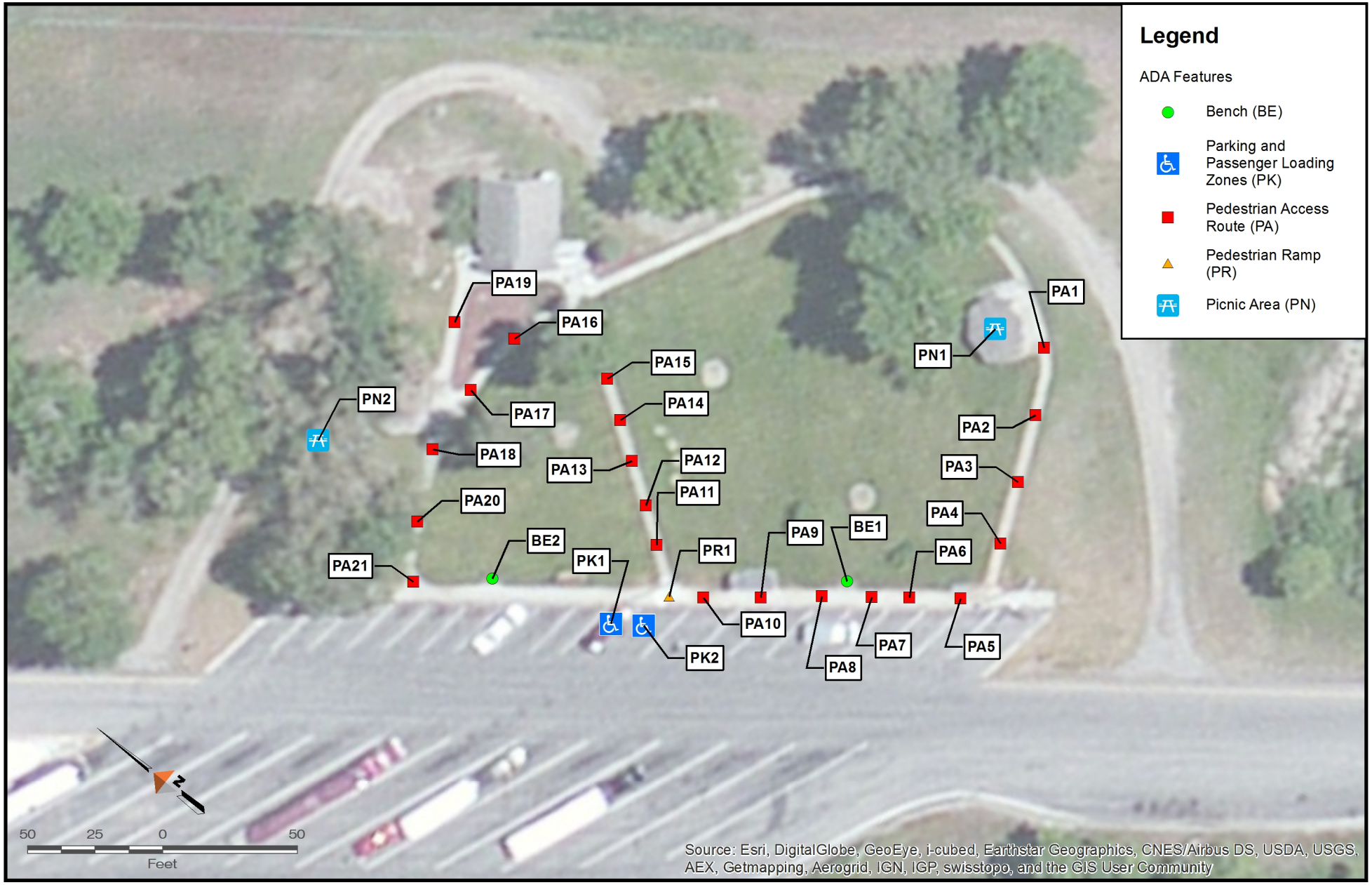
STATION FROM	STATION TO	LINEAL FEET — TURNS	LINEAL FEET — BUSH	±	FOR	TONS AGGREGATE — ALBMI MIX	CRUSH 1/2" MAX. — TYPE A	CRUSH 3/8" MAX. — TYPE B	CRUSH BASE COURSE — GRADE 5	CRUSH BASE COURSE — GRADE 2	BITUMINOUS MIXTURE — GRAN. MIX (AS PER SPEC)	MATERIAL — ASPHALT HC-70	MATERIAL — CALCIUM CHLORIDE TYPE II 32 %	REMARKS
21+62.2	42+10	52.8.7	54.8.7		RECONDITIONING FRONTAGE ROAD	98	33				2.47			ALL SPECIAL PROVISIONS
350+00	422+28.7	7272.7	7272.7		FRONTAGE ROAD			8108						TYPICAL SECTION NO. 11
378+88	382+02.7	384.2	384.2		RAMP G1	1232	1487		6886		170.34	18.32		TYPICAL SECTION NO. 13 (INCLUDES TAPER & PAVING)
520+00	558+00	3600.2	3600.2		RAMP G8	1878	1884		7191		114.02	19.48		TYPICAL SECTION NO. 13 (INCLUDES TAPER & PAVING)
821+00		138.0	134.0		PAVED INVERT FOR VEHICLES UNDERPASS	134	3		90		2.12	0.18		S.D. DWG S1-104 (SEE 9)
433+28	307+00	9167.1	9167.1		DETOUR ROAD	1132	1098		5811		79.18	12.67		TYPICAL SECTION NO. 12
600+70	350+00	4730.0	4730.0		DETOUR ROAD	7166	—		—		185.25	22.92		TYPICAL SECTION NO. 12 PLANT MIX ONLY
340+00	342+60	260.0	260.0		RAMP B2	69	260		1254		6.15	0.09		TYPICAL SECTION NO. 13
620+00	622+50 RK	1836.2	1836.2		RAMP G1	991	385		2824		29.39	8.01		TYPICAL SECTION NO. 9 (INCLUDES TAPER & FILLETS)
582+20.2	579+86.5	1158.6	1158.6		RAMP G4	537	309		1957		21.93	3.76		TYPICAL SECTION NO. 9 (INCLUDES TAPER & FILLETS)
579+86.5	576+60.9	1011.7	1011.7		RAMP G5	542	306		2052		23.00	3.59		TYPICAL SECTION NO. 13 (INCLUDES TAPER & FILLETS)
582+02.8	584+50.0	1847.2	1847.2		RAMP G2	517	458		2855		33.91	5.67		TYPICAL SECTION NO. 9 (INCLUDES FILLETS)
91+07	92+11.8	1248.1	1248.1		LINE G	676	596		1712	2030	43.23	6.18		TYPICAL SECTION NO. 10
1500.0	1500.0	1500.0	1500.0		RAILROAD ACCESS ROAD			060						TYPICAL SECTION NO. 12
8050.0	53+50.2	3650.0	3650.0		DETOUR ROAD	1159	1010		3469		76.75	17.22		TYPICAL SECTION NO. 12
552+50	570+28.6	1838.0	1838.0		DETOUR ROAD	542	475		1786		35.85	5.74		TYPICAL SECTION NO. 12
291+28	282+42.2	291.6.2	291.6.2		PILOTRATE TO WARM SPRING FRONTAGE RIVERSIDE CONNECTION TO R.T.W.	1619	1201				103.78		1648	TYPICAL SECTION NO. 10
638+18.3	711+20.1 K					786	586		1781	2065	49.98	6.28		TRANSITION - TYPICAL SECTION NO. 10
1410.0	1410.0	1250.0	1250.0		WARM SPRING CREEK ACCESS ROAD	273	814		1504		31.28	4.01		TYPICAL SECTION NO. 12
38+26.2	711+20.6	1370.2	1370.6		FRONTAGE ROAD	894	838		2573		52.76	5.28		TYPICAL SECTION NO. 12
					BOARD RAIL WIDENING	397	246				8.78	8.51	5.01	
					MEDIAN TURN APRONS			1829			18.98			
					ROAD APPROACHES	83	16	68	2105		6.58	2.86		
						18.874	9818	8741	48.109	8526	967.72	198.90	1648	I 90-3(23)166

ORIGINAL SURVEY — SURVEYED / PLOTTED / TEMPLATE / AREAS CHECKED — NOTE BOOK — NO. — BY — DATE

FINAL SURVEY — SURVEYED / PLOTTED / TEMPLATE / AREAS CHECKED — NOTE BOOK — NO. — BY — DATE

PLATE 3, CROSS SECTION

Appendix F: Accessibility Data



DOWL

Notes:
1. Date of inventory: April 19, 2017
2. Building facility was not inventoried.
3. Pedestrian Access Routes (PA) were measured along the most direct path to accessible facilities at approximately 20-foot intervals.

GOLD CREEK EASTBOUND REST AREA
EXISTING EXTERIOR ADA FEATURES

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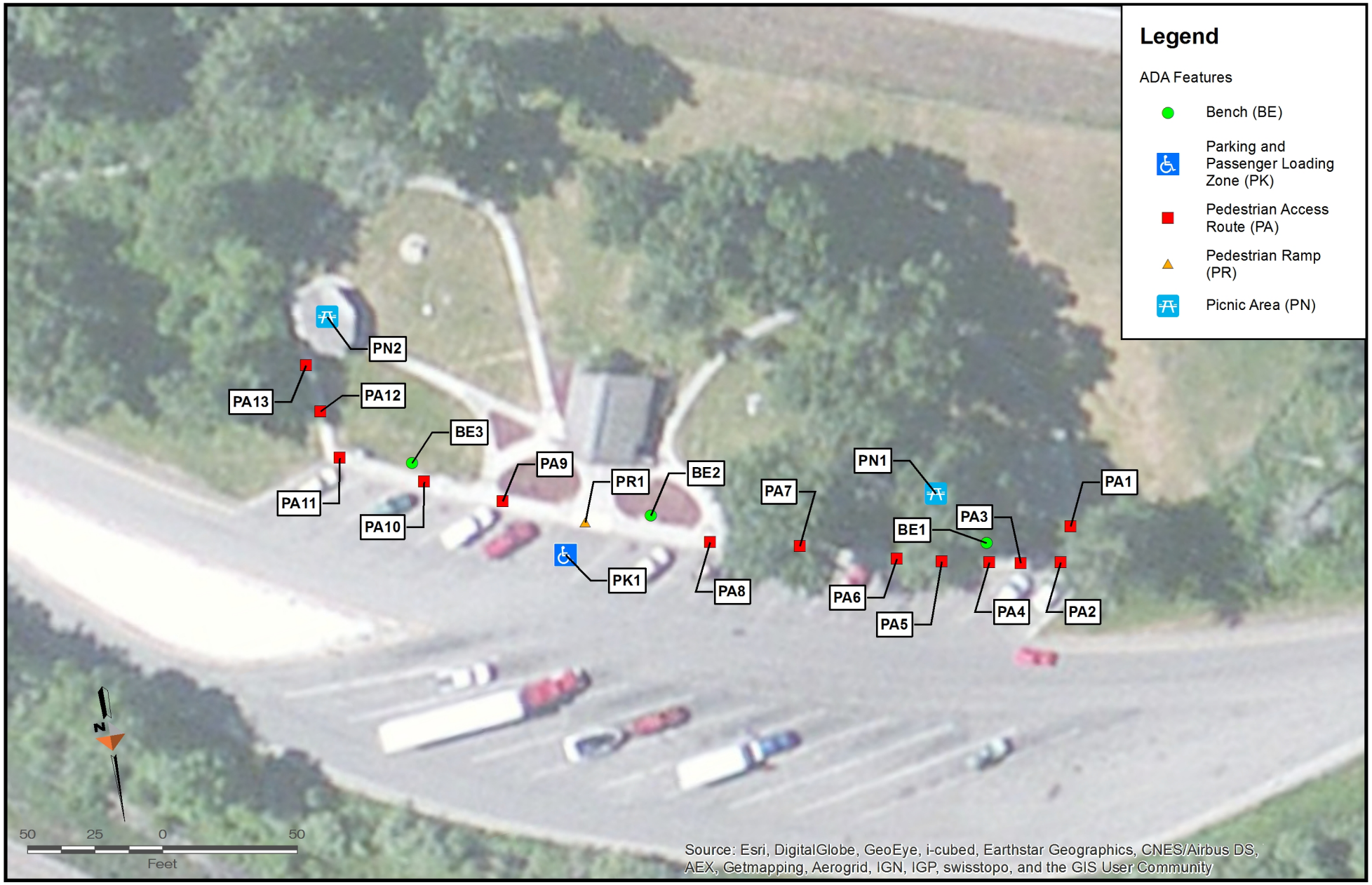

DOWL

Notes:
1. Date of inventory: April 19, 2017
2. Building facility was not inventoried.
3. Pedestrian Access Routes (PA) were measured along the most direct path to accessible facilities at approximately 20-foot intervals.

GOLD CREEK WESTBOUND REST AREA
EXISTING EXTERIOR ADA FEATURES

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GOLD CREEK SAFETY REST AREA - WESTBOUND
ADA INVENTORY - 4/19/17

Feature	Feature Element	Compliance Requirements	PR1
Pedestrian Ramp	Ramp Layout	Perpendicular, Parallel, Blended	Perpendicular
	Flush With Surface	Yes	No
	Ramp Slope	8.3% Maximum	4.1
	Ramp Cross Slope	2% Maximum	0.2
	Ramp Width	48" Minimum	57.5
	Landing Length	48" Minimum	123.5
	Landing Width	48" Minimum	143
	Landing Slope	2% Maximum	0.9
	Landing Cross Slope	2% Maximum	0.3
	Flare Slope Right (from behind curb)	10% Maximum	3.2
	Flare Slope Left (from behind curb)	10% Maximum	4.3
	Gutter Slope	5% Maximum	2.5
	Detectable Warning Device	Yes	No
	DWD Condition	Good	NA
	DWD Color Contrast	Yes	NA
	Vertical Surface Discontinuities (Trip Hazards)	½" Maximum	No

Feature	Feature Element	Compliance Requirements		PK1
Accessible Parking Spaces	Minimum Number per Parking Facility	Total Number of Parking Spaces Provided in Parking Facility	Minimum Number of Required Accessible Parking Spaces	1 accessible; 19 total
		1 to 25	1	
		26 to 50	2	
		For every six or fraction of six parking spaces, at least one shall be a van parking space.		No
	Parking Sign with International Symbol of Accessibility	Yes except where four or fewer parking spaces, including accessible parking spaces, are provided.		Yes
		Signs identifying van parking spaces shall contain the designation "van accessible".		No
	Sign Mounting Height	60" Minimum above the finish floor or ground surface measured to the bottom of the sign.		70
	Vehicle Space Width	96" Minimum for a Car Parking Space 132" Minimum for a Van Parking Space 96" Minimum for a Van Parking Space w/ an Access Aisle >= 96"		295
	Adjacent Access Aisle	Yes except for parallel on-street parking spaces where the adjacent sidewalk or available right-of-way is less than or equal to 14 feet (168") wide.		No
	Access Aisle Width	60" Minimum		NA
	Access Aisle Length	Shall extend the full length of the parking spaces they serve.		NA
	Access Aisle Markings	Yes		NA
	Access Aisle Location	Either side of the parking space except for angled van spaces which shall have access aisles on the passenger side of the parking space		NA
	Parking Space and Access Aisle Slopes and Cross Slopes	2% Maximum		1.2 slope 0.3 cross slope

Feature	Feature Element	Compliance Requirements		PN1	PN2
Picnic Areas	Minimum Number per Site	Total Number of Picnic Areas Provided at Site	Minimum Number of Required Accessible Picnic Areas	None accessible.	None accessible.
		2 or Fewer	All		
		More than 2	20 percent; not less than 2		
	Picnic Table Clear Space	36" on all usable sides of the tables measured from the back edge of the benches		No	No
		Slope not steeper than 1:48 (2%)		Yes	Yes
	Openings in Clear Ground Space	Not more than 1/2 inch in diameter		None	None
	Table Height	28" Minimum; 34" Maximum		27.5	27.5
	Wheelchair Space	At least 1 wheelchair spave for each 24 linear feet of usable table surface perimeter.		None	None
		30" by 48 " Minimum			
		Positioned for a forward approach to the table; provide knee and toe clerance.			

Feature	Feature Element	Compliance Requirements	BE1	BE2	BE3
Benches (not at Picnic Areas)	Bench Clear Space	36" by 48" Minimum; Must adjoin accessible route.	Yes	Yes	Yes
	Bench Seat Size	42" long Minimum	72.5	72.5	72.5
		20" deep Minimum; 24 " deep Maximum	13	13	13
	Bench Seat Height	17" Minimum; 19" Maximum	16	16	16
	Bench Back Support	42" long Minimum	72.5	72.5	72.5
		Extend from a point 2" Maximum above seat surface.	4	4	4
		Extend to point 18" Minimum above seat surface.	13	13	13
		2.5" Maximum from rear edge of seat measured horizontally.	2	2	2

GOLD CREEK SAFETY REST AREA - WESTBOUND
ADA INVENTORY - 4/19/17

Feature	Feature Element	Compliance Requirements	PA1	PA2	PA3	PA4	PA5	PA6	PA7	PA8	PA9	PA10	PA11	PA12	PA13
Pedestrian Access Routes	Continuous Clear Width	48" Minimum	54	54	69	60	60	60	60	60	60	60	60	48	48
		Where the clear width is less than 60", passing spaces (60" x 60" minimum) shall be provided at intervals of 200 feet maximum.	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
	Slope if not contained within a street right-of-way	5% Maximum	0.7	3.4	1	0.3	1.6	0.3	0.3	1	0.3	0.5	0.2	1.9	3
	Cross Slope	2% Maximum	0.7	0.6	1.7	1.4	1.4	0.9	1.3	0.9	2.1	1.7	1.6	2.7	0.5
	Vertical Surface Discontinuities (Trip Hazards)	½" Maximum	Yes	No	Yes	No	No	No	No	No	No	No	No	No	No

Source of Compliance Requirements:

2010 ADA Standards for Accessible Design
2011 Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way
2013 Architectural Barriers Act Accessibility Guidelines Outdoor Developed Areas Final Rule

Red highlighted cells indicate non-compliant elements.

Feature Type	Feature Element	Compliance Requirements	PR1
Pedestrian Ramp	Ramp Layout	Perpendicular, Parallel, Blended	Parallel
	Flush With Surface	Yes	Yes
	Ramp Slope	8.3% Maximum	5.4
	Ramp Cross Slope	2% Maximum	4.8
	Ramp Width	48" Minimum	59
	Landing Length	48" Minimum	62
	Landing Width	48" Minimum	64
	Landing Slope	2% Maximum	0.2
	Landing Cross Slope	2% Maximum	4.7
	Gutter Slope	5% Maximum	3.4
	Detectable Warning Device	Yes	No
	DWD Condition	Good	NA
	DWD Color Contrast	Yes	NA
	Vertical Surface Discontinuities (Trip Hazards)	½" Maximum	No

Feature Type	Feature Element	Compliance Requirements		1	2
Accessible Parking Spaces	Minimum Number per Parking Facility	Total Number of Parking Spaces Provided in Parking Facility	Minimum Number of Required Accessible Parking Spaces	2 accessible; 20 total	
		1 to 25	1		
		26 to 50	2		
		For every six or fraction of six parking spaces, at least one shall be a van parking space.		No	No
	Parking Sign with International Symbol of Accessibility	Yes except where four or fewer parking spaces, including accessible parking spaces, are provided.		Yes	No
		Signs identifying van parking spaces shall contain the designation "van accessible".		No	No
	Sign Mounting Height	60" Minimum above the finish floor or ground surface measured to the bottom of the sign.		64	NA
	Vehicle Space Width	96" Minimum for a Car Parking Space 132" Minimum for a Van Parking Space 96" Minimum for a Van Parking Space w/ an Access Aisle >= 96"		154	154
	Adjacent Access Aisle	Yes except for parallel on-street parking spaces where the adjacent sidewalk or available right-of-way is less than or equal to 14 feet (168") wide.		No	No
	Access Aisle Width	60" Minimum		NA	NA
	Access Aisle Length	Shall extend the full length of the parking spaces they serve.		NA	NA
	Access Aisle Markings	Yes		NA	NA
	Access Aisle Location	Either side of the parking space except for angled van spaces which shall have access aisles on the passenger side of the parking space		NA	NA
	Parking Space and Access Aisle Slopes and Cross Slopes	2% Maximum		1.5 slope 1.2 cross slope	1.3 slope 1.0 cross slope

Feature Type	Feature Element	Compliance Requirements		1	2
Picnic Areas	Minimum Number per Site	Total Number of Picnic Areas Provided at Site	Minimum Number of Required Accessible Picnic Areas	None accessible.	None accessible.
		2 or Fewer	All		
		More than 2	20 percent; not less than 2		
	Picnic Table Clear Space	36" on all usable sides of the tables measured from the back edge of the benches		No	No
		Slope not steeper than 1:48 (2%)		Yes	Yes
	Openings in Clear Ground Space	Not more than 1/2 inch in diameter		None	None
	Table Height	28" Minimum; 34" Maximum		29.5	29.5
	Wheelchair Space	At least 1 wheelchair spave for each 24 linear feet of usable table surface perimeter.		None	None
		30" by 48 " Minimum			
		Positioned for a forward approach to the table; provide knee and toe clerance.			

Feature Type	Feature Element	Compliance Requirements	1	2
Benches (not at Picnic Areas)	Bench Clear Space	36" by 48" Minimum; Must adjoin accessible route.	Yes	Yes
	Bench Seat Size	42" long Minimum	72	72
		20" deep Minimum; 24 " deep Maximum	22	22
	Bench Seat Height	17" Minimum; 19" Maximum	19	19
	Bench Back Support	42" long Minimum	72.5	72.5
		Extend from a point 2" Maximum above seat surface.	No Back	No Back
		Extend to point 18" Minimum above seat surface.		
		2.5" Maximum from rear edge of seat measured horizontally.		

GOLD CREEK SAFETY REST AREA - EASTBOUND
ADA INVENTORY - 4/19/17

Feature Type	Feature Element	Compliance Requirements	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Pedestrian Access Routes	Continuous Clear Width	48" Minimum	46	46	46	46	60	60	60	60	60	60	46	46	46	46	46
		Where the clear width is less than 60", passing spaces (60" x 60" minimum) shall be provided at intervals of 200 feet maximum.	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
	Slope if not contained within a street right-of-way	5% Maximum	0.1	2.7	2.7	2.2	0.3	0.2	0.1	0.1	0.1	0.1	1.8	2.2	2.9	1.2	1.8
	Cross Slope	2% Maximum	0.4	0.2	0.3	1.0	1.1	1.5	1.9	1.7	1.8	1.3	1.0	1.0	0.3	0.1	5.0
	Vertical Surface Discontinuities (Trip Hazards)	½" Maximum	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes
		Comments	Overgrown with vegetation	Overgrown with vegetation	Overgrown with vegetation	Overgrown with vegetation							Overgrown with vegetation	Overgrown with vegetation	Overgrown with vegetation	Overgrown with vegetation	Root damage from tree

Feature Type	Feature Element	Compliance Requirements	16	17	18	19	20	21	22	23	24	25
Pedestrian Access Routes	Continuous Clear Width	48" Minimum	49	49	49	48	60	48	60	60	60	60
		Where the clear width is less than 60", passing spaces (60" x 60" minimum) shall be provided at intervals of 200 feet maximum.	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
	Slope if not contained within a street right-of-way	5% Maximum	0.2	0.7	0.5	0.6	2.5	3.1	0.2	0.6	0.1	0.7
	Cross Slope	2% Maximum	0.7	0.3	0.7	0.7	1	0.3	1.5	1.3	1	1.5
	Vertical Surface Discontinuities (Trip Hazards)	½" Maximum	No	No	No	No	No	No	Yes	Yes	No	No

Source of Compliance Requirements:
2010 ADA Standards for Accessible Design
2011 Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way
2013 Architectural Barriers Act Accessibility Guidelines Outdoor Developed Areas Final Rule

Red highlighted cells indicate non-compliant elements.

Appendix G: Soils Data

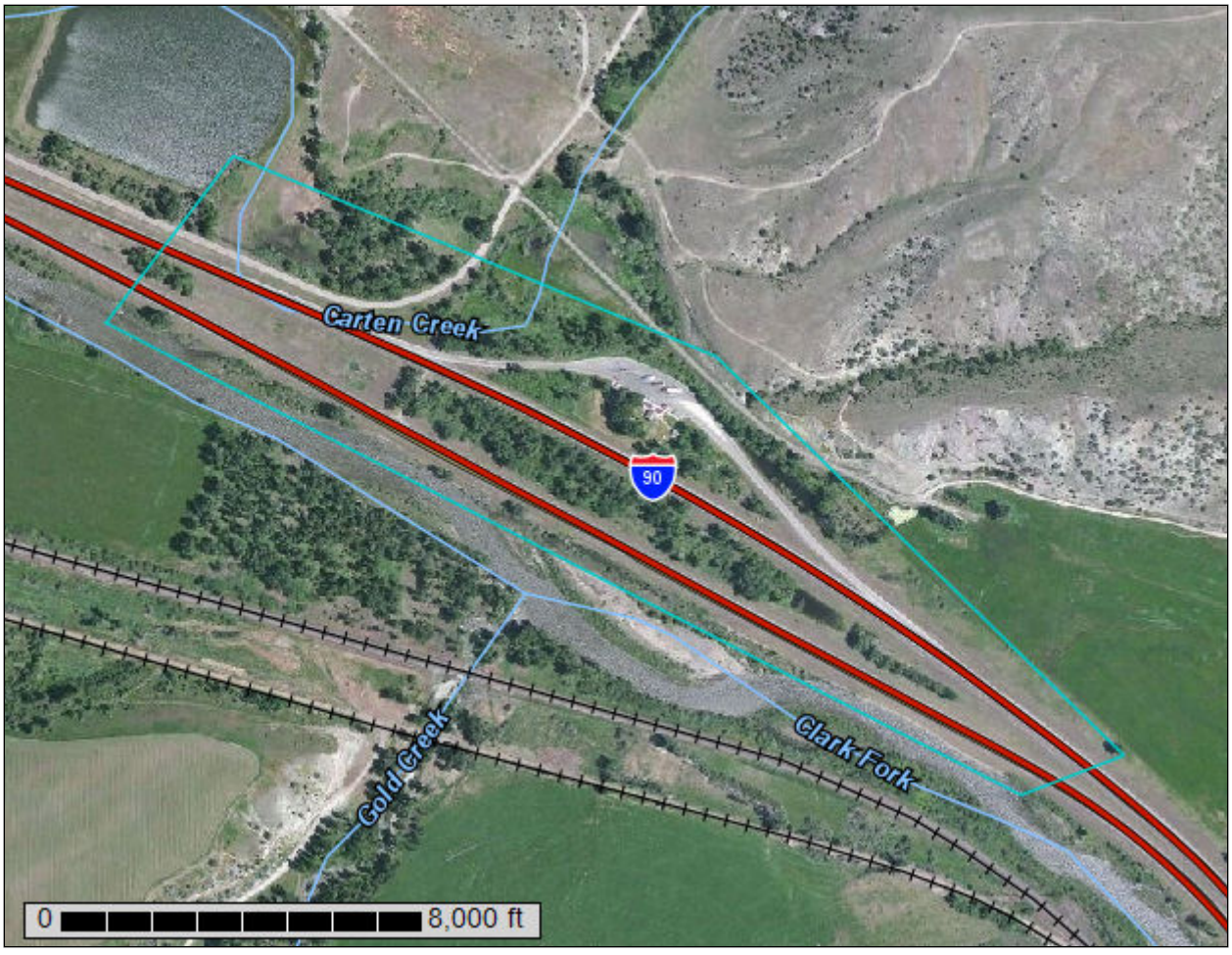
United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Powell County Area, Montana



May 10, 2017

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

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Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



Map Scale: 1:6,210 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 300 600 1200 1800

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 12N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Powell County Area, Montana
Survey Area Data: Version 13, Sep 20, 2016

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 9, 2011—Jul 17, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Powell County Area, Montana (MT644)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
4	Aquents-Slickens complex, 0 to 2 percent slopes, occasionally flooded	56.7	88.5%
102	Pits, gravel	3.5	5.4%
169F	Doney-Dolus channery loams, 15 to 45 percent slopes	0.9	1.5%
535	Saypo loam, cool, 0 to 4 percent slopes	3.0	4.6%
W	Water	0.0	0.0%
Totals for Area of Interest		**64.2**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Powell County Area, Montana

4—Aquents-Slickens complex, 0 to 2 percent slopes, occasionally flooded

Map Unit Setting

National map unit symbol: 4wmt
Elevation: 3,600 to 5,200 feet
Mean annual precipitation: 10 to 14 inches
Mean annual air temperature: 39 to 45 degrees F
Frost-free period: 90 to 105 days
Farmland classification: Not prime farmland

Map Unit Composition

Aquents and similar soils: 55 percent
Slickens: 30 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Aquents

Setting

Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Depth to water table: About 12 to 24 inches
Frequency of flooding: Occasional
Frequency of ponding: None

Description of Slickens

Setting

Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear

Minor Components

Nythar

Percent of map unit: 7 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: Wet Meadow (WM) 10-14" p.z. (R044XW127MT)
Hydric soil rating: Yes

Riverwash

Percent of map unit: 5 percent
Hydric soil rating: No

Water

Percent of map unit: 3 percent
Hydric soil rating: No

102—Pits, gravel

Map Unit Composition

Pits, gravel: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

169F—Doney-Dolus channery loams, 15 to 45 percent slopes

Map Unit Setting

National map unit symbol: 4wgs
Elevation: 3,600 to 5,000 feet
Mean annual precipitation: 10 to 14 inches
Mean annual air temperature: 39 to 46 degrees F
Frost-free period: 90 to 105 days
Farmland classification: Not prime farmland

Map Unit Composition

Doney and similar soils: 50 percent
Dolus and similar soils: 35 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Doney

Setting

Landform: Hills
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Residuum weathered from sandstone and siltstone

Typical profile

A - 0 to 4 inches: channery loam
Bk - 4 to 32 inches: loam
Cr - 32 to 60 inches: unweathered bedrock

Properties and qualities

Slope: 15 to 45 percent
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None

Frequency of ponding: None
Calcium carbonate, maximum in profile: 15 percent
Salinity, maximum in profile: Very slightly saline to slightly saline (2.0 to 4.0 mmhos/cm)
Available water storage in profile: Low (about 5.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: C
Ecological site: Silty (Si) 15-19" p.z. (R044XW184MT)
Hydric soil rating: No

Description of Dolus

Setting

Landform: Hills
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Residuum and/or colluvium derived from sandstone and siltstone

Typical profile

A - 0 to 8 inches: channery loam
Bw - 8 to 16 inches: very channery loam
Bk - 16 to 32 inches: very channery loam
Cr - 32 to 60 inches: weathered bedrock

Properties and qualities

Slope: 15 to 45 percent
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 15 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: C
Ecological site: Silty-Droughty (SiDr) 10-14" p.z. (R044XW131MT)
Hydric soil rating: No

Minor Components

Castner

Percent of map unit: 10 percent
Landform: Hills
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: Shallow (Sw) 15-19" p.z. (R044XW146MT)
Hydric soil rating: No

Rock outcrop
Percent of map unit: 5 percent
Landform: Hills
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

535—Saypo loam, cool, 0 to 4 percent slopes

Map Unit Setting
National map unit symbol: 4wq3
Elevation: 3,800 to 5,000 feet
Mean annual precipitation: 15 to 19 inches
Mean annual air temperature: 39 to 45 degrees F
Frost-free period: 70 to 90 days
Farmland classification: All areas are prime farmland

Map Unit Composition
Saypo and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Saypo

Setting
Landform: Stream terraces
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Fine-loamy alluvium

Typical profile
Oe - 0 to 2 inches: moderately decomposed plant material
Ap - 2 to 9 inches: loam
Bk1 - 9 to 17 inches: silt loam
Bk2 - 17 to 49 inches: silty clay loam
C - 49 to 60 inches: loam

Properties and qualities
Slope: 0 to 4 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 24 to 42 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 35 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 5.0
Available water storage in profile: Moderate (about 7.9 inches)

Interpretive groups
Land capability classification (irrigated): 4e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: Subirrigated (Sb) 15-19" p.z. (R044XW187MT)
Hydric soil rating: No

Minor Components

Gregson
Percent of map unit: 5 percent
Landform: Stream terraces
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: Subirrigated (Sb) 15-19" p.z. (R044XW187MT)
Hydric soil rating: No

Tetonview
Percent of map unit: 5 percent
Landform: Depressions
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: Wet Meadow (WM) 10-14" p.z. (R044XW127MT)
Hydric soil rating: Yes

Saypo, saline
Percent of map unit: 5 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: Subirrigated (Sb) 10-14" p.z. (R044XW128MT)
Hydric soil rating: No

W—Water

Map Unit Composition
Water: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Soil Information for All Uses

Suitabilities and Limitations for Use

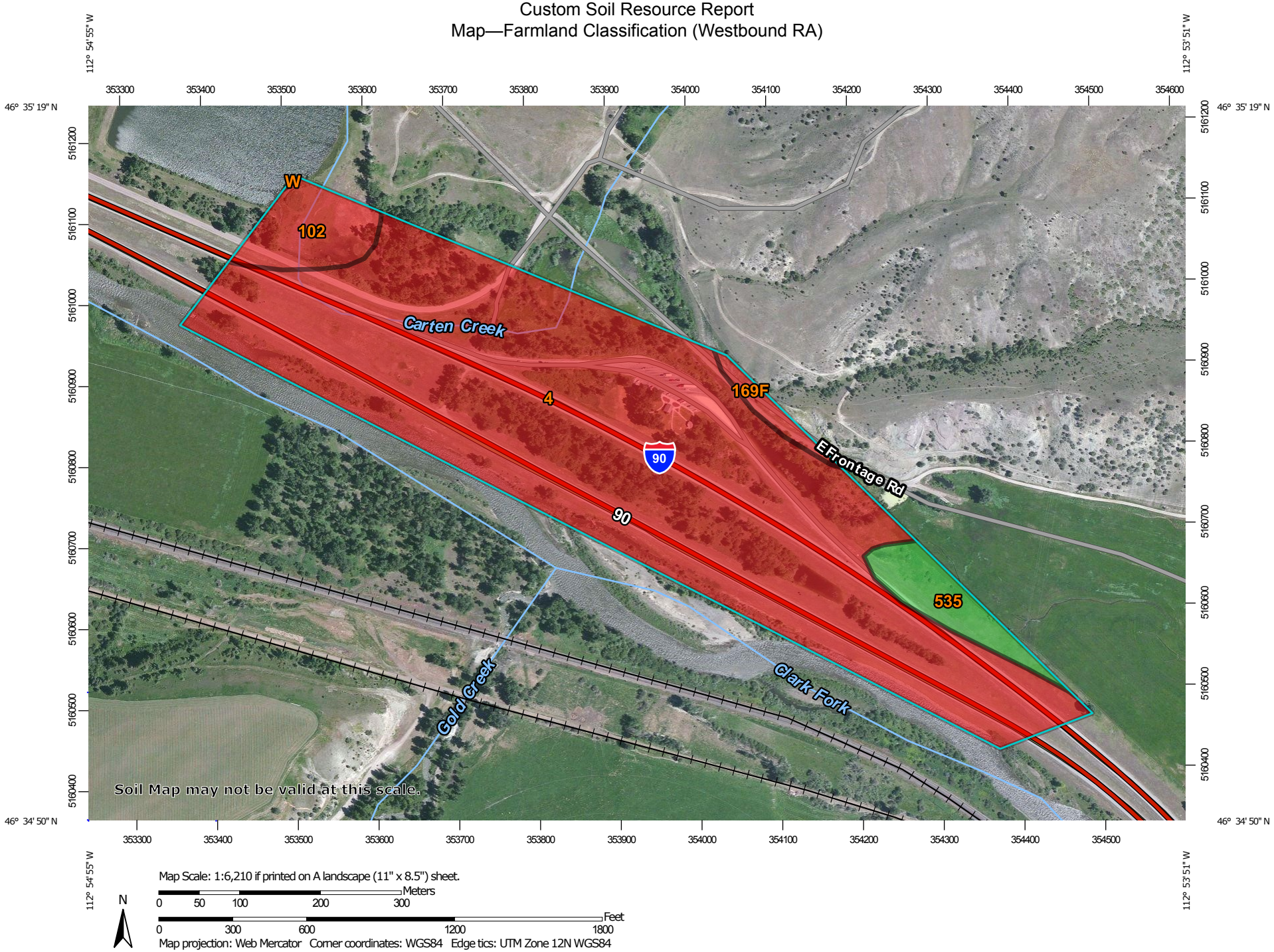
The Suitabilities and Limitations for Use section includes various soil interpretations displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each interpretation.

Land Classifications

Land Classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

Farmland Classification (Westbound RA)

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.



Map Scale: 1:6,210 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 50 100 200 300

Feet
0 300 600 1200 1800

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 12N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

Not prime farmland

All areas are prime farmland

Prime farmland if drained

Prime farmland if protected from flooding or not frequently flooded during the growing season

Prime farmland if irrigated

Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season

Prime farmland if irrigated and drained

Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season

Prime farmland if subsoiled, completely removing the root inhibiting soil layer

Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60

Prime farmland if irrigated and reclaimed of excess salts and sodium

Farmland of statewide importance

Farmland of local importance

Farmland of unique importance

Not rated or not available

Soil Rating Lines

Not prime farmland

All areas are prime farmland

Prime farmland if drained

Prime farmland if protected from flooding or not frequently flooded during the growing season

Prime farmland if irrigated

Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season

Prime farmland if irrigated and drained

Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season

Prime farmland if subsoiled, completely removing the root inhibiting soil layer

Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60

Prime farmland if irrigated and reclaimed of excess salts and sodium

Farmland of statewide importance

Farmland of local importance

Farmland of unique importance

Not rated or not available

Soil Rating Points

Not prime farmland

All areas are prime farmland

Prime farmland if drained

Prime farmland if protected from flooding or not frequently flooded during the growing season

Prime farmland if irrigated

Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season

Prime farmland if irrigated and drained

Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season

Prime farmland if subsoiled, completely removing the root inhibiting soil layer

Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60

Prime farmland if irrigated and reclaimed of excess salts and sodium

Farmland of statewide importance

Farmland of local importance

Farmland of unique importance

Not rated or not available

Water Features

MAP INFORMATION

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Powell County Area, Montana
Survey Area Data: Version 13, Sep 20, 2016

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 9, 2011—Jul 17, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Farmland Classification (Westbound RA)

Farmland Classification— Summary by Map Unit — Powell County Area, Montana (MT644)				
Map unit symbol	**Map unit name**	**Rating**	**Acres in AOI**	**Percent of AOI**
4	Aquents-Slickens complex, 0 to 2 percent slopes, occasionally flooded	Not prime farmland	56.7	88.5%
102	Pits, gravel	Not prime farmland	3.5	5.4%
169F	Doney-Dolus channery loams, 15 to 45 percent slopes	Not prime farmland	0.9	1.5%
535	Saypo loam, cool, 0 to 4 percent slopes	All areas are prime farmland	3.0	4.6%
W	Water	Not prime farmland	0.0	0.0%
Totals for Area of Interest			**64.2**	**100.0%**

Rating Options—Farmland Classification (Westbound RA)

Aggregation Method: No Aggregation Necessary

Tie-break Rule: Lower

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Powell County Area, Montana



May 11, 2017

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

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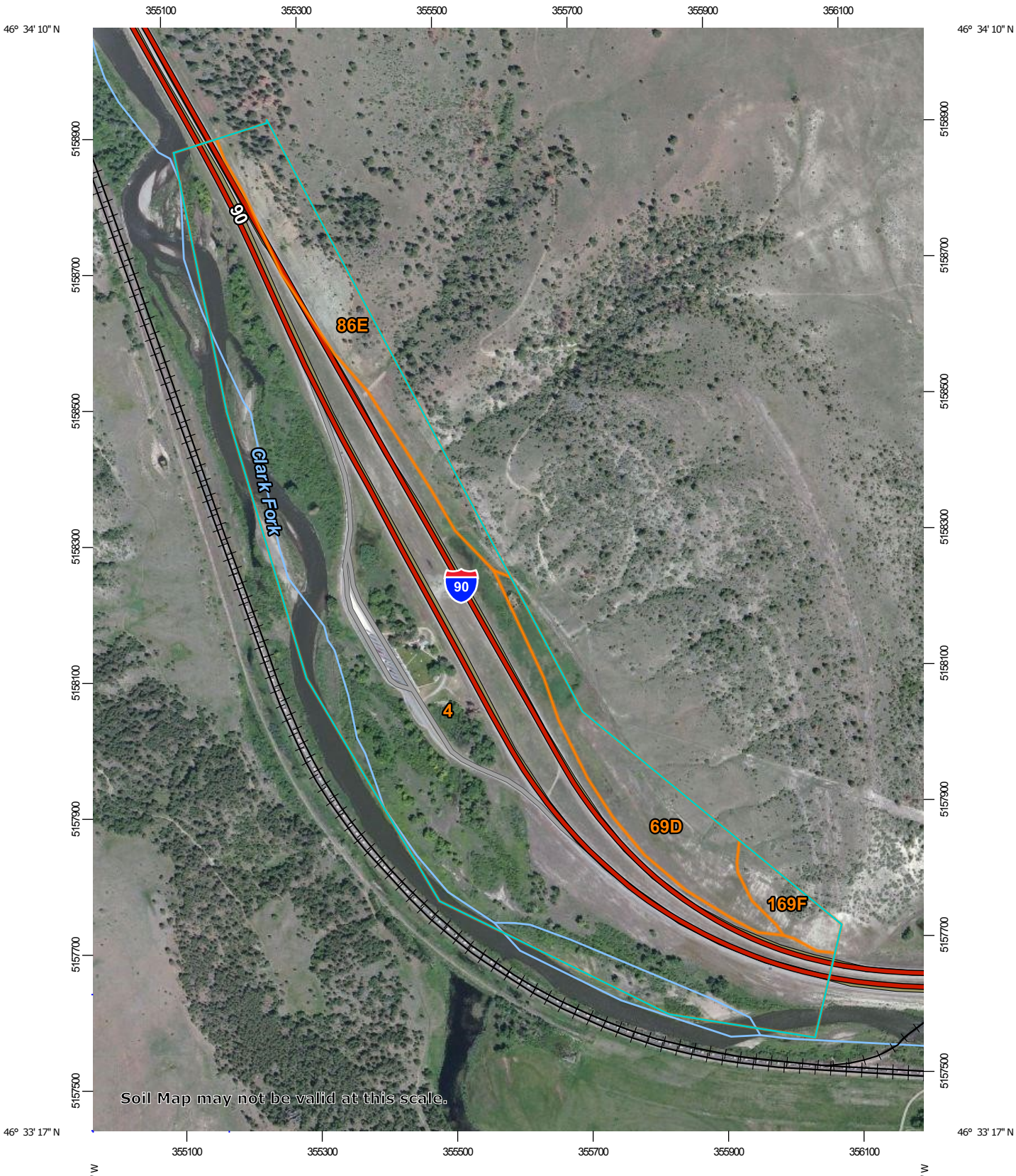
Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



Map Scale: 1:7,900 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 100 200 400 600

Feet: 0 350 700 1400 2100

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 12N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Powell County Area, Montana
Survey Area Data: Version 13, Sep 20, 2016

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 9, 2011—Jul 17, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Powell County Area, Montana (MT644)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
4	Aquents-Slickens complex, 0 to 2 percent slopes, occasionally flooded	85.4	78.0%
69D	Boxwell loam, 8 to 15 percent slopes	9.6	8.7%
86E	Winkler gravelly loam, 15 to 35 percent slopes	11.9	10.9%
169F	Doney-Dolus channery loams, 15 to 45 percent slopes	2.6	2.4%
Totals for Area of Interest		**109.5**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Powell County Area, Montana

4—Aquents-Slickens complex, 0 to 2 percent slopes, occasionally flooded

Map Unit Setting

National map unit symbol: 4wmt
Elevation: 3,600 to 5,200 feet
Mean annual precipitation: 10 to 14 inches
Mean annual air temperature: 39 to 45 degrees F
Frost-free period: 90 to 105 days
Farmland classification: Not prime farmland

Map Unit Composition

Aquents and similar soils: 55 percent
Slickens: 30 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Aquents

Setting

Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Depth to water table: About 12 to 24 inches
Frequency of flooding: Occasional
Frequency of ponding: None

Description of Slickens

Setting

Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear

Minor Components

Nythar

Percent of map unit: 7 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: Wet Meadow (WM) 10-14" p.z. (R044XW127MT)
Hydric soil rating: Yes

Riverwash

Percent of map unit: 5 percent
Hydric soil rating: No

Water

Percent of map unit: 3 percent
Hydric soil rating: No

69D—Boxwell loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 4wsf
Elevation: 4,000 to 5,200 feet
Mean annual precipitation: 10 to 14 inches
Mean annual air temperature: 39 to 45 degrees F
Frost-free period: 90 to 105 days
Farmland classification: Farmland of local importance

Map Unit Composition

Boxwell and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Boxwell

Setting

Landform: Hills
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Residuum weathered from sandstone and siltstone

Typical profile

A - 0 to 3 inches: loam
Bw - 3 to 11 inches: loam
Bk - 11 to 36 inches: loam

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 30 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Moderate (about 6.1 inches)

Interpretive groups

Land capability classification (irrigated): 4e
Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: C
Ecological site: Silty (Si) 10-14" p.z. (R044XW125MT)
Hydric soil rating: No

Minor Components

Tanna

Percent of map unit: 10 percent
Landform: Hills
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: Clayey (Cy) 10-14" p.z. (R044XW124MT)
Hydric soil rating: No

Rock outcrop

Percent of map unit: 5 percent
Landform: Hills
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

86E—Winkler gravelly loam, 15 to 35 percent slopes

Map Unit Setting

National map unit symbol: 4wvr
Elevation: 4,400 to 6,500 feet
Mean annual precipitation: 18 to 24 inches
Mean annual air temperature: 39 to 45 degrees F
Frost-free period: 70 to 90 days
Farmland classification: Not prime farmland

Map Unit Composition

Winkler and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Winkler

Setting

Landform: Mountains
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Colluvium derived from argillite and/or quartzite

Typical profile

Oi - 0 to 2 inches: slightly decomposed plant material
A - 2 to 5 inches: gravelly loam
E - 5 to 28 inches: very gravelly sandy loam
E and Bt - 28 to 60 inches: extremely gravelly sandy loam

Properties and qualities

Slope: 15 to 35 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: A
Other vegetative classification: Douglas-fir/elk sedge (PK330), Douglas-fir/bluebunch wheatgrass (PK210)
Hydric soil rating: No

Minor Components

Rock outcrop

Percent of map unit: 8 percent
Landform: Mountains
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Bignell

Percent of map unit: 7 percent
Landform: Mountains
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

169F—Doney-Dolus channery loams, 15 to 45 percent slopes

Map Unit Setting

National map unit symbol: 4wgs
Elevation: 3,600 to 5,000 feet
Mean annual precipitation: 10 to 14 inches
Mean annual air temperature: 39 to 46 degrees F
Frost-free period: 90 to 105 days
Farmland classification: Not prime farmland

Map Unit Composition

Doney and similar soils: 50 percent
Dolus and similar soils: 35 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Doney

Setting

Landform: Hills
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Residuum weathered from sandstone and siltstone

Typical profile

A - 0 to 4 inches: channery loam
Bk - 4 to 32 inches: loam
Cr - 32 to 60 inches: unweathered bedrock

Properties and qualities

Slope: 15 to 45 percent
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 15 percent
Salinity, maximum in profile: Very slightly saline to slightly saline (2.0 to 4.0 mmhos/cm)
Available water storage in profile: Low (about 5.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: C
Ecological site: Silty (Si) 15-19" p.z. (R044XW184MT)
Hydric soil rating: No

Description of Dolus

Setting

Landform: Hills
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Residuum and/or colluvium derived from sandstone and siltstone

Typical profile

A - 0 to 8 inches: channery loam
Bw - 8 to 16 inches: very channery loam
Bk - 16 to 32 inches: very channery loam
Cr - 32 to 60 inches: weathered bedrock

Properties and qualities

Slope: 15 to 45 percent
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None

Calcium carbonate, maximum in profile: 15 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: C
Ecological site: Silty-Droughty (SiDr) 10-14" p.z. (R044XW131MT)
Hydric soil rating: No

Minor Components

Castner

Percent of map unit: 10 percent
Landform: Hills
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: Shallow (Sw) 15-19" p.z. (R044XW146MT)
Hydric soil rating: No

Rock outcrop

Percent of map unit: 5 percent
Landform: Hills
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Soil Information for All Uses

Suitabilities and Limitations for Use

The Suitabilities and Limitations for Use section includes various soil interpretations displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each interpretation.

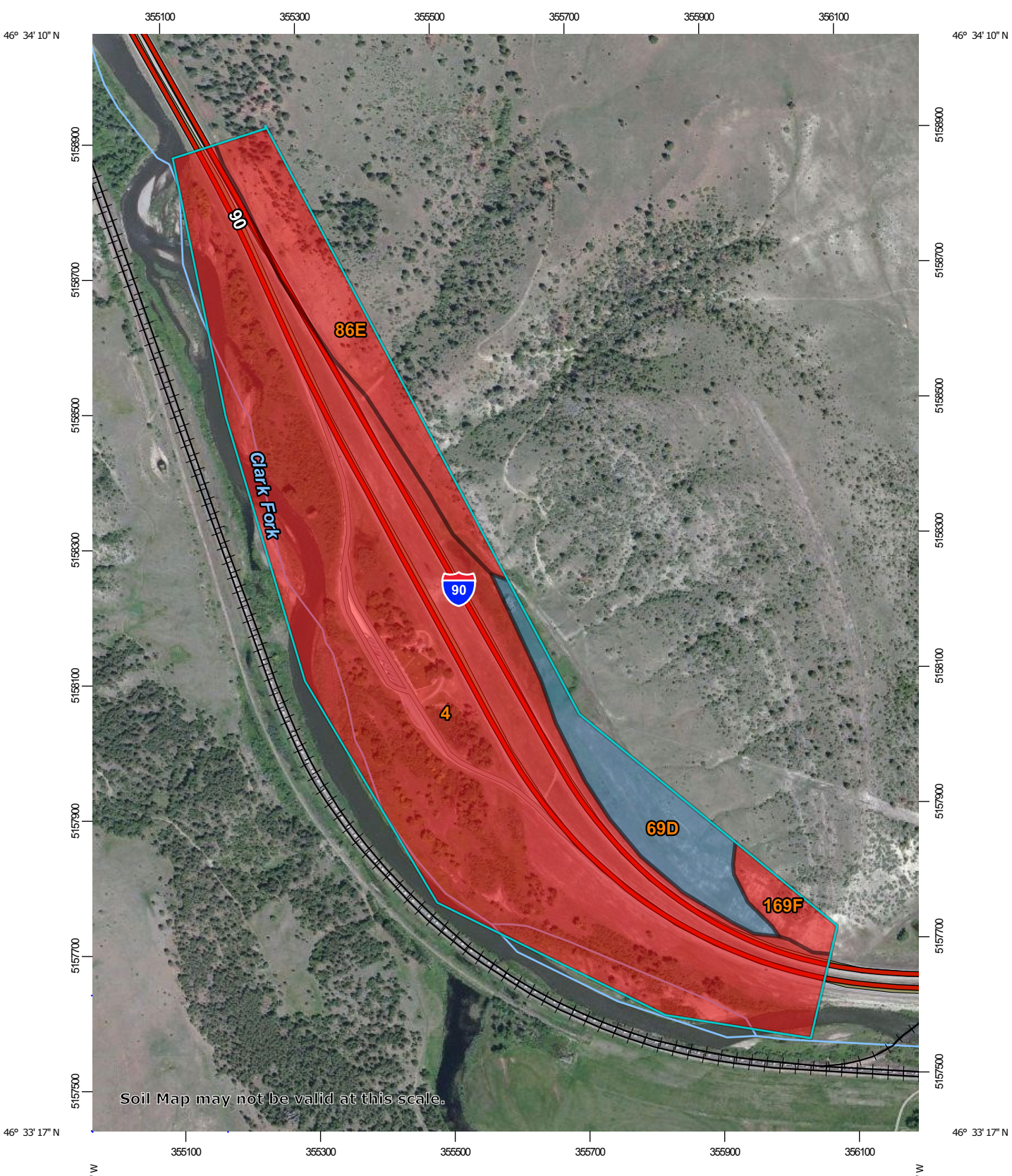
Land Classifications

Land Classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

Farmland Classification

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.

Custom Soil Resource Report
Map—Farmland Classification



Map Scale: 1:7,900 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 100 200 400 600

Feet: 0 350 700 1400 2100

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 12N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

- Not prime farmland
- All areas are prime farmland
- Prime farmland if drained
- Prime farmland if protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated
- Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated and drained
- Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if subsoiled, completely removing the root inhibiting soil layer
- Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Prime farmland if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance
- Farmland of local importance
- Farmland of unique importance
- Not rated or not available

Soil Rating Lines

- Not prime farmland
- All areas are prime farmland
- Prime farmland if drained
- Prime farmland if protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated
- Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated and drained
- Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if subsoiled, completely removing the root inhibiting soil layer
- Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Prime farmland if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance
- Farmland of local importance
- Farmland of unique importance
- Not rated or not available

Soil Rating Points

- Not prime farmland
- All areas are prime farmland
- Prime farmland if drained
- Prime farmland if protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated
- Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated and drained
- Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if subsoiled, completely removing the root inhibiting soil layer
- Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Prime farmland if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance
- Farmland of local importance
- Farmland of unique importance
- Not rated or not available

Water Features

MAP INFORMATION

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

The soil surveys that comprise your AOI were mapped at 1:24,000.

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Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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Survey Area Data: Version 13, Sep 20, 2016

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The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Farmland Classification

Farmland Classification— Summary by Map Unit — Powell County Area, Montana (MT644)				
Map unit symbol	**Map unit name**	**Rating**	**Acres in AOI**	**Percent of AOI**
4	Aquents-Slickens complex, 0 to 2 percent slopes, occasionally flooded	Not prime farmland	85.4	78.0%
69D	Boxwell loam, 8 to 15 percent slopes	Farmland of local importance	9.6	8.7%
86E	Winkler gravelly loam, 15 to 35 percent slopes	Not prime farmland	11.9	10.9%
169F	Doney-Dolus channery loams, 15 to 45 percent slopes	Not prime farmland	2.6	2.4%
Totals for Area of Interest			**109.5**	**100.0%**

Rating Options—Farmland Classification

Aggregation Method: No Aggregation Necessary

Tie-break Rule: Lower

Appendix H: Clark Fork River Impairment Data

2016 Water Quality Information

New Search (/deq/dst/app/cwaic) | View Data in Map ()

Detailed Assessment Report (http://deq.mt.gov/Portals/112/Water/WQPB/CWAIC/Reports/2016/MT76G001_010.pdf

Cycle Year: 2016 View detailed report by cycle year

Water Information

AUID	MT76G001_010	**Water Type**	RIVER
Waterbody Name	Clark Fork River	**Hydro Unit**	17010201
Size (Miles / Acres)	27.78	**Basin**	Columbia
Ecoregion	Middle Rockies	**Watershed**	Pend Oreille
County	Granite County	**Use Class**	B-1
TMDL Planning Area	Clark Fork River	**Trophic Status and Trend**	
Location	CLARK FORK RIVER, Little Blackfoot River to Flint Creek		
Water Quality Category	4A		

Beneficial Use Support Information

Use Name	Fully Supporting	Not Fully Supporting	Threatened	Insufficient Information	Not Assessed
Drinking Water		✔	No		
Primary Contact Recreation		✔	No		
Agricultural	✔		No		
Aquatic Life		✔	No		

Impairment Information

Probable Cause	Probable Sources	Associated Uses	TMDL Completed

Probable Cause	Probable Sources	Associated Uses	TMDL Completed
Alteration in stream-side or littoral vegetative covers	Agriculture	Aquatic Life	N/A
Arsenic	Mill Tailings	Drinking Water	Yes (http://deq.mt.gov/Portals/112/Water/WQPB/CWAIC/TMDL/C01-TMDL-05a.pdf)
Cadmium	Mill Tailings	Aquatic Life	Yes (http://deq.mt.gov/Portals/112/Water/WQPB/CWAIC/TMDL/C01-TMDL-05a.pdf)
Copper	Mill Tailings	Aquatic Life	Yes (http://deq.mt.gov/Portals/112/Water/WQPB/CWAIC/TMDL/C01-TMDL-05a.pdf)
Iron	Mill Tailings	Aquatic Life	Yes (http://deq.mt.gov/Portals/112/Water/WQPB/CWAIC/TMDL/C01-TMDL-05a.pdf)
Lead	Mill Tailings	Aquatic Life,Drinking Water	Yes (http://deq.mt.gov/Portals/112/Water/WQPB/CWAIC/TMDL/C01-TMDL-05a.pdf)
Low flow alterations	Irrigated Crop Production	Aquatic Life	N/A
Mercury	Mill Tailings	Drinking Water	Yes (http://deq.mt.gov/Portals/112/Water/WQPB/CWAIC/TMDL/C01-TMDL-05a.pdf)
Nitrogen (Total)	Municipal Point Source Discharges,Grazing in Riparian or Shoreline Zones	Aquatic Life,Primary Contact Recreation	Yes (http://deq.mt.gov/Portals/112/Water/WQPB/CWAIC/TMDL/C01-TMDL-01a.pdf)
Phosphorus (Total)	Municipal Point Source Discharges,Grazing in Riparian or Shoreline Zones	Aquatic Life,Primary Contact Recreation	Yes (http://deq.mt.gov/Portals/112/Water/WQPB/CWAIC/TMDL/C01-TMDL-01a.pdf)
Physical substrate habitat alterations	Agriculture	Aquatic Life	N/A

Probable Cause	Probable Sources	Associated Uses	TMDL Completed
Sedimentation-Siltation	Agriculture	Aquatic Life	Yes (http://deq.mt.gov/Portals/112/Water/WQPB/CWAIC/TMDL/C01-TMDL-04a.pdf)

Observed Effects

Observed Effect	Associated Uses

Report Explanation

Water Information

- *AUID* - Assessment Unit Identification (AUID) is a unique code assigned to each waterbody to facilitate assessment and tracking.
- *Waterbody Name* - The current name of a river or lake.
- *Size (Miles/Acres)* - The size of the assessment unit; rivers and streams are measured in miles; lakes in acres.
- *Ecoregion* - A large unit of land in which the waterbody is situated and denoted by a general similarity in ecosystems and resources. Link to additional ecoregion description: http://www.eoearth.org/view/article/152124 (http://www.eoearth.org/view/article/152124)
- *County* - The county or counties within which the waterbody (assessment unit) is situated.
- *Total Maximum Daily Load (TMDL) Planning Area* - DEQ has divided the state in multiple planning areas to facilitate a 'watershed approach' to developing TMDLs (http://deq.mt.gov/Water/WQPB/TMDL).
- *Water Type* - Lake or river.
- *Hydro Unit* - The code used by USGS to identify hydrologic units. DEQ uses 4th code (eight digit) HUCs.
- *Basin* - Montana DEQ divides the state into four major (administrative) basins; Columbia, Upper Missouri, Lower Missouri (including Saskatchewan) & Yellowstone.
- *Watershed* - Each major basin is divided into sub-major basins, or watersheds, that identify the major waterbodies that smaller streams drain into. Montana has 16 sub-major basins.
- *Use Class* - Montana's Water Quality Act establishes a systematic classification of waters in accordance to their "present and future most beneficial uses" (75-5-701 MCA).
    - **A-Closed** - Waters classified as suitable for drinking, culinary, and food processing purposes after simple disinfection.
    - **A-1** - Waters classified as suitable for drinking, culinary, and food processing purposes after conventional treatment for removal of naturally present impurities.
    - **B-1** - Waters classified as suitable for drinking, culinary, and food processing purposes after conventional treatment; bathing, swimming and recreation; growth and propagation of salmonid fishes and associated aquatic life, waterfowl and furbearers; and agricultural and industrial water supply.
    - **B-2** - Waters classified as suitable for drinking, culinary, and food processing purposes after conventional treatment; bathing, swimming and recreation; growth and marginal propagation of salmonid fishes and associated aquatic life, waterfowl and furbearers; and agricultural and industrial water supply.
    - **B-3** - Waters classified as suitable for drinking, culinary, and food processing purposes after conventional treatment; bathing, swimming and recreation; growth and propagation of non-

salmonid fishes and associated aquatic life, waterfowl and furbearers; and agricultural and industrial water supply.
    - **C-1** - Waters classified as suitable for bathing, swimming and recreation; growth and propagation of salmonid fishes and associated aquatic life, waterfowl and furbearers; and agricultural and industrial water supply.
    - **C-2** - Waters classified as suitable for bathing, swimming and recreation; growth and marginal propagation of salmonid fishes and associated aquatic life, waterfowl and furbearers; and agricultural and industrial water supply.
    - **C-3** - Waters classified as suitable for drinking, culinary, and food processing purposes after conventional treatment; bathing, swimming and recreation; growth and propagation of non-salmonid fishes and associated aquatic life, waterfowl and furbearers; and agricultural and industrial water supply. The quality of these waters is naturally marginal for drinking, culinary and food processing purposes, agriculture, and industrial water supply.
    - **I** - The goal of the State of Montana is to have these waters fully support the following uses: drinking, culinary, and food processing purposes after conventional treatment; bathing, swimming and recreation; growth and propagation of fishes and associated awuatic life, waterfowl and furbearers; and agricultural and industrial water supply.
- *Trophic Status and Trend* - Trophic states are based on lake fertility (i.e., ability to support aquatic life and plant growth) and classified based on the amount of available nutrients (Phosphorus and Nitrogen) for organisms. Trophic Statuses are: Oligotrophic, Mesotrophic, Dystrophic, Eutrophic, Hypertrophic and Unknown. Trophic Trends are: Improving, Degrading, Fluctuating, Stable or Unknown. A blank means the trophic status and trend is undetermined.
- *Location* - A description of the waterbody the assessment relates to including upstream and downstream points.
- *Water Quality Category* - Each waterbody is assigned a unique assessment category as listed below.
    - **1** - Waters for which all applicable beneficial uses have been assessed and all uses are determined to be fully supported.
    - **2** - Available data and/or information indicate that some, but not all of the beneficial uses are supported.
    - **2A** - Dropped in 2014 cycle. All 2A assessment units are now listed in EPA category 2.
    - **2B** - Changed in 2014 cycle to category 5N. All 2B assessment units are now listed in state defined category 5N. The category definition is unchanged from the 2B definition.
    - **3** - Waters for which there is insufficient data to assess the use-support of any applicable beneficial use; no use-support determinations have been made.
    - **4A** - All TMDLs needed to rectify all identified threats or impairments have been completed and approved.
    - **4B** - Waterbodies are on lands where "other pollution control requirements required by local, state, or federal authority" [see 40 CFR 130.7(b)(1)(iii)] are in place, are expected to address all waterbody-pollutant combinations, and attain all WQS in a reasonable period of time. These control requirements act "in lieu of" a TMDL, thus no actual TMDLs are required.
    - **4C** - Identified threats or impairments result from pollution categories such as dewatering or habitat modification and, thus, a TMDL is not required.
    - **5** - Waters where one or more applicable beneficial uses are impaired or threatened, and a TMDL is required to address the factors causing the impairment or threat.
    - **5N** - Available data and/or information indicate that a water quality standard is exceeded due to an apparent natural source in the absence of any identified manmade sources.

Beneficial Use Support Information

- *Use Name* - All surface waters have designated beneficial uses that may include: agriculture, drinking water, primary contact recreation, aquatic life, and industry.
- *Support Status*
    - Fully Supporting - The use has been assessed and is determined to be fully supporting.
    - Not Fully Supporting - The use has been assessed and is determined to be impaired or partially impaired.

- Threatened - If yes, the use has been assessed and is fully supporting, but has been determined to be threatened for impairment (see 75-5-103(36), MCA (http://leg.mt.gov/bills/mca/75/5/75-5-103.htm)).
- Insufficient Information - there is not enough available data/information to perform a valid assessment.
- Not Assessed - The waterbody has not been assessed for use support.

Impairment Information

- *Probable Causes* - The list of probable causes of pollution.
- *Probable Sources* - The probable source or sources related to the cause of impairment.
- *Associated Uses* - The Beneficial Use being affected by the impairment cause.
- *TMDL Completed* - If the TMDL is completed for the cause there will be a “yes” button. Click the button to be redirected to the TMDL document. A "no" indicates that either a TMDL is required or the cause is a non-pollutant. An N/A identifies the cause as a non-pollutant and no TMDL is required.

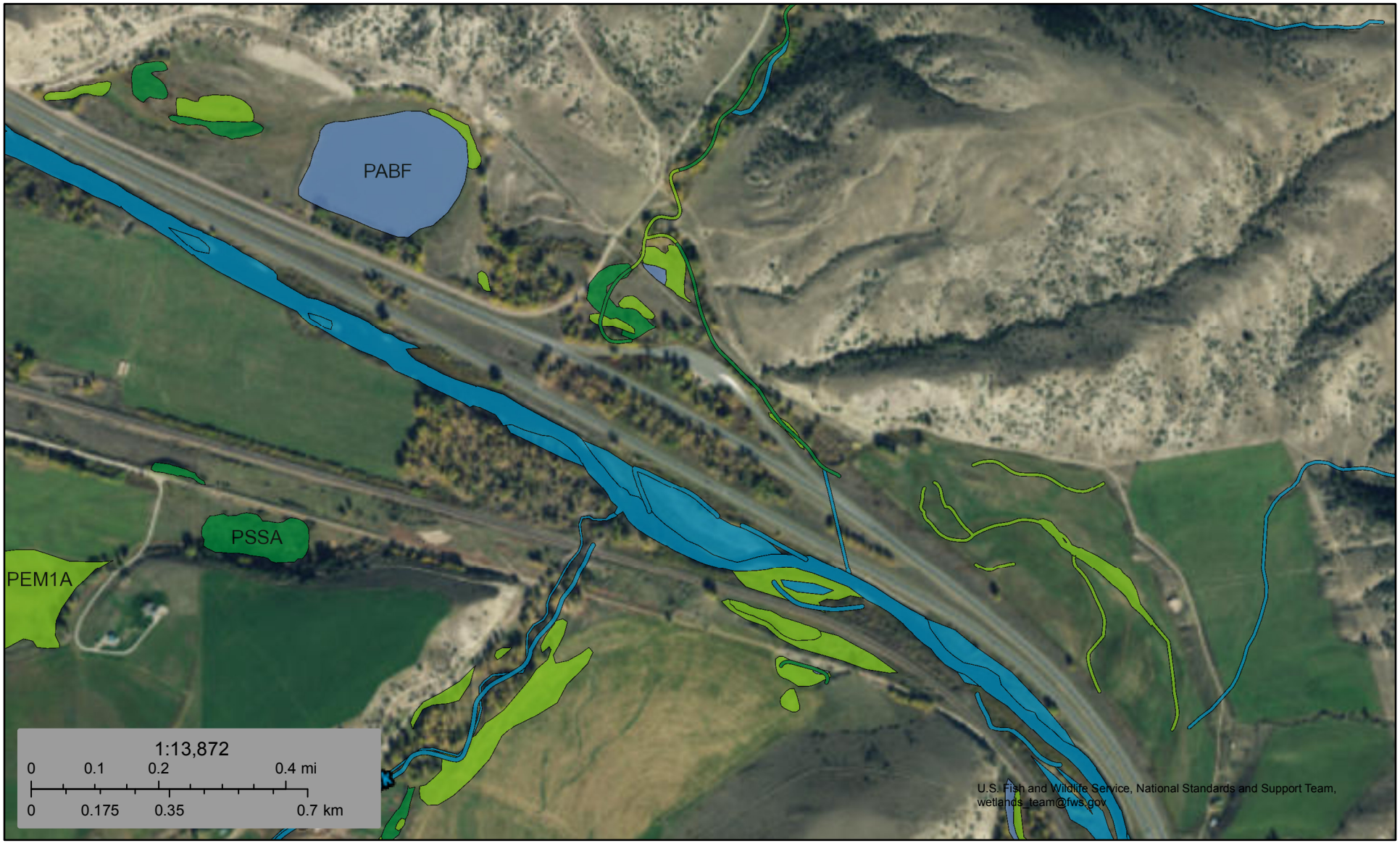
Observed Effects Information

- *Observed Effect* - Indications of pollution may be observed and documented (e.g., excess algal growth) which are a response to environmental conditions and potentially excessive pollutant loading. These are termed “observed effects.”
- *Associated Uses* - The uses that may be impaired due to the observed effect.

Appendix I: NWI Mapping

U.S. Fish and Wildlife Service
National Wetlands Inventory

NWI Westbound Gold Creek



May 10, 2017

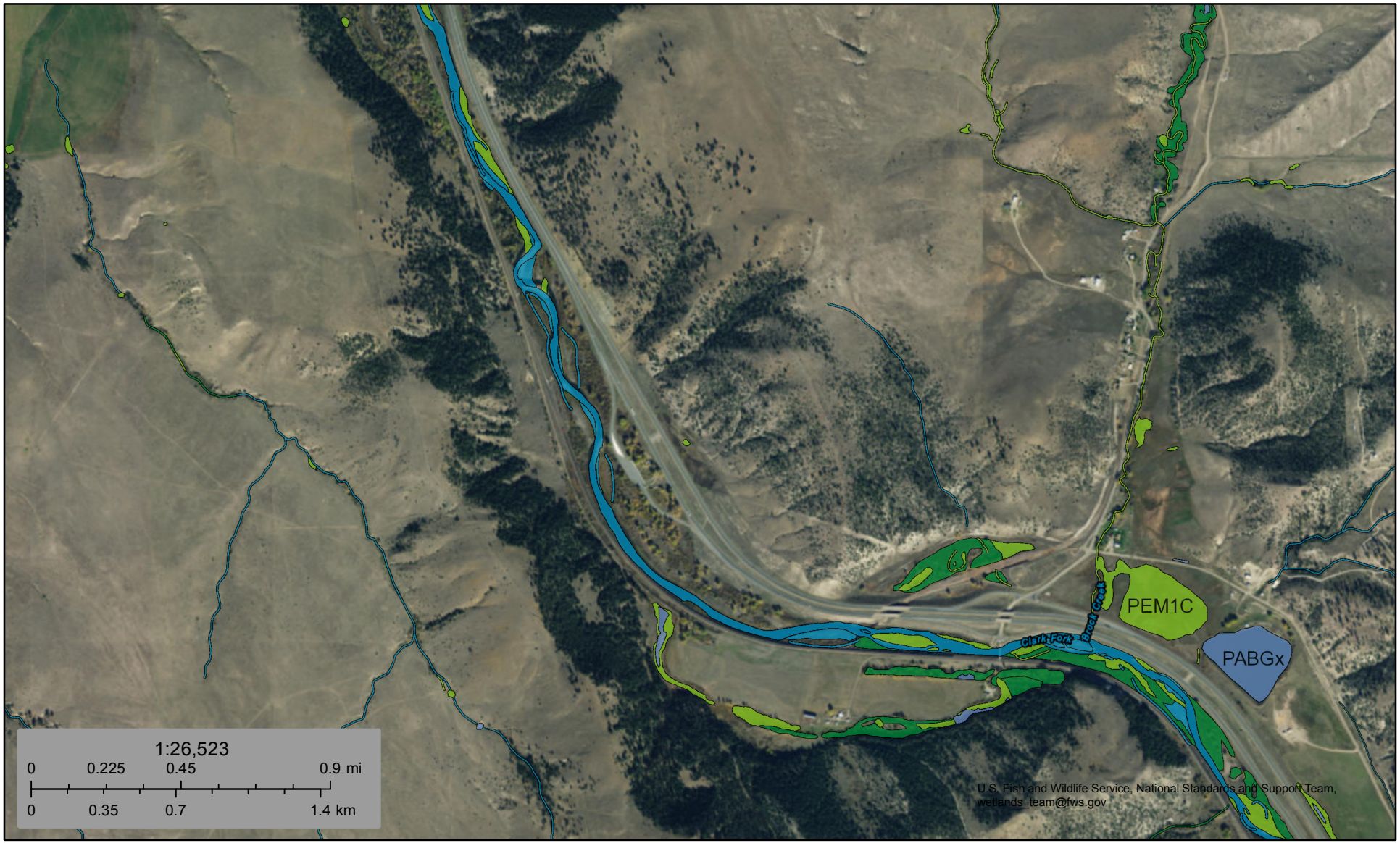
Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

U.S. Fish and Wildlife Service
National Wetlands Inventory

EB Rest Area



May 11, 2017

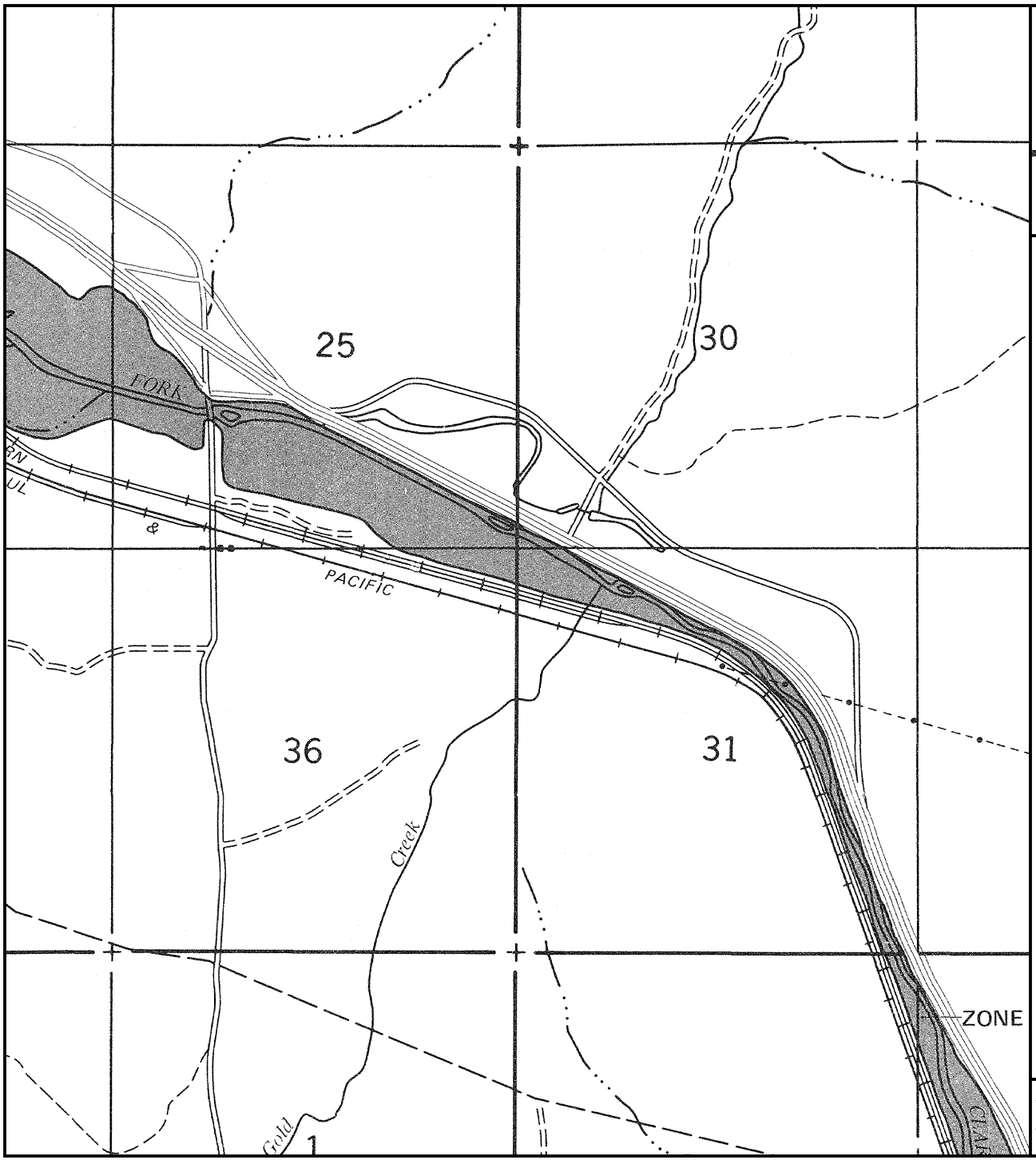
Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

Appendix J: FEMA Mapping



APPROXIMATE SCALE

2000 0 2000 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

POWELL COUNTY, MONTANA
(UNINCORPORATED AREAS)

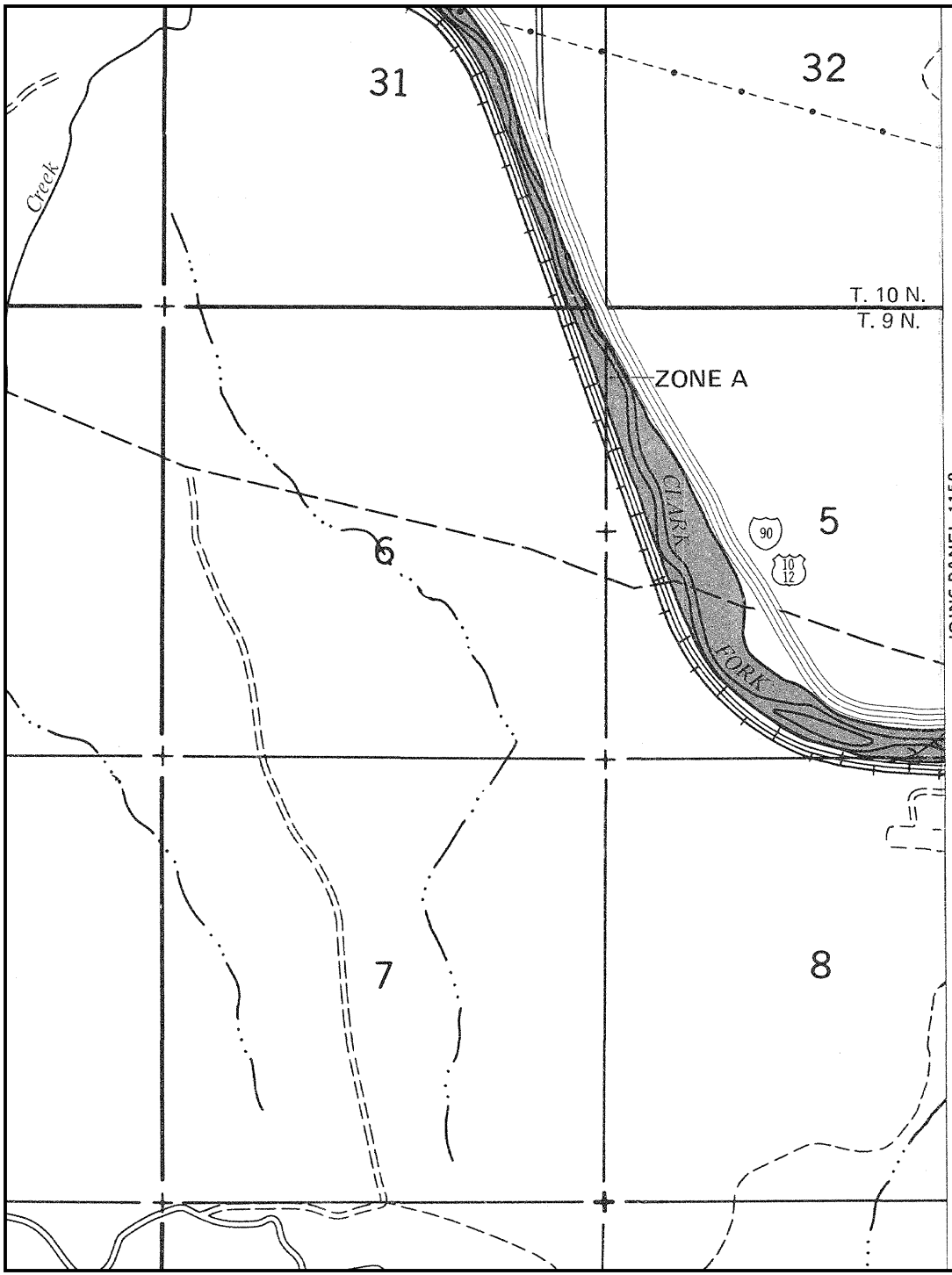
PANEL 1125 OF 1575
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
300059 1125 B

EFFECTIVE DATE:
APRIL 15, 1981

federal emergency management agency
federal insurance administration

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



APPROXIMATE SCALE

2000 0 2000 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

POWELL COUNTY, MONTANA

(UNINCORPORATED AREAS)

PANEL 1125 OF 1575

(SEE MAP INDEX FOR PANELS NOT PRINTED)

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EFFECTIVE DATE:
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federal emergency management agency
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Appendix K: Asbestos and Lead Paint Inspection Reports

ASBESTOS INSPECTION REPORT
FOR
MONTANA DEPARTMENT OF TRANSPORATION



WEST BOUND REST AREA



EAST BOUND REST AREA

GOLD CREEK REST AREA

DOWL Project #: 4638.11961.01

Prepared By:

ENVIRONMENTAL solutions
PO Box 7010, Bozeman, MT 59771-7010
PH: (406) 579-1441 FX: (406) 587-0193 Web: esmontana.com
HEALTH & SAFETY - RISK MANAGEMENT CONSULTANTS

Report Requested By:

DOWL
Sarah W. Nicolai, P.E.

DATE OF INSPECTIONS: 05/08/17 & 05/14/17

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Credentials

Authored By: _____

Sonia Rogers, IH

Reviewed By: _____

Scott Rogers, CIH, CHMM



Asbestos Certifications:

Name	MTA #	Inspector	Contractor / Supervisor	Project Designer	Management Planner
Scott Rogers, CIH CSP CHMM	2322	09/07/2017	09/06/2017	09/08/2017	09/07/2017
Sonia Rogers, IH	3150	09/07/2017	09/06/2017	09/08/2017	

INTRODUCTION

Sonia Rogers of Environmental Solutions LLC performed a comprehensive asbestos inspection on May 8, 2017 of the closed West and East Bound Gold Creek Rest Areas located off of I-90, Gold Creek, Montana. This evaluation was performed at the request of Sarah W. Nicolai, P.E., transportation Planning Manager for DOWL.

The intent of this report is to properly identify the presence of asbestos containing materials that may be impacted during a planned renovation and/or demolition project. This report and its recommendations are pursuant to the NESHAP requirements (40 CFR 61.145) and the Administrative Rules of Montana (17.74.354) as administered by the Montana Department of Environmental Quality, Asbestos Control Program.

The regulations require the building owner to have the facility inspected for the presence of asbestos containing material(s) (ACM) prior to the construction, renovation or demolition of the facility. The owner is required to provide information obtained from the inspection to those who may be impacted such as, but not limited to, contractors, sub-contractors and/or employees. ARM 17.74.354 requires that the inspection be conducted by a Montana Accredited Inspector.

INSPECTION PROCEDURES

The inspection was conducted by our accredited inspector, Sonia Rogers and consisted of a detailed visual survey of the structures. Following a brief review, the inspector entered the buildings with sampling equipment and began to assess the homogenous areas to be impacted by this project. Suspect ACBM was then grouped into homogenous materials and a sampling plan was developed.

Inspector determined that 8 homogeneous materials were present and collected 28 representative samples from these materials. Zero (0) of the 8 materials were found to contain asbestos quantities greater than 1%. Zero (0) materials were found to contain asbestos quantities of a trace or less than 1%. Zero (0) materials were assumed to contain quantities greater than 1%. See the Inspection Summary for a more detailed description and location of materials sampled.

Materials were collected wet to avoid dust generation and placed into Ziploc bags for transport. The materials were submitted to EMSL Laboratories, Raleigh, North Carolina. EMSL is an “accredited” laboratory under the National Voluntary Laboratory Accreditation Program (NVLAP), Laboratory Code #200671-0, which employs Polarized Light Microscopic (PLM) techniques with dispersion staining for identification of mineral forms of asbestos. The quantification of asbestos in the sample is intended to be an estimate only and the limit of detection for this method is approximately 1% by volume.

Bulk samples obtained during the inspection were assigned bulk sample numbers and entered on the sample summary / chain of custody forms. The samples were transported to the laboratory via Fed-Ex (Standard Overnight).

Sample locations for this survey were chosen in a random fashion, with emphasis placed on obtaining samples of each type of accessible, suspect material and minimizing damage to the material being sampled. Samples were collected by carefully removing small portions of the suspect material in a non-

invasive manner, when possible. If possible, samples from existing damaged areas or loose pieces of material were collected.

The intent of the inspection was to identify the suspect materials, assume that materials contain asbestos or collect samples of materials to determine if they are ACM and assess the friability of the materials. Materials that were assumed to contain asbestos or that were identified as containing greater than 1% asbestos were categorized as a regulated asbestos containing material (RACM), Category I Non-Friable ACM, Category I RACM or Category II Non-Friable ACM based on the type and the condition of the material.

Sample analysis results are included in Appendix B and Chain of Custody documents are included in Appendix C.

ENVIRONMENTAL SOLUTIONS INSPECTION SUMMARY

SAMPLE ID	SAMPLE DESCRIPTION	SAMPLE COLOR	APPROX SQ/FT	MATERIAL DESIGNATION	LAB RESULTS	MATERIAL LOCATIONS	RECOMMENDATIONS
05-08-17 Sampling							
01, 02, 03	Tar Paper	Black	N/A	N/A	None Detected	Interior Walls	N/A
04, 05, 06	Plaster	Gray	N/A	N/A	None Detected	Interior Walls – Pipe Chase	N/A
07, 08, 09, 10, 11	Concrete	Gray	N/A	N/A	None Detected	Floors & Foundation	N/A
12, 13, 14	4x4 Ceramic Tiles	White	N/A	N/A	None Detected	Interior Restroom Walls	N/A
15, 16, 17, 18, 19	Drywall / Mud / Tape	White	N/A	N/A	None Detected	Interior Restroom Ceilings	N/A
20, 21, 22	Tar Paper	Black	N/A	N/A	None Detected	Under Wood Siding	N/A
23, 24, 25	Tar Paper	Black	N/A	N/A	None Detected	Main Building - Under Shake Shingles	N/A
05-14-17 Sampling							
01, 02, 03	Tar Paper	Black	N/A	N/A	None Detected	Covered Picnic Roofs – Under Shake Shingles	N/A

Materials containing >1% Asbestos

Materials of Note – Containing Trace Amounts of Asbestos

DISCLAIMERS

This document and its contents incorporated herein, is proprietary information and as an instrument of professional services, is the property of Environmental Solutions LLC, and are not to be used, in part or in whole for any other project without the written authorization of Environmental Solutions LLC.

This asbestos assessment report was prepared based on information obtained during the survey, interpretation of the laboratory results of bulk samples of building materials collected during the survey. The conclusions of this report are professional opinions based solely upon visual site observations and interpretations of laboratory analysis and field data as described in our report.

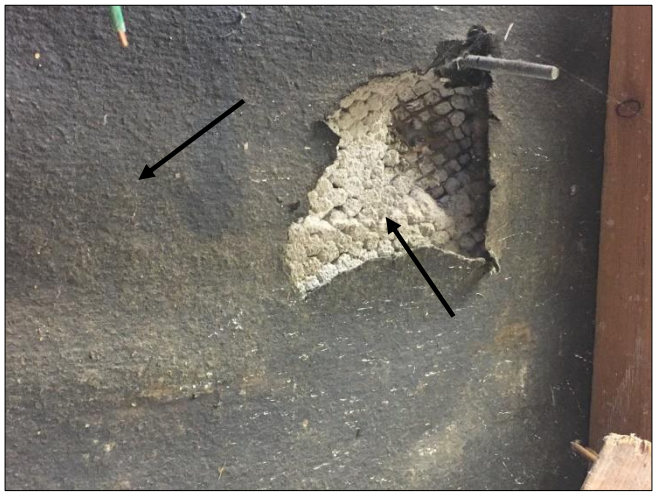
This report has been prepared to provide information concerning the various types and estimated quantities of asbestos-containing materials that will be impacted during the demolition project. While extreme effort was made to inspect every aspect of the buildings, it still includes only those materials that were visible and accessible at the time of our inspection.

Our opinions are intended exclusively for use by the State of Montana Department of Transportation & DOWL. The scope of services performed by Environmental Solutions LLC may not be appropriate to satisfy the needs of other users, and any use or re-use of this document, or the findings presented herein, is at the sole risk of the user.

The opinions presented herein apply to the site conditions existing at the time of our investigation. Therefore, our opinions and recommendations may not apply to future conditions that may exist at the site, which we have not had the opportunity to evaluate.

APPENDIX A

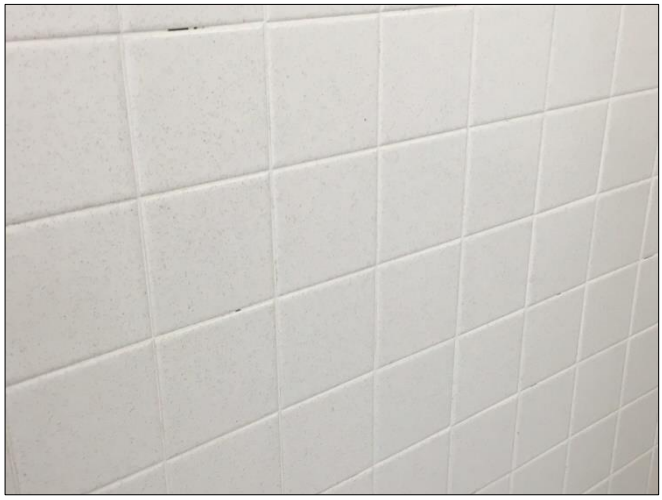
PHOTOGRAPHS OF SAMPLES



Pipe Chase Tar Paper & Plaster



Concrete



4x4 Ceramic Tiles



Drywall / Mud / Tape



Main Roof – Tar Paper

APPENDIX A

PHOTOGRAPHS OF FACILITIES



West Bound Rest Area



East Bound Rest Area



Mechanical Room



Pipe Chase



Restroom Interior



View of Covered Picnic Shelter

APPENDIX B

Sample Analysis Report by
EMSL Raleigh, NC Laboratory

EMSL Analytical, Inc.

2500 Gateway Centre Blvd., Suite 600 Morrisville, NC 27560

Tel/Fax: (919) 465-3900 / (919) 465-3950

http://www.EMSL.com / raleighlab@emsl.com

EMSL Order:	291703751
Customer ID:	ENSO62
Customer PO:	
Project ID:	

Attention:	Sonia Rogers	**Phone:**	(406) 579-1441
	Environmental Solutions, LLC	**Fax:**	
	PO Box 7010	**Received Date:**	05/10/2017 10:00 AM
	Bozeman, MT 59771	**Analysis Date:**	05/15/2017 - 05/16/2017
		Collected Date:	05/08/2017
Project:	17030 - Gold Creek Rest Area		

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
01 *291703751-0001*	Tar Paper	Black Fibrous Homogeneous	65% Cellulose	35% Non-fibrous (Other)	None Detected
02 *291703751-0002*	Tar Paper	Black Fibrous Homogeneous	65% Cellulose	35% Non-fibrous (Other)	None Detected
03 *291703751-0003*	Tar Paper	Brown/Black Fibrous Homogeneous	65% Cellulose	35% Non-fibrous (Other)	None Detected
04 *291703751-0004*	Plaster	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
05 *291703751-0005*	Plaster	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
06 *291703751-0006*	Plaster	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
07 *291703751-0007*	Concrete	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
08 *291703751-0008*	Concrete	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
09 *291703751-0009*	Concrete	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
10 *291703751-0010*	Concrete	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
11 *291703751-0011*	Concrete	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
12 *291703751-0012* *Insufficient amount of adhesive for analysis.*	4x4 Ceramic Tiles	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
13-Ceramic Tile *291703751-0013*	4x4 Ceramic Tiles	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
13-Adhesive *291703751-0013A*	4x4 Ceramic Tiles	Tan Fibrous Homogeneous	2% Cellulose	98% Non-fibrous (Other)	None Detected
14 *291703751-0014* *Insufficient amount of adhesive for analysis.*	4x4 Ceramic Tiles	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 05/16/2017 08:20:15

EMSL Analytical, Inc.
2500 Gateway Centre Blvd., Suite 600 Morrisville, NC 27560
Tel/Fax: (919) 465-3900 / (919) 465-3950
http://www.EMSL.com / raleighlab@emsl.com

EMSL Order: 291703751
Customer ID: ENSO62
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
15-Drywall *291703751-0015*	Drywall/Mud/Tape	Brown/Gray Fibrous Homogeneous	20% Cellulose 2% Glass	78% Non-fibrous (Other)	None Detected
15-Mud *291703751-0015A*	Drywall/Mud/Tape	White Fibrous Homogeneous	2% Cellulose <1% Wollastonite	98% Non-fibrous (Other)	None Detected
15-Tape *291703751-0015B*	Drywall/Mud/Tape	White Fibrous Homogeneous	75% Cellulose	25% Non-fibrous (Other)	None Detected
16-Drywall *291703751-0016*	Drywall/Mud/Tape	Brown/Gray Fibrous Homogeneous	20% Cellulose	80% Non-fibrous (Other)	None Detected
16-Mud *291703751-0016A*	Drywall/Mud/Tape	White Fibrous Homogeneous	2% Cellulose <1% Wollastonite	98% Non-fibrous (Other)	None Detected
16-Tape *291703751-0016B*	Drywall/Mud/Tape	White Fibrous Homogeneous	75% Cellulose	25% Non-fibrous (Other)	None Detected
17-Drywall *291703751-0017*	Drywall/Mud/Tape	Brown/Gray Fibrous Homogeneous	20% Cellulose	80% Non-fibrous (Other)	None Detected
17-Mud *291703751-0017A*	Drywall/Mud/Tape	White Fibrous Homogeneous	2% Cellulose <1% Wollastonite	98% Non-fibrous (Other)	None Detected
17-Tape *291703751-0017B*	Drywall/Mud/Tape	White Fibrous Homogeneous	75% Cellulose	25% Non-fibrous (Other)	None Detected
18-Drywall *291703751-0018*	Drywall/Mud/Tape	Brown/Gray Fibrous Homogeneous	10% Cellulose 2% Glass	88% Non-fibrous (Other)	None Detected
18-Mud *291703751-0018A*	Drywall/Mud/Tape	White Non-Fibrous Homogeneous	<1% Wollastonite	100% Non-fibrous (Other)	None Detected
18-Tape *291703751-0018B*	Drywall/Mud/Tape	White Fibrous Homogeneous	65% Cellulose	35% Non-fibrous (Other)	None Detected
19-Drywall *291703751-0019*	Drywall/Mud/Tape	Brown/Gray Fibrous Homogeneous	10% Cellulose 2% Glass	88% Non-fibrous (Other)	None Detected
19-Mud *291703751-0019A*	Drywall/Mud/Tape	White Non-Fibrous Homogeneous	<1% Wollastonite	100% Non-fibrous (Other)	None Detected
19-Tape *291703751-0019B*	Drywall/Mud/Tape	White Fibrous Homogeneous	65% Cellulose	35% Non-fibrous (Other)	None Detected
20 *291703751-0020*	Tar Paper	Black Fibrous Homogeneous	50% Cellulose 15% Synthetic	35% Non-fibrous (Other)	None Detected
21 *291703751-0021*	Tar Paper	Black Fibrous Homogeneous	50% Cellulose 15% Synthetic	35% Non-fibrous (Other)	None Detected
22 *291703751-0022*	Tar Paper	Brown/Black Fibrous Homogeneous	60% Cellulose 10% Synthetic	30% Non-fibrous (Other)	None Detected
23 *291703751-0023*	Tar Paper	Black Fibrous Homogeneous	50% Cellulose 15% Synthetic	35% Non-fibrous (Other)	None Detected

Initial report from: 05/16/2017 08:20:15

EMSL Analytical, Inc.
2500 Gateway Centre Blvd., Suite 600 Morrisville, NC 27560
Tel/Fax: (919) 465-3900 / (919) 465-3950
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EMSL Order:	291703751
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Customer PO:	
Project ID:	

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
24	Tar Paper	Black Fibrous	50% Cellulose 15% Synthetic	35% Non-fibrous (Other)	None Detected
291703751-0024		Homogeneous			
25	Tar Paper	Black Fibrous	60% Cellulose 10% Synthetic	30% Non-fibrous (Other)	None Detected
291703751-0025		Homogeneous			

Analyst(s)

Joshua Moorman (23)
Roxsee Stover (13)

Billy Barnes, Asbestos Lab Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%

Samples analyzed by EMSL Analytical, Inc. Morrisville, NC NVLAP Lab Code 200671-0, VA 3333 000278, WVA LT000296

Initial report from: 05/16/2017 08:20:15

EMSL Analytical, Inc.

2500 Gateway Centre Blvd., Suite 600 Morrisville, NC 27560
Tel/Fax: (919) 465-3900 / (919) 465-3950
http://www.EMSL.com / raleighlab@emsl.com

EMSL Order:	291703947
Customer ID:	ENSO62
Customer PO:	
Project ID:	

Attention:	Sonia Rogers	**Phone:**	(406) 579-1441
	Environmental Solutions, LLC	**Fax:**	
	PO Box 7010	**Received Date:**	05/17/2017 10:00 AM
	Bozeman, MT 59771	**Analysis Date:**	05/17/2017
		Collected Date:	05/15/2017
Project:	17030 - Gold Creek Rest Areas		

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
01 *291703947-0001*	Tar Paper	Black Fibrous Homogeneous	50% Cellulose 15% Synthetic	35% Non-fibrous (Other)	None Detected
02 *291703947-0002*	Tar Paper	Black Fibrous Homogeneous	50% Cellulose 15% Synthetic	35% Non-fibrous (Other)	None Detected
03 *291703947-0003*	Tar Paper	Brown/Black Fibrous Homogeneous	65% Cellulose	35% Non-fibrous (Other)	None Detected

Analyst(s)

Joshua Moorman (2)
Kelly Gallisdorfer (1)



Billy Barnes, Asbestos Lab Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%

Samples analyzed by EMSL Analytical, Inc. Morrisville, NC NVLAP Lab Code 200671-0, VA 3333 000278, WVA LT000296

Initial report from: 05/18/2017 07:12:13

APPENDIX C

CHAIN OF CUSTODY DOCUMENTS

OrderID: 291703751

EMSL Analytical, Inc.
2500 Gateway Centre Bouleva
isville, NC 27560
HONE: 919-465-3900
FAX: 919-465-3950

Asbestos Chain of Custody

Environmental Solutions, LLC
17030 - Gold Creek Rest Area
5/10/2017 10:0
PLM

TAT: 96 Hour
Bulk

Order ID: 291703751
No Samples: 25
Due: 05/16 10:00 AM
Fax:

Company Name : Environmental Solutions, LLC		**EMSL Customer ID:**	
Street: PO Box 7010		**City:** Bozeman	**State/Province:** MT
Zip/Postal Code: 59771	**Country:** US	**Telephone #:** 406-579-1441	**Fax #:**
Report To (Name): Sonia Rogers		**Please Provide Results:** ☐ Fax ☑ Email	
Email Address: environmentalsol@msn.com		**Purchase Order:**	
Project Name/Number: 17030-Gold Creek Rest Area		**EMSL Project ID** (*Internal Use Only*):	
U.S. State Samples Taken: MT		**CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt	

EMSL-Bill to: ☑ Same ☐ Different - If Bill to is Different note instructions in Comments**
Third Party Billing requires written authorization from third party

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hour | ☐ 6 Hour | ☐ 24 Hour | ☐ 48 Hour | ☐ 72 Hour | ☑ 96 Hour | ☐ 1 Week | ☐ 2 Week

*For TEM Air 3 hr through 6 hr, please call ahead to schedule.*There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide

PCM - Air ☐ Check if samples are from NY
☐ NIOSH 7400
☐ w/ OSHA 8hr. TWA

PLM - Bulk (reporting limit)
☑ PLM EPA 600/R-93/116 (<1%)
☐ PLM EPA NOB (<1%)
Point Count
☐ 400 (<0.25%) ☐ 1000 (<0.1%)
Point Count w/Gravimetric
☐ 400 (<0.25%) ☐ 1000 (<0.1%)
☐ NYS 198.1 (friable in NY)
☐ NYS 198.6 NOB (non-friable-NY)
☐ NYS 198.8 SOF-V
☐ NIOSH 9002 (<1%)

TEM – Air ☐ 4-4.5hr TAT (AHERA only)
☐ AHERA 40 CFR, Part 763
☐ NIOSH 7402
☐ EPA Level II
☐ ISO 10312

TEM - Bulk
☐ TEM EPA NOB
☐ NYS NOB 198.4 (non-friable-NY)
☐ Chatfield SOP
☐ TEM Mass Analysis-EPA 600 sec. 2.5

TEM – Water: EPA 100.2
Fibers >10µm ☐ Waste ☐ Drinking
All Fiber Sizes ☐ Waste ☐ Drinking

TEM- Dust
☐ Microvac - ASTM D 5755
☐ Wipe - ASTM D6480
☐ Carpet Sonication (EPA 600/J-93/167)

Soil/Rock/Vermiculite
☐ PLM EPA 600/R-93/116 with milling prep (<1%)
☐ PLM EPA 600/R-93/116 with milling prep (<0.25%)
☐ TEM EPA 600/R-93/116 with milling prep (<0.1%)
☐ TEM Qualitative via Filtration Prep
☐ TEM Qualitative via Drop Mount Prep
☐ Cincinnati Method EPA 600/R-04/004 – PLM/TEM (BC only)

Other:
☐

☐ Check For Positive Stop – Clearly Identify Homogenous Group

Filter Pore Size (Air Samples): ☐ 0.8µm ☐ 0.45µm

Samplers Name: Sonia Rogers

Samplers Signature:

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
01-02-03	Tar Paper	3	5-8-17
04-05-06	Plaster	3	
07-08-09-10-11	Concrete	5	
12-13-14	4x4 Ceramic Tiles	3	
*15-16-17-18-19-	Drywall / Mud / Tape	5	

Client Sample # (s): **Total # of Samples:** 25

Relinquished (Client): Sonia Rogers **Date:** 5-9-17 **Time:** 9:00am

Received (Lab): **Date:** 5-10-17 **Time:**

Comments/Special Instructions:

ALL DRYWALL / MUD / TAPE SAMPLES:
Please analyze each layer by PLM EPA 600/R-93/116 (<1%) Method
For Any Layer with <2% Asbestos content, including trace amounts, please do additional 400 (<0.25%) Point Count Analysis. NO COMPOSITES!

Page 1 of ____ pa

Controlled Document – Asbestos COC – R10 – 05/09/2016

EFE 7952 8297 2524

OVER

EMSL Analytical, Inc.
2500 Gateway Centre Bouleva

Asbestos Chain of Custody

Environmental Solutions, LLC
17030 - Gold Creek Rest Area
5/10/2017 10.0
PLM

TAT: 96 Hour
Bulk

Order ID: 291703751
No Samples: 25
Due: 05/16 10:00 AM
Fax:

ille, NC 27560
919-465-3900
919-465-3950

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
20-21-22	Tar Paper	3	5-8-17
23-24-25	Tar Paper	3	"

***Comments/Special Instructions:**

Page _____ of _____ pages

OrderID: 291703947

EMSL Analytical, Inc.
2500 Gateway Centre Bouleva

Environmental Solutions, LLC
17030 - Gold Creek Rest Areas
5/17/2017 10:0
PLM
TAT: 48 Hour
Bulk

Order ID: 291703947
No Samples: 3
Due: 05/19 10:00 AM
Fax:

orrisville, NC 27560
PHONE: 919-465-3900
FAX: 919-465-3950

Company Name: Environmental Solutions, LLC		**EMSL Customer ID:**	
Street: PO Box 7010		**City:** Bozeman	**State/Province:** MT
Zip/Postal Code: 59771	**Country:** US	**Telephone #:** 406-579-1441	**Fax #:**
Report To (Name): Sonia Rogers		**Please Provide Results:** ☐ Fax ☑ Email	
Email Address: environmentalsol@msn.com		**Purchase Order:**	
Project Name/Number: 17030 - Gold Creek Rest Areas		**EMSL Project ID** (*Internal Use Only*):	
U.S. State Samples Taken: MT		**CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt	

EMSL-Bill to: ☑ Same ☐ Different - If Bill to is Different note instructions in Comments**
Third Party Billing requires written authorization from third party

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hour ☐ 6 Hour ☐ 24 Hour ☑ 48 Hour ☐ 72 Hour ☐ 96 Hour ☐ 1 Week ☐ 2 Week

*For TEM Air 3 hr through 6 hr, please call ahead to schedule. There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.

PCM - Air ☐ Check if samples are from NY
☐ NIOSH 7400
☐ w/ OSHA 8hr. TWA

PLM - Bulk (reporting limit)
☑ PLM EPA 600/R-93/116 (<1%)
☐ PLM EPA NOB (<1%)
Point Count
☐ 400 (<0.25%) ☐ 1000 (<0.1%)
Point Count w/Gravimetric
☐ 400 (<0.25%) ☐ 1000 (<0.1%)
☐ NYS 198.1 (friable in NY)
☐ NYS 198.6 NOB (non-friable-NY)
☐ NYS 198.8 SOF-V
☐ NIOSH 9002 (<1%)

TEM – Air ☐ **4-4.5hr TAT (AHERA only)**
☐ AHERA 40 CFR, Part 763
☐ NIOSH 7402
☐ EPA Level II
☐ ISO 10312

TEM - Bulk
☐ TEM EPA NOB
☐ NYS NOB 198.4 (non-friable-NY)
☐ Chatfield SOP
☐ TEM Mass Analysis-EPA 600 sec. 2.5

TEM – Water: EPA 100.2
Fibers >10µm ☐ Waste ☐ Drinking
All Fiber Sizes ☐ Waste ☐ Drinking

TEM- Dust
☐ Microvac - ASTM D 5755
☐ Wipe - ASTM D6480
☐ Carpet Sonication (EPA 600/J-93/167)

Soil/Rock/Vermiculite
☐ PLM EPA 600/R-93/116 with milling prep (<1%)
☐ PLM EPA 600/R-93/116 with milling prep (<0.25%)
☐ TEM EPA 600/R-93/116 with milling prep (<0.1%)
☐ TEM Qualitative via Filtration Prep
☐ TEM Qualitative via Drop Mount Prep
☐ Cincinnati Method EPA 600/R-04/004 – PLM/TEM (BC only)

Other:
☐

☐ **Check For Positive Stop – Clearly Identify Homogenous Group**

Filter Pore Size (Air Samples): ☐ 0.8µm ☐ 0.45µm

Samplers Name:

Samplers Signature:

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
01-02-03	Tar Paper	3	5-15-17

Client Sample # (s): **Total # of Samples:** 3

Relinquished (Client): Sonia Rogers **Date:** 5-16-17 **Time:** 1:00pm

Received (Lab): SET **Date:** 5-17-17 **Time:** 10am

Comments/Special Instructions:
FEE 7952 8297 2557

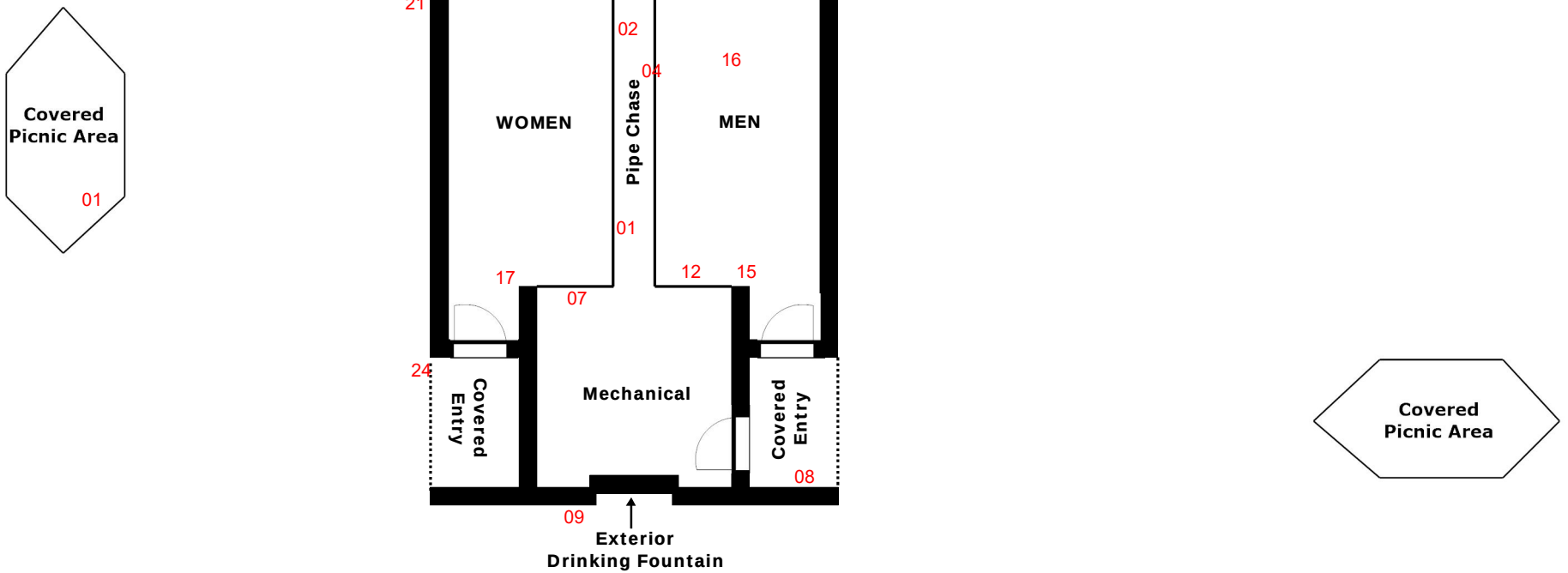
Page 1 of _____ pages

Controlled Document – Asbestos COC – R10 – 05/09/2016

APPENDIX D

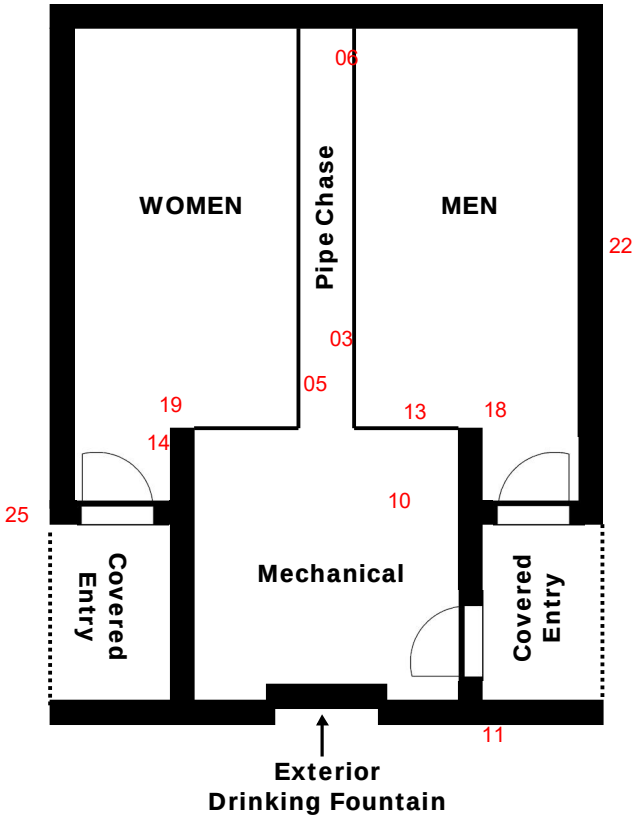
FLOOR PLANS

Rest Area Layouts & Sample Locations



WEST BOUND REST AREA

Gold Creek - Montana



03
Covered Picnic Area

03
Covered Picnic Area

EAST BOUND REST AREA

Gold Creek - Montana

Information Shed

APPENDIX E

ABBREVIATIONS

A/C	asbestos/cement
ACM	asbestos-containing material
AHERA	Asbestos Hazard Emergency Response Act of 1986
ANSI	American National Standards Institute
ASTM	American Society for Testing and Materials
BID	background information document
CAA	Clean Air Act
CPSC	Consumer Products Safety Commission
DOT	Department of Transportation
EPA	Environmental Protection Agency
ID	identification
LEV	local exhaust ventilation
NADC	National Association of Demolition Contractors
NARS	National Asbestos Registry System
NESHAP	National Emission Standards for Hazardous Air Pollutants
NIOSH	National Institute for Occupational Safety and Health
OAQPS	Office of Air Quality Planning and Standards
OSHA	Occupational Safety and Health Administration
OSW	Office of Solid Waste
PEL	permissible exposure limit
PLM	polarized light microscopy
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act of 1986
TEM	transmission electron microscopy
TSCA	Toxic Substances Control Act

LEAD PAINT INSPECTION
FOR
MONTANA DEPARTMENT OF TRANSPORATION



WEST BOUND REST AREA



EAST BOUND REST AREA

GOLD CREEK REST AREA

DOWL Project #: 4638.11961.01

Report Requested By:

DOWL
Sarah W. Nicolai, P.E.

DATE OF INSPECTION: 05/08/17

Prepared By:

ENVIRONMENTAL solutions
PO Box 7010, Bozeman, MT 59771-7010
PH: (406) 579-1441 FX: (406) 587-0193 Web: esmontana.com
HEALTH & SAFETY - RISK MANAGEMENT CONSULTANTS

Table of Contents

Introduction 3

Inspection Procedures 3

Data Summary 3

Disclaimer 4

Appendix A – XRF Data Report 5

Appendix B – XRF Data Report 9

Credentials

Authored By: _____

Sonia Rogers, IH

Reviewed By: _____

Scott Rogers, CIH, CSP, CHMM



Lead Certifications:

Name	EPA Lead Inspector	EPA Risk Assessor
Scott Rogers, CIH CSP CHMM		
Sonia Rogers, IH		EPA Region VIII, #MT-R-15691-1

INTRODUCTION

Environmental Solutions LLC performed a cursory visual and XRF evaluation of painted and glazed surfaces for lead content on May 8, 2017, of the West and East Bound Gold Creek Rest Areas located off of I-90, Gold Creek, Montana. This evaluation was performed at the request of Sarah W. Nicolai, P.E., transportation Planning Manager for DOWL.

The intent of this report is to provide a cursory guide and general determination of the presence of lead containing surfaces identified above at the facilities. Not all surfaces or materials were tested. This report and its recommendations are based upon the evaluation of surfaces of similar type and color with an X-ray fluorescence analyzer (XRF).

INSPECTION PROCEDURES

The lead inspection was performed by Environmental Solutions EPA Region VIII, Certified Lead Risk Assessor and reviewed by the Certified Industrial Hygienist (CIH). The inspection consisted of a detailed visual survey of the structures and evaluation of painted and glazed surfaces by using an X-Ray Fluorescence (XRF) spectrum analyzer for surface evaluation of lead paint concentrations. The XRF was standardized prior to evaluations and as manufacture's recommendation and confirmed using a standardized paint sample at 1.04 mg/cm² during the sampling process.

The Spectrum analyzer was used on painted and glazed surfaces throughout the areas. Samples or surfaces where analytical results by XRF are reproducible and above the 1.0 mg/cm² for lead are identified as positive for lead concentrations per industry standards. OSHA requirements, EPA, and HUD requirements for lead safe work practices are triggered at this level.

Data Summary

Lead inspection results for the West and East Restroom Facilities indicate multiple surfaces meets or exceed the HUD/EPA recommendation for lead surface designation. All location specific results are attached in Appendix A. Floor plans with identified locations are attached in Appendix B.

The list below is meant as a highlight of materials that have tested positive for lead. It does not include every positive surface or location. Please refer to Appendix A for a complete list of positive surfaces and locations.

- Interior White Painted Ceilings
- Interior White 4x4 Ceramic Tiles on Walls

*****Color represents the surface color at the time of evaluation. Multiple paint layers are expected.

Sample analysis results are included in Appendix A.

Impact to lead based paint on the ceiling and 4x4 ceramic tiles on the wall surfaces of the buildings must meet Occupational Health and Safety (OSHA) Standards as well as environmental protection requirements (EPA). Worker protection regulations require levels of exposure be maintained below 30ug/m³ without respiratory protection and program requirements. This is best accomplished by preventing dust generation from the disturbance of the lead containing paint. No abrasion, drilling, grinding, or other activity without proper engineering controls and personal protective equipment is allowed by regulation. Compliance with 29 CFR 1926.62 is required for worker protection.

Environmental regulations require the compliance with the Environmental Protection Agency's Renovation, Repair and Painting standard. EPA's Lead Renovation, Repair and Painting Rule (RRP Rule) requires that firms performing renovation, repair, and painting projects that disturb lead-based paint in homes, child care facilities and pre-schools built before 1978 have their firm certified by EPA (or an EPA authorized state), use certified renovators who are trained by EPA-approved training providers and follow lead-safe work practices. Although the Rest Area facilities are NOT primarily a child occupied facility the protection of the public is a minimum requirement and the RRP rule is to be used for lead safe work practices in controlling the lead dust hazard.

DISCLAIMERS

This document and its contents incorporated herein, are proprietary information and as an instrument of professional services, is the property of Environmental Solutions LLC, and are not to be used, in part or in whole for any other project without the written authorization of Environmental Solutions LLC.

This lead assessment report was prepared based on information obtained during the survey and interpretation of the XRF results of samples. The conclusions of this report are professional opinions based solely upon visual site observations and interpretations of XRF analysis and field data as described in our report.

This report has been prepared to provide information concerning the various types of lead-containing materials that may be present at these sites. Our opinions are intended exclusively for use by Montana Department of Transportation and DOWL. The scope of services performed by Environmental Solutions LLC may not be appropriate to satisfy the needs of other users, and any use or re-use of this document, or the findings presented herein, is at the sole risk of the user. Use of this report for the determination of lead containing materials for worker protection is at the sole risk of the user.

APPENDIX A

XRF DATA REPORT

Environmental Solutions LLC
PO Box 7010
Bozeman, MT 59771

Index	Time	Site	Location	Room Type	Side-Area	Color	Component	Substrate	Condition	Results	PbC	Units
1	2017-05-08 10:57	Gold Creek Rest Area	West	Calibration		White			CAL	Negative	< LOD : 0.03	mg / cm ^2
2	**2017-05-08 10:57**	**Gold Creek Rest Area**	**West**	**Calibration**		**Red**			**CAL**	**Positive**	**1.10 ± 0.10**	**mg / cm ^2**
3	2017-05-08 10:59	Gold Creek Rest Area	West	Exterior	A	Green	Wall Siding	Wood	Poor	Negative	< LOD : 0.06	mg / cm ^2
4	2017-05-08 10:59	Gold Creek Rest Area	West	Exterior	A	Green	Wall Siding	Wood	Poor	Negative	< LOD : 0.20	mg / cm ^2
5	2017-05-08 11:00	Gold Creek Rest Area	West	Exterior	B	Green	Wall Siding	Wood	Poor	Negative	< LOD : 0.04	mg / cm ^2
6	2017-05-08 11:00	Gold Creek Rest Area	West	Exterior	B	Green	Wall Siding	Wood	Poor	Negative	< LOD : 0.03	mg / cm ^2
7	2017-05-08 11:00	Gold Creek Rest Area	West	Exterior	C	Green	Wall Siding	Wood	Poor	Negative	< LOD : 0.03	mg / cm ^2
8	2017-05-08 11:01	Gold Creek Rest Area	West	Exterior	D	Green	Wall Siding	Wood	Poor	Negative	< LOD : 0.10	mg / cm ^2
9	2017-05-08 11:02	Gold Creek Rest Area	West	Exterior	B	White	Exterior Fascia	Wood	Poor	Negative	< LOD : 0.09	mg / cm ^2
10	2017-05-08 11:02	Gold Creek Rest Area	West	Exterior	B	White	Exterior Fascia	Wood	Poor	Negative	< LOD : 0.11	mg / cm ^2
11	2017-05-08 11:02	Gold Creek Rest Area	West	Exterior	A	White	Exterior Fascia	Wood	Poor	Negative	< LOD : 0.03	mg / cm ^2
12	2017-05-08 11:03	Gold Creek Rest Area	West	Exterior	A	White	Exterior Fascia	Wood	Poor	Negative	< LOD : 0.15	mg / cm ^2
13	2017-05-08 11:03	Gold Creek Rest Area	West	Exterior	C	White	Exterior Fascia	Wood	Poor	Negative	< LOD : 0.13	mg / cm ^2
14	2017-05-08 11:03	Gold Creek Rest Area	West	Exterior	C	White	Exterior Soffit	Wood	Poor	Negative	< LOD : 0.06	mg / cm ^2
15	2017-05-08 11:03	Gold Creek Rest Area	West	Exterior	D	White	Exterior Fascia	Wood	Poor	Negative	< LOD : 0.13	mg / cm ^2
16	2017-05-08 11:04	Gold Creek Rest Area	West	Exterior	A	White	Door	Metal	Fair	Negative	< LOD : 0.03	mg / cm ^2
17	2017-05-08 11:05	Gold Creek Rest Area	West	Exterior	A	White	Door	Metal	Fair	Negative	< LOD : 0.03	mg / cm ^2
18	2017-05-08 11:05	Gold Creek Rest Area	West	Exterior	A	White	Door Trim	Metal	Fair	Negative	< LOD : 0.23	mg / cm ^2
19	2017-05-08 11:05	Gold Creek Rest Area	West	Exterior	A	White	Door Trim	Metal	Fair	Negative	< LOD : 0.03	mg / cm ^2
20	**2017-05-08 11:06**	**Gold Creek Rest Area**	**West**	**Exterior**	**A**	**White**	**Tile**	**Ceramic tile**	**Good**	**Positive**	**< LOD : 6.00**	**mg / cm ^2**
21	**2017-05-08 11:06**	**Gold Creek Rest Area**	**West**	**Exterior**	**B**	**White**	**Tile**	**Ceramic tile**	**Good**	**Positive**	**< LOD : 6.30**	**mg / cm ^2**
22	**2017-05-08 11:06**	**Gold Creek Rest Area**	**West**	**Exterior**	**C**	**White**	**Tile**	**Ceramic tile**	**Good**	**Positive**	**< LOD : 7.05**	**mg / cm ^2**
23	**2017-05-08 11:06**	**Gold Creek Rest Area**	**West**	**Exterior**	**D**	**White**	**Tile**	**Ceramic tile**	**Good**	**Positive**	**< LOD : 7.50**	**mg / cm ^2**
24	2017-05-08 11:07	Gold Creek Rest Area	West	Exterior	A	Brown	Tile	Ceramic tile	Good	Null	1.30 ± 0.60	mg / cm ^2
25	2017-05-08 11:07	Gold Creek Rest Area	West	Exterior	A	Brown	Tile	Ceramic tile	Good	Null	< LOD : 0.04	mg / cm ^2
26	2017-05-08 11:07	Gold Creek Rest Area	West	Exterior	A	Brown	Tile	Ceramic tile	Good	Negative	< LOD : 0.07	mg / cm ^2
27	2017-05-08 11:08	Gold Creek Rest Area	West	Interior	Floor	White	Tile	Ceramic tile	Good	Negative	< LOD : 0.03	mg / cm ^2
28	2017-05-08 11:08	Gold Creek Rest Area	West	Interior	Floor	White	Tile	Ceramic tile	Good	Negative	< LOD : 0.03	mg / cm ^2
29	2017-05-08 11:09	Gold Creek Rest Area	West	Interior	Stalls	White	Tile	Metal	Good	Negative	< LOD : 0.03	mg / cm ^2
30	2017-05-08 11:09	Gold Creek Rest Area	West	Interior	Stalls	White	Tile	Metal	Good	Negative	< LOD : 0.03	mg / cm ^2
31	2017-05-08 11:09	Gold Creek Rest Area	West	Interior	Stalls	White	Tile	Metal	Good	Negative	< LOD : 0.03	mg / cm ^2
32	**2017-05-08 11:10**	**Gold Creek Rest Area**	**West**	**Interior**	**Ceiling**	**White**	**Ceiling**	**Drywall**	**Fair**	**Positive**	**2.20 ± 0.80**	**mg / cm ^2**
33	**2017-05-08 11:11**	**Gold Creek Rest Area**	**West**	**Interior**	**Ceiling**	**White**	**Ceiling**	**Drywall**	**Fair**	**Positive**	**2.20 ± 0.80**	**mg / cm ^2**
34	**2017-05-08 11:11**	**Gold Creek Rest Area**	**West**	**Interior**	**Ceiling**	**White**	**Ceiling**	**Drywall**	**Fair**	**Positive**	**1.80 ± 0.70**	**mg / cm ^2**
35	**2017-05-08 11:11**	**Gold Creek Rest Area**	**West**	**Interior**	**Ceiling**	**White**	**Ceiling**	**Drywall**	**Fair**	**Positive**	**1.90 ± 0.70**	**mg / cm ^2**
36	**2017-05-08 11:11**	**Gold Creek Rest Area**	**West**	**Interior**	**Ceiling**	**White**	**Ceiling**	**Drywall**	**Fair**	**Positive**	**< LOD : 12.30**	**mg / cm ^2**
37	**2017-05-08 11:12**	**Gold Creek Rest Area**	**West**	**Interior**	**B**	**White**	**Tile**	**Ceramic tile**	**Good**	**Positive**	**< LOD : 11.85**	**mg / cm ^2**

Environmental Solutions LLC
PO Box 7010
Bozeman, MT 59771

Index	Time	Site	Location	Room Type	Side-Area	Color	Component	Substrate	Condition	Results	PbC	Units
38	2017-05-08 11:12	Gold Creek Rest Area	West	Interior	C	White	Tile	Ceramic tile	Good	Positive	< LOD : 7.95	mg / cm ^2
39	2017-05-08 11:13	Gold Creek Rest Area	West	Exterior	A	Brown	Tile	Ceramic tile	Good	Negative	< LOD : 0.03	mg / cm ^2
40	2017-05-08 11:13	Gold Creek Rest Area	West	Exterior	A	Brown	Tile	Ceramic tile	Good	Negative	< LOD : 0.03	mg / cm ^2
41	2017-05-08 11:14	Gold Creek Rest Area	West	Exterior	A	White	Exterior Soffit	Wood	Poor	Negative	< LOD : 0.03	mg / cm ^2
42	2017-05-08 11:14	Gold Creek Rest Area	West	Exterior	B	White	Exterior Soffit	Wood	Poor	Negative	< LOD : 0.03	mg / cm ^2
43	2017-05-08 11:15	Gold Creek Rest Area	West	Exterior	C	White	Exterior Soffit	Wood	Poor	Negative	< LOD : 0.04	mg / cm ^2
44	2017-05-08 11:15	Gold Creek Rest Area	West	Exterior	D	White	Exterior Soffit	Wood	Poor	Negative	< LOD : 0.05	mg / cm ^2
45	2017-05-08 11:15	Gold Creek Rest Area	West	Exterior	A	Brown	Picnic Trim	Wood	Poor	Negative	< LOD : 0.16	mg / cm ^2
46	2017-05-08 11:15	Gold Creek Rest Area	West	Exterior	B	Brown	Picnic Trim	Wood	Poor	Negative	< LOD : 0.16	mg / cm ^2
47	2017-05-08 11:16	Gold Creek Rest Area	West	Exterior	C	Brown	Picnic Trim	Wood	Poor	Negative	< LOD : 0.34	mg / cm ^2
48	2017-05-08 11:16	Gold Creek Rest Area	West	Exterior	D	Green	Picning Siding	Wood	Poor	Negative	< LOD : 0.04	mg / cm ^2
49	2017-05-08 11:16	Gold Creek Rest Area	West	Exterior	A	Green	Picnic Siding	Wood	Poor	Negative	< LOD : 0.03	mg / cm ^2
50	2017-05-08 11:19	Gold Creek Rest Area	West	Calibration		White			CAL	Negative	< LOD : 0.03	mg / cm ^2
51	2017-05-08 11:19	Gold Creek Rest Area	West	Calibration		Red			CAL	Positive	1.00 ± 0.10	mg / cm ^2
52	2017-05-08 11:38	Gold Creek Rest Area	East	Exterior	A	Green	Exterior Siding	Wood	Poor	Negative	< LOD : 0.06	mg / cm ^2
53	2017-05-08 11:38	Gold Creek Rest Area	East	Exterior	A	Green	Exterior Siding	Wood	Poor	Negative	< LOD : 0.03	mg / cm ^2
54	2017-05-08 11:39	Gold Creek Rest Area	East	Exterior	B	Green	Exterior Siding	Wood	Poor	Negative	< LOD : 0.05	mg / cm ^2
55	2017-05-08 11:39	Gold Creek Rest Area	East	Exterior	C	Green	Exterior Siding	Wood	Poor	Negative	< LOD : 0.03	mg / cm ^2
56	2017-05-08 11:39	Gold Creek Rest Area	East	Exterior	D	Green	Exterior Siding	Wood	Poor	Negative	< LOD : 0.25	mg / cm ^2
57	2017-05-08 11:40	Gold Creek Rest Area	East	Exterior	A	White	Exterior Soffit	Wood	Poor	Negative	< LOD : 0.25	mg / cm ^2
58	2017-05-08 11:40	Gold Creek Rest Area	East	Exterior	B	White	Exterior Soffit	Wood	Poor	Negative	< LOD : 0.04	mg / cm ^2
59	2017-05-08 11:41	Gold Creek Rest Area	East	Exterior	C	White	Exterior Soffit	Wood	Poor	Negative	< LOD : 0.13	mg / cm ^2
60	2017-05-08 11:41	Gold Creek Rest Area	East	Exterior	D	White	Exterior Soffit	Wood	Poor	Negative	< LOD : 0.20	mg / cm ^2
61	2017-05-08 11:41	Gold Creek Rest Area	East	Exterior	A	White	Door	Metal	Fair	Negative	< LOD : 0.03	mg / cm ^2
62	2017-05-08 11:41	Gold Creek Rest Area	East	Exterior	A	White	Door Trim	Metal	Fair	Negative	< LOD : 0.06	mg / cm ^2
63	2017-05-08 11:42	Gold Creek Rest Area	East	Exterior	A	White	Door	Metal	Fair	Negative	< LOD : 0.09	mg / cm ^2
64	2017-05-08 11:42	Gold Creek Rest Area	East	Exterior	A	White	Door Trim	Metal	Fair	Negative	< LOD : 0.08	mg / cm ^2
65	2017-05-08 11:42	Gold Creek Rest Area	East	Interior	B	White	Tile	Ceramic tile	Good	Positive	< LOD : 9.60	mg / cm ^2
66	2017-05-08 11:42	Gold Creek Rest Area	East	Interior	C	White	Tile	Ceramic tile	Good	Positive	< LOD : 10.80	mg / cm ^2
67	2017-05-08 11:43	Gold Creek Rest Area	East	Interior	B	White	Tile	Ceramic tile	Good	Positive	< LOD : 8.40	mg / cm ^2
68	2017-05-08 11:43	Gold Creek Rest Area	East	Exterior	A	Brown	Tile	Ceramic tile	Good	Negative	< LOD : 0.03	mg / cm ^2
69	2017-05-08 11:44	Gold Creek Rest Area	East	Exterior	A	Brown	Tile	Ceramic tile	Good	Negative	< LOD : 0.03	mg / cm ^2
70	2017-05-08 11:45	Gold Creek Rest Area	East	Interior	Ceiling	White	Ceiling	Drywall	Fair	Positive	1.80 ± 0.70	mg / cm ^2
71	2017-05-08 11:46	Gold Creek Rest Area	East	Interior	Ceiling	White	Ceiling	Drywall	Fair	Positive	1.60 ± 0.50	mg / cm ^2
72	2017-05-08 11:46	Gold Creek Rest Area	East	Interior	Ceiling	White	Ceiling	Drywall	Fair	Positive	1.80 ± 0.70	mg / cm ^2
73	2017-05-08 11:47	Gold Creek Rest Area	East	Interior	A	Gray	Door	Metal	Fair	Negative	< LOD : 0.05	mg / cm ^2
74	2017-05-08 11:47	Gold Creek Rest Area	East	Interior	A	Gray	Door	Metal	Fair	Negative	< LOD : 0.03	mg / cm ^2

Environmental Solutions LLC
PO Box 7010
Bozeman, MT 59771

Index	Time	Site	Location	Room Type	Side-Area	Color	Component	Substrate	Condition	Results	PbC	Units
75	2017-05-08 11:48	Gold Creek Rest Area	East	Calibration		White			CAL	Negative	< LOD : 0.03	mg / cm ^2
76	**2017-05-08 11:49**	**Gold Creek Rest Area**	**East**	**Calibration**		**Red**			**CAL**	**Positive**	**1.10 ± 0.10**	**mg / cm ^2**

APPENDIX B

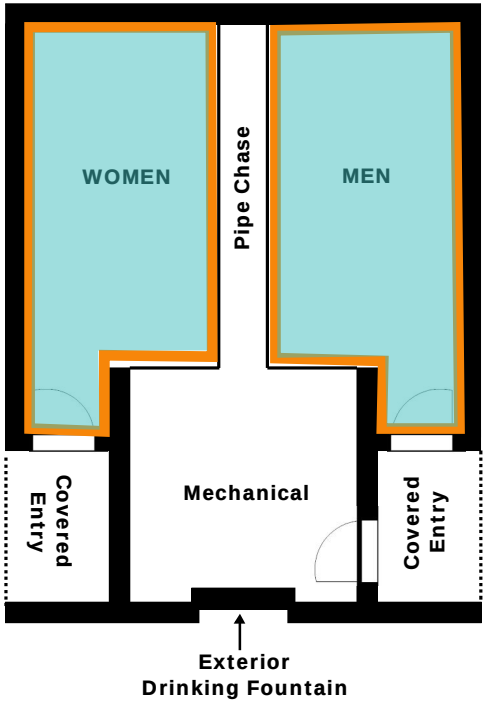
FLOOR PLANS

Location of Lead Containing Materials

Location of Painted Ceilings with Lead

Walls with 4x4 Ceramic Tile with Lead

Covered Picnic Area

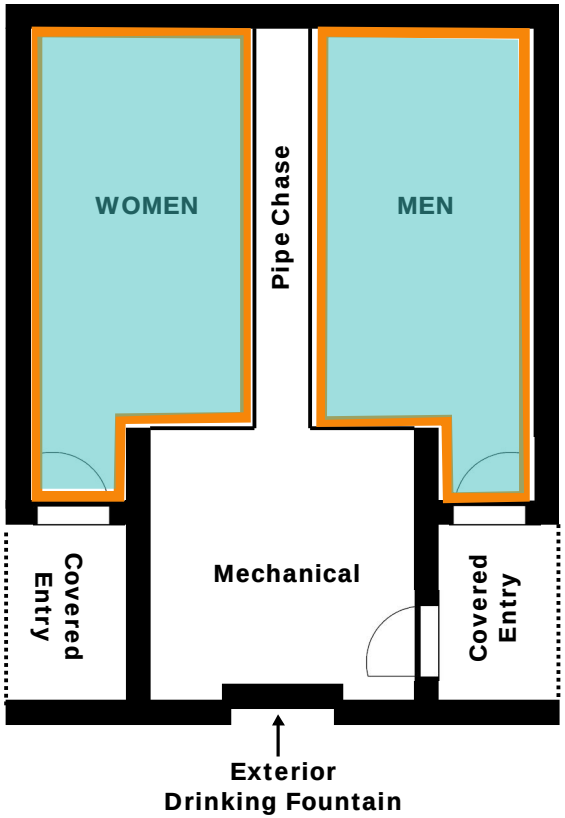


Covered Picnic Area

WEST BOUND REST AREA

Gold Creek - Montana

Information Shed



Covered Picnic Area

Covered Picnic Area

EAST BOUND REST AREA

Gold Creek - Montana

Information Shed

Appendix L: Weed List



Updated 2017

Montana Noxious Weed Management Plan

DRAFT

Appendix D: The Statewide Noxious Weed List

Effective: February 2017

PRIORITY 1A These weeds are not present or have a very limited presence in Montana. Management criteria will require eradication if detected, education, and prevention:

(a) Yellow starthistle (*Centaurea solstitialis*)
(b) Dyer's woad *(Isatis tinctoria*)
(c) Common reed *(Phragmites australis ssp. australis)*
(d) Medusahead *(Taeniatherum caput-medusae)*

PRIORITY 1B These weeds have limited presence in Montana.
Management criteria will require eradication or containment and education:

(a) Knotweed complex (*Polygonum cuspidatum, P. sachalinense, P. × bohemicum, Fallopia japonica, F. sachalinensis, F. × bohemica, Reynoutria japonica, R. sachalinensis, and R.× bohemica*)
(b) Purple loosestrife (*Lythrum salicaria*)
(c) Rush skeletonweed (*Chondrilla juncea*)
(d) Scotch broom (*Cytisus scoparius*)
(e) Blueweed (*Echium vulgare*)

PRIORITY 2A These weeds are common in isolated areas of Montana. Management criteria will require eradication or containment where less abundant. Management shall be prioritized by local weed districts:

(a) Tansy ragwort (*Senecio jacobaea, Jacobaea vulgaris*)
(b) Meadow hawkweed complex (*Hieracium caespitosum, H. praealturm, H. floridundum, and Pilosella caespitosa*)
(c) Orange hawkweed (*Hieracium aurantiacum, Pilosella aurantiaca*)
(d) Tall buttercup (*Ranunculus acris*)
(e) Perennial pepperweed (*Lepidium latifolium*)
(f) Yellowflag iris (*Iris pseudacorus*)
(g) Eurasian watermilfoil (*Myriophyllum spicatum, Myriophyllum spicatum x Myriophyllum sibiricum***)**
(h) Flowering rush (*Butomus umbellatus*)
(i) Common buckthorn *(Rhamnus cathartica L.)*

PRIORITY 2B These weeds are abundant in Montana and widespread in many counties. Management criteria will require eradication or containment where less abundant. Management shall be prioritized by local weed districts:

(a) Canada thistle (*Cirsium arvense*)
(b) Field bindweed (*Convolvulus arvensis*)
(c) Leafy spurge (*Euphorbia esula*)
(d) Whitetop (*Cardaria draba, Lepidium draba*)
(e) Russian knapweed (*Acroptilon repens, Rhaponticum repens*)
(f) Spotted knapweed (*Centaurea stoebe, C.maculosa*)
(g) Diffuse knapweed (*Centaurea diffusa*)
(h) Dalmatian toadflax (*Linaria dalmatica*)
(i) St. Johnswort (*Hypericum perforatum*)
(j) Sulfur cinquefoil (*Potentilla recta*)
(k) Common tansy (*Tanacetum vulgare*)
(l) Oxeye daisy (*Leucanthemum vulgare*)
(m) Houndstongue (*Cynoglossum officinale*)
(n) Yellow toadflax (*Linaria vulgaris*)
(o) Saltcedar (*Tamarix spp*.)
(p) Curlyleaf pondweed (*Potamogeton crispus*)
(q) Hoary alyssum (*Berteroa incana*)

PRIORITY 3 Regulated Plants: (NOT MONTANA LISTED NOXIOUS WEEDS)
These regulated plants have the potential to have significant negative impacts. The plant may not be intentionally spread or sold other than as a contaminant in agricultural products. The state recommends research, education and prevention to minimize the spread of the regulated plant.

(a) Cheatgrass (*Bromus tectorum*)
(b) Hydrilla (*Hydrilla verticillata*)
(c) Russian olive (*Elaeagnus angustifolia*)
(d) Brazilian waterweed (*Egeria densa*)
(e) Parrot feather watermilfoil (*Myriophyllum aquaticum or M. brasiliense*)

Appendix M: General Wildlife, SOC, and T&E Species

MONTANA Natural Heritage Program
A program of the **Montana State Library's Natural Resource Information System** operated by the **University of Montana**.

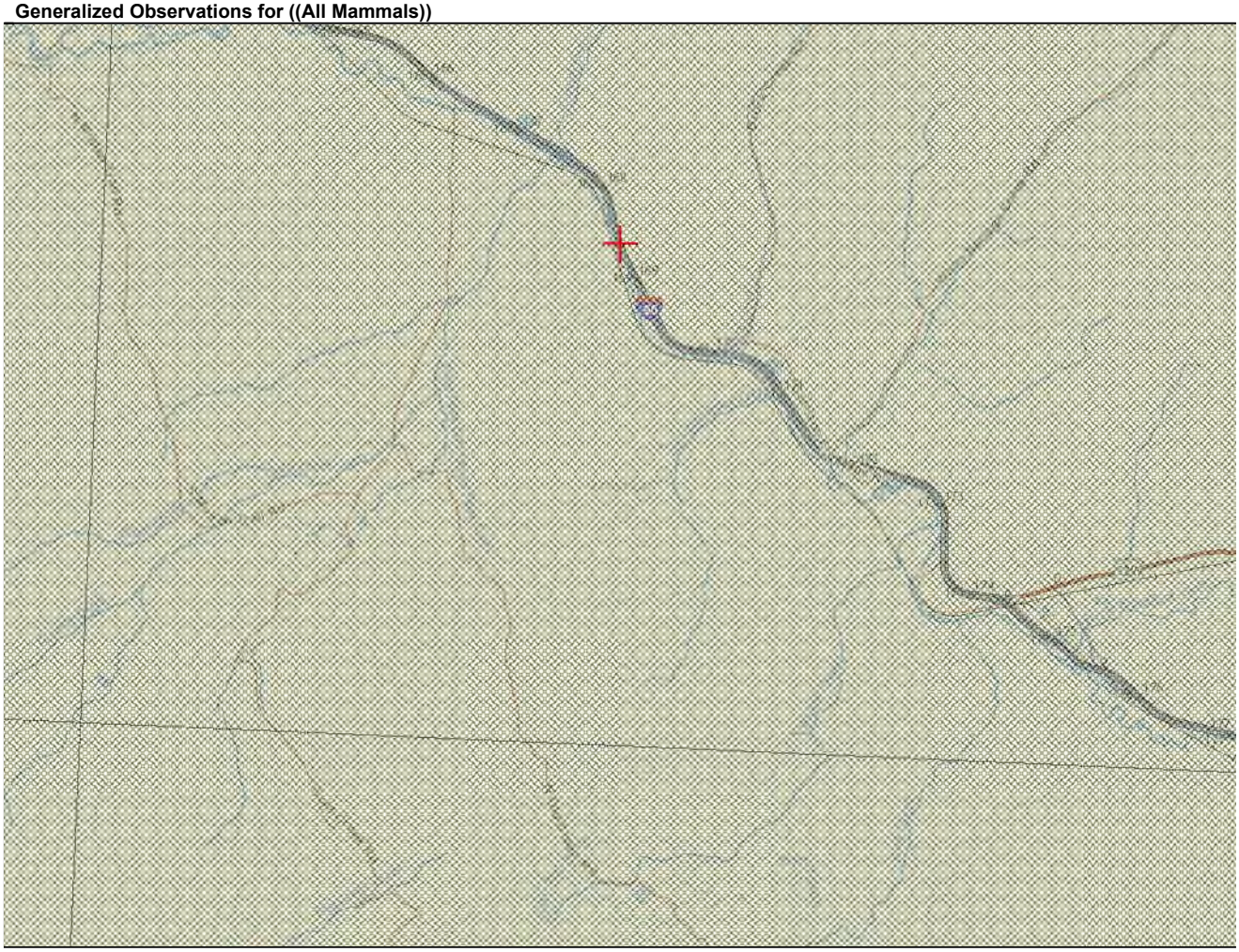
Latitude	Longitude
46.48273	-112.71446
46.59156	-113.06639



Montana Generalized Observations Report

Report generated 5/12/2017 11:36:30 AM

Generalized Observations for ((All Mammals))



	Obs Count	Earliest Obs	Recent Obs
Mammals - American Mink *(Mustela vison)*	1	2012	2012
Mammals - Beaver *(Castor canadensis)*	8	2000	2009
Mammals - Big Brown Bat *(Eptesicus fuscus)*	5	2009	2010
Mammals - Black Bear *(Ursus americanus)*	4	1971	1998
Mammals - Bobcat *(Lynx rufus)*	17	1970	1970
Mammals - Canada Lynx *(Lynx canadensis)*	1		
Mammals - Columbian Ground Squirrel *(Urocitellus columbianus)*	5	1894	1980
Mammals - Coyote *(Canis latrans)*	2	2002	2002
Mammals - Deer Mouse *(Peromyscus maniculatus)*	8	1894	2009
Mammals - Elk *(Cervus canadensis)*	6	1971	1972
Mammals - Golden-mantled Ground Squirrel *(Callospermophilus lateralis)*	1	1894	1894
Mammals - Gray Wolf *(Canis lupus)*	5	2000	2010
Mammals - Hoary Bat *(Lasiurus cinereus)*	9	2009	2009
Mammals - Little Brown Myotis *(Myotis lucifugus)*	8	2009	2010
Mammals - Long-eared Myotis *(Myotis evotis)*	2	2010	2010
Mammals - Long-tailed Vole *(Microtus longicaudus)*	3	1894	1998
Mammals - Marten *(Martes americana)*	1		
Mammals - Masked Shrew *(Sorex cinereus)*	2	1895	2009
Mammals - Meadow Vole *(Microtus pennsylvanicus)*	21	1980	2009
Mammals - Moose *(Alces americanus)*	1	1972	1972
Mammals - Mountain Lion *(Puma concolor)*	2	1994	1997

Mammals - Mule Deer *(Odocoileus hemionus)*	**Obs Count**: 17	**Earliest Obs**: 1970	**Recent Obs**: 1972
Mammals - Muskrat *(Ondatra zibethicus)*	**Obs Count**: 2	**Earliest Obs**: 1950	**Recent Obs**: 2009
Mammals - Northern Flying Squirrel *(Glaucomys sabrinus)*	**Obs Count**: 1	**Earliest Obs**: 1997	**Recent Obs**: 1997
Mammals - Northern Pocket Gopher *(Thomomys talpoides)*	**Obs Count**: 1	**Earliest Obs**: 1995	**Recent Obs**: 1995
Mammals - Northern River Otter *(Lontra canadensis)*	**Obs Count**: 3	**Earliest Obs**: 2009	**Recent Obs**: 2009
Mammals - Pika *(Ochotona princeps)*	**Obs Count**: 1	**Earliest Obs**: 1972	**Recent Obs**: 1972
Mammals - Porcupine *(Erethizon dorsatum)*	**Obs Count**: 2	**Earliest Obs**: 2001	**Recent Obs**: 2003
Mammals - Raccoon *(Procyon lotor)*	**Obs Count**: 1	**Earliest Obs**: 2008	**Recent Obs**: 2008
Mammals - Red Squirrel *(Tamiasciurus hudsonicus)*	**Obs Count**: 2	**Earliest Obs**: 1894	**Recent Obs**: 1973
Mammals - Red-tailed Chipmunk *(Tamias ruficaudus)*	**Obs Count**: 4	**Earliest Obs**: 1894	**Recent Obs**: 1999
Mammals - Silver-haired Bat *(Lasionycteris noctivagans)*	**Obs Count**: 9	**Earliest Obs**: 2009	**Recent Obs**: 2010
Mammals - Snowshoe Hare *(Lepus americanus)*	**Obs Count**: 1	**Earliest Obs**: 2010	**Recent Obs**: 2010
Mammals - Southern Red-backed Vole *(Myodes gapperi)*	**Obs Count**: 4	**Earliest Obs**: 1894	**Recent Obs**: 1999
Mammals - Striped Skunk *(Mephitis mephitis)*	**Obs Count**: 1	**Earliest Obs**: 2012	**Recent Obs**: 2012
Mammals - Vagrant Shrew *(Sorex vagrans)*	**Obs Count**: 1	**Earliest Obs**: 2010	**Recent Obs**: 2010
Mammals - Western Jumping Mouse *(Zapus princeps)*	**Obs Count**: 2	**Earliest Obs**: 1994	**Recent Obs**: 1999
Mammals - Western Small-footed Myotis *(Myotis ciliolabrum)*	**Obs Count**: 2	**Earliest Obs**: 2009	**Recent Obs**: 2009
Mammals - White-tailed Deer *(Odocoileus virginianus)*	**Obs Count**: 1	**Earliest Obs**: 1972	**Recent Obs**: 1972
Mammals - White-tailed Jack Rabbit *(Lepus townsendii)*	**Obs Count**: 1	**Earliest Obs**: 1950	**Recent Obs**: 1950
Mammals - Yellow-pine Chipmunk *(Tamias amoenus)*	**Obs Count**: 4	**Earliest Obs**: 1973	**Recent Obs**: 1999

Citation for this report:
Montana Generalized Observations Report
Generalized Observations for ((All Mammals))
Within Lat/Long: (46.48273,-112.71446) to (46.59156,-113.06639)
Natural Heritage Map Viewer. Montana Natural Heritage Program.
Retrieved on May 12, 2017, from http://mtnhp.org/mapviewer/GenOBSReport.aspx

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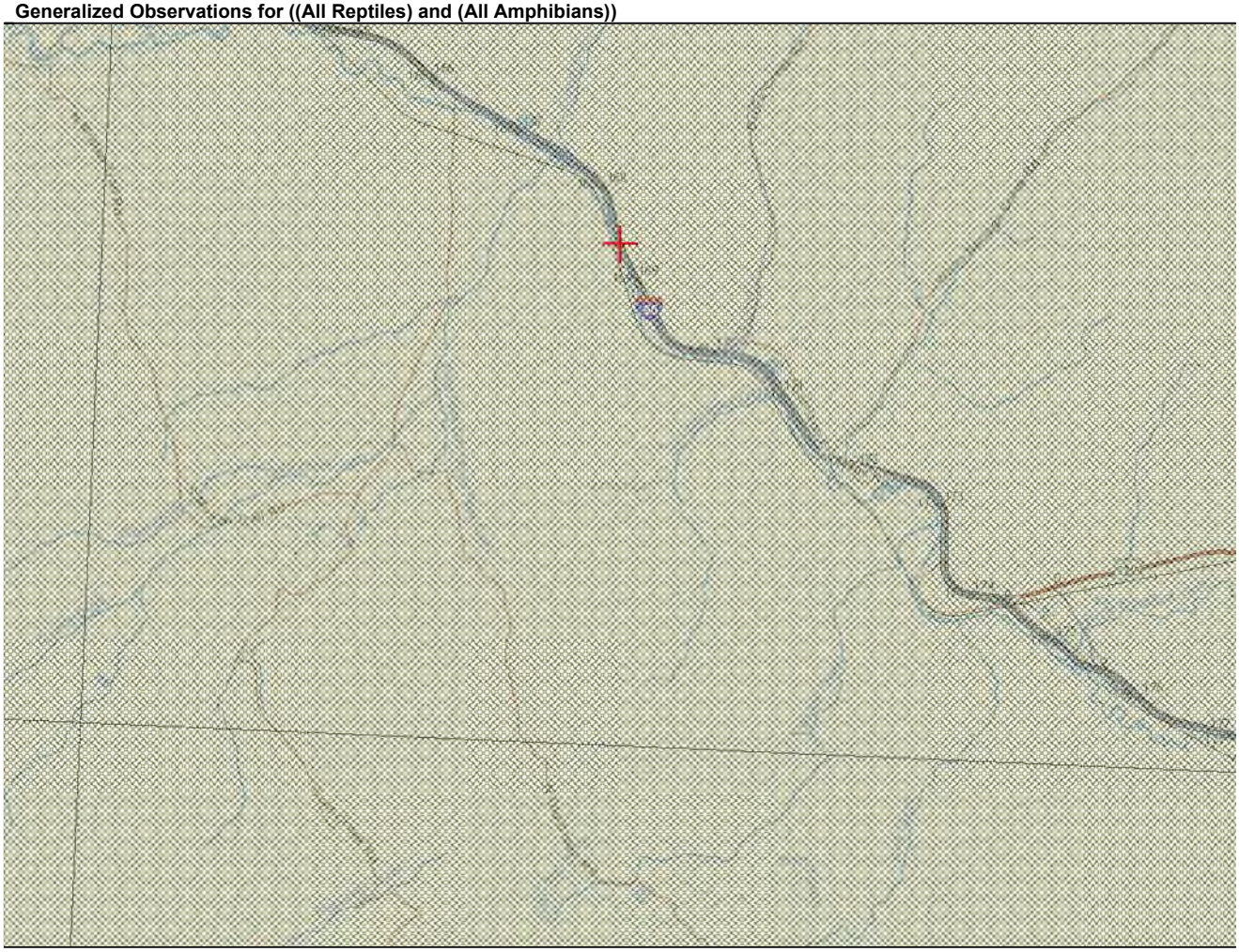
46.48273	-112.71446
46.59156	-113.06639



Montana Generalized Observations Report

Report generated 5/12/2017 1:06:12 PM

Generalized Observations for ((All Reptiles) and (All Amphibians))



⊞ **Amphibians - Columbia Spotted Frog** *(Rana luteiventris)*	**Obs Count**: 4	**Earliest Obs**: 2007	**Recent Obs**: 2011
⊞ **Amphibians - Long-toed Salamander** *(Ambystoma macrodactylum)*	**Obs Count**: 1	**Earliest Obs**: 2010	**Recent Obs**: 2010

Citation for this report:
Montana Generalized Observations Report
Generalized Observations for ((All Reptiles) and (All Amphibians))
Within Lat/Long: (46.48273,-112.71446) to (46.59156,-113.06639)
Natural Heritage Map Viewer. Montana Natural Heritage Program.
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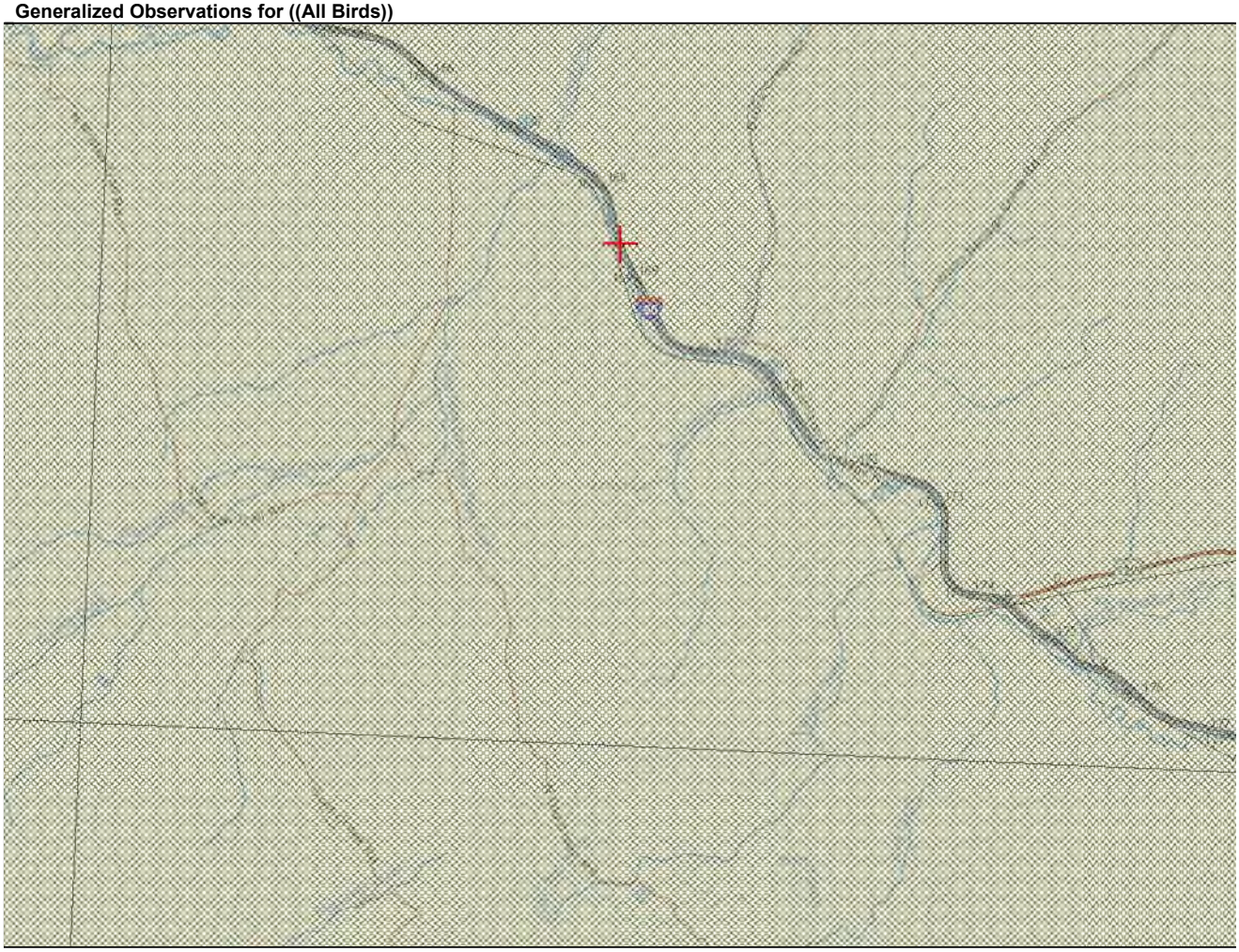
46.59156	-113.06639



Montana Generalized Observations Report

Report generated 5/12/2017 11:31:57 AM

Generalized Observations for ((All Birds))



	Obs Count	Earliest Obs	Recent Obs
Birds - American Crow *(Corvus brachyrhynchos)*	16	2007	2016
Birds - American Dipper *(Cinclus mexicanus)*	1	2009	2009
Birds - American Goldfinch *(Spinus tristis)*	10	2009	2010
Birds - American Kestrel *(Falco sparverius)*	1	2015	2015
Birds - American Robin *(Turdus migratorius)*	40	1994	2010
Birds - American White Pelican *(Pelecanus erythrorhynchos)*	1	2009	2009
Birds - Bald Eagle *(Haliaeetus leucocephalus)*	50	1971	2016
Birds - Bank Swallow *(Riparia riparia)*	6	2009	2009
Birds - Barn Swallow *(Hirundo rustica)*	2	2009	2010
Birds - Belted Kingfisher *(Megaceryle alcyon)*	4	1996	2010
Birds - Black-billed Magpie *(Pica hudsonia)*	12	2007	2011
Birds - Black-capped Chickadee *(Poecile atricapillus)*	18	2009	2010
Birds - Black-headed Grosbeak *(Pheucticus melanocephalus)*	1	2009	2009
Birds - Bobolink *(Dolichonyx oryzivorus)*	1	1995	1995
Birds - Brewer's Blackbird *(Euphagus cyanocephalus)*	5	2004	2009
Birds - Brown Creeper *(Certhia americana)*	2	1998	2002
Birds - Brown-headed Cowbird *(Molothrus ater)*	34	1994	2009
Birds - Bufflehead *(Bucephala albeola)*	1	2011	2011
Birds - Bullock's Oriole *(Icterus bullockii)*	10	2009	2010
Birds - Canada Goose *(Branta canadensis)*	1	2009	2009
Birds - Cassin's Finch *(Haemorhous cassinii)*	6	1993	2009

Birds - Cassin's Vireo *(Vireo cassinii)*	**Obs Count**: 2	**Earliest Obs**: 1996	**Recent Obs**: 2000
Birds - Cedar Waxwing *(Bombycilla cedrorum)*	**Obs Count**: 2	**Earliest Obs**: 2009	**Recent Obs**: 2010
Birds - Chipping Sparrow *(Spizella passerina)*	**Obs Count**: 31	**Earliest Obs**: 1994	**Recent Obs**: 2010
Birds - Clark's Nutcracker *(Nucifraga columbiana)*	**Obs Count**: 16	**Earliest Obs**: 1994	**Recent Obs**: 2010
Birds - Clay-colored Sparrow *(Spizella pallida)*	**Obs Count**: 2	**Earliest Obs**: 2009	**Recent Obs**: 2009
Birds - Cliff Swallow *(Petrochelidon pyrrhonota)*	**Obs Count**: 3	**Earliest Obs**: 2007	**Recent Obs**: 2010
Birds - Common Goldeneye *(Bucephala clangula)*	**Obs Count**: 1	**Earliest Obs**: 2011	**Recent Obs**: 2011
Birds - Common Merganser *(Mergus merganser)*	**Obs Count**: 1	**Earliest Obs**: 2009	**Recent Obs**: 2009
Birds - Common Nighthawk *(Chordeiles minor)*	**Obs Count**: 1	**Earliest Obs**: 2013	**Recent Obs**: 2013
Birds - Common Raven *(Corvus corax)*	**Obs Count**: 12	**Earliest Obs**: 1995	**Recent Obs**: 2011
Birds - Common Yellowthroat *(Geothlypis trichas)*	**Obs Count**: 2	**Earliest Obs**: 2009	**Recent Obs**: 2009
Birds - Cordilleran Flycatcher *(Empidonax occidentalis)*	**Obs Count**: 2	**Earliest Obs**: 2009	**Recent Obs**: 2009
Birds - Dark-eyed Junco *(Junco hyemalis)*	**Obs Count**: 36	**Earliest Obs**: 1994	**Recent Obs**: 2004
Birds - Double-crested Cormorant *(Phalacrocorax auritus)*	**Obs Count**: 2	**Earliest Obs**: 2009	**Recent Obs**: 2009
Birds - Downy Woodpecker *(Picoides pubescens)*	**Obs Count**: 1	**Earliest Obs**: 1996	**Recent Obs**: 1996
Birds - Dusky Flycatcher *(Empidonax oberholseri)*	**Obs Count**: 8	**Earliest Obs**: 2009	**Recent Obs**: 2009
Birds - Dusky Grouse *(Dendragapus obscurus)*	**Obs Count**: 2	**Earliest Obs**: 1982	**Recent Obs**: 1982
Birds - Eastern Kingbird *(Tyrannus tyrannus)*	**Obs Count**: 4	**Earliest Obs**: 2009	**Recent Obs**: 2010
Birds - European Starling *(Sturnus vulgaris)*	**Obs Count**: 9	**Earliest Obs**: 2007	**Recent Obs**: 2010
Birds - Evening Grosbeak *(Coccothraustes vespertinus)*	**Obs Count**: 1	**Earliest Obs**: 2004	**Recent Obs**: 2004
Birds - Flammulated Owl *(Psiloscops flammeolus)*	**Obs Count**: 1	**Earliest Obs**: 1995	**Recent Obs**: 1995
Birds - Golden Eagle *(Aquila chrysaetos)*	**Obs Count**: 7	**Earliest Obs**: 1993	**Recent Obs**: 2015
Birds - Golden-crowned Kinglet *(Regulus satrapa)*	**Obs Count**: 3	**Earliest Obs**: 1998	**Recent Obs**: 2004
Birds - Gray Catbird *(Dumetella carolinensis)*	**Obs Count**: 10	**Earliest Obs**: 2009	**Recent Obs**: 2009
Birds - Gray Jay *(Perisoreus canadensis)*	**Obs Count**: 3	**Earliest Obs**: 1995	**Recent Obs**: 2004
Birds - Great Blue Heron *(Ardea herodias)*	**Obs Count**: 11	**Earliest Obs**: 2003	**Recent Obs**: 2011
Birds - Great Gray Owl *(Strix nebulosa)*	**Obs Count**: 2	**Earliest Obs**: 1989	**Recent Obs**: 2011
Birds - Great Horned Owl *(Bubo virginianus)*	**Obs Count**: 2	**Earliest Obs**: 1994	**Recent Obs**: 2009
Birds - Hairy Woodpecker *(Picoides villosus)*	**Obs Count**: 7	**Earliest Obs**: 1995	**Recent Obs**: 2009
Birds - Hermit Thrush *(Catharus guttatus)*	**Obs Count**: 16	**Earliest Obs**: 1995	**Recent Obs**: 2004
Birds - Hooded Merganser *(Lophodytes cucullatus)*	**Obs Count**: 2	**Earliest Obs**: 2009	**Recent Obs**: 2009
Birds - House Wren *(Troglodytes aedon)*	**Obs Count**: 13	**Earliest Obs**: 2009	**Recent Obs**: 2009
Birds - Killdeer *(Charadrius vociferus)*	**Obs Count**: 2	**Earliest Obs**: 2009	**Recent Obs**: 2016
Birds - Lazuli Bunting *(Passerina amoena)*	**Obs Count**: 7	**Earliest Obs**: 2009	**Recent Obs**: 2010
Birds - Least Flycatcher *(Empidonax minimus)*	**Obs Count**: 2	**Earliest Obs**: 2009	**Recent Obs**: 2009
Birds - Lewis's Woodpecker *(Melanerpes lewis)*	**Obs Count**: 1	**Earliest Obs**: 2005	**Recent Obs**: 2005
Birds - Long-billed Curlew *(Numenius americanus)*	**Obs Count**: 5	**Earliest Obs**: 2009	**Recent Obs**: 2012
Birds - MacGillivray's Warbler *(Geothlypis tolmiei)*	**Obs Count**: 2	**Earliest Obs**: 1998	**Recent Obs**: 2009
Birds - Mallard *(Anas platyrhynchos)*	**Obs Count**: 7	**Earliest Obs**: 2009	**Recent Obs**: 2014
Birds - Mountain Bluebird *(Sialia currucoides)*	**Obs Count**: 12	**Earliest Obs**: 1994	**Recent Obs**: 2010
Birds - Mountain Chickadee *(Poecile gambeli)*	**Obs Count**: 28	**Earliest Obs**: 1994	**Recent Obs**: 2004
Birds - Mourning Dove *(Zenaida macroura)*	**Obs Count**: 5	**Earliest Obs**: 1995	**Recent Obs**: 2009
Birds - Northern Flicker *(Colaptes auratus)*	**Obs Count**: 25	**Earliest Obs**: 1994	**Recent Obs**: 2010
Birds - Northern Goshawk *(Accipiter gentilis)*	**Obs Count**: 7	**Earliest Obs**: 1995	**Recent Obs**: 2001
Birds - Northern Harrier *(Circus cyaneus)*	**Obs Count**: 1	**Earliest Obs**: 2009	**Recent Obs**: 2009
Birds - Northern Rough-winged Swallow *(Stelgidopteryx serripennis)*	**Obs Count**: 6	**Earliest Obs**: 2009	**Recent Obs**: 2009
Birds - Northern Saw-whet Owl *(Aegolius acadicus)*	**Obs Count**: 2	**Earliest Obs**: 1992	**Recent Obs**: 1992
Birds - Northern Waterthrush *(Parkesia noveboracensis)*	**Obs Count**: 2	**Earliest Obs**: 2009	**Recent Obs**: 2009
Birds - Olive-sided Flycatcher *(Contopus cooperi)*	**Obs Count**: 15	**Earliest Obs**: 1993	**Recent Obs**: 2002
Birds - Osprey *(Pandion haliaetus)*	**Obs Count**: 10	**Earliest Obs**: 1993	**Recent Obs**: 2010
Birds - Pacific Wren *(Troglodytes pacificus)*	**Obs Count**: 2	**Earliest Obs**: 1997	**Recent Obs**: 2001
Birds - Pileated Woodpecker *(Dryocopus pileatus)*	**Obs Count**: 2	**Earliest Obs**: 1997	**Recent Obs**: 2000
Birds - Pine Siskin *(Spinus pinus)*	**Obs Count**: 28	**Earliest Obs**: 1994	**Recent Obs**: 2009
Birds - Red Crossbill *(Loxia curvirostra)*	**Obs Count**: 15	**Earliest Obs**: 1994	**Recent Obs**: 2004
Birds - Red-breasted Nuthatch *(Sitta canadensis)*	**Obs Count**: 32	**Earliest Obs**: 1995	**Recent Obs**: 2004
Birds - Red-eyed Vireo *(Vireo olivaceus)*	**Obs Count**: 2	**Earliest Obs**: 1996	**Recent Obs**: 2009
Birds - Red-naped Sapsucker *(Sphyrapicus nuchalis)*	**Obs Count**: 6	**Earliest Obs**: 1994	**Recent Obs**: 2009
Birds - Red-tailed Hawk *(Buteo jamaicensis)*	**Obs Count**: 19	**Earliest Obs**: 1993	**Recent Obs**: 2010
Birds - Red-winged Blackbird *(Agelaius phoeniceus)*	**Obs Count**: 10	**Earliest Obs**: 2007	**Recent Obs**: 2009
Birds - Ring-billed Gull *(Larus delawarensis)*	**Obs Count**: 2	**Earliest Obs**: 2009	**Recent Obs**: 2009
Birds - Rock Pigeon *(Columba livia)*	**Obs Count**: 3	**Earliest Obs**: 2009	**Recent Obs**: 2011
Birds - Rock Wren *(Salpinctes obsoletus)*	**Obs Count**: 4	**Earliest Obs**: 2009	**Recent Obs**: 2009
Birds - Rough-legged Hawk *(Buteo lagopus)*	**Obs Count**: 4	**Earliest Obs**: 1992	**Recent Obs**: 1993

Birds - Ruby-crowned Kinglet *(Regulus calendula)*	**Obs Count**: 28	**Earliest Obs**: 1994	**Recent Obs**: 2009
Birds - Ruffed Grouse *(Bonasa umbellus)*	**Obs Count**: 3	**Earliest Obs**: 1972	**Recent Obs**: 2009
Birds - Savannah Sparrow *(Passerculus sandwichensis)*	**Obs Count**: 2	**Earliest Obs**: 2009	**Recent Obs**: 2012
Birds - Sharp-tailed Grouse *(Tympanuchus phasianellus)*	**Obs Count**: 1	**Earliest Obs**: 1983	**Recent Obs**: 1983
Birds - Song Sparrow *(Melospiza melodia)*	**Obs Count**: 15	**Earliest Obs**: 2004	**Recent Obs**: 2009
Birds - Spotted Sandpiper *(Actitis macularius)*	**Obs Count**: 9	**Earliest Obs**: 2009	**Recent Obs**: 2009
Birds - Spruce Grouse *(Falcipennis canadensis)*	**Obs Count**: 1	**Earliest Obs**: 1972	**Recent Obs**: 1972
Birds - Steller's Jay *(Cyanocitta stelleri)*	**Obs Count**: 1	**Earliest Obs**: 2004	**Recent Obs**: 2004
Birds - Swainson's Hawk *(Buteo swainsoni)*	**Obs Count**: 3	**Earliest Obs**: 1991	**Recent Obs**: 2009
Birds - Swainson's Thrush *(Catharus ustulatus)*	**Obs Count**: 3	**Earliest Obs**: 1994	**Recent Obs**: 1994
Birds - Townsend's Solitaire *(Myadestes townsendi)*	**Obs Count**: 18	**Earliest Obs**: 1994	**Recent Obs**: 2002
Birds - Townsend's Warbler *(Setophaga townsendi)*	**Obs Count**: 1	**Earliest Obs**: 2002	**Recent Obs**: 2002
Birds - Tree Swallow *(Tachycineta bicolor)*	**Obs Count**: 13	**Earliest Obs**: 2009	**Recent Obs**: 2009
Birds - Veery *(Catharus fuscescens)*	**Obs Count**: 1	**Earliest Obs**: 2000	**Recent Obs**: 2000
Birds - Vesper Sparrow *(Pooecetes gramineus)*	**Obs Count**: 6	**Earliest Obs**: 2009	**Recent Obs**: 2010
Birds - Warbling Vireo *(Vireo gilvus)*	**Obs Count**: 23	**Earliest Obs**: 1994	**Recent Obs**: 2009
Birds - Western Meadowlark *(Sturnella neglecta)*	**Obs Count**: 8	**Earliest Obs**: 2007	**Recent Obs**: 2012
Birds - Western Tanager *(Piranga ludoviciana)*	**Obs Count**: 15	**Earliest Obs**: 1994	**Recent Obs**: 2002
Birds - Western Wood-Pewee *(Contopus sordidulus)*	**Obs Count**: 10	**Earliest Obs**: 2009	**Recent Obs**: 2010
Birds - Williamson's Sapsucker *(Sphyrapicus thyroideus)*	**Obs Count**: 5	**Earliest Obs**: 1998	**Recent Obs**: 2004
Birds - Willow Flycatcher *(Empidonax traillii)*	**Obs Count**: 10	**Earliest Obs**: 2009	**Recent Obs**: 2009
Birds - Wilson's Snipe *(Gallinago delicata)*	**Obs Count**: 1	**Earliest Obs**: 2008	**Recent Obs**: 2008
Birds - Wood Duck *(Aix sponsa)*	**Obs Count**: 1	**Earliest Obs**: 2010	**Recent Obs**: 2010
Birds - Yellow Warbler *(Setophaga petechia)*	**Obs Count**: 32	**Earliest Obs**: 2007	**Recent Obs**: 2009
Birds - Yellow-headed Blackbird *(Xanthocephalus xanthocephalus)*	**Obs Count**: 1	**Earliest Obs**: 2007	**Recent Obs**: 2007
Birds - Yellow-rumped Warbler *(Setophaga coronata)*	**Obs Count**: 29	**Earliest Obs**: 1994	**Recent Obs**: 2009

Citation for this report:
Montana Generalized Observations Report
Generalized Observations for ((All Birds))
Within Lat/Long: (46.48273,-112.71446) to (46.59156,-113.06639)
Natural Heritage Map Viewer. Montana Natural Heritage Program.
Retrieved on May 12, 2017, from http://mtnhp.org/mapviewer/GenOBSReport.aspx

Clark Fork River
River Mile: 9.4 to 340
Miles: 330.5
Total Stream Miles: 340
HUC: Lower Clark Fork (17010213)
Tributary To: No Downlink
Regions: Region 1; Region 2
Counties: Deer Lodge; Granite; Mineral; Missoula; Powell; Sanders

Fish Distribution Download Data

Begin Mile	End Mile	Species	Abundance	Use Type	Life History	Origin	Genetic Status	Data Rating	Data Source
61	65.7	Black Bullhead	Rare	Year-round resident	Not applicable	Introduced	Not Applicable	Extrapolated from multiple surveys/observations	FIS
61	65.7	Brook Trout	Rare	Unknown	Not applicable	Introduced	Not Applicable	Extrapolated from multiple surveys/observations	FWP
75.5	327	Brook Trout	Rare	Year-round resident	Not applicable	Introduced	Not Applicable	Extrapolated from multiple surveys/observations	FWP
25.5	28.2	Brown Trout	Rare	Year-round resident	Not applicable	Introduced	Not Applicable	Extrapolated from multiple surveys/observations	FWP
61	65.7	Brown Trout	Rare	Year-round resident	Not applicable	Introduced	Not Applicable	Extrapolated from multiple surveys/observations	FIS
75.5	222.5	Brown Trout	Rare	Year-round resident	Not applicable	Introduced	Not Applicable	Extrapolated from multiple surveys/observations	FWP
222.5	274	Brown Trout	Common	Both resident and Fluvial/Adfluvial populations	Not applicable	Introduced	Not Applicable	Extrapolated from multiple surveys/observations	FWP
274	339.9	Brown Trout	Common	Fluvial/Adfluvial population, Spawning elsewhere	Not applicable	Introduced	Not Applicable	Extrapolated from multiple surveys/observations	FWP
61	65.7	Bull Trout	Rare	Fluvial/Adfluvial population, Spawning elsewhere	Not applicable	Native	Genetically pure, determined visually (bull trout only)	Extrapolated from multiple surveys/observations	FIS
75.5	294.6	Bull Trout	Rare	Fluvial/Adfluvial population, Spawning elsewhere	Not applicable	Native	Potentially unaltered with no record of stocking	Extrapolated from multiple surveys/observations	FWP
144	145	Columbia Slimy Sculpin	Unknown	Unknown	Unknown	Native	Not Applicable	Extrapolated from a single survey/observation	FWP
227	228	Columbia Slimy Sculpin	Rare	Unknown	Unknown	Native	Not Applicable	Extrapolated from a single survey/observation	FWP
61	65.7	Kokanee	Rare	Unknown	Resident	Introduced	Not Applicable	No Survey, Professional judgment	FWP
75.5	102.8	Kokanee	Rare	Unknown		Introduced			FWP

					Not applicable		Not Applicable	No Survey, Professional judgment	
61	65.7	Lake Trout	Rare	Unknown	Unknown	Introduced	Not Applicable	Extrapolated from multiple surveys/observations	FIS
75.5	108	Lake Trout	Rare	Unknown	Not applicable	Introduced	Not Applicable	Extrapolated from a single survey/observation	FWP
126	150	Lake Trout	Rare	Unknown	Not applicable	Introduced	Not Applicable	Extrapolated from multiple surveys/observations	FIS
212	225	Lake Trout	Rare	Unknown	Not applicable	Introduced	Not Applicable	Extrapolated from multiple surveys/observations	FIS
61	65.7	Lake Whitefish	Common	Year-round resident	Not applicable	Introduced	Not Applicable	Extrapolated from multiple surveys/observations	FIS
61	65.7	Largemouth Bass	Abundant	Year-round resident	Not applicable	Introduced	Not Applicable	Extrapolated from multiple surveys/observations	FWP
75.5	274.1	Largemouth Bass	Rare	Year-round resident	Resident	Introduced	Not Applicable	Extrapolated from multiple surveys/observations	FWP
25.5	28.2	Largescale Sucker	Rare	Unknown	Not applicable	Native	Not Applicable	Extrapolated from a single survey/observation	scp
61	65.7	Largescale Sucker	Abundant	Year-round resident	Not applicable	Native	Not Applicable	Extrapolated from multiple surveys/observations	FIS
75.5	339.9	Largescale Sucker	Abundant	Year-round resident	Resident	Native	Not Applicable	Extrapolated from multiple surveys/observations	FWP
61	65.7	Longnose Dace	Rare	Year-round resident	Resident	Native	Not Applicable	Extrapolated from multiple surveys/observations	FWP
75.5	339.9	Longnose Dace	Common	Year-round resident	Not applicable	Native	Not Applicable	Extrapolated from multiple surveys/observations	FWP
61	65.7	Longnose Sucker	Rare	Year-round resident	Not applicable	Native	Not Applicable	Extrapolated from multiple surveys/observations	FIS
75.5	339.9	Longnose Sucker	Abundant	Year-round resident	Resident	Native	Not Applicable	Extrapolated from multiple surveys/observations	FWP
75.5	148.8	Mottled Sculpin	Rare	Year-round resident	Not applicable	Native	Not Applicable	Extrapolated from multiple surveys/observations	fwp
311.2	339.9	Mottled Sculpin	Unknown	Unknown	Unknown	Unknown	Not Applicable	Extrapolated from multiple surveys/observations	UN
61	65.7	Mountain Whitefish	Common	Year-round resident	Not applicable	Native	Not Applicable	Extrapolated from multiple surveys/observations	FIS
75.5	274	Mountain Whitefish	Common	Year-round resident	Resident	Native	Not Applicable	Extrapolated from multiple surveys/observations	FWP
274	339.9	Mountain Whitefish	Abundant	Year-round resident	Not applicable	Native	Not Applicable		FWP

								Extrapolated from multiple surveys/observations	
25.5	28.2	Northern Pike	Rare	Year-round resident	Not applicable	Introduced	Not Applicable	Extrapolated from a single survey/observation	scp
61	65.7	Northern Pike	Abundant	Year-round resident	Not applicable	Introduced	Not Applicable	Extrapolated from multiple surveys/observations	FIS
75.5	221.7	Northern Pike	Rare	Year-round resident	Not applicable	Introduced	Not Applicable	Extrapolated from multiple surveys/observations	FWP
25.5	28.2	Northern Pike Minnow	Abundant	Unknown	Not applicable	Native	Not Applicable	Extrapolated from a single survey/observation	scp
61	65.7	Northern Pike Minnow	Abundant	Year-round resident	Not applicable	Native	Not Applicable	Extrapolated from multiple surveys/observations	FIS
75.5	162	Northern Pike Minnow	Abundant	Year-round resident	Not applicable	Native	Not Applicable	Extrapolated from multiple surveys/observations	SCP
245	261	Northern Pike Minnow	Rare	Unknown	Not applicable	Native	Not Applicable	Extrapolated from multiple surveys/observations	fwp
275	300	Northern Pike Minnow	Rare	Unknown	Not applicable	Native	Not Applicable	Extrapolated from multiple surveys/observations	fwp
333	339.9	Northern Pike Minnow	Rare	Unknown	Not applicable	Native	Not Applicable	Extrapolated from a single survey/observation	scp
25.5	28.2	Peamouth	Common	Unknown	Not applicable	Native	Not Applicable	Extrapolated from a single survey/observation	scp
61	65.7	Peamouth	Abundant	Year-round resident	Not applicable	Native	Not Applicable	Extrapolated from multiple surveys/observations	FIS
94	221.5	Peamouth	Rare	Year-round resident	Not applicable	Native	Not Applicable	Extrapolated from multiple surveys/observations	FIS
61	65.7	Pumpkinseed	Common	Year-round resident	Not applicable	Introduced	Not Applicable	Extrapolated from multiple surveys/observations	FIS
75.5	274.1	Pumpkinseed	Rare	Year-round resident	Not applicable	Introduced	Not Applicable	Extrapolated from a single survey/observation	FIS
25.5	28.2	Rainbow Trout	Common	Year-round resident	Resident	Introduced	Not Applicable	Extrapolated from multiple surveys/observations	fwp
61	65.7	Rainbow Trout	Common	Both resident and Fluvial/Adfluvial populations	Not applicable	Introduced	Not Applicable	Extrapolated from multiple surveys/observations	FIS
75.5	260	Rainbow Trout	Common	Fluvial/Adfluvial population, Spawning elsewhere	Not applicable	Introduced	Not Applicable	Extrapolated from multiple surveys/observations	FWP
260	339.9	Rainbow Trout	Rare	Year-round resident	Not applicable	Introduced	Not Applicable	Extrapolated from multiple surveys/observations	FWP
61	65.7		Abundant			Native			FWP

		Redside Shiner		Year-round resident	Not applicable		Not Applicable	Extrapolated from multiple surveys/observations	
75.5	79.5	Redside Shiner	Abundant	Year-round resident	Unknown	Native	Not Applicable	Extrapolated from a single survey/observation	FWP
94	102	Redside Shiner	Rare	Unknown	Unknown	Native	Not Applicable	Extrapolated from multiple surveys/observations	FIS
155.3	162	Redside Shiner	Rare	Year-round resident	Not applicable	Native	Not Applicable	Extrapolated from multiple surveys/observations	GS
182	186.5	Redside Shiner	Rare	Unknown	Unknown	Native	Not Applicable	Extrapolated from a single survey/observation	FIS
221.7	339.9	Redside Shiner	Rare	Year-round resident	Not applicable	Native	Not Applicable	Extrapolated from multiple surveys/observations	FWP
203	204.5	Rocky Mountain Sculpin	Rare	Unknown	Unknown	Native	Not Applicable	Extrapolated from multiple surveys/observations	FWP
215	216	Rocky Mountain Sculpin	Unknown	Unknown	Unknown	Native	Not Applicable	Extrapolated from multiple surveys/observations	FWP
220	221	Rocky Mountain Sculpin	Unknown	Unknown	Unknown	Native	Not Applicable	Extrapolated from multiple surveys/observations	FWP
227	228	Rocky Mountain Sculpin	Unknown	Unknown	Unknown	Native	Not Applicable	Extrapolated from multiple surveys/observations	FWP
236	237	Rocky Mountain Sculpin	Unknown	Unknown	Unknown	Native	Not Applicable	Extrapolated from a single survey/observation	FWP
245	246	Rocky Mountain Sculpin	Unknown	Unknown	Unknown	Native	Not Applicable	Extrapolated from a single survey/observation	FWP
218	336	Slimy Sculpin	Common	Year-round resident	Not applicable	Native	Not Applicable	Extrapolated from a single survey/observation	FWP
25.5	28.2	Smallmouth Bass	Common	Year-round resident	Not applicable	Introduced	Not Applicable	Extrapolated from a single survey/observation	scp
61	65.7	Smallmouth Bass	Abundant	Year-round resident	Not applicable	Introduced	Not Applicable	Extrapolated from multiple surveys/observations	FWP
75.5	109	Smallmouth Bass	Common	Year-round resident	Not applicable	Introduced	Not Applicable	Extrapolated from multiple surveys/observations	FIS
239	274.1	Variable Platyfish	Rare	Year-round resident	Not applicable	Introduced (Illegally)	Not Applicable	No Survey, Professional judgment	FWP
61	65.7	Walleye	Common	Unknown	Resident	Introduced	Not Applicable	Extrapolated from multiple surveys/observations	FIS
75.5	102.8	Walleye	Rare	Unknown	Not applicable	Introduced	Not Applicable	No Survey, Professional judgment	FWP
25.5	28.2		Common	Year-round resident	Resident	Native	Hybridized species based		FWP

		Westslope Cutthroat Trout					on genetic analysis less than 90%	Extrapolated from multiple surveys/observations	
61	65.7	Westslope Cutthroat Trout	Common	Year-round resident	Resident	Native	Hybridized species based on genetic analysis less than 90%	Extrapolated from multiple surveys/observations	FWP
75.5	259.4	Westslope Cutthroat Trout	Rare	Year-round resident	Resident	Native	Hybridized and Pure populations exist in stream based on genetic analysis	Extrapolated from multiple surveys/observations	FWP
259.4	339.9	Westslope Cutthroat Trout	Rare	Year-round resident	Resident	Native	Unknown	Extrapolated from multiple surveys/observations	FWP
61	65.7	Yellow Bullhead	Rare	Year-round resident	Not applicable	Introduced	Not Applicable	No Survey, Professional judgment	FWP
75.5	102.8	Yellow Bullhead	Rare	Unknown	Not applicable	Introduced	Not Applicable	No Survey, Professional judgment	FWP
61	65.7	Yellow Perch	Abundant	Year-round resident	Resident	Introduced	Not Applicable	Extrapolated from multiple surveys/observations	FIS
75.5	274.1	Yellow Perch	Rare	Year-round resident	Not applicable	Introduced	Not Applicable	Extrapolated from multiple surveys/observations	FWP

Population Surveys Download Data

Section: Cabinet Gorge Reservoir
River Miles: 9.5 to 28.2

Date	Collector	Species	Est.	Sec. Unit	Method	Length Min	Max	Avg.	Unit	Gear	Data Rating	Source
10/12/2015	Kreiner, Ryan	Brown Trout	1	no estimate, counts only	Total number captured or presence only	260	260	260	mm	Gill netting	Good quality	FIS
10/12/2015	Kreiner, Ryan	Lake Whitefish	1	no estimate, counts only	Total number captured or presence only	426	426	426	mm	Gill netting	Good quality	FIS
10/12/2015	Kreiner, Ryan	Largescale Sucker	25	no estimate, counts only	Total number captured or presence only	393	533	441.9	mm	Gill netting	Good quality	FIS
10/12/2015	Kreiner, Ryan	Northern Pike	10	no estimate, counts only	Total number captured or presence only	345	750	614.4	mm	Gill netting	Good quality	FIS

10/12/2015	Kreiner, Ryan	Northern Pike Minnow	24	no estimate, counts only	Total number captured or presence only	201	515	364.8	mm	Gill netting	Good quality	FIS
10/12/2015	Kreiner, Ryan	Peamouth	10	no estimate, counts only	Total number captured or presence only	260	315	282.1	mm	Gill netting	Good quality	FIS
10/12/2015	Kreiner, Ryan	Pumpkinseed	19	no estimate, counts only	Total number captured or presence only	85	143	113.9	mm	Gill netting	Good quality	FIS
10/12/2015	Kreiner, Ryan	Smallmouth Bass	9	no estimate, counts only	Total number captured or presence only	203	410	344.9	mm	Gill netting	Good quality	FIS
10/12/2015	Kreiner, Ryan	Surveyed; no fish captured	0	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Gill netting	Good quality	FIS
10/12/2015	Kreiner, Ryan	Walleye	3	no estimate, counts only	Total number captured or presence only	350	485	405	mm	Gill netting	Good quality	FIS
10/12/2015	Kreiner, Ryan	Yellow Perch	81	no estimate, counts only	Total number captured or presence only	110	255	161	mm	Gill netting	Good quality	FIS
10/13/2014	Kreiner, Ryan	Brown Trout	3	no estimate, counts only	Total number captured or presence only	515	567	546.7	mm	Gill netting	Good quality	FIS
10/13/2014	Kreiner, Ryan	Lake Whitefish	3	no estimate, counts only	Total number captured or presence only	356	386	373	mm	Gill netting	Good quality	FIS
10/13/2014	Kreiner, Ryan	Largemouth Bass	1	no estimate, counts only	Total number captured or presence only	150	150	150	mm	Gill netting	Good quality	FIS
10/13/2014	Kreiner, Ryan		11			393	477	435.9	mm	Gill netting		FIS

		Largescale Sucker		no estimate, counts only	Total number captured or presence only						Good quality	
10/13/2014	Kreiner, Ryan	Northern Pike	11	no estimate, counts only	Total number captured or presence only	314	820	554.9	mm	Gill netting	Good quality	FIS
10/13/2014	Kreiner, Ryan	Northern Pike Minnow	26	no estimate, counts only	Total number captured or presence only	142	515	319.6	mm	Gill netting	Good quality	FIS
10/13/2014	Kreiner, Ryan	Peamouth	5	no estimate, counts only	Total number captured or presence only	253	333	281.4	mm	Gill netting	Good quality	FIS
10/13/2014	Kreiner, Ryan	Pumpkinseed	4	no estimate, counts only	Total number captured or presence only	101	121	112.8	mm	Gill netting	Good quality	FIS
10/13/2014	Kreiner, Ryan	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	229	491	391.3	mm	Gill netting	Good quality	FIS
10/13/2014	Kreiner, Ryan	Smallmouth Bass	9	no estimate, counts only	Total number captured or presence only	149	385	331	mm	Gill netting	Good quality	FIS
10/13/2014	Kreiner, Ryan	Walleye	8	no estimate, counts only	Total number captured or presence only	359	564	447.4	mm	Gill netting	Good quality	FIS
10/13/2014	Kreiner, Ryan	Yellow Perch	30	no estimate, counts only	Total number captured or presence only	122	5511.8	358.8	mm	Gill netting	Good quality	FIS
10/13/2013	Breidinger, Kenneth	Brook Trout	1	no estimate, counts only	Total number captured or presence only	221	221	221	mm	Gill netting	Good quality	FIS
10/13/2013		Brown Trout	2			295	471	383	mm	Gill netting		FIS

	Breidinger, Kenneth			no estimate, counts only	Total number captured or presence only						Good quality	
10/13/2013	Breidinger, Kenneth	Lake Whitefish	4	no estimate, counts only	Total number captured or presence only	362	425	393.8	mm	Gill netting	Good quality	FIS
10/13/2013	Breidinger, Kenneth	Largescale Sucker	8	no estimate, counts only	Total number captured or presence only	436	467	451.5	mm	Gill netting	Good quality	FIS
10/13/2013	Breidinger, Kenneth	Northern Pike	11	no estimate, counts only	Total number captured or presence only	230	775	569.2	mm	Gill netting	Good quality	FIS
10/13/2013	Breidinger, Kenneth	Northern Pike Minnow	21	no estimate, counts only	Total number captured or presence only	240	482	341.5	mm	Gill netting	Good quality	FIS
10/13/2013	Breidinger, Kenneth	Peamouth	18	no estimate, counts only	Total number captured or presence only	240	351	277.2	mm	Gill netting	Good quality	FIS
10/13/2013	Breidinger, Kenneth	Pumpkinseed	2	no estimate, counts only	Total number captured or presence only	89	143	116	mm	Gill netting	Good quality	FIS
10/13/2013	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	420	420	420	mm	Gill netting	Good quality	FIS
10/13/2013	Breidinger, Kenneth	Smallmouth Bass	6	no estimate, counts only	Total number captured or presence only	260	356	320.2	mm	Gill netting	Good quality	FIS
10/13/2013	Breidinger, Kenneth	Surveyed; no fish captured	0	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Gill netting	Good quality	FIS
10/13/2013		Walleye	5			478	715	556.2	mm	Gill netting		FIS

	Breidinger, Kenneth			no estimate, counts only	Total number captured or presence only						Good quality	
10/13/2013	Breidinger, Kenneth	Yellow Perch	41	no estimate, counts only	Total number captured or presence only	146	235	192.1	mm	Gill netting	Good quality	FIS
10/7/2012	Breidinger, Kenneth	Brown Trout	3	no estimate, counts only	Total number captured or presence only	479	584	522.3	mm	Gill netting	Good quality	FIS
10/7/2012	Breidinger, Kenneth	Lake Whitefish	14	no estimate, counts only	Total number captured or presence only	269	444	367.8	mm	Gill netting	Good quality	FIS
10/7/2012	Breidinger, Kenneth	Largemouth Bass	1	no estimate, counts only	Total number captured or presence only	236	236	236	mm	Gill netting	Good quality	FIS
10/7/2012	Breidinger, Kenneth	Largescale Sucker	23	no estimate, counts only	Total number captured or presence only	302	516	440.4	mm	Gill netting	Good quality	FIS
10/7/2012	Breidinger, Kenneth	Northern Pike	8	no estimate, counts only	Total number captured or presence only	237	804	494.1	mm	Gill netting	Good quality	FIS
10/7/2012	Breidinger, Kenneth	Northern Pike Minnow	62	no estimate, counts only	Total number captured or presence only	190	561	298.3	mm	Gill netting	Good quality	FIS
10/7/2012	Breidinger, Kenneth	Peamouth	21	no estimate, counts only	Total number captured or presence only	183	353	286	mm	Gill netting	Good quality	FIS
10/7/2012	Breidinger, Kenneth	Pumpkinseed	2	no estimate, counts only	Total number captured or presence only	123	151	137	mm	Gill netting	Good quality	FIS
10/7/2012			2			290	339	314.5	mm	Gill netting		FIS

	Breidinger, Kenneth	Rainbow Trout		no estimate, counts only	Total number captured or presence only						Good quality	
10/7/2012	Breidinger, Kenneth	Smallmouth Bass	6	no estimate, counts only	Total number captured or presence only	254	293	286.5	mm	Gill netting	Good quality	FIS
10/7/2012	Breidinger, Kenneth	Surveyed; no fish captured	0	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Gill netting	Good quality	FIS
10/7/2012	Breidinger, Kenneth	Walleye	6	no estimate, counts only	Total number captured or presence only	248	631	399.8	mm	Gill netting	Good quality	FIS
10/7/2012	Breidinger, Kenneth	Yellow Perch	74	no estimate, counts only	Total number captured or presence only	134	216	163.1	mm	Gill netting	Good quality	FIS
10/9/2011	Hanson, Jon	Brown Trout	3	no estimate, counts only	Total number captured or presence only	186	562	413.3	mm	Gill netting	Good quality	FIS
10/9/2011	Hanson, Jon	Lake Whitefish	1	no estimate, counts only	Total number captured or presence only	510	510	510	mm	Gill netting	Good quality	FIS
10/9/2011	Hanson, Jon	Largemouth Bass	2	no estimate, counts only	Total number captured or presence only	144	319	231.5	mm	Gill netting	Good quality	FIS
10/9/2011	Hanson, Jon	Largescale Sucker	9	no estimate, counts only	Total number captured or presence only	330	490	423.2	mm	Gill netting	Good quality	FIS
10/9/2011	Hanson, Jon	Northern Pike	5	no estimate, counts only	Total number captured or presence only	528	749	590.8	mm	Gill netting	Good quality	FIS
10/9/2011	Hanson, Jon		51			190	524	306.6	mm	Gill netting		FIS

		Northern Pike Minnow		no estimate, counts only	Total number captured or presence only						Good quality	
10/9/2011	Hanson, Jon	Peamouth	38	no estimate, counts only	Total number captured or presence only	160	331	273	mm	Gill netting	Good quality	FIS
10/9/2011	Hanson, Jon	Pumpkinseed	7	no estimate, counts only	Total number captured or presence only	95	161	125.7	mm	Gill netting	Good quality	FIS
10/9/2011	Hanson, Jon	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	240	280	260	mm	Gill netting	Good quality	FIS
10/9/2011	Hanson, Jon	Redside Shiner	1	no estimate, counts only	Total number captured or presence only	156	156	156	mm	Gill netting	Good quality	FIS
10/9/2011	Hanson, Jon	Smallmouth Bass	6	no estimate, counts only	Total number captured or presence only	228	402	306.8	mm	Gill netting	Good quality	FIS
10/9/2011	Hanson, Jon	Walleye	5	no estimate, counts only	Total number captured or presence only	220	648	408.6	mm	Gill netting	Good quality	FIS
10/9/2011	Hanson, Jon	Yellow Perch	35	no estimate, counts only	Total number captured or presence only	130	224	171.6	mm	Gill netting	Good quality	FIS
10/10/2010	Hanson, Jon	Brown Trout	1	no estimate, counts only	Total number captured or presence only	463	463	463	mm	Gill netting	Good quality	FIS
10/10/2010	Hanson, Jon	Lake Whitefish	15	no estimate, counts only	Total number captured or presence only	268	491	369.1	mm	Gill netting	Good quality	FIS
10/10/2010	Hanson, Jon		18			360	490	437.1	mm	Gill netting		FIS

		Largescale Sucker		no estimate, counts only	Total number captured or presence only						Good quality	
10/10/2010	Hanson, Jon	Northern Pike	5	no estimate, counts only	Total number captured or presence only	574	624	597	mm	Gill netting	Good quality	FIS
10/10/2010	Hanson, Jon	Northern Pike Minnow	91	no estimate, counts only	Total number captured or presence only	165	560	288.8	mm	Gill netting	Good quality	FIS
10/10/2010	Hanson, Jon	Peamouth	45	no estimate, counts only	Total number captured or presence only	170	313	277	mm	Gill netting	Good quality	FIS
10/10/2010	Hanson, Jon	Pumpkinseed	5	no estimate, counts only	Total number captured or presence only	122	155	137.2	mm	Gill netting	Good quality	FIS
10/10/2010	Hanson, Jon	Smallmouth Bass	9	no estimate, counts only	Total number captured or presence only	228	384	333.6	mm	Gill netting	Good quality	FIS
10/10/2010	Hanson, Jon	Surveyed; no fish captured	0	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Gill netting	Good quality	FIS
10/10/2010	Hanson, Jon	Walleye	3	no estimate, counts only	Total number captured or presence only	450	559	520.7	mm	Gill netting	Good quality	FIS
10/10/2010	Hanson, Jon	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	336	336	336	mm	Gill netting	Good quality	FIS
10/10/2010	Hanson, Jon	Yellow Perch	97	no estimate, counts only	Total number captured or presence only	127	222	183.8	mm	Gill netting	Good quality	FIS
10/11/2009	Hanson, Jon	Brown Trout	2			560	567	563.5	mm	Gill netting		FIS

				no estimate, counts only	Total number captured or presence only						Good quality	
10/11/2009	Hanson, Jon	Lake Whitefish	3	no estimate, counts only	Total number captured or presence only	295	492	397.3	mm	Gill netting	Good quality	FIS
10/11/2009	Hanson, Jon	Largescale Sucker	16	no estimate, counts only	Total number captured or presence only	275	470	401.9	mm	Gill netting	Good quality	FIS
10/11/2009	Hanson, Jon	Mountain Whitefish	1	no estimate, counts only	Total number captured or presence only	300	300	300	mm	Gill netting	Good quality	FIS
10/11/2009	Hanson, Jon	Northern Pike	4	no estimate, counts only	Total number captured or presence only	275	620	467.5	mm	Gill netting	Good quality	FIS
10/11/2009	Hanson, Jon	Northern Pike Minnow	67	no estimate, counts only	Total number captured or presence only	170	540	260.9	mm	Gill netting	Good quality	FIS
10/11/2009	Hanson, Jon	Peamouth	34	no estimate, counts only	Total number captured or presence only	154	290	263.9	mm	Gill netting	Good quality	FIS
10/11/2009	Hanson, Jon	Smallmouth Bass	2	no estimate, counts only	Total number captured or presence only	227	285	256	mm	Gill netting	Good quality	FIS
10/11/2009	Hanson, Jon	Surveyed; no fish captured	0	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Gill netting	Good quality	FIS
10/11/2009	Hanson, Jon	Walleye	2	no estimate, counts only	Total number captured or presence only	476	490	483	mm	Gill netting	Good quality	FIS
10/11/2009	Hanson, Jon		32			138	225	177.9	mm	Gill netting		FIS

		Yellow Perch		no estimate, counts only	Total number captured or presence only						Good quality	
10/19/2008	Hanson, Jon	Brown Trout	2	no estimate, counts only	Total number captured or presence only	377	482	429.5	mm	Gill netting	Good quality	FIS
10/19/2008	Hanson, Jon	Bull Trout	1	no estimate, counts only	Total number captured or presence only	585	585	585	mm	Gill netting	Good quality	FIS
10/19/2008	Hanson, Jon	Lake Whitefish	8	no estimate, counts only	Total number captured or presence only	395	455	417.8	mm	Gill netting	Good quality	FIS
10/19/2008	Hanson, Jon	Largescale Sucker	8	no estimate, counts only	Total number captured or presence only	395	510	434.5	mm	Gill netting	Good quality	FIS
10/19/2008	Hanson, Jon	Mountain Whitefish	1	no estimate, counts only	Total number captured or presence only	315	315	315	mm	Gill netting	Good quality	FIS
10/19/2008	Hanson, Jon	Northern Pike	6	no estimate, counts only	Total number captured or presence only	540	780	638.3	mm	Gill netting	Good quality	FIS
10/19/2008	Hanson, Jon	Northern Pike Minnow	50	no estimate, counts only	Total number captured or presence only	160	425	280.2	mm	Gill netting	Good quality	FIS
10/19/2008	Hanson, Jon	Peamouth	25	no estimate, counts only	Total number captured or presence only	243	300	268	mm	Gill netting	Good quality	FIS
10/19/2008	Hanson, Jon	Pumpkinseed	7	no estimate, counts only	Total number captured or presence only	95	123	104.1	mm	Gill netting	Good quality	FIS
10/19/2008	Hanson, Jon		2			179	401	290	mm	Gill netting		FIS

		Smallmouth Bass		no estimate, counts only	Total number captured or presence only						Good quality	
10/19/2008	Hanson, Jon	Walleye	1	no estimate, counts only	Total number captured or presence only	509	509	509	mm	Gill netting	Good quality	FIS
10/19/2008	Hanson, Jon	Yellow Perch	54	no estimate, counts only	Total number captured or presence only	92	245	174.2	mm	Gill netting	Good quality	FIS

Section: Mussel Survey
River Miles: 16.3 to 16.4

Date	Collector	Species	Est.	Sec. Unit	Method	Length Min	Max	Avg.	Unit	Gear	Data Rating	Source
7/27/2007	Stagliano, David	Surveyed;no mussels found	0	no estimate, presence only	Catch per unit effort	-	-	-	N/A	Visual Observation	Medium quality	NHP

Section: Mussel Survey
River Miles: 18.6 to 18.7

Date	Collector	Species	Est.	Sec. Unit	Method	Length Min	Max	Avg.	Unit	Gear	Data Rating	Source
7/27/2007	Stagliano, David	Surveyed;no mussels found	0	no estimate, presence only	Catch per unit effort	-	-	-	N/A	Visual Observation	Medium quality	NHP

Section: Mussel Survey
River Miles: 19.4 to 19.5

Date	Collector	Species	Est.	Sec. Unit	Method	Length Min	Max	Avg.	Unit	Gear	Data Rating	Source
8/25/2008	Stagliano, David	Surveyed;no mussels found	0	no estimate, presence only	Catch per unit effort	-	-	-	N/A	Visual Observation	Medium quality	NHP

Section: Below Noxon
River Miles: 28 to 28.1

Date	Collector	Species	Est.	Sec. Unit	Method	Length Min	Max	Avg.	Unit	Gear	Data Rating	Source
4/29/2009	Dossantos, Joe	Brown Trout	7	no estimate, counts only	Total number captured or presence only	330.2	457.2	399.1	mm	Angling	Medium quality	SCP
4/29/2009			1			-	-	381	mm	Angling		SCP

	Dossantos, Joe	Largescale Sucker		no estimate, counts only	Total number captured or presence only						Medium quality	
4/29/2009	Dossantos, Joe	Northern Pike	1	no estimate, counts only	Total number captured or presence only	-	-	600.6	mm	Angling	Medium quality	SCP
4/29/2009	Dossantos, Joe	Northern Pike Minnow	452	no estimate, counts only	Total number captured or presence only	152.4	711.2	382.3	mm	Angling	Medium quality	SCP
4/29/2009	Dossantos, Joe	Peamouth	26	no estimate, counts only	Total number captured or presence only	304.8	508	406.4	mm	Angling	Medium quality	SCP
4/29/2009	Dossantos, Joe	Smallmouth Bass	228	no estimate, counts only	Total number captured or presence only	76.2	533.4	239.9	mm	Angling	Medium quality	SCP
4/29/2009	Dossantos, Joe	Westslope Cutthroat Trout	8	no estimate, counts only	Total number captured or presence only	152.4	711.2	382.3	mm	Angling	Medium quality	SCP

Section: Noxon Reservoir
River Miles: 28.3 to 62.4

Date	Collector	Species	Est.	Sec. Unit	Method	Length Min	Max	Avg.	Unit	Gear	Data Rating	Source
10/13/2015	Kreiner, Ryan	Black Bullhead	38	no estimate, counts only	Total number captured or presence only	181	316	240	mm	Gill netting	Good quality	FIS
10/13/2015	Kreiner, Ryan	Lake Whitefish	36	no estimate, counts only	Total number captured or presence only	238	540	423.8	mm	Gill netting	Good quality	FIS
10/13/2015	Kreiner, Ryan	Largemouth Bass	14	no estimate, counts only	Total number captured or presence only	135	361	241.1	mm	Gill netting	Good quality	FIS
10/13/2015	Kreiner, Ryan		26			440	602	486.9	mm	Gill netting		FIS

		Largescale Sucker		no estimate, counts only	Total number captured or presence only						Good quality	
10/13/2015	Kreiner, Ryan	Longnose Sucker	1	no estimate, counts only	Total number captured or presence only	516	516	516	mm	Gill netting	Good quality	FIS
10/13/2015	Kreiner, Ryan	Northern Pike	82	no estimate, counts only	Total number captured or presence only	260	848	567.8	mm	Gill netting	Good quality	FIS
10/13/2015	Kreiner, Ryan	Northern Pike Minnow	74	no estimate, counts only	Total number captured or presence only	189	591	411.4	mm	Gill netting	Good quality	FIS
10/13/2015	Kreiner, Ryan	Peamouth	33	no estimate, counts only	Total number captured or presence only	255	392	344.1	mm	Gill netting	Good quality	FIS
10/13/2015	Kreiner, Ryan	Pumpkinseed	261	no estimate, counts only	Total number captured or presence only	86	197	134	mm	Gill netting	Good quality	FIS
10/13/2015	Kreiner, Ryan	Smallmouth Bass	67	no estimate, counts only	Total number captured or presence only	123	494	330.1	mm	Gill netting	Good quality	FIS
10/13/2015	Kreiner, Ryan	Walleye	35	no estimate, counts only	Total number captured or presence only	314	680	458	mm	Gill netting	Good quality	FIS
10/13/2015	Kreiner, Ryan	Yellow Bullhead	92	no estimate, counts only	Total number captured or presence only	141	305	219	mm	Gill netting	Good quality	FIS
10/13/2015	Kreiner, Ryan	Yellow Perch	596	no estimate, counts only	Total number captured or presence only	109	280	187.4	mm	Gill netting	Good quality	FIS
10/14/2014	Kreiner, Ryan		1			294	294	294	mm	Gill netting		FIS

		Black Bullhead		no estimate, counts only	Total number captured or presence only						Good quality	
10/14/2014	Kreiner, Ryan	Bull Trout	2	no estimate, counts only	Total number captured or presence only	508	580	544	mm	Gill netting	Good quality	FIS
10/14/2014	Kreiner, Ryan	Lake Whitefish	28	no estimate, counts only	Total number captured or presence only	297	478	421.6	mm	Gill netting	Good quality	FIS
10/14/2014	Kreiner, Ryan	Largemouth Bass	8	no estimate, counts only	Total number captured or presence only	162	236	201.9	mm	Gill netting	Good quality	FIS
10/14/2014	Kreiner, Ryan	Largescale Sucker	21	no estimate, counts only	Total number captured or presence only	423	570	477.5	mm	Gill netting	Good quality	FIS
10/14/2014	Kreiner, Ryan	Northern Pike	68	no estimate, counts only	Total number captured or presence only	230	21082	1664.9	mm	Gill netting	Good quality	FIS
10/14/2014	Kreiner, Ryan	Northern Pike Minnow	71	no estimate, counts only	Total number captured or presence only	180	12750.8	624	mm	Gill netting	Good quality	FIS
10/14/2014	Kreiner, Ryan	Peamouth	54	no estimate, counts only	Total number captured or presence only	211	400	336.5	mm	Gill netting	Good quality	FIS
10/14/2014	Kreiner, Ryan	Pumpkinseed	247	no estimate, counts only	Total number captured or presence only	87	3835.4	226.7	mm	Gill netting	Good quality	FIS
10/14/2014	Kreiner, Ryan	Smallmouth Bass	41	no estimate, counts only	Total number captured or presence only	204	443	319.8	mm	Gill netting	Good quality	FIS
10/14/2014	Kreiner, Ryan		0			-	-	-	mm	Gill netting		FIS

		Surveyed; no fish captured		no estimate, counts only	Total number captured or presence only						Good quality	
10/14/2014	Kreiner, Ryan	Walleye	47	no estimate, counts only	Total number captured or presence only	250	13081	719.4	mm	Gill netting	Good quality	FIS
10/14/2014	Kreiner, Ryan	Yellow Bullhead	56	no estimate, counts only	Total number captured or presence only	155	320	247.6	mm	Gill netting	Good quality	FIS
10/14/2014	Kreiner, Ryan	Yellow Perch	374	no estimate, counts only	Total number captured or presence only	120	5359.4	294.7	mm	Gill netting	Good quality	FIS
10/14/2013	Breidinger, Kenneth	Black Bullhead	11	no estimate, counts only	Total number captured or presence only	199	384	268.6	mm	Gill netting	Good quality	FIS
10/14/2013	Breidinger, Kenneth	Brown Trout	2	no estimate, counts only	Total number captured or presence only	385	402	393.5	mm	Gill netting	Good quality	FIS
10/14/2013	Breidinger, Kenneth	Lake Whitefish	19	no estimate, counts only	Total number captured or presence only	315	484	411.1	mm	Gill netting	Good quality	FIS
10/14/2013	Breidinger, Kenneth	Largemouth Bass	14	no estimate, counts only	Total number captured or presence only	182	343	231.4	mm	Gill netting	Good quality	FIS
10/14/2013	Breidinger, Kenneth	Largescale Sucker	18	no estimate, counts only	Total number captured or presence only	271	522	455.3	mm	Gill netting	Good quality	FIS
10/14/2013	Breidinger, Kenneth	Northern Pike	64	no estimate, counts only	Total number captured or presence only	345	775	570.1	mm	Gill netting	Good quality	FIS
10/14/2013			69			195	566	420.9	mm	Gill netting		FIS

	Breidinger, Kenneth	Northern Pike Minnow		no estimate, counts only	Total number captured or presence only						Good quality	
10/14/2013	Breidinger, Kenneth	Peamouth	79	no estimate, counts only	Total number captured or presence only	262	382	331.3	mm	Gill netting	Good quality	FIS
10/14/2013	Breidinger, Kenneth	Pumpkinseed	124	no estimate, counts only	Total number captured or presence only	92	378	144.9	mm	Gill netting	Good quality	FIS
10/14/2013	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	332	332	332	mm	Gill netting	Good quality	FIS
10/14/2013	Breidinger, Kenneth	Smallmouth Bass	63	no estimate, counts only	Total number captured or presence only	159	419	315.7	mm	Gill netting	Good quality	FIS
10/14/2013	Breidinger, Kenneth	Walleye	49	no estimate, counts only	Total number captured or presence only	288	655	464.8	mm	Gill netting	Good quality	FIS
10/14/2013	Breidinger, Kenneth	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	320	320	320	mm	Gill netting	Good quality	FIS
10/14/2013	Breidinger, Kenneth	Yellow Bullhead	5	no estimate, counts only	Total number captured or presence only	236	300	272	mm	Gill netting	Good quality	FIS
10/14/2013	Breidinger, Kenneth	Yellow Perch	357	no estimate, counts only	Total number captured or presence only	109	282	199.7	mm	Gill netting	Good quality	FIS
10/8/2012	Breidinger, Kenneth	Black Bullhead	31	no estimate, counts only	Total number captured or presence only	179	296	243.3	mm	Gill netting	Good quality	FIS
10/8/2012			21			164	491	392.1	mm	Gill netting		FIS

	Breidinger, Kenneth	Lake Whitefish		no estimate, counts only	Total number captured or presence only						Good quality	
10/8/2012	Breidinger, Kenneth	Largemouth Bass	5	no estimate, counts only	Total number captured or presence only	284	355	322	mm	Gill netting	Good quality	FIS
10/8/2012	Breidinger, Kenneth	Largescale Sucker	25	no estimate, counts only	Total number captured or presence only	346	530	474.2	mm	Gill netting	Good quality	FIS
10/8/2012	Breidinger, Kenneth	Northern Pike	50	no estimate, counts only	Total number captured or presence only	281	917	488.3	mm	Gill netting	Good quality	FIS
10/8/2012	Breidinger, Kenneth	Northern Pike Minnow	78	no estimate, counts only	Total number captured or presence only	169	616	364.1	mm	Gill netting	Good quality	FIS
10/8/2012	Breidinger, Kenneth	Peamouth	67	no estimate, counts only	Total number captured or presence only	298	394	337.6	mm	Gill netting	Good quality	FIS
10/8/2012	Breidinger, Kenneth	Pumpkinseed	94	no estimate, counts only	Total number captured or presence only	92	180	127.1	mm	Gill netting	Good quality	FIS
10/8/2012	Breidinger, Kenneth	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	224	445	308.7	mm	Gill netting	Good quality	FIS
10/8/2012	Breidinger, Kenneth	Smallmouth Bass	42	no estimate, counts only	Total number captured or presence only	102	403	271.6	mm	Gill netting	Good quality	FIS
10/8/2012	Breidinger, Kenneth	Walleye	29	no estimate, counts only	Total number captured or presence only	402	689	491.4	mm	Gill netting	Good quality	FIS
10/8/2012			375			100	359	183.3	mm	Gill netting		FIS

	Breidinger, Kenneth	Yellow Perch		no estimate, counts only	Total number captured or presence only						Good quality	
10/10/2011	Hanson, Jon	Black Bullhead	29	no estimate, counts only	Total number captured or presence only	200	295	255.7	mm	Gill netting	Good quality	FIS
10/10/2011	Hanson, Jon	Brown Trout	1	no estimate, counts only	Total number captured or presence only	539	539	539	mm	Gill netting	Good quality	FIS
10/10/2011	Hanson, Jon	Lake Whitefish	21	no estimate, counts only	Total number captured or presence only	315	518	395.3	mm	Gill netting	Good quality	FIS
10/10/2011	Hanson, Jon	Largemouth Bass	3	no estimate, counts only	Total number captured or presence only	258	330	305.7	mm	Gill netting	Good quality	FIS
10/10/2011	Hanson, Jon	Largescale Sucker	37	no estimate, counts only	Total number captured or presence only	167	532	454.5	mm	Gill netting	Good quality	FIS
10/10/2011	Hanson, Jon	Longnose Sucker	2	no estimate, counts only	Total number captured or presence only	177	460	318.5	mm	Gill netting	Good quality	FIS
10/10/2011	Hanson, Jon	Northern Pike	27	no estimate, counts only	Total number captured or presence only	270	750	620.4	mm	Gill netting	Good quality	FIS
10/10/2011	Hanson, Jon	Northern Pike Minnow	108	no estimate, counts only	Total number captured or presence only	143	533	333.6	mm	Gill netting	Good quality	FIS
10/10/2011	Hanson, Jon	Peamouth	157	no estimate, counts only	Total number captured or presence only	150	370	321.2	mm	Gill netting	Good quality	FIS
10/10/2011	Hanson, Jon	Pumpkinseed	75			90	174	129.8	mm	Gill netting		FIS

				no estimate, counts only	Total number captured or presence only						Good quality	
10/10/2011	Hanson, Jon	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	455	455	455	mm	Gill netting	Good quality	FIS
10/10/2011	Hanson, Jon	Smallmouth Bass	31	no estimate, counts only	Total number captured or presence only	182	395	274	mm	Gill netting	Good quality	FIS
10/10/2011	Hanson, Jon	Surveyed; no fish captured	0	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Gill netting	Good quality	FIS
10/10/2011	Hanson, Jon	Walleye	46	no estimate, counts only	Total number captured or presence only	252	655	455.3	mm	Gill netting	Good quality	FIS
10/10/2011	Hanson, Jon	Yellow Bullhead	12	no estimate, counts only	Total number captured or presence only	165	271	217.5	mm	Gill netting	Good quality	FIS
10/10/2011	Hanson, Jon	Yellow Perch	252	no estimate, counts only	Total number captured or presence only	120	264	192.9	mm	Gill netting	Good quality	FIS
10/11/2010	Hanson, Jon	Black Bullhead	29	no estimate, counts only	Total number captured or presence only	144	290	241.6	mm	Gill netting	Good quality	FIS
10/11/2010	Hanson, Jon	Brown Trout	1	no estimate, counts only	Total number captured or presence only	176	176	176	mm	Gill netting	Good quality	FIS
10/11/2010	Hanson, Jon	Lake Whitefish	19	no estimate, counts only	Total number captured or presence only	306	526	418.3	mm	Gill netting	Good quality	FIS
10/11/2010	Hanson, Jon		10			163	312	233.4	mm	Gill netting		FIS

		Largemouth Bass		no estimate, counts only	Total number captured or presence only						Good quality	
10/11/2010	Hanson, Jon	Largescale Sucker	38	no estimate, counts only	Total number captured or presence only	311	550	460.6	mm	Gill netting	Good quality	FIS
10/11/2010	Hanson, Jon	Longnose Sucker	2	no estimate, counts only	Total number captured or presence only	445	525	485	mm	Gill netting	Good quality	FIS
10/11/2010	Hanson, Jon	Mountain Whitefish	2	no estimate, counts only	Total number captured or presence only	309	386	347.5	mm	Gill netting	Good quality	FIS
10/11/2010	Hanson, Jon	Northern Pike	46	no estimate, counts only	Total number captured or presence only	305	890	563.3	mm	Gill netting	Good quality	FIS
10/11/2010	Hanson, Jon	Northern Pike Minnow	101	no estimate, counts only	Total number captured or presence only	117	539	364.6	mm	Gill netting	Good quality	FIS
10/11/2010	Hanson, Jon	Peamouth	182	no estimate, counts only	Total number captured or presence only	270	488	329.4	mm	Gill netting	Good quality	FIS
10/11/2010	Hanson, Jon	Pumpkinseed	110	no estimate, counts only	Total number captured or presence only	92	198	141.4	mm	Gill netting	Good quality	FIS
10/11/2010	Hanson, Jon	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	246	246	246	mm	Gill netting	Good quality	FIS
10/11/2010	Hanson, Jon	Smallmouth Bass	20	no estimate, counts only	Total number captured or presence only	235	479	338.2	mm	Gill netting	Good quality	FIS
10/11/2010	Hanson, Jon	Walleye	26			272	758	401.5	mm	Gill netting		FIS

				no estimate, counts only	Total number captured or presence only						Good quality	
10/11/2010	Hanson, Jon	Yellow Bullhead	22	no estimate, counts only	Total number captured or presence only	124	287	235.1	mm	Gill netting	Good quality	FIS
10/11/2010	Hanson, Jon	Yellow Perch	405	no estimate, counts only	Total number captured or presence only	113	296	205.7	mm	Gill netting	Good quality	FIS
10/12/2009	Hanson, Jon	Black Bullhead	9	no estimate, counts only	Total number captured or presence only	150	312	218.6	mm	Gill netting	Good quality	FIS
10/12/2009	Hanson, Jon	Brown Trout	2	no estimate, counts only	Total number captured or presence only	243	470	356.5	mm	Gill netting	Good quality	FIS
10/12/2009	Hanson, Jon	Lake Whitefish	21	no estimate, counts only	Total number captured or presence only	295	567	387.6	mm	Gill netting	Good quality	FIS
10/12/2009	Hanson, Jon	Largemouth Bass	9	no estimate, counts only	Total number captured or presence only	215	386	279.3	mm	Gill netting	Good quality	FIS
10/12/2009	Hanson, Jon	Largescale Sucker	26	no estimate, counts only	Total number captured or presence only	332	575	458.5	mm	Gill netting	Good quality	FIS
10/12/2009	Hanson, Jon	Longnose Sucker	2	no estimate, counts only	Total number captured or presence only	197	455	326	mm	Gill netting	Good quality	FIS
10/12/2009	Hanson, Jon	Mountain Whitefish	1	no estimate, counts only	Total number captured or presence only	289	289	289	mm	Gill netting	Good quality	FIS
10/12/2009	Hanson, Jon		25			298	1110	506.2	mm	Gill netting		FIS

		Northern Pike		no estimate, counts only	Total number captured or presence only						Good quality	
10/12/2009	Hanson, Jon	Northern Pike Minnow	81	no estimate, counts only	Total number captured or presence only	160	770	386.9	mm	Gill netting	Good quality	FIS
10/12/2009	Hanson, Jon	Peamouth	205	no estimate, counts only	Total number captured or presence only	215	358	321	mm	Gill netting	Good quality	FIS
10/12/2009	Hanson, Jon	Pumpkinseed	46	no estimate, counts only	Total number captured or presence only	90	175	129.6	mm	Gill netting	Good quality	FIS
10/12/2009	Hanson, Jon	Smallmouth Bass	16	no estimate, counts only	Total number captured or presence only	185	380	262.3	mm	Gill netting	Good quality	FIS
10/12/2009	Hanson, Jon	Sucker	1	no estimate, counts only	Total number captured or presence only	170	170	170	mm	Gill netting	Good quality	FIS
10/12/2009	Hanson, Jon	Surveyed; no fish captured	0	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Gill netting	Good quality	FIS
10/12/2009	Hanson, Jon	Walleye	13	no estimate, counts only	Total number captured or presence only	184	562	416.5	mm	Gill netting	Good quality	FIS
10/12/2009	Hanson, Jon	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	310	310	310	mm	Gill netting	Good quality	FIS
10/12/2009	Hanson, Jon	Yellow Bullhead	33	no estimate, counts only	Total number captured or presence only	144	290	230.3	mm	Gill netting	Good quality	FIS
10/12/2009	Hanson, Jon		428			135	290	206.9	mm	Gill netting		FIS

		Yellow Perch		no estimate, counts only	Total number captured or presence only						Good quality	
10/20/2008	Hanson, Jon	Black Bullhead	20	no estimate, counts only	Total number captured or presence only	230	316	265.7	mm	Gill netting	Good quality	FIS
10/20/2008	Hanson, Jon	Bull Trout	1	no estimate, counts only	Total number captured or presence only	650	650	650	mm	Gill netting	Good quality	FIS
10/20/2008	Hanson, Jon	Lake Whitefish	7	no estimate, counts only	Total number captured or presence only	345	518	422.6	mm	Gill netting	Good quality	FIS
10/20/2008	Hanson, Jon	Largemouth Bass	2	no estimate, counts only	Total number captured or presence only	225	255	240	mm	Gill netting	Good quality	FIS
10/20/2008	Hanson, Jon	Largescale Sucker	63	no estimate, counts only	Total number captured or presence only	405	550	468.7	mm	Gill netting	Good quality	FIS
10/20/2008	Hanson, Jon	Longnose Sucker	4	no estimate, counts only	Total number captured or presence only	462	485	472.3	mm	Gill netting	Good quality	FIS
10/20/2008	Hanson, Jon	Mountain Whitefish	4	no estimate, counts only	Total number captured or presence only	407	490	443.3	mm	Gill netting	Good quality	FIS
10/20/2008	Hanson, Jon	Northern Pike	11	no estimate, counts only	Total number captured or presence only	365	865	667.5	mm	Gill netting	Good quality	FIS
10/20/2008	Hanson, Jon	Northern Pike Minnow	104	no estimate, counts only	Total number captured or presence only	195	622	364.5	mm	Gill netting	Good quality	FIS
10/20/2008	Hanson, Jon	Peamouth	204			214	390	316.1	mm	Gill netting		FIS

				no estimate, counts only	Total number captured or presence only						Good quality	
10/20/2008	Hanson, Jon	Pumpkinseed	33	no estimate, counts only	Total number captured or presence only	90	180	135.2	mm	Gill netting	Good quality	FIS
10/20/2008	Hanson, Jon	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	336	370	353	mm	Gill netting	Good quality	FIS
10/20/2008	Hanson, Jon	Smallmouth Bass	12	no estimate, counts only	Total number captured or presence only	133	460	278.4	mm	Gill netting	Good quality	FIS
10/20/2008	Hanson, Jon	Surveyed; no fish captured	0	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Gill netting	Good quality	FIS
10/20/2008	Hanson, Jon	Walleye	16	no estimate, counts only	Total number captured or presence only	294	725	447	mm	Gill netting	Good quality	FIS
10/20/2008	Hanson, Jon	Yellow Bullhead	50	no estimate, counts only	Total number captured or presence only	170	293	238.1	mm	Gill netting	Good quality	FIS
10/20/2008	Hanson, Jon	Yellow Perch	193	no estimate, counts only	Total number captured or presence only	74	293	208.8	mm	Gill netting	Good quality	FIS

Section: QUINN
River Miles: 31.2 to 36.8

Date	Collector	Species	Est.	Sec. Unit	Method	Length Min	Max	Avg.	Unit	Gear	Data Rating	Source
9/1/1990	Berg, Rod	Brown Trout	4	per mile	Peterson mark-recapture	-	-	-	N/A	Unknown	Medium quality	FWP
9/1/1990	Berg, Rod	Rainbow Trout	170	per mile	Peterson mark-recapture	-	-	-	N/A	Unknown	Medium quality	FWP
9/1/1990	Berg, Rod		28	per mile		-	-	-	N/A	Unknown		FWP

		Westslope Cutthroat Trout			Peterson mark-recapture						Medium quality	
5/1/1990	Berg, Rod	Brown Trout	9	per mile	Peterson mark-recapture	-	-	-	N/A	Unknown	Medium quality	FWP
5/1/1990	Berg, Rod	Rainbow Trout	209	per mile	Peterson mark-recapture	-	-	-	N/A	Unknown	Medium quality	FWP
5/1/1990	Berg, Rod	Westslope Cutthroat Trout	42	per mile	Peterson mark-recapture	-	-	-	N/A	Unknown	Medium quality	FWP
9/1/1989	Berg, Rod	Rainbow Trout	44	per 1000 ft.	Peterson mark-recapture	7.1	-	-	in	Unknown	Medium quality	FWP
9/1/1989	Berg, Rod	Westslope Cutthroat Trout	4	per 1000 ft.	Peterson mark-recapture	7.1	-	-	in	Unknown	Medium quality	FWP

Section: ST REGIS
River Miles: 51.9 to 52

Date	Collector	Species	Est.	Sec. Unit	Method	Length Min	Max	Avg.	Unit	Gear	Data Rating	Source
9/1/1990	Berg, Rod	Brown Trout	20	per mile	Peterson mark-recapture	-	-	-	N/A	Boat shocking - mobile anode	Medium quality	FWP
9/1/1990	Berg, Rod	Westslope Cutthroat Trout	34	per mile	Peterson mark-recapture	-	-	-	N/A	Boat shocking - mobile anode	Medium quality	FWP
8/1/1990	Berg, Rod	Brown Trout	20	per mile	Peterson mark-recapture	-	-	-	N/A	Boat shocking - mobile anode	Medium quality	FWP
8/1/1990	Berg, Rod	Rainbow Trout	222	per mile	Peterson mark-recapture	-	-	-	N/A	Boat shocking - mobile anode	Medium quality	FWP
8/1/1990	Berg, Rod	Westslope Cutthroat Trout	34	per mile	Peterson mark-recapture	-	-	-	N/A	Boat shocking - mobile anode	Medium quality	FWP
5/1/1990	Berg, Rod	Brown Trout	15	per mile	Peterson mark-recapture	-	-	-	N/A	Boat shocking - mobile anode	Medium quality	FWP
5/1/1990	Berg, Rod	Rainbow Trout	248	per mile	Peterson mark-recapture	-	-	-	N/A	Boat shocking - mobile anode	Medium quality	FWP
9/1/1989	Unknown,	Rainbow Trout	51	per 1000 ft.	Peterson mark-recapture	7	-	-	in	Unknown	Medium quality	UN
9/1/1989	Unknown,	Westslope Cutthroat Trout	11	per 1000 ft.	Peterson mark-recapture	7	-	-	in	Unknown	Medium quality	UN
9/1/1987	Unknown,	Rainbow Trout	41	per 1000 ft.	Peterson mark-recapture	7	-	-	in	Unknown	Medium quality	UN
8/1/1985	Unknown,	Rainbow Trout	52	per 1000 ft.	Peterson mark-recapture	8.3	-	-	in	Unknown	Medium quality	UN
8/1/1985	Unknown,		4	per 1000 ft.		8.3	-	-	in	Unknown	Medium quality	UN

		Westslope Cutthroat Trout			Peterson mark-recapture							

Section: Mussel Survey
River Miles: 62.8 to 62.9

Date	Collector	Species	Est.	Sec. Unit	Method	Length Min	Max	Avg.	Unit	Gear	Data Rating	Source
8/25/2008	Stagliano, David	Surveyed;no mussels found	0	no estimate, presence only	Catch per unit effort	-	-	-	N/A	Visual Observation	Medium quality	NHP

Section: Walleye Spawning Bar
River Miles: 64.2 to 64.7

Date	Collector	Species	Est.	Sec. Unit	Method	Length Min	Max	Avg.	Unit	Gear	Data Rating	Source
4/27/2016	Kreiner, Ryan	Walleye	18	no estimate, counts only	Total number captured or presence only	349	556	389.6	mm	Boat shocking with boom	Good quality	FIS
4/25/2016	Kreiner, Ryan	Walleye	15	no estimate, counts only	Total number captured or presence only	356	678	474.1	mm	Boat shocking with boom	Good quality	FIS
4/19/2016	Kreiner, Ryan	Walleye	41	no estimate, counts only	Total number captured or presence only	347	613	425.3	mm	Boat shocking with boom	Good quality	FIS
4/18/2016	Kreiner, Ryan	Walleye	85	no estimate, counts only	Total number captured or presence only	334	663	414.6	mm	Boat shocking with boom	Good quality	FIS
4/14/2016	Kreiner, Ryan	Walleye	96	no estimate, counts only	Total number captured or presence only	338	820	444.4	mm	Boat shocking with boom	Good quality	FIS
4/11/2016	Kreiner, Ryan	Walleye	58	no estimate, counts only	Total number captured or presence only	348	780	480	mm	Boat shocking with boom	Good quality	FIS
4/4/2016	Kreiner, Ryan	Walleye	35	no estimate, counts only	Total number captured or presence only	343	785	495.1	mm	Boat shocking with boom	Good quality	FIS

5/14/2015	Kreiner, Ryan	Walleye	6	no estimate, counts only	Total number captured or presence only	369	565	465.7	mm	Boat shocking with boom	Good quality	FIS
5/11/2015	Kreiner, Ryan	Walleye	14	no estimate, counts only	Total number captured or presence only	405	694	533.6	mm	Boat shocking with boom	Good quality	FIS
5/7/2015	Kreiner, Ryan	Walleye	18	no estimate, counts only	Total number captured or presence only	369	680	522.8	mm	Boat shocking with boom	Good quality	FIS
5/4/2015	Kreiner, Ryan	Walleye	35	no estimate, counts only	Total number captured or presence only	385	795	508.3	mm	Boat shocking with boom	Good quality	FIS
4/30/2015	Kreiner, Ryan	Walleye	12	no estimate, counts only	Total number captured or presence only	385	650	544.2	mm	Boat shocking with boom	Good quality	FIS
4/28/2015	Kreiner, Ryan	Walleye	13	no estimate, counts only	Total number captured or presence only	370	616	491.9	mm	Boat shocking with boom	Good quality	FIS
4/26/2015	Kreiner, Ryan	Walleye	7	no estimate, counts only	Total number captured or presence only	390	652	555.3	mm	Boat shocking with boom	Good quality	FIS
4/21/2015	Kreiner, Ryan	Walleye	54	no estimate, counts only	Total number captured or presence only	331	716	516.4	mm	Boat shocking with boom	Good quality	FIS
4/16/2015	Kreiner, Ryan	Walleye	7	no estimate, counts only	Total number captured or presence only	452	605	526.9	mm	Boat shocking with boom	Good quality	FIS
4/15/2015	Kreiner, Ryan	Walleye	9	no estimate, counts only	Total number captured or presence only	408	636	563.1	mm	Boat shocking with boom	Good quality	FIS
4/13/2015	Kreiner, Ryan	Walleye	31			388	791	523.4	mm			FIS

				no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
4/6/2015	Kreiner, Ryan	Walleye	3	no estimate, counts only	Total number captured or presence only	383	478	421.7	mm	Boat shocking with boom	Good quality	FIS
4/2/2015	Kreiner, Ryan	Walleye	6	no estimate, counts only	Total number captured or presence only	408	660	550.7	mm	Boat shocking with boom	Good quality	FIS
4/1/2015	Kreiner, Ryan	Walleye	2	no estimate, counts only	Total number captured or presence only	506	573	539.5	mm	Boat shocking with boom	Good quality	FIS
3/30/2015	Kreiner, Ryan	Walleye	1	no estimate, counts only	Total number captured or presence only	630	630	630	mm	Boat shocking with boom	Good quality	FIS
5/12/2014	Breidinger, Kenneth	Walleye	1	no estimate, counts only	Total number captured or presence only	499	499	499	mm	Boat shocking with boom	Good quality	FIS
5/7/2014	Breidinger, Kenneth	Northern Pike	2	no estimate, counts only	Total number captured or presence only	812.8	863.6	838.2	mm	Boat shocking with boom	Good quality	FIS
5/5/2014	Breidinger, Kenneth	Walleye	5	no estimate, counts only	Total number captured or presence only	515	642	576.6	mm	Boat shocking with boom	Good quality	FIS
5/1/2014	Breidinger, Kenneth	Walleye	1	no estimate, counts only	Total number captured or presence only	457	457	457	mm	Boat shocking with boom	Good quality	FIS
4/28/2014	Breidinger, Kenneth	Walleye	8	no estimate, counts only	Total number captured or presence only	450	560	493.4	mm	Boat shocking with boom	Good quality	FIS
4/21/2014		Walleye	11			450	675	518.3	mm			FIS

	Breidinger, Kenneth			no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
4/16/2014	Breidinger, Kenneth	Walleye	8	no estimate, counts only	Total number captured or presence only	333	628	494.6	mm	Boat shocking with boom	Good quality	FIS
4/15/2014	Breidinger, Kenneth	Walleye	8	no estimate, counts only	Total number captured or presence only	447	629	502.4	mm	Boat shocking with boom	Good quality	FIS
4/14/2014	Breidinger, Kenneth	Walleye	9	no estimate, counts only	Total number captured or presence only	369	755	541.1	mm	Boat shocking with boom	Good quality	FIS
4/10/2014	Breidinger, Kenneth	Walleye	9	no estimate, counts only	Total number captured or presence only	440	552	482.9	mm	Boat shocking with boom	Good quality	FIS
4/9/2014	Breidinger, Kenneth	Walleye	9	no estimate, counts only	Total number captured or presence only	430	611	514.8	mm	Boat shocking with boom	Good quality	FIS
5/8/2013	Breidinger, Kenneth	Walleye	19	no estimate, counts only	Total number captured or presence only	362	608	497.7	mm	Boat shocking with boom	Good quality	FIS
5/1/2013	Breidinger, Kenneth	Walleye	18	no estimate, counts only	Total number captured or presence only	330	672	496.8	mm	Boat shocking with boom	Good quality	FIS
4/29/2013	Breidinger, Kenneth	Walleye	41	no estimate, counts only	Total number captured or presence only	371	754	517.5	mm	Boat shocking with boom	Good quality	FIS
4/22/2013	Breidinger, Kenneth	Walleye	14	no estimate, counts only	Total number captured or presence only	364	752	515.8	mm	Boat shocking with boom	Good quality	FIS
4/17/2013		Walleye	25			365	720	505.5	mm			FIS

	Breidinger, Kenneth			no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
4/17/2012	Kreiner, Ryan	Walleye	1	no estimate, counts only	Total number captured or presence only	481	481	481	mm	Boat shocking with boom	Good quality	FIS

Section: Below PPL Dam
River Miles: 64.3 to 65.5

Date	Collector	Species	Est.	Sec. Unit	Method	Length Min	Max	Avg.	Unit	Gear	Data Rating	Source
5/21/2012	Breidinger, Kenneth	Brown Trout	4	no estimate, counts only	Total number captured or presence only	168	360	253.8	mm	Boat shocking with boom	Good quality	FIS
5/21/2012	Breidinger, Kenneth	Lake Whitefish	13	no estimate, counts only	Total number captured or presence only	412	470	444.8	mm	Boat shocking with boom	Good quality	FIS
5/21/2012	Breidinger, Kenneth	Largescale Sucker	74	no estimate, counts only	Total number captured or presence only	412	580	473.6	mm	Boat shocking with boom	Good quality	FIS
5/21/2012	Breidinger, Kenneth	Longnose Sucker	21	no estimate, counts only	Total number captured or presence only	192	528	469.2	mm	Boat shocking with boom	Good quality	FIS
5/21/2012	Breidinger, Kenneth	Mountain Whitefish	17	no estimate, counts only	Total number captured or presence only	128	375	180.1	mm	Boat shocking with boom	Good quality	FIS
5/21/2012	Breidinger, Kenneth	Northern Pike	2	no estimate, counts only	Total number captured or presence only	600	710	655	mm	Boat shocking with boom	Good quality	FIS
5/21/2012	Breidinger, Kenneth	Northern Pike Minnow	3	no estimate, counts only	Total number captured or presence only	470	585	521	mm	Boat shocking with boom	Good quality	FIS
5/21/2012		Peamouth	1			355	355	355	mm			FIS

	Breidinger, Kenneth			no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
5/21/2012	Breidinger, Kenneth	Rainbow Trout	8	no estimate, counts only	Total number captured or presence only	157	485	290.3	mm	Boat shocking with boom	Good quality	FIS
5/21/2012	Breidinger, Kenneth	Smallmouth Bass	1	no estimate, counts only	Total number captured or presence only	277	277	277	mm	Boat shocking with boom	Good quality	FIS
5/21/2012	Breidinger, Kenneth	Westslope Cutthroat Trout	3	no estimate, counts only	Total number captured or presence only	222	300	259	mm	Boat shocking with boom	Good quality	FIS
4/3/2012	Breidinger, Kenneth	Brook Trout	1	no estimate, counts only	Total number captured or presence only	157	157	157	mm	Boat shocking with boom	Good quality	FIS
4/3/2012	Breidinger, Kenneth	Brown Trout	6	no estimate, counts only	Total number captured or presence only	184	355	262.7	mm	Boat shocking with boom	Good quality	FIS
4/3/2012	Breidinger, Kenneth	Lake Whitefish	44	no estimate, counts only	Total number captured or presence only	400	535	443.9	mm	Gill netting	Good quality	FIS
4/3/2012	Breidinger, Kenneth	Lake Whitefish	7	no estimate, counts only	Total number captured or presence only	408	468	442.1	mm	Boat shocking with boom	Good quality	FIS
4/3/2012	Breidinger, Kenneth	Largescale Sucker	6	no estimate, counts only	Total number captured or presence only	410	505	462.3	mm	Gill netting	Good quality	FIS
4/3/2012	Breidinger, Kenneth	Largescale Sucker	35	no estimate, counts only	Total number captured or presence only	408	531	465.2	mm	Boat shocking with boom	Good quality	FIS
4/3/2012			7			455	522	485.4	mm			FIS

	Breidinger, Kenneth	Longnose Sucker		no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
4/3/2012	Breidinger, Kenneth	Mountain Whitefish	35	no estimate, counts only	Total number captured or presence only	141	420	278.2	mm	Boat shocking with boom	Good quality	FIS
4/3/2012	Breidinger, Kenneth	Northern Pike	1	no estimate, counts only	Total number captured or presence only	762	762	762	mm	Boat shocking with boom	Good quality	FIS
4/3/2012	Breidinger, Kenneth	Northern Pike	1	no estimate, counts only	Total number captured or presence only	650	650	650	mm	Gill netting	Good quality	FIS
4/3/2012	Breidinger, Kenneth	Northern Pike Minnow	3	no estimate, counts only	Total number captured or presence only	372	606	501.7	mm	Boat shocking with boom	Good quality	FIS
4/3/2012	Breidinger, Kenneth	Rainbow Trout	41	no estimate, counts only	Total number captured or presence only	117	534	256.9	mm	Boat shocking with boom	Good quality	FIS
4/3/2012	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	430	430	430	mm	Gill netting	Good quality	FIS
4/3/2012	Breidinger, Kenneth	Smallmouth Bass	1	no estimate, counts only	Total number captured or presence only	373	373	373	mm	Boat shocking with boom	Good quality	FIS
4/3/2012	Breidinger, Kenneth	Walleye	14	no estimate, counts only	Total number captured or presence only	380	621	494.1	mm	Boat shocking with boom	Good quality	FIS
4/3/2012	Breidinger, Kenneth	Walleye	5	no estimate, counts only	Total number captured or presence only	398	555	479.2	mm	Gill netting	Good quality	FIS
4/3/2012			7			237	288	251.6	mm			FIS

	Breidinger, Kenneth	Westslope Cutthroat Trout		no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
4/3/2012	Breidinger, Kenneth	Westslope X Rainbow	1	no estimate, counts only	Total number captured or presence only	252	252	252	mm	Boat shocking with boom	Good quality	FIS
4/3/2012	Breidinger, Kenneth	Yellow Perch	2	no estimate, counts only	Total number captured or presence only	207	218	212.5	mm	Boat shocking with boom	Good quality	FIS
3/27/2012	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	284	284	284	mm	Boat shocking with boom	Good quality	FIS
3/27/2012	Breidinger, Kenneth	Largescale Sucker	46	no estimate, counts only	Total number captured or presence only	378	530	452.4	mm	Boat shocking with boom	Good quality	FIS
3/27/2012	Breidinger, Kenneth	Longnose Sucker	3	no estimate, counts only	Total number captured or presence only	406	522	466	mm	Boat shocking with boom	Good quality	FIS
3/27/2012	Breidinger, Kenneth	Mountain Whitefish	6	no estimate, counts only	Total number captured or presence only	240	275	252.8	mm	Boat shocking with boom	Good quality	FIS
3/27/2012	Breidinger, Kenneth	Rainbow Trout	6	no estimate, counts only	Total number captured or presence only	211	340	243.5	mm	Boat shocking with boom	Good quality	FIS
3/27/2012	Breidinger, Kenneth	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	258	258	258	mm	Boat shocking with boom	Good quality	FIS
3/19/2012	Breidinger, Kenneth	Brook Trout	1	no estimate, counts only	Total number captured or presence only	217	217	217	mm	Boat shocking with boom	Good quality	FIS
3/19/2012		Brown Trout	2			255	271	263	mm			FIS

	Breidinger, Kenneth			no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
3/19/2012	Breidinger, Kenneth	Lake Whitefish	14	no estimate, counts only	Total number captured or presence only	415	460	439.5	mm	Boat shocking with boom	Good quality	FIS
3/19/2012	Breidinger, Kenneth	Largescale Sucker	30	no estimate, counts only	Total number captured or presence only	412	540	458.4	mm	Boat shocking with boom	Good quality	FIS
3/19/2012	Breidinger, Kenneth	Longnose Sucker	1	no estimate, counts only	Total number captured or presence only	495	495	495	mm	Boat shocking with boom	Good quality	FIS
3/19/2012	Breidinger, Kenneth	Mountain Whitefish	6	no estimate, counts only	Total number captured or presence only	225	392	322.8	mm	Boat shocking with boom	Good quality	FIS
3/19/2012	Breidinger, Kenneth	Rainbow Trout	6	no estimate, counts only	Total number captured or presence only	156	460	298.5	mm	Boat shocking with boom	Good quality	FIS
3/13/2012	Breidinger, Kenneth	Largescale Sucker	32	no estimate, counts only	Total number captured or presence only	397	560	457.5	mm	Boat shocking with boom	Good quality	FIS
3/13/2012	Breidinger, Kenneth	Mountain Whitefish	3	no estimate, counts only	Total number captured or presence only	298	305	301	mm	Boat shocking with boom	Good quality	FIS
3/13/2012	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	412	412	412	mm	Boat shocking with boom	Good quality	FIS
3/13/2012	Breidinger, Kenneth	Rainbow X Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	498	498	498	mm	Boat shocking with boom	Good quality	FIS
3/6/2012		Brown Trout	6			220	421	318.5	mm			FIS

	Breidinger, Kenneth			no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
3/6/2012	Breidinger, Kenneth	Largescale Sucker	24	no estimate, counts only	Total number captured or presence only	412	500	458.6	mm	Boat shocking with boom	Good quality	FIS
3/6/2012	Breidinger, Kenneth	Mountain Whitefish	11	no estimate, counts only	Total number captured or presence only	238	420	330.8	mm	Boat shocking with boom	Good quality	FIS
3/6/2012	Breidinger, Kenneth	Rainbow Trout	5	no estimate, counts only	Total number captured or presence only	220	255	240.4	mm	Boat shocking with boom	Good quality	FIS
3/6/2012	Breidinger, Kenneth	Westslope Cutthroat Trout	2	no estimate, counts only	Total number captured or presence only	340	343	341.5	mm	Boat shocking with boom	Good quality	FIS

Section: Below PPL Dam, Thompson Falls, MT
River Miles: 64.3 to 65.5

Date	Collector	Species	Est.	Sec. Unit	Method	Length Min	Max	Avg.	Unit	Gear	Data Rating	Source
4/25/2016	Kreiner, Ryan	Brown Trout	2	no estimate, counts only	Total number captured or presence only	330	348	339	mm	Boat shocking with boom	Good quality	FIS
4/25/2016	Kreiner, Ryan	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	239	380	309.5	mm	Boat shocking with boom	Good quality	FIS
4/25/2016	Kreiner, Ryan	Walleye	2	no estimate, counts only	Total number captured or presence only	630	685	657.5	mm	Boat shocking with boom	Good quality	FIS
6/3/2014	Breidinger, Kenneth	Brown Trout	2	no estimate, counts only	Total number captured or presence only	125	361	243	mm	Boat shocking with boom	Good quality	FIS
6/3/2014		Bull Trout	1			509	509	509	mm			FIS

	Breidinger, Kenneth			no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
6/3/2014	Breidinger, Kenneth	Lake Whitefish	37	no estimate, counts only	Total number captured or presence only	365	485	421.1	mm	Boat shocking with boom	Good quality	FIS
6/3/2014	Breidinger, Kenneth	Largescale Sucker	44	no estimate, counts only	Total number captured or presence only	197	560	464.2	mm	Boat shocking with boom	Good quality	FIS
6/3/2014	Breidinger, Kenneth	Longnose Sucker	5	no estimate, counts only	Total number captured or presence only	375	535	460.2	mm	Boat shocking with boom	Good quality	FIS
6/3/2014	Breidinger, Kenneth	Mountain Whitefish	4	no estimate, counts only	Total number captured or presence only	267	430	348.8	mm	Boat shocking with boom	Good quality	FIS
6/3/2014	Breidinger, Kenneth	Northern Pike	25	no estimate, counts only	Total number captured or presence only	458	960	607	mm	Boat shocking with boom	Good quality	FIS
6/3/2014	Breidinger, Kenneth	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	555	555	555	mm	Boat shocking with boom	Good quality	FIS
6/3/2014	Breidinger, Kenneth	Peamouth	6	no estimate, counts only	Total number captured or presence only	322	346	335.8	mm	Boat shocking with boom	Good quality	FIS
6/3/2014	Breidinger, Kenneth	Rainbow Trout	6	no estimate, counts only	Total number captured or presence only	130	429	345.7	mm	Boat shocking with boom	Good quality	FIS
6/3/2014	Breidinger, Kenneth	Smallmouth Bass	2	no estimate, counts only	Total number captured or presence only	345	345	345	mm	Boat shocking with boom	Good quality	FIS
6/3/2014			1			277	277	277	mm			FIS

	Breidinger, Kenneth	Westslope Cutthroat Trout		no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
5/28/2014	Breidinger, Kenneth	Brown Trout	3	no estimate, counts only	Total number captured or presence only	125	433	251.7	mm	Boat shocking with boom	Good quality	FIS
5/28/2014	Breidinger, Kenneth	Bull Trout	1	no estimate, counts only	Total number captured or presence only	567	567	567	mm	Boat shocking with boom	Good quality	FIS
5/28/2014	Breidinger, Kenneth	Lake Whitefish	76	no estimate, counts only	Total number captured or presence only	127	492	412	mm	Boat shocking with boom	Good quality	FIS
5/28/2014	Breidinger, Kenneth	Largescale Sucker	60	no estimate, counts only	Total number captured or presence only	418	537	468.3	mm	Boat shocking with boom	Good quality	FIS
5/28/2014	Breidinger, Kenneth	Longnose Sucker	20	no estimate, counts only	Total number captured or presence only	400	531	455.3	mm	Boat shocking with boom	Good quality	FIS
5/28/2014	Breidinger, Kenneth	Mountain Whitefish	7	no estimate, counts only	Total number captured or presence only	262	412	342.4	mm	Boat shocking with boom	Good quality	FIS
5/28/2014	Breidinger, Kenneth	Northern Pike	13	no estimate, counts only	Total number captured or presence only	495	710	566.9	mm	Boat shocking with boom	Good quality	FIS
5/28/2014	Breidinger, Kenneth	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	485	485	485	mm	Boat shocking with boom	Good quality	FIS
5/28/2014	Breidinger, Kenneth	Peamouth	4	no estimate, counts only	Total number captured or presence only	312	343	333.8	mm	Boat shocking with boom	Good quality	FIS
5/28/2014			3			140	332	241.7	mm			FIS

	Breidinger, Kenneth	Rainbow Trout		no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
5/28/2014	Breidinger, Kenneth	Smallmouth Bass	16	no estimate, counts only	Total number captured or presence only	125	397	314.4	mm	Boat shocking with boom	Good quality	FIS
5/28/2014	Breidinger, Kenneth	Walleye	1	no estimate, counts only	Total number captured or presence only	468	468	468	mm	Boat shocking with boom	Good quality	FIS
5/28/2014	Breidinger, Kenneth	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	252	252	252	mm	Boat shocking with boom	Good quality	FIS
4/7/2014	Breidinger, Kenneth	Brown Trout	2	no estimate, counts only	Total number captured or presence only	261	391	326	mm	Boat shocking with boom	Good quality	FIS
4/7/2014	Breidinger, Kenneth	Bull Trout	1	no estimate, counts only	Total number captured or presence only	520	520	520	mm	Boat shocking with boom	Good quality	FIS
4/7/2014	Breidinger, Kenneth	Mountain Whitefish	1	no estimate, counts only	Total number captured or presence only	317	317	317	mm	Boat shocking with boom	Good quality	FIS
4/7/2014	Breidinger, Kenneth	Northern Pike	1	no estimate, counts only	Total number captured or presence only	605	605	605	mm	Boat shocking with boom	Good quality	FIS
4/7/2014	Breidinger, Kenneth	Rainbow Trout	6	no estimate, counts only	Total number captured or presence only	285	496	426.5	mm	Boat shocking with boom	Good quality	FIS
4/7/2014	Breidinger, Kenneth	Walleye	1	no estimate, counts only	Total number captured or presence only	482	482	482	mm	Boat shocking with boom	Good quality	FIS
4/7/2014			2			307	340	323.5	mm			FIS

	Breidinger, Kenneth	Westslope Cutthroat Trout		no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
4/7/2014	Breidinger, Kenneth	Westslope X Rainbow	1	no estimate, counts only	Total number captured or presence only	462	462	462	mm	Boat shocking with boom	Good quality	FIS
4/4/2014	Breidinger, Kenneth	Brown Trout	2	no estimate, counts only	Total number captured or presence only	385	490	437.5	mm	Boat shocking with boom	Good quality	FIS
4/4/2014	Breidinger, Kenneth	Mountain Whitefish	1	no estimate, counts only	Total number captured or presence only	242	242	242	mm	Boat shocking with boom	Good quality	FIS
4/4/2014	Breidinger, Kenneth	Northern Pike	2	no estimate, counts only	Total number captured or presence only	485	645	565	mm	Boat shocking with boom	Good quality	FIS
4/4/2014	Breidinger, Kenneth	Rainbow Trout	12	no estimate, counts only	Total number captured or presence only	270	486	401.4	mm	Boat shocking with boom	Good quality	FIS
4/4/2014	Breidinger, Kenneth	Walleye	1	no estimate, counts only	Total number captured or presence only	470	470	470	mm	Boat shocking with boom	Good quality	FIS
4/4/2014	Breidinger, Kenneth	Westslope Cutthroat Trout	2	no estimate, counts only	Total number captured or presence only	306	438	372	mm	Boat shocking with boom	Good quality	FIS
4/4/2014	Breidinger, Kenneth	Westslope X Rainbow	1	no estimate, counts only	Total number captured or presence only	242	242	242	mm	Boat shocking with boom	Good quality	FIS
6/25/2012	Breidinger, Kenneth	Kokanee	1	no estimate, counts only	Total number captured or presence only	155	155	155	mm	Boat shocking with boom	Good quality	FIS
6/25/2012			6			428	500	462.2	mm			FIS

	Breidinger, Kenneth	Lake Whitefish		no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
6/25/2012	Breidinger, Kenneth	Largescale Sucker	89	no estimate, counts only	Total number captured or presence only	125	555	444.4	mm	Boat shocking with boom	Good quality	FIS
6/25/2012	Breidinger, Kenneth	Longnose Sucker	1	no estimate, counts only	Total number captured or presence only	480	480	480	mm	Boat shocking with boom	Good quality	FIS
6/25/2012	Breidinger, Kenneth	Mountain Whitefish	3	no estimate, counts only	Total number captured or presence only	177	285	223.3	mm	Boat shocking with boom	Good quality	FIS
6/25/2012	Breidinger, Kenneth	Northern Pike	9	no estimate, counts only	Total number captured or presence only	560	1035	682.3	mm	Boat shocking with boom	Good quality	FIS
6/25/2012	Breidinger, Kenneth	Northern Pike Minnow	13	no estimate, counts only	Total number captured or presence only	136	602	353.7	mm	Boat shocking with boom	Good quality	FIS
6/25/2012	Breidinger, Kenneth	Rainbow Trout	10	no estimate, counts only	Total number captured or presence only	110	455	230.4	mm	Boat shocking with boom	Good quality	FIS
6/25/2012	Breidinger, Kenneth	Smallmouth Bass	16	no estimate, counts only	Total number captured or presence only	223	447	300.9	mm	Boat shocking with boom	Good quality	FIS
6/25/2012	Breidinger, Kenneth	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	232	232	232	mm	Boat shocking with boom	Good quality	FIS
4/16/2012	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	385	385	385	mm	Boat shocking with boom	Good quality	FIS
4/16/2012			1			275	275	275	mm			FIS

	Breidinger, Kenneth	Westslope Cutthroat Trout		no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
4/10/2012	Breidinger, Kenneth	Brown Trout	3	no estimate, counts only	Total number captured or presence only	278	362	331.7	mm	Boat shocking with boom	Good quality	FIS
4/10/2012	Breidinger, Kenneth	Bull Trout	1	no estimate, counts only	Total number captured or presence only	272	272	272	mm	Boat shocking with boom	Good quality	FIS
4/10/2012	Breidinger, Kenneth	Mountain Whitefish	5	no estimate, counts only	Total number captured or presence only	245	396	313.8	mm	Boat shocking with boom	Good quality	FIS
4/10/2012	Breidinger, Kenneth	Northern Pike Minnow	4	no estimate, counts only	Total number captured or presence only	333	470	381.3	mm	Boat shocking with boom	Good quality	FIS
4/10/2012	Breidinger, Kenneth	Rainbow Trout	6	no estimate, counts only	Total number captured or presence only	205	435	325.8	mm	Boat shocking with boom	Good quality	FIS
4/10/2012	Breidinger, Kenneth	Smallmouth Bass	1	no estimate, counts only	Total number captured or presence only	375	375	375	mm	Boat shocking with boom	Good quality	FIS
4/10/2012	Breidinger, Kenneth	Walleye	26	no estimate, counts only	Total number captured or presence only	370	748	496.2	mm	Boat shocking with boom	Good quality	FIS
4/10/2012	Breidinger, Kenneth	Westslope Cutthroat Trout	3	no estimate, counts only	Total number captured or presence only	260	330	295	mm	Boat shocking with boom	Good quality	FIS
4/4/2012	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	220	220	220	mm	Boat shocking with boom	Good quality	FIS
4/4/2012			1			236	236	236	mm			FIS

	Breidinger, Kenneth	Mountain Whitefish		no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
4/4/2012	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	214	214	214	mm	Boat shocking with boom	Good quality	FIS
4/4/2012	Breidinger, Kenneth	Walleye	17	no estimate, counts only	Total number captured or presence only	413	571	496.4	mm	Boat shocking with boom	Good quality	FIS
4/4/2012	Breidinger, Kenneth	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	315	315	315	mm	Boat shocking with boom	Good quality	FIS
6/28/2011	Breidinger, Kenneth	Lake Whitefish	33	no estimate, counts only	Total number captured or presence only	360	531	434.3	mm	Boat shocking with boom	Good quality	FIS
6/28/2011	Breidinger, Kenneth	Largescale Sucker	80	no estimate, counts only	Total number captured or presence only	205	592	467.3	mm	Boat shocking with boom	Good quality	FIS
6/28/2011	Breidinger, Kenneth	Longnose Sucker	29	no estimate, counts only	Total number captured or presence only	186	522	462.5	mm	Boat shocking with boom	Good quality	FIS
6/28/2011	Breidinger, Kenneth	Mountain Whitefish	20	no estimate, counts only	Total number captured or presence only	157	410	273.4	mm	Boat shocking with boom	Good quality	FIS
6/28/2011	Breidinger, Kenneth	Northern Pike Minnow	4	no estimate, counts only	Total number captured or presence only	420	573	482.8	mm	Boat shocking with boom	Good quality	FIS
6/28/2011	Breidinger, Kenneth	Peamouth	24	no estimate, counts only	Total number captured or presence only	265	392	325.8	mm	Boat shocking with boom	Good quality	FIS
6/28/2011			7			166	397	248	mm			FIS

	Breidinger, Kenneth	Rainbow Trout		no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
6/28/2011	Breidinger, Kenneth	Smallmouth Bass	2	no estimate, counts only	Total number captured or presence only	223	230	226.5	mm	Boat shocking with boom	Good quality	FIS
6/28/2011	Breidinger, Kenneth	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	305	305	305	mm	Boat shocking with boom	Good quality	FIS

Section: Thompson Falls Fish Ladder
River Miles: 65.6 to 65.7

Date	Collector	Species	Est.	Sec. Unit	Method	Length Min	Max	Avg.	Unit	Gear	Data Rating	Source
7/22/2016	Kreiner, Ryan	Northern Pike Minnow	2	no estimate, counts only	Total number captured or presence only	322	322	322	mm	Other	Good quality	FIS
7/22/2016	Kreiner, Ryan	Rainbow Trout	14	no estimate, counts only	Total number captured or presence only	216	490	325.8	mm	Other	Good quality	FIS
7/22/2016	Kreiner, Ryan	Smallmouth Bass	74	no estimate, counts only	Total number captured or presence only	194	337	231.3	mm	Other	Good quality	FIS
7/20/2016	Kreiner, Ryan	Brown Trout	3	no estimate, counts only	Total number captured or presence only	276	468	384.7	mm	Other	Good quality	FIS
7/20/2016	Kreiner, Ryan	Rainbow Trout	8	no estimate, counts only	Total number captured or presence only	349	520	423.3	mm	Other	Good quality	FIS
7/18/2016	Kreiner, Ryan	Brown Trout	1	no estimate, counts only	Total number captured or presence only	287	287	287	mm	Other	Good quality	FIS
7/18/2016	Kreiner, Ryan		2			315	317	316	mm	Other		FIS

		Northern Pike Minnow		no estimate, counts only	Total number captured or presence only						Good quality	
7/18/2016	Kreiner, Ryan	Rainbow Trout	9	no estimate, counts only	Total number captured or presence only	309	468	389.6	mm	Other	Good quality	FIS
7/18/2016	Kreiner, Ryan	Smallmouth Bass	1	no estimate, counts only	Total number captured or presence only	258	258	258	mm	Other	Good quality	FIS
7/15/2016	Kreiner, Ryan	Brown Trout	2	no estimate, counts only	Total number captured or presence only	272	384	328	mm	Other	Good quality	FIS
7/15/2016	Kreiner, Ryan	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	211	472	341.5	mm	Other	Good quality	FIS
7/14/2016	Kreiner, Ryan	Brown Trout	3	no estimate, counts only	Total number captured or presence only	372	504	423.3	mm	Other	Good quality	FIS
7/14/2016	Kreiner, Ryan	Northern Pike Minnow	2	no estimate, counts only	Total number captured or presence only	322	391	356.5	mm	Other	Good quality	FIS
7/14/2016	Kreiner, Ryan	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	371	481	424.7	mm	Other	Good quality	FIS
7/14/2016	Kreiner, Ryan	Smallmouth Bass	3	no estimate, counts only	Total number captured or presence only	207	248	230.7	mm	Other	Good quality	FIS
7/12/2016	Kreiner, Ryan	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	530	530	530	mm	Other	Good quality	FIS
7/12/2016	Kreiner, Ryan		5			198	288	238.8	mm	Other		FIS

		Smallmouth Bass		no estimate, counts only	Total number captured or presence only						Good quality	
7/11/2016	Kreiner, Ryan	Brown Trout	6	no estimate, counts only	Total number captured or presence only	272	446	374	mm	Other	Good quality	FIS
7/11/2016	Kreiner, Ryan	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	396	396	396	mm	Other	Good quality	FIS
7/11/2016	Kreiner, Ryan	Northern Pike Minnow	5	no estimate, counts only	Total number captured or presence only	276	316	300.2	mm	Other	Good quality	FIS
7/11/2016	Kreiner, Ryan	Rainbow Trout	8	no estimate, counts only	Total number captured or presence only	315	468	392.9	mm	Other	Good quality	FIS
7/11/2016	Kreiner, Ryan	Smallmouth Bass	64	no estimate, counts only	Total number captured or presence only	221	327	248.4	mm	Other	Good quality	FIS
7/11/2016	Kreiner, Ryan	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	272	272	272	mm	Other	Good quality	FIS
7/8/2016	Kreiner, Ryan	Brown Trout	2	no estimate, counts only	Total number captured or presence only	280	420	350	mm	Other	Good quality	FIS
7/8/2016	Kreiner, Ryan	Northern Pike Minnow	2	no estimate, counts only	Total number captured or presence only	310	370	340	mm	Other	Good quality	FIS
7/8/2016	Kreiner, Ryan	Rainbow Trout	6	no estimate, counts only	Total number captured or presence only	210	450	357.5	mm	Other	Good quality	FIS
7/8/2016	Kreiner, Ryan		16			200	270	237.8	mm	Other		FIS

		Smallmouth Bass		no estimate, counts only	Total number captured or presence only						Good quality	
7/7/2016	Kreiner, Ryan	Brown Trout	4	no estimate, counts only	Total number captured or presence only	217	430	301	mm	Other	Good quality	FIS
7/7/2016	Kreiner, Ryan	Northern Pike Minnow	4	no estimate, counts only	Total number captured or presence only	297	441	337.8	mm	Other	Good quality	FIS
7/7/2016	Kreiner, Ryan	Rainbow Trout	4	no estimate, counts only	Total number captured or presence only	201	363	308.8	mm	Other	Good quality	FIS
7/7/2016	Kreiner, Ryan	Smallmouth Bass	9	no estimate, counts only	Total number captured or presence only	208	284	243.2	mm	Other	Good quality	FIS
7/7/2016	Kreiner, Ryan	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	263	263	263	mm	Other	Good quality	FIS
7/6/2016	Kreiner, Ryan	Brown Trout	1	no estimate, counts only	Total number captured or presence only	311	311	311	mm	Other	Good quality	FIS
7/6/2016	Kreiner, Ryan	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	348	348	348	mm	Other	Good quality	FIS
7/5/2016	Kreiner, Ryan	Brown Trout	17	no estimate, counts only	Total number captured or presence only	212	599	351.7	mm	Other	Good quality	FIS
7/5/2016	Kreiner, Ryan	Northern Pike Minnow	4	no estimate, counts only	Total number captured or presence only	303	435	369.3	mm	Other	Good quality	FIS
7/5/2016	Kreiner, Ryan		34			198	455	352.3	mm	Other		FIS

		Rainbow Trout		no estimate, counts only	Total number captured or presence only						Good quality	
7/1/2016	Kreiner, Ryan	Brown Trout	12	no estimate, counts only	Total number captured or presence only	231	455	310.9	mm	Other	Good quality	FIS
7/1/2016	Kreiner, Ryan	Northern Pike Minnow	2	no estimate, counts only	Total number captured or presence only	301	341	321	mm	Other	Good quality	FIS
7/1/2016	Kreiner, Ryan	Rainbow Trout	12	no estimate, counts only	Total number captured or presence only	208	514	340.2	mm	Other	Good quality	FIS
7/1/2016	Kreiner, Ryan	Smallmouth Bass	1	no estimate, counts only	Total number captured or presence only	274	274	274	mm	Other	Good quality	FIS
7/1/2016	Kreiner, Ryan	Westslope Cutthroat Trout	4	no estimate, counts only	Total number captured or presence only	306	356	328.5	mm	Other	Good quality	FIS
6/30/2016	Kreiner, Ryan	Brown Trout	8	no estimate, counts only	Total number captured or presence only	303	582	390	mm	Other	Good quality	FIS
6/30/2016	Kreiner, Ryan	Rainbow Trout	5	no estimate, counts only	Total number captured or presence only	272	500	384.4	mm	Other	Good quality	FIS
6/30/2016	Kreiner, Ryan	Smallmouth Bass	16	no estimate, counts only	Total number captured or presence only	182	276	231	mm	Other	Good quality	FIS
6/29/2016	Kreiner, Ryan	Brown Trout	3	no estimate, counts only	Total number captured or presence only	238	338	277.7	mm	Other	Good quality	FIS
6/29/2016	Kreiner, Ryan		1			478	478	478	mm	Other		FIS

		Largescale Sucker		no estimate, counts only	Total number captured or presence only						Good quality	
6/29/2016	Kreiner, Ryan	Northern Pike Minnow	7	no estimate, counts only	Total number captured or presence only	281	543	366.6	mm	Other	Good quality	FIS
6/29/2016	Kreiner, Ryan	Smallmouth Bass	42	no estimate, counts only	Total number captured or presence only	207	273	236.6	mm	Other	Good quality	FIS
6/28/2016	Kreiner, Ryan	Brown Trout	4	no estimate, counts only	Total number captured or presence only	217	426	324.5	mm	Other	Good quality	FIS
6/28/2016	Kreiner, Ryan	Northern Pike Minnow	18	no estimate, counts only	Total number captured or presence only	296	462	390.8	mm	Other	Good quality	FIS
6/28/2016	Kreiner, Ryan	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	337	552	444.5	mm	Other	Good quality	FIS
6/28/2016	Kreiner, Ryan	Smallmouth Bass	9	no estimate, counts only	Total number captured or presence only	223	369	272.2	mm	Other	Good quality	FIS
6/27/2016	Kreiner, Ryan	Brown Trout	11	no estimate, counts only	Total number captured or presence only	200	450	298.7	mm	Other	Good quality	FIS
6/27/2016	Kreiner, Ryan	Largescale Sucker	5	no estimate, counts only	Total number captured or presence only	216	527	320.8	mm	Other	Good quality	FIS
6/27/2016	Kreiner, Ryan	Northern Pike Minnow	21	no estimate, counts only	Total number captured or presence only	264	521	363.5	mm	Other	Good quality	FIS
6/27/2016	Kreiner, Ryan		11			186	510	357.9	mm	Other		FIS

		Rainbow Trout		no estimate, counts only	Total number captured or presence only						Good quality	
6/27/2016	Kreiner, Ryan	Smallmouth Bass	6	no estimate, counts only	Total number captured or presence only	224	281	244.3	mm	Other	Good quality	FIS
6/27/2016	Kreiner, Ryan	Westslope Cutthroat Trout	2	no estimate, counts only	Total number captured or presence only	262	345	303.5	mm	Other	Good quality	FIS
6/24/2016	Kreiner, Ryan	Brown Trout	4	no estimate, counts only	Total number captured or presence only	421	484	447.5	mm	Other	Good quality	FIS
6/24/2016	Kreiner, Ryan	Largescale Sucker	5	no estimate, counts only	Total number captured or presence only	225	497	340.8	mm	Other	Good quality	FIS
6/24/2016	Kreiner, Ryan	Northern Pike Minnow	9	no estimate, counts only	Total number captured or presence only	285	414	344.3	mm	Other	Good quality	FIS
6/24/2016	Kreiner, Ryan	Rainbow Trout	5	no estimate, counts only	Total number captured or presence only	241	338	280.6	mm	Other	Good quality	FIS
6/24/2016	Kreiner, Ryan	Smallmouth Bass	6	no estimate, counts only	Total number captured or presence only	212	296	243	mm	Other	Good quality	FIS
6/23/2016	Kreiner, Ryan	Brown Trout	5	no estimate, counts only	Total number captured or presence only	260	452	307.4	mm	Other	Good quality	FIS
6/23/2016	Kreiner, Ryan	Northern Pike Minnow	20	no estimate, counts only	Total number captured or presence only	286	414	354.8	mm	Other	Good quality	FIS
6/23/2016	Kreiner, Ryan		16			208	465	315.3	mm	Other		FIS

		Rainbow Trout		no estimate, counts only	Total number captured or presence only						Good quality	
6/23/2016	Kreiner, Ryan	Smallmouth Bass	12	no estimate, counts only	Total number captured or presence only	230	282	253.4	mm	Other	Good quality	FIS
6/23/2016	Kreiner, Ryan	Westslope Cutthroat Trout	3	no estimate, counts only	Total number captured or presence only	324	358	342.7	mm	Other	Good quality	FIS
6/22/2016	Kreiner, Ryan	Brown Trout	3	no estimate, counts only	Total number captured or presence only	277	314	293	mm	Other	Good quality	FIS
6/22/2016	Kreiner, Ryan	Largescale Sucker	7	no estimate, counts only	Total number captured or presence only	252	467	342.9	mm	Other	Good quality	FIS
6/22/2016	Kreiner, Ryan	Northern Pike Minnow	15	no estimate, counts only	Total number captured or presence only	308	544	405.7	mm	Other	Good quality	FIS
6/22/2016	Kreiner, Ryan	Peamouth X Squawfish	1	no estimate, counts only	Total number captured or presence only	320	320	320	mm	Other	Good quality	FIS
6/22/2016	Kreiner, Ryan	Rainbow Trout	6	no estimate, counts only	Total number captured or presence only	178	522	310	mm	Other	Good quality	FIS
6/22/2016	Kreiner, Ryan	Smallmouth Bass	3	no estimate, counts only	Total number captured or presence only	239	273	257.7	mm	Other	Good quality	FIS
6/22/2016	Kreiner, Ryan	Westslope Cutthroat Trout	2	no estimate, counts only	Total number captured or presence only	314	336	325	mm	Other	Good quality	FIS
6/21/2016	Kreiner, Ryan	Brown Trout	9			234	482	309	mm	Other		FIS

				no estimate, counts only	Total number captured or presence only						Good quality	
6/21/2016	Kreiner, Ryan	Largescale Sucker	17	no estimate, counts only	Total number captured or presence only	292	534	393.7	mm	Other	Good quality	FIS
6/21/2016	Kreiner, Ryan	Northern Pike Minnow	94	no estimate, counts only	Total number captured or presence only	297	518	418.5	mm	Other	Good quality	FIS
6/21/2016	Kreiner, Ryan	Rainbow Trout	11	no estimate, counts only	Total number captured or presence only	212	526	418.1	mm	Other	Good quality	FIS
6/21/2016	Kreiner, Ryan	Smallmouth Bass	3	no estimate, counts only	Total number captured or presence only	259	453	331.7	mm	Other	Good quality	FIS
6/21/2016	Kreiner, Ryan	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	360	360	360	mm	Other	Good quality	FIS
6/21/2016	Kreiner, Ryan	Westslope X Rainbow	1	no estimate, counts only	Total number captured or presence only	462	462	462	mm	Other	Good quality	FIS
6/20/2016	Kreiner, Ryan	Brown Trout	16	no estimate, counts only	Total number captured or presence only	242	497	367.6	mm	Other	Good quality	FIS
6/20/2016	Kreiner, Ryan	Largescale Sucker	155	no estimate, counts only	Total number captured or presence only	372	562	440.9	mm	Other	Good quality	FIS
6/20/2016	Kreiner, Ryan	Northern Pike Minnow	129	no estimate, counts only	Total number captured or presence only	281	532	413.8	mm	Other	Good quality	FIS
6/20/2016	Kreiner, Ryan		10			345	370	357.5	mm	Other		FIS

		Peamouth X Squawfish		no estimate, counts only	Total number captured or presence only						Good quality	
6/20/2016	Kreiner, Ryan	Rainbow Trout	9	no estimate, counts only	Total number captured or presence only	262	468	375.7	mm	Other	Good quality	FIS
6/17/2016	Kreiner, Ryan	Brown Trout	1	no estimate, counts only	Total number captured or presence only	412	412	412	mm	Other	Good quality	FIS
6/17/2016	Kreiner, Ryan	Largescale Sucker	2	no estimate, counts only	Total number captured or presence only	328	411	369.5	mm	Other	Good quality	FIS
6/17/2016	Kreiner, Ryan	Northern Pike Minnow	4	no estimate, counts only	Total number captured or presence only	340	458	387	mm	Other	Good quality	FIS
6/17/2016	Kreiner, Ryan	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	452	452	452	mm	Other	Good quality	FIS
6/16/2016	Kreiner, Ryan	Brown Trout	2	no estimate, counts only	Total number captured or presence only	484	564	524	mm	Other	Good quality	FIS
6/16/2016	Kreiner, Ryan	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	347	347	347	mm	Other	Good quality	FIS
6/15/2016	Kreiner, Ryan	Northern Pike Minnow	2	no estimate, counts only	Total number captured or presence only	396	407	401.5	mm	Other	Good quality	FIS
6/14/2016	Kreiner, Ryan	Brown Trout	2	no estimate, counts only	Total number captured or presence only	368	423	395.5	mm	Other	Good quality	FIS
6/14/2016	Kreiner, Ryan		2			470	518	494	mm	Other		FIS

		Rainbow Trout		no estimate, counts only	Total number captured or presence only						Good quality	
6/13/2016	Kreiner, Ryan	Brown Trout	3	no estimate, counts only	Total number captured or presence only	342	450	401.3	mm	Other	Good quality	FIS
6/13/2016	Kreiner, Ryan	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	381	381	381	mm	Other	Good quality	FIS
6/13/2016	Kreiner, Ryan	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	462	462	462	mm	Other	Good quality	FIS
6/13/2016	Kreiner, Ryan	Smallmouth Bass	1	no estimate, counts only	Total number captured or presence only	230	230	230	mm	Other	Good quality	FIS
6/10/2016	Kreiner, Ryan	Largescale Sucker	7	no estimate, counts only	Total number captured or presence only	347	472	406.7	mm	Other	Good quality	FIS
6/10/2016	Kreiner, Ryan	Northern Pike Minnow	2	no estimate, counts only	Total number captured or presence only	346	492	419	mm	Other	Good quality	FIS
6/10/2016	Kreiner, Ryan	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	510	510	510	mm	Other	Good quality	FIS
6/9/2016	Kreiner, Ryan	Brown Trout	4	no estimate, counts only	Total number captured or presence only	394	426	405.3	mm	Other	Good quality	FIS
6/9/2016	Kreiner, Ryan	Largescale Sucker	73	no estimate, counts only	Total number captured or presence only	312	470	409.6	mm	Other	Good quality	FIS
6/9/2016	Kreiner, Ryan		27			284	530	395.2	mm	Other		FIS

		Northern Pike Minnow		no estimate, counts only	Total number captured or presence only						Good quality	
6/9/2016	Kreiner, Ryan	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	412	422	417	mm	Other	Good quality	FIS
6/9/2016	Kreiner, Ryan	Smallmouth Bass	9	no estimate, counts only	Total number captured or presence only	227	360	269.7	mm	Other	Good quality	FIS
6/8/2016	Kreiner, Ryan	Brown Trout	1	no estimate, counts only	Total number captured or presence only	302	302	302	mm	Other	Good quality	FIS
6/8/2016	Kreiner, Ryan	Largescale Sucker	55	no estimate, counts only	Total number captured or presence only	272	455	393.9	mm	Other	Good quality	FIS
6/8/2016	Kreiner, Ryan	Northern Pike Minnow	91	no estimate, counts only	Total number captured or presence only	298	545	414.7	mm	Other	Good quality	FIS
6/8/2016	Kreiner, Ryan	Smallmouth Bass	2	no estimate, counts only	Total number captured or presence only	288	297	292.5	mm	Other	Good quality	FIS
6/7/2016	Kreiner, Ryan	Largescale Sucker	218	no estimate, counts only	Total number captured or presence only	283	484	397.1	mm	Other	Good quality	FIS
6/7/2016	Kreiner, Ryan	Longnose Sucker	2	no estimate, counts only	Total number captured or presence only	429	452	440.5	mm	Other	Good quality	FIS
6/7/2016	Kreiner, Ryan	Northern Pike Minnow	96	no estimate, counts only	Total number captured or presence only	297	543	397.9	mm	Other	Good quality	FIS
6/7/2016	Kreiner, Ryan		2			273	413	343	mm	Other		FIS

		Smallmouth Bass		no estimate, counts only	Total number captured or presence only						Good quality	
6/6/2016	Kreiner, Ryan	Brown Trout	2	no estimate, counts only	Total number captured or presence only	433	510	471.5	mm	Other	Good quality	FIS
6/6/2016	Kreiner, Ryan	Bull Trout	1	no estimate, counts only	Total number captured or presence only	618	618	618	mm	Other	Good quality	FIS
6/6/2016	Kreiner, Ryan	Largescale Sucker	148	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
6/6/2016	Kreiner, Ryan	Northern Pike Minnow	64	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
6/6/2016	Kreiner, Ryan	Peamouth X Squawfish	2	no estimate, counts only	Total number captured or presence only	390	390	390	mm	Other	Good quality	FIS
6/3/2016	Kreiner, Ryan	Largescale Sucker	3	no estimate, counts only	Total number captured or presence only	446	486	459.7	mm	Other	Good quality	FIS
6/3/2016	Kreiner, Ryan	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	418	418	418	mm	Other	Good quality	FIS
6/2/2016	Kreiner, Ryan	Largescale Sucker	27	no estimate, counts only	Total number captured or presence only	401	538	461.1	mm	Other	Good quality	FIS
6/2/2016	Kreiner, Ryan	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	352	352	352	mm	Other	Good quality	FIS
6/1/2016	Kreiner, Ryan		16			426	441	433.5	mm	Other		FIS

		Largescale Sucker		no estimate, counts only	Total number captured or presence only						Good quality	
6/1/2016	Kreiner, Ryan	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	370	370	370	mm	Other	Good quality	FIS
6/1/2016	Kreiner, Ryan	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	365	365	365	mm	Other	Good quality	FIS
5/31/2016	Kreiner, Ryan	Largescale Sucker	21	no estimate, counts only	Total number captured or presence only	412	520	458.2	mm	Other	Good quality	FIS
5/31/2016	Kreiner, Ryan	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	418	418	418	mm	Other	Good quality	FIS
5/31/2016	Kreiner, Ryan	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	298	542	400.3	mm	Other	Good quality	FIS
5/27/2016	Kreiner, Ryan	Largescale Sucker	25	no estimate, counts only	Total number captured or presence only	372	535	437.8	mm	Other	Good quality	FIS
5/26/2016	Kreiner, Ryan	Largescale Sucker	157	no estimate, counts only	Total number captured or presence only	395	461	425.3	mm	Other	Good quality	FIS
5/26/2016	Kreiner, Ryan	Northern Pike Minnow	2	no estimate, counts only	Total number captured or presence only	432	540	486	mm	Other	Good quality	FIS
5/25/2016	Kreiner, Ryan	Largescale Sucker	2	no estimate, counts only	Total number captured or presence only	426	475	450.5	mm	Other	Good quality	FIS
5/24/2016	Kreiner, Ryan		5			308	458	414.4	mm	Other		FIS

		Largescale Sucker		no estimate, counts only	Total number captured or presence only						Good quality	
5/24/2016	Kreiner, Ryan	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	371	371	371	mm	Other	Good quality	FIS
5/23/2016	Kreiner, Ryan	Largescale Sucker	3	no estimate, counts only	Total number captured or presence only	402	430	418	mm	Other	Good quality	FIS
5/20/2016	Kreiner, Ryan	Brown Trout	1	no estimate, counts only	Total number captured or presence only	241	241	241	mm	Other	Good quality	FIS
5/20/2016	Kreiner, Ryan	Largescale Sucker	102	no estimate, counts only	Total number captured or presence only	372	543	444.3	mm	Other	Good quality	FIS
5/20/2016	Kreiner, Ryan	Northern Pike Minnow	3	no estimate, counts only	Total number captured or presence only	363	530	462	mm	Other	Good quality	FIS
5/19/2016	Kreiner, Ryan	Largescale Sucker	15	no estimate, counts only	Total number captured or presence only	393	475	434.1	mm	Other	Good quality	FIS
5/19/2016	Kreiner, Ryan	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	378	378	378	mm	Other	Good quality	FIS
5/19/2016	Kreiner, Ryan	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	501	501	501	mm	Other	Good quality	FIS
5/18/2016	Kreiner, Ryan	Bull Trout	1	no estimate, counts only	Total number captured or presence only	615	615	615	mm	Other	Good quality	FIS
5/18/2016	Kreiner, Ryan		1			393	393	393	mm	Other		FIS

		Largescale Sucker		no estimate, counts only	Total number captured or presence only						Good quality	
5/18/2016	Kreiner, Ryan	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	388	388	388	mm	Other	Good quality	FIS
5/16/2016	Kreiner, Ryan	Largescale Sucker	84	no estimate, counts only	Total number captured or presence only	427	528	465.1	mm	Other	Good quality	FIS
5/16/2016	Kreiner, Ryan	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	378	378	378	mm	Other	Good quality	FIS
5/16/2016	Kreiner, Ryan	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	286	535	444.3	mm	Other	Good quality	FIS
5/13/2016	Kreiner, Ryan	Brown Trout	1	no estimate, counts only	Total number captured or presence only	312	312	312	mm	Other	Good quality	FIS
5/13/2016	Kreiner, Ryan	Largescale Sucker	4	no estimate, counts only	Total number captured or presence only	408	496	462	mm	Other	Good quality	FIS
5/12/2016	Kreiner, Ryan	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	461	461	461	mm	Other	Good quality	FIS
5/11/2016	Kreiner, Ryan	Largescale Sucker	3	no estimate, counts only	Total number captured or presence only	435	446	440	mm	Other	Good quality	FIS
5/11/2016	Kreiner, Ryan	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	421	421	421	mm	Other	Good quality	FIS
5/11/2016	Kreiner, Ryan		1			285	285	285	mm	Other		FIS

		Rainbow Trout		no estimate, counts only	Total number captured or presence only						Good quality	
5/11/2016	Kreiner, Ryan	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	315	315	315	mm	Other	Good quality	FIS
5/9/2016	Kreiner, Ryan	Largescale Sucker	300	no estimate, counts only	Total number captured or presence only	377	494	434.1	mm	Other	Good quality	FIS
5/9/2016	Kreiner, Ryan	Longnose Sucker	2	no estimate, counts only	Total number captured or presence only	412	417	414.5	mm	Other	Good quality	FIS
5/9/2016	Kreiner, Ryan	Northern Pike Minnow	22	no estimate, counts only	Total number captured or presence only	347	535	410.5	mm	Other	Good quality	FIS
5/9/2016	Kreiner, Ryan	Peamouth	2	no estimate, counts only	Total number captured or presence only	342	343	342.5	mm	Other	Good quality	FIS
5/6/2016	Kreiner, Ryan	Largescale Sucker	123	no estimate, counts only	Total number captured or presence only	296	508	435.6	mm	Other	Good quality	FIS
5/6/2016	Kreiner, Ryan	Northern Pike Minnow	5	no estimate, counts only	Total number captured or presence only	353	537	427	mm	Other	Good quality	FIS
5/5/2016	Kreiner, Ryan	Largescale Sucker	195	no estimate, counts only	Total number captured or presence only	395	530	454.5	mm	Other	Good quality	FIS
5/5/2016	Kreiner, Ryan	Longnose Sucker	1	no estimate, counts only	Total number captured or presence only	418	418	418	mm	Other	Good quality	FIS
5/5/2016	Kreiner, Ryan		9			336	548	444.7	mm	Other		FIS

		Northern Pike Minnow		no estimate, counts only	Total number captured or presence only						Good quality	
5/5/2016	Kreiner, Ryan	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	307	307	307	mm	Other	Good quality	FIS
5/5/2016	Kreiner, Ryan	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	481	481	481	mm	Other	Good quality	FIS
5/4/2016	Kreiner, Ryan	Largescale Sucker	157	no estimate, counts only	Total number captured or presence only	395	506	450.6	mm	Other	Good quality	FIS
5/4/2016	Kreiner, Ryan	Northern Pike Minnow	4	no estimate, counts only	Total number captured or presence only	339	522	420.5	mm	Other	Good quality	FIS
5/4/2016	Kreiner, Ryan	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	308	496	399.7	mm	Other	Good quality	FIS
5/4/2016	Kreiner, Ryan	Westslope Cutthroat Trout	2	no estimate, counts only	Total number captured or presence only	374	395	384.5	mm	Other	Good quality	FIS
5/3/2016	Kreiner, Ryan	Brook Trout	1	no estimate, counts only	Total number captured or presence only	248	248	248	mm	Other	Good quality	FIS
5/3/2016	Kreiner, Ryan	Brown Trout	1	no estimate, counts only	Total number captured or presence only	535	535	535	mm	Other	Good quality	FIS
5/3/2016	Kreiner, Ryan	Largescale Sucker	16	no estimate, counts only	Total number captured or presence only	403	480	441.4	mm	Other	Good quality	FIS
5/3/2016	Kreiner, Ryan		1			484	484	484	mm	Other		FIS

		Northern Pike Minnow		no estimate, counts only	Total number captured or presence only						Good quality	
5/3/2016	Kreiner, Ryan	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	303	410	358	mm	Other	Good quality	FIS
4/26/2016	Kreiner, Ryan	Largescale Sucker	2	no estimate, counts only	Total number captured or presence only	388	460	424	mm	Other	Good quality	FIS
4/25/2016	Kreiner, Ryan	Brown Trout	2	no estimate, counts only	Total number captured or presence only	285	315	300	mm	Other	Good quality	FIS
4/25/2016	Kreiner, Ryan	Largescale Sucker	159	no estimate, counts only	Total number captured or presence only	388	482	433.8	mm	Other	Good quality	FIS
4/25/2016	Kreiner, Ryan	Mountain Whitefish	1	no estimate, counts only	Total number captured or presence only	247	247	247	mm	Other	Good quality	FIS
4/25/2016	Kreiner, Ryan	Rainbow Trout	5	no estimate, counts only	Total number captured or presence only	267	512	350.2	mm	Other	Good quality	FIS
4/25/2016	Kreiner, Ryan	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	368	368	368	mm	Other	Good quality	FIS
4/22/2016	Kreiner, Ryan	Brown Trout	2	no estimate, counts only	Total number captured or presence only	270	290	280	mm	Other	Good quality	FIS
4/22/2016	Kreiner, Ryan	Largescale Sucker	72	no estimate, counts only	Total number captured or presence only	397	520	448.8	mm	Other	Good quality	FIS
4/22/2016	Kreiner, Ryan		1			402	402	402	mm	Other		FIS

		Northern Pike Minnow		no estimate, counts only	Total number captured or presence only						Good quality	
4/22/2016	Kreiner, Ryan	Rainbow Trout	5	no estimate, counts only	Total number captured or presence only	284	390	318.2	mm	Other	Good quality	FIS
4/22/2016	Kreiner, Ryan	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	418	418	418	mm	Other	Good quality	FIS
4/21/2016	Kreiner, Ryan	Brown Trout	1	no estimate, counts only	Total number captured or presence only	340	340	340	mm	Other	Good quality	FIS
4/21/2016	Kreiner, Ryan	Largescale Sucker	17	no estimate, counts only	Total number captured or presence only	407	516	454.1	mm	Other	Good quality	FIS
4/21/2016	Kreiner, Ryan	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	315	362	338.5	mm	Other	Good quality	FIS
4/20/2016	Kreiner, Ryan	Largescale Sucker	7	no estimate, counts only	Total number captured or presence only	416	480	440.1	mm	Other	Good quality	FIS
4/20/2016	Kreiner, Ryan	Rainbow Trout	6	no estimate, counts only	Total number captured or presence only	242	370	299.5	mm	Other	Good quality	FIS
4/20/2016	Kreiner, Ryan	Westslope Cutthroat Trout	2	no estimate, counts only	Total number captured or presence only	329	358	343.5	mm	Other	Good quality	FIS
4/19/2016	Kreiner, Ryan	Brown Trout	1	no estimate, counts only	Total number captured or presence only	305	305	305	mm	Other	Good quality	FIS
4/19/2016	Kreiner, Ryan		1			482	482	482	mm	Other		FIS

		Largescale Sucker		no estimate, counts only	Total number captured or presence only						Good quality	
4/19/2016	Kreiner, Ryan	Rainbow Trout	5	no estimate, counts only	Total number captured or presence only	297	408	329.4	mm	Other	Good quality	FIS
4/19/2016	Kreiner, Ryan	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	359	359	359	mm	Other	Good quality	FIS
4/18/2016	Kreiner, Ryan	Bull Trout	1	no estimate, counts only	Total number captured or presence only	413	413	413	mm	Other	Good quality	FIS
4/15/2016	Kreiner, Ryan	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	352	352	352	mm	Other	Good quality	FIS
4/14/2016	Kreiner, Ryan	Largescale Sucker	2	no estimate, counts only	Total number captured or presence only	408	501	454.5	mm	Other	Good quality	FIS
4/14/2016	Kreiner, Ryan	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	355	355	355	mm	Other	Good quality	FIS
4/13/2016	Kreiner, Ryan	Brown Trout	1	no estimate, counts only	Total number captured or presence only	298	298	298	mm	Other	Good quality	FIS
4/13/2016	Kreiner, Ryan	Largescale Sucker	9	no estimate, counts only	Total number captured or presence only	410	455	438.8	mm	Other	Good quality	FIS
4/13/2016	Kreiner, Ryan	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	271	271	271	mm	Other	Good quality	FIS
4/12/2016	Kreiner, Ryan	Brown Trout	5			286	362	325.2	mm	Other		FIS

				no estimate, counts only	Total number captured or presence only						Good quality	
4/12/2016	Kreiner, Ryan	Largescale Sucker	5	no estimate, counts only	Total number captured or presence only	417	471	442.8	mm	Other	Good quality	FIS
4/12/2016	Kreiner, Ryan	Mountain Whitefish	1	no estimate, counts only	Total number captured or presence only	381	381	381	mm	Other	Good quality	FIS
4/11/2016	Kreiner, Ryan	Brown Trout	2	no estimate, counts only	Total number captured or presence only	285	337	311	mm	Other	Good quality	FIS
4/11/2016	Kreiner, Ryan	Largescale Sucker	4	no estimate, counts only	Total number captured or presence only	418	459	440.5	mm	Other	Good quality	FIS
4/11/2016	Kreiner, Ryan	Rainbow Trout	4	no estimate, counts only	Total number captured or presence only	301	377	337.5	mm	Other	Good quality	FIS
4/11/2016	Kreiner, Ryan	Westslope Cutthroat Trout	2	no estimate, counts only	Total number captured or presence only	405	444	424.5	mm	Other	Good quality	FIS
4/11/2016	Kreiner, Ryan	Westslope X Rainbow	1	no estimate, counts only	Total number captured or presence only	311	311	311	mm	Other	Good quality	FIS
4/8/2016	Kreiner, Ryan	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	432	432	432	mm	Other	Good quality	FIS
4/8/2016	Kreiner, Ryan	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	330	330	330	mm	Other	Good quality	FIS
4/7/2016	Kreiner, Ryan	Brown Trout	4			272	372	313.8	mm	Other		FIS

				no estimate, counts only	Total number captured or presence only						Good quality	
4/6/2016	Kreiner, Ryan	Brown Trout	3	no estimate, counts only	Total number captured or presence only	281	349	304.7	mm	Other	Good quality	FIS
4/6/2016	Kreiner, Ryan	Largescale Sucker	3	no estimate, counts only	Total number captured or presence only	432	482	462.3	mm	Other	Good quality	FIS
4/6/2016	Kreiner, Ryan	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	298	298	298	mm	Other	Good quality	FIS
4/5/2016	Kreiner, Ryan	Brook Trout	1	no estimate, counts only	Total number captured or presence only	402	402	402	mm	Other	Good quality	FIS
4/5/2016	Kreiner, Ryan	Brown Trout	1	no estimate, counts only	Total number captured or presence only	288	288	288	mm	Other	Good quality	FIS
4/5/2016	Kreiner, Ryan	Largescale Sucker	6	no estimate, counts only	Total number captured or presence only	402	465	432.5	mm	Other	Good quality	FIS
4/5/2016	Kreiner, Ryan	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	400	405	402.5	mm	Other	Good quality	FIS
4/4/2016	Kreiner, Ryan	Rainbow Trout	6	no estimate, counts only	Total number captured or presence only	290	570	400.3	mm	Other	Good quality	FIS
4/4/2016	Kreiner, Ryan	Westslope Cutthroat Trout	4	no estimate, counts only	Total number captured or presence only	380	486	428.5	mm	Other	Good quality	FIS
4/1/2016	Kreiner, Ryan		1			352	352	352	mm	Other		FIS

		Rainbow Trout		no estimate, counts only	Total number captured or presence only						Good quality	
4/1/2016	Kreiner, Ryan	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	418	418	418	mm	Other	Good quality	FIS
3/31/2016	Kreiner, Ryan	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	422	422	422	mm	Other	Good quality	FIS
3/28/2016	Kreiner, Ryan	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	415	508	465.3	mm	Other	Good quality	FIS
3/25/2016	Kreiner, Ryan	Brown Trout	1	no estimate, counts only	Total number captured or presence only	352	352	352	mm	Other	Good quality	FIS
3/25/2016	Kreiner, Ryan	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	315	384	349.5	mm	Other	Good quality	FIS
3/25/2016	Kreiner, Ryan	Westslope X Rainbow	1	no estimate, counts only	Total number captured or presence only	434	434	434	mm	Other	Good quality	FIS
3/22/2016	Kreiner, Ryan	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	377	488	442.7	mm	Other	Good quality	FIS
3/22/2016	Kreiner, Ryan	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	417	417	417	mm	Other	Good quality	FIS
3/22/2016	Kreiner, Ryan	Westslope X Rainbow	1	no estimate, counts only	Total number captured or presence only	491	491	491	mm	Other	Good quality	FIS
3/21/2016	Kreiner, Ryan		1			378	378	378	mm	Other		FIS

		Rainbow Trout		no estimate, counts only	Total number captured or presence only						Good quality	
3/17/2016	Kreiner, Ryan	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	408	602	477.7	mm	Other	Good quality	FIS
3/16/2016	Kreiner, Ryan	Rainbow Trout	4	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
3/15/2016	Kreiner, Ryan	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	485	485	485	mm	Other	Good quality	FIS
3/15/2016	Kreiner, Ryan	Westslope X Rainbow	1	no estimate, counts only	Total number captured or presence only	478	478	478	mm	Other	Good quality	FIS
11/9/2015	Kreiner, Ryan	Mountain Whitefish	2	no estimate, counts only	Total number captured or presence only	378	386	382	mm	Other	Good quality	FIS
11/9/2015	Kreiner, Ryan	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	259	259	259	mm	Other	Good quality	FIS
11/4/2015	Kreiner, Ryan	Brown Trout	1	no estimate, counts only	Total number captured or presence only	375	375	375	mm	Other	Good quality	FIS
11/4/2015	Kreiner, Ryan	Mountain Whitefish	1	no estimate, counts only	Total number captured or presence only	380	380	380	mm	Other	Good quality	FIS
11/4/2015	Kreiner, Ryan	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	300	300	300	mm	Other	Good quality	FIS
11/3/2015	Kreiner, Ryan	Brown Trout	1			475	475	475	mm	Other		FIS

				no estimate, counts only	Total number captured or presence only						Good quality	
11/3/2015	Kreiner, Ryan	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	450	450	450	mm	Other	Good quality	FIS
11/3/2015	Kreiner, Ryan	Mountain Whitefish	3	no estimate, counts only	Total number captured or presence only	365	378	370	mm	Other	Good quality	FIS
11/3/2015	Kreiner, Ryan	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	282	282	282	mm	Other	Good quality	FIS
11/3/2015	Kreiner, Ryan	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	410	410	410	mm	Other	Good quality	FIS
11/2/2015	Kreiner, Ryan	Brown Trout	4	no estimate, counts only	Total number captured or presence only	266	407	362	mm	Other	Good quality	FIS
11/2/2015	Kreiner, Ryan	Mountain Whitefish	9	no estimate, counts only	Total number captured or presence only	360	404	382	mm	Other	Good quality	FIS
11/2/2015	Kreiner, Ryan	Rainbow Trout	5	no estimate, counts only	Total number captured or presence only	300	519	425.4	mm	Other	Good quality	FIS
10/30/2015	Kreiner, Ryan	Mountain Whitefish	6	no estimate, counts only	Total number captured or presence only	347	406	376.5	mm	Other	Good quality	FIS
10/30/2015	Kreiner, Ryan	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	392	392	392	mm	Other	Good quality	FIS
10/27/2015	Kreiner, Ryan		5			361	405	384	mm	Other		FIS

		Mountain Whitefish		no estimate, counts only	Total number captured or presence only						Good quality	
10/27/2015	Kreiner, Ryan	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	452	452	452	mm	Other	Good quality	FIS
10/26/2015	Kreiner, Ryan	Lake Trout	1	no estimate, counts only	Total number captured or presence only	785	785	785	mm	Other	Good quality	FIS
10/26/2015	Kreiner, Ryan	Mountain Whitefish	5	no estimate, counts only	Total number captured or presence only	350	383	364.6	mm	Other	Good quality	FIS
10/26/2015	Kreiner, Ryan	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	407	407	407	mm	Other	Good quality	FIS
10/23/2015	Kreiner, Ryan	Brown Trout	2	no estimate, counts only	Total number captured or presence only	390	487	438.5	mm	Other	Good quality	FIS
10/23/2015	Kreiner, Ryan	Mountain Whitefish	3	no estimate, counts only	Total number captured or presence only	373	388	383	mm	Other	Good quality	FIS
10/23/2015	Kreiner, Ryan	Rainbow Trout	5	no estimate, counts only	Total number captured or presence only	236	620	395	mm	Other	Good quality	FIS
10/20/2015	Kreiner, Ryan	Mountain Whitefish	1	no estimate, counts only	Total number captured or presence only	390	390	390	mm	Other	Good quality	FIS
10/19/2015	Kreiner, Ryan	Brown Trout	3	no estimate, counts only	Total number captured or presence only	283	467	365.3	mm	Other	Good quality	FIS
10/19/2015	Kreiner, Ryan		8			344	377	363.8	mm	Other		FIS

		Mountain Whitefish		no estimate, counts only	Total number captured or presence only						Good quality	
10/19/2015	Kreiner, Ryan	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	263	263	263	mm	Other	Good quality	FIS
10/16/2015	Kreiner, Ryan	Brook Trout	1	no estimate, counts only	Total number captured or presence only	420	420	420	mm	Other	Good quality	FIS
10/16/2015	Kreiner, Ryan	Brown Trout	2	no estimate, counts only	Total number captured or presence only	430	451	440.5	mm	Other	Good quality	FIS
10/16/2015	Kreiner, Ryan	Mountain Whitefish	1	no estimate, counts only	Total number captured or presence only	393	393	393	mm	Other	Good quality	FIS
10/16/2015	Kreiner, Ryan	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	280	318	299	mm	Other	Good quality	FIS
10/14/2015	Kreiner, Ryan	Brown Trout	2	no estimate, counts only	Total number captured or presence only	400	520	460	mm	Other	Good quality	FIS
10/14/2015	Kreiner, Ryan	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	515	515	515	mm	Other	Good quality	FIS
10/14/2015	Kreiner, Ryan	Mountain Whitefish	1	no estimate, counts only	Total number captured or presence only	377	377	377	mm	Other	Good quality	FIS
10/14/2015	Kreiner, Ryan	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	475	475	475	mm	Other	Good quality	FIS
10/13/2015	Kreiner, Ryan	Brown Trout	1			437	437	437	mm	Other		FIS

				no estimate, counts only	Total number captured or presence only						Good quality	
10/13/2015	Kreiner, Ryan	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	312	484	398	mm	Other	Good quality	FIS
10/12/2015	Kreiner, Ryan	Largescale Sucker	2	no estimate, counts only	Total number captured or presence only	432	496	464	mm	Other	Good quality	FIS
10/12/2015	Kreiner, Ryan	Mountain Whitefish	2	no estimate, counts only	Total number captured or presence only	355	355	355	mm	Other	Good quality	FIS
10/12/2015	Kreiner, Ryan	Rainbow Trout	5	no estimate, counts only	Total number captured or presence only	225	471	328.4	mm	Other	Good quality	FIS
10/7/2015	Kreiner, Ryan	Brown Trout	3	no estimate, counts only	Total number captured or presence only	437	635	510	mm	Other	Good quality	FIS
10/7/2015	Kreiner, Ryan	Mountain Whitefish	1	no estimate, counts only	Total number captured or presence only	373	373	373	mm	Other	Good quality	FIS
10/7/2015	Kreiner, Ryan	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	325	325	325	mm	Other	Good quality	FIS
10/5/2015	Kreiner, Ryan	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	457	457	457	mm	Other	Good quality	FIS
10/5/2015	Kreiner, Ryan	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	448	448	448	mm	Other	Good quality	FIS
10/5/2015	Kreiner, Ryan		2			408	485	446.5	mm	Other		FIS

		Rainbow Trout		no estimate, counts only	Total number captured or presence only						Good quality	
10/2/2015	Kreiner, Ryan	Brown Trout	1	no estimate, counts only	Total number captured or presence only	436	436	436	mm	Other	Good quality	FIS
10/2/2015	Kreiner, Ryan	Longnose Sucker	1	no estimate, counts only	Total number captured or presence only	413	413	413	mm	Other	Good quality	FIS
10/2/2015	Kreiner, Ryan	Mountain Whitefish	1	no estimate, counts only	Total number captured or presence only	341	341	341	mm	Other	Good quality	FIS
9/30/2015	Kreiner, Ryan	Brown Trout	2	no estimate, counts only	Total number captured or presence only	555	564	559.5	mm	Other	Good quality	FIS
9/30/2015	Kreiner, Ryan	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	232	458	326	mm	Other	Good quality	FIS
9/28/2015	Kreiner, Ryan	Brown Trout	4	no estimate, counts only	Total number captured or presence only	433	523	479.8	mm	Other	Good quality	FIS
9/28/2015	Kreiner, Ryan	Lake Trout	1	no estimate, counts only	Total number captured or presence only	610	610	610	mm	Other	Good quality	FIS
9/28/2015	Kreiner, Ryan	Largescale Sucker	21	no estimate, counts only	Total number captured or presence only	432	568	462.1	mm	Other	Good quality	FIS
9/28/2015	Kreiner, Ryan	Longnose Sucker	1	no estimate, counts only	Total number captured or presence only	477	477	477	mm	Other	Good quality	FIS
9/25/2015	Kreiner, Ryan	Brown Trout	3			326	468	390	mm	Other		FIS

				no estimate, counts only	Total number captured or presence only						Good quality	
9/25/2015	Kreiner, Ryan	Largescale Sucker	29	no estimate, counts only	Total number captured or presence only	388	514	464	mm	Other	Good quality	FIS
9/25/2015	Kreiner, Ryan	Longnose Sucker	1	no estimate, counts only	Total number captured or presence only	456	456	456	mm	Other	Good quality	FIS
9/25/2015	Kreiner, Ryan	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	342	345	343.5	mm	Other	Good quality	FIS
9/24/2015	Kreiner, Ryan	Brown Trout	1	no estimate, counts only	Total number captured or presence only	399	399	399	mm	Other	Good quality	FIS
9/24/2015	Kreiner, Ryan	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	489	489	489	mm	Other	Good quality	FIS
9/24/2015	Kreiner, Ryan	Mountain Whitefish	1	no estimate, counts only	Total number captured or presence only	361	361	361	mm	Other	Good quality	FIS
9/24/2015	Kreiner, Ryan	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	307	307	307	mm	Other	Good quality	FIS
9/23/2015	Kreiner, Ryan	Brown Trout	1	no estimate, counts only	Total number captured or presence only	431	431	431	mm	Other	Good quality	FIS
9/23/2015	Kreiner, Ryan	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	331	453	392	mm	Other	Good quality	FIS
9/21/2015	Kreiner, Ryan		1			327	327	327	mm	Other		FIS

		Largescale Sucker		no estimate, counts only	Total number captured or presence only						Good quality	
9/21/2015	Kreiner, Ryan	Mountain Whitefish	1	no estimate, counts only	Total number captured or presence only	353	353	353	mm	Other	Good quality	FIS
9/18/2015	Kreiner, Ryan	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	361	472	431	mm	Other	Good quality	FIS
9/16/2015	Kreiner, Ryan	Rainbow Trout	4	no estimate, counts only	Total number captured or presence only	218	339	285	mm	Other	Good quality	FIS
9/14/2015	Kreiner, Ryan	Brown Trout	3	no estimate, counts only	Total number captured or presence only	270	284	278.7	mm	Other	Good quality	FIS
9/14/2015	Kreiner, Ryan	Largescale Sucker	7	no estimate, counts only	Total number captured or presence only	438	497	472.9	mm	Other	Good quality	FIS
9/14/2015	Kreiner, Ryan	Mountain Whitefish	1	no estimate, counts only	Total number captured or presence only	344	344	344	mm	Other	Good quality	FIS
9/14/2015	Kreiner, Ryan	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	253	346	299.5	mm	Other	Good quality	FIS
9/14/2015	Kreiner, Ryan	Smallmouth Bass	2	no estimate, counts only	Total number captured or presence only	222	381	301.5	mm	Other	Good quality	FIS
9/14/2015	Kreiner, Ryan	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	297	297	297	mm	Other	Good quality	FIS
9/9/2015	Kreiner, Ryan		1			376	376	376	mm	Other		FIS

		Mountain Whitefish		no estimate, counts only	Total number captured or presence only						Good quality	
9/8/2015	Kreiner, Ryan	Brown Trout	3	no estimate, counts only	Total number captured or presence only	266	492	344.3	mm	Other	Good quality	FIS
9/8/2015	Kreiner, Ryan	Largescale Sucker	8	no estimate, counts only	Total number captured or presence only	423	515	468.3	mm	Other	Good quality	FIS
9/8/2015	Kreiner, Ryan	Rainbow Trout	8	no estimate, counts only	Total number captured or presence only	243	467	340.3	mm	Other	Good quality	FIS
9/8/2015	Kreiner, Ryan	Westslope Cutthroat Trout	2	no estimate, counts only	Total number captured or presence only	287	305	296	mm	Other	Good quality	FIS
9/4/2015	Kreiner, Ryan	Brown Trout	1	no estimate, counts only	Total number captured or presence only	448	448	448	mm	Other	Good quality	FIS
9/4/2015	Kreiner, Ryan	Largescale Sucker	4	no estimate, counts only	Total number captured or presence only	452	542	489.3	mm	Other	Good quality	FIS
9/4/2015	Kreiner, Ryan	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	335	335	335	mm	Other	Good quality	FIS
9/4/2015	Kreiner, Ryan	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	320	320	320	mm	Other	Good quality	FIS
9/2/2015	Kreiner, Ryan	Brown Trout	2	no estimate, counts only	Total number captured or presence only	433	472	452.5	mm	Other	Good quality	FIS
9/2/2015	Kreiner, Ryan		2			425	464	444.5	mm	Other		FIS

		Largescale Sucker		no estimate, counts only	Total number captured or presence only						Good quality	
9/2/2015	Kreiner, Ryan	Longnose Sucker	1	no estimate, counts only	Total number captured or presence only	401	401	401	mm	Other	Good quality	FIS
9/2/2015	Kreiner, Ryan	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	301	301	301	mm	Other	Good quality	FIS
9/2/2015	Kreiner, Ryan	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	372	385	378.5	mm	Other	Good quality	FIS
9/2/2015	Kreiner, Ryan	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	392	392	392	mm	Other	Good quality	FIS
9/1/2015	Kreiner, Ryan	Largescale Sucker	6	no estimate, counts only	Total number captured or presence only	430	505	464	mm	Other	Good quality	FIS
8/31/2015	Kreiner, Ryan	Brown Trout	1	no estimate, counts only	Total number captured or presence only	435	435	435	mm	Other	Good quality	FIS
8/31/2015	Kreiner, Ryan	Largescale Sucker	15	no estimate, counts only	Total number captured or presence only	413	508	470.3	mm	Other	Good quality	FIS
8/31/2015	Kreiner, Ryan	Longnose Sucker	1	no estimate, counts only	Total number captured or presence only	428	428	428	mm	Other	Good quality	FIS
8/31/2015	Kreiner, Ryan	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	482	482	482	mm	Other	Good quality	FIS
8/31/2015	Kreiner, Ryan		1			299	299	299	mm	Other		FIS

		Rainbow Trout		no estimate, counts only	Total number captured or presence only						Good quality	
8/31/2015	Kreiner, Ryan	Smallmouth Bass	2	no estimate, counts only	Total number captured or presence only	203	226	214.5	mm	Other	Good quality	FIS
8/28/2015	Kreiner, Ryan	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	468	468	468	mm	Other	Good quality	FIS
8/28/2015	Kreiner, Ryan	Smallmouth Bass	1	no estimate, counts only	Total number captured or presence only	242	242	242	mm	Other	Good quality	FIS
8/27/2015	Kreiner, Ryan	Largescale Sucker	3	no estimate, counts only	Total number captured or presence only	411	480	448.7	mm	Other	Good quality	FIS
8/27/2015	Kreiner, Ryan	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	302	302	302	mm	Other	Good quality	FIS
8/27/2015	Kreiner, Ryan	Smallmouth Bass	4	no estimate, counts only	Total number captured or presence only	215	244	232.5	mm	Other	Good quality	FIS
8/26/2015	Kreiner, Ryan	Largescale Sucker	2	no estimate, counts only	Total number captured or presence only	414	433	423.5	mm	Other	Good quality	FIS
8/26/2015	Kreiner, Ryan	Rainbow Trout	4	no estimate, counts only	Total number captured or presence only	321	470	364.5	mm	Other	Good quality	FIS
8/26/2015	Kreiner, Ryan	Smallmouth Bass	2	no estimate, counts only	Total number captured or presence only	211	373	292	mm	Other	Good quality	FIS
8/24/2015	Kreiner, Ryan		11			417	475	449.7	mm	Other		FIS

		Largescale Sucker		no estimate, counts only	Total number captured or presence only						Good quality	
8/24/2015	Kreiner, Ryan	Northern Pike Minnow	2	no estimate, counts only	Total number captured or presence only	280	425	352.5	mm	Other	Good quality	FIS
8/24/2015	Kreiner, Ryan	Rainbow Trout	4	no estimate, counts only	Total number captured or presence only	305	483	385	mm	Other	Good quality	FIS
8/24/2015	Kreiner, Ryan	Smallmouth Bass	5	no estimate, counts only	Total number captured or presence only	220	455	296.2	mm	Other	Good quality	FIS
8/19/2015	Kreiner, Ryan	Largescale Sucker	7	no estimate, counts only	Total number captured or presence only	416	488	439.3	mm	Other	Good quality	FIS
8/19/2015	Kreiner, Ryan	Longnose Sucker	1	no estimate, counts only	Total number captured or presence only	453	453	453	mm	Other	Good quality	FIS
8/19/2015	Kreiner, Ryan	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	462	500	481	mm	Other	Good quality	FIS
8/19/2015	Kreiner, Ryan	Smallmouth Bass	6	no estimate, counts only	Total number captured or presence only	162	325	219.2	mm	Other	Good quality	FIS
8/16/2015	Kreiner, Ryan	Largescale Sucker	21	no estimate, counts only	Total number captured or presence only	376	521	436.1	mm	Other	Good quality	FIS
8/16/2015	Kreiner, Ryan	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	475	475	475	mm	Other	Good quality	FIS
8/16/2015	Kreiner, Ryan		15			158	240	191.6	mm	Other		FIS

		Smallmouth Bass		no estimate, counts only	Total number captured or presence only						Good quality	
8/14/2015	Kreiner, Ryan	Brown Trout	1	no estimate, counts only	Total number captured or presence only	455	455	455	mm	Other	Good quality	FIS
8/14/2015	Kreiner, Ryan	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	430	430	430	mm	Other	Good quality	FIS
8/14/2015	Kreiner, Ryan	Northern Pike Minnow	4	no estimate, counts only	Total number captured or presence only	269	308	293.5	mm	Other	Good quality	FIS
8/14/2015	Kreiner, Ryan	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	315	331	323	mm	Other	Good quality	FIS
8/14/2015	Kreiner, Ryan	Smallmouth Bass	27	no estimate, counts only	Total number captured or presence only	157	261	203.9	mm	Other	Good quality	FIS
8/12/2015	Kreiner, Ryan	Largescale Sucker	7	no estimate, counts only	Total number captured or presence only	424	518	466.1	mm	Other	Good quality	FIS
8/12/2015	Kreiner, Ryan	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	395	395	395	mm	Other	Good quality	FIS
8/12/2015	Kreiner, Ryan	Smallmouth Bass	11	no estimate, counts only	Total number captured or presence only	159	258	203.5	mm	Other	Good quality	FIS
8/11/2015	Kreiner, Ryan	Largescale Sucker	2	no estimate, counts only	Total number captured or presence only	430	452	441	mm	Other	Good quality	FIS
8/11/2015	Kreiner, Ryan		1			304	304	304	mm	Other		FIS

		Northern Pike Minnow		no estimate, counts only	Total number captured or presence only						Good quality	
8/11/2015	Kreiner, Ryan	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	301	523	425.3	mm	Other	Good quality	FIS
8/11/2015	Kreiner, Ryan	Smallmouth Bass	4	no estimate, counts only	Total number captured or presence only	174	357	238.5	mm	Other	Good quality	FIS
8/10/2015	Kreiner, Ryan	Largescale Sucker	4	no estimate, counts only	Total number captured or presence only	415	483	453	mm	Other	Good quality	FIS
8/10/2015	Kreiner, Ryan	Northern Pike Minnow	4	no estimate, counts only	Total number captured or presence only	288	300	296.5	mm	Other	Good quality	FIS
8/10/2015	Kreiner, Ryan	Rainbow Trout	4	no estimate, counts only	Total number captured or presence only	301	534	435.3	mm	Other	Good quality	FIS
8/10/2015	Kreiner, Ryan	Smallmouth Bass	12	no estimate, counts only	Total number captured or presence only	165	279	201.8	mm	Other	Good quality	FIS
8/7/2015	Kreiner, Ryan	Largescale Sucker	11	no estimate, counts only	Total number captured or presence only	408	503	447.8	mm	Other	Good quality	FIS
8/7/2015	Kreiner, Ryan	Northern Pike Minnow	6	no estimate, counts only	Total number captured or presence only	277	475	351.5	mm	Other	Good quality	FIS
8/7/2015	Kreiner, Ryan	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	349	349	349	mm	Other	Good quality	FIS
8/7/2015	Kreiner, Ryan		42			163	253	196.3	mm	Other		FIS

		Smallmouth Bass		no estimate, counts only	Total number captured or presence only						Good quality	
8/4/2015	Kreiner, Ryan	Largescale Sucker	5	no estimate, counts only	Total number captured or presence only	423	508	453.4	mm	Other	Good quality	FIS
8/4/2015	Kreiner, Ryan	Northern Pike Minnow	7	no estimate, counts only	Total number captured or presence only	225	451	301.4	mm	Other	Good quality	FIS
8/4/2015	Kreiner, Ryan	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	297	413	359.3	mm	Other	Good quality	FIS
8/4/2015	Kreiner, Ryan	Smallmouth Bass	72	no estimate, counts only	Total number captured or presence only	163	252	198.9	mm	Other	Good quality	FIS
8/2/2015	Kreiner, Ryan	Largescale Sucker	2	no estimate, counts only	Total number captured or presence only	400	406	403	mm	Other	Good quality	FIS
8/2/2015	Kreiner, Ryan	Northern Pike Minnow	15	no estimate, counts only	Total number captured or presence only	272	590	325.1	mm	Other	Good quality	FIS
8/2/2015	Kreiner, Ryan	Rainbow Trout	6	no estimate, counts only	Total number captured or presence only	282	490	377.5	mm	Other	Good quality	FIS
8/2/2015	Kreiner, Ryan	Smallmouth Bass	70	no estimate, counts only	Total number captured or presence only	155	327	199.8	mm	Other	Good quality	FIS
7/30/2015	Kreiner, Ryan	Brown Trout	3	no estimate, counts only	Total number captured or presence only	430	441	436	mm	Other	Good quality	FIS
7/30/2015	Kreiner, Ryan		2			448	487	467.5	mm	Other		FIS

		Largescale Sucker		no estimate, counts only	Total number captured or presence only						Good quality	
7/30/2015	Kreiner, Ryan	Northern Pike Minnow	6	no estimate, counts only	Total number captured or presence only	272	504	323.3	mm	Other	Good quality	FIS
7/30/2015	Kreiner, Ryan	Rainbow Trout	4	no estimate, counts only	Total number captured or presence only	361	525	442.5	mm	Other	Good quality	FIS
7/30/2015	Kreiner, Ryan	Smallmouth Bass	17	no estimate, counts only	Total number captured or presence only	172	266	214.4	mm	Other	Good quality	FIS
7/28/2015	Kreiner, Ryan	Largescale Sucker	2	no estimate, counts only	Total number captured or presence only	435	485	460	mm	Other	Good quality	FIS
7/28/2015	Kreiner, Ryan	Northern Pike Minnow	12	no estimate, counts only	Total number captured or presence only	262	375	308	mm	Other	Good quality	FIS
7/28/2015	Kreiner, Ryan	Smallmouth Bass	7	no estimate, counts only	Total number captured or presence only	182	234	200.9	mm	Other	Good quality	FIS
7/27/2015	Kreiner, Ryan	Largescale Sucker	6	no estimate, counts only	Total number captured or presence only	399	477	442	mm	Other	Good quality	FIS
7/27/2015	Kreiner, Ryan	Northern Pike Minnow	37	no estimate, counts only	Total number captured or presence only	271	525	303.6	mm	Other	Good quality	FIS
7/27/2015	Kreiner, Ryan	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	277	317	297	mm	Other	Good quality	FIS
7/27/2015	Kreiner, Ryan		88			147	390	203.5	mm	Other		FIS

		Smallmouth Bass		no estimate, counts only	Total number captured or presence only						Good quality	
7/24/2015	Kreiner, Ryan	Brown Trout	1	no estimate, counts only	Total number captured or presence only	250	250	250	mm	Other	Good quality	FIS
7/24/2015	Kreiner, Ryan	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	525	525	525	mm	Other	Good quality	FIS
7/24/2015	Kreiner, Ryan	Northern Pike Minnow	17	no estimate, counts only	Total number captured or presence only	260	325	294.6	mm	Other	Good quality	FIS
7/24/2015	Kreiner, Ryan	Rainbow Trout	4	no estimate, counts only	Total number captured or presence only	286	520	400.3	mm	Other	Good quality	FIS
7/24/2015	Kreiner, Ryan	Smallmouth Bass	71	no estimate, counts only	Total number captured or presence only	157	300	196	mm	Other	Good quality	FIS
7/22/2015	Kreiner, Ryan	Largescale Sucker	2	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
7/22/2015	Kreiner, Ryan	Northern Pike Minnow	19	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
7/22/2015	Kreiner, Ryan	Rainbow Trout	12	no estimate, counts only	Total number captured or presence only	283	485	364.9	mm	Other	Good quality	FIS
7/22/2015	Kreiner, Ryan	Smallmouth Bass	93	no estimate, counts only	Total number captured or presence only	150	386	208.2	mm	Other	Good quality	FIS
7/20/2015	Kreiner, Ryan	Brown Trout	2			370	491	430.5	mm	Other		FIS

				no estimate, counts only	Total number captured or presence only						Good quality	
7/20/2015	Kreiner, Ryan	Largescale Sucker	2	no estimate, counts only	Total number captured or presence only	444	473	458.5	mm	Other	Good quality	FIS
7/20/2015	Kreiner, Ryan	Northern Pike Minnow	9	no estimate, counts only	Total number captured or presence only	265	380	297.4	mm	Other	Good quality	FIS
7/20/2015	Kreiner, Ryan	Rainbow Trout	8	no estimate, counts only	Total number captured or presence only	292	363	321.9	mm	Other	Good quality	FIS
7/20/2015	Kreiner, Ryan	Smallmouth Bass	43	no estimate, counts only	Total number captured or presence only	152	284	216.1	mm	Other	Good quality	FIS
7/17/2015	Kreiner, Ryan	Brown Trout	1	no estimate, counts only	Total number captured or presence only	322	322	322	mm	Other	Good quality	FIS
7/17/2015	Kreiner, Ryan	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	441	441	441	mm	Other	Good quality	FIS
7/17/2015	Kreiner, Ryan	Northern Pike Minnow	9	no estimate, counts only	Total number captured or presence only	235	304	280.7	mm	Other	Good quality	FIS
7/17/2015	Kreiner, Ryan	Rainbow Trout	6	no estimate, counts only	Total number captured or presence only	274	511	381	mm	Other	Good quality	FIS
7/17/2015	Kreiner, Ryan	Smallmouth Bass	42	no estimate, counts only	Total number captured or presence only	107	410	209.5	mm	Other	Good quality	FIS
7/16/2015	Kreiner, Ryan	Brown Trout	2			390	423	406.5	mm	Other		FIS

				no estimate, counts only	Total number captured or presence only						Good quality	
7/16/2015	Kreiner, Ryan	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	458	458	458	mm	Other	Good quality	FIS
7/16/2015	Kreiner, Ryan	Northern Pike Minnow	3	no estimate, counts only	Total number captured or presence only	268	295	283.7	mm	Other	Good quality	FIS
7/16/2015	Kreiner, Ryan	Rainbow Trout	7	no estimate, counts only	Total number captured or presence only	287	430	348	mm	Other	Good quality	FIS
7/16/2015	Kreiner, Ryan	Smallmouth Bass	46	no estimate, counts only	Total number captured or presence only	158	268	205.6	mm	Other	Good quality	FIS
7/15/2015	Kreiner, Ryan	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	416	416	416	mm	Other	Good quality	FIS
7/15/2015	Kreiner, Ryan	Northern Pike Minnow	9	no estimate, counts only	Total number captured or presence only	253	384	290	mm	Other	Good quality	FIS
7/15/2015	Kreiner, Ryan	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	312	417	364.5	mm	Other	Good quality	FIS
7/15/2015	Kreiner, Ryan	Smallmouth Bass	40	no estimate, counts only	Total number captured or presence only	166	294	211.5	mm	Other	Good quality	FIS
7/15/2015	Kreiner, Ryan	Westslope X Rainbow	1	no estimate, counts only	Total number captured or presence only	466	466	466	mm	Other	Good quality	FIS
7/14/2015	Kreiner, Ryan	Brown Trout	1			398	398	398	mm	Other		FIS

				no estimate, counts only	Total number captured or presence only						Good quality	
7/14/2015	Kreiner, Ryan	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	406	406	406	mm	Other	Good quality	FIS
7/14/2015	Kreiner, Ryan	Northern Pike Minnow	3	no estimate, counts only	Total number captured or presence only	271	310	293	mm	Other	Good quality	FIS
7/14/2015	Kreiner, Ryan	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	295	465	406	mm	Other	Good quality	FIS
7/14/2015	Kreiner, Ryan	Smallmouth Bass	45	no estimate, counts only	Total number captured or presence only	172	257	199.3	mm	Other	Good quality	FIS
7/13/2015	Kreiner, Ryan	Brown Trout	3	no estimate, counts only	Total number captured or presence only	315	337	325.3	mm	Other	Good quality	FIS
7/13/2015	Kreiner, Ryan	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	280	280	280	mm	Other	Good quality	FIS
7/13/2015	Kreiner, Ryan	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	330	377	353.5	mm	Other	Good quality	FIS
7/13/2015	Kreiner, Ryan	Smallmouth Bass	77	no estimate, counts only	Total number captured or presence only	151	325	202.8	mm	Other	Good quality	FIS
7/13/2015	Kreiner, Ryan	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	298	298	298	mm	Other	Good quality	FIS
7/11/2015	Kreiner, Ryan		2			246	276	261	mm	Other		FIS

		Northern Pike Minnow		no estimate, counts only	Total number captured or presence only						Good quality	
7/11/2015	Kreiner, Ryan	Smallmouth Bass	42	no estimate, counts only	Total number captured or presence only	159	303	200.3	mm	Other	Good quality	FIS
7/10/2015	Kreiner, Ryan	Brown Trout	1	no estimate, counts only	Total number captured or presence only	513	513	513	mm	Other	Good quality	FIS
7/10/2015	Kreiner, Ryan	Largescale Sucker	2	no estimate, counts only	Total number captured or presence only	404	412	408	mm	Other	Good quality	FIS
7/10/2015	Kreiner, Ryan	Northern Pike Minnow	9	no estimate, counts only	Total number captured or presence only	196	315	273.3	mm	Other	Good quality	FIS
7/10/2015	Kreiner, Ryan	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	323	323	323	mm	Other	Good quality	FIS
7/10/2015	Kreiner, Ryan	Smallmouth Bass	58	no estimate, counts only	Total number captured or presence only	161	326	205.8	mm	Other	Good quality	FIS
7/9/2015	Kreiner, Ryan	Largescale Sucker	2	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
7/9/2015	Kreiner, Ryan	Northern Pike Minnow	10	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
7/9/2015	Kreiner, Ryan	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	296	296	296	mm	Other	Good quality	FIS
7/9/2015	Kreiner, Ryan		26			152	298	208.3	mm	Other		FIS

		Smallmouth Bass		no estimate, counts only	Total number captured or presence only						Good quality	
7/8/2015	Kreiner, Ryan	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	463	463	463	mm	Other	Good quality	FIS
7/8/2015	Kreiner, Ryan	Northern Pike Minnow	6	no estimate, counts only	Total number captured or presence only	272	508	348	mm	Other	Good quality	FIS
7/8/2015	Kreiner, Ryan	Rainbow Trout	5	no estimate, counts only	Total number captured or presence only	265	390	340	mm	Other	Good quality	FIS
7/8/2015	Kreiner, Ryan	Smallmouth Bass	23	no estimate, counts only	Total number captured or presence only	178	310	218.5	mm	Other	Good quality	FIS
7/7/2015	Kreiner, Ryan	Largescale Sucker	4	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
7/7/2015	Kreiner, Ryan	Northern Pike Minnow	10	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
7/7/2015	Kreiner, Ryan	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	301	302	301.5	mm	Other	Good quality	FIS
7/7/2015	Kreiner, Ryan	Smallmouth Bass	7	no estimate, counts only	Total number captured or presence only	180	278	214.9	mm	Other	Good quality	FIS
7/6/2015	Kreiner, Ryan	Brown Trout	2	no estimate, counts only	Total number captured or presence only	402	455	428.5	mm	Other	Good quality	FIS
7/6/2015	Kreiner, Ryan		22			-	-	-	mm	Other		FIS

		Largescale Sucker		no estimate, counts only	Total number captured or presence only						Good quality	
7/6/2015	Kreiner, Ryan	Mountain Whitefish	1	no estimate, counts only	Total number captured or presence only	225	225	225	mm	Other	Good quality	FIS
7/6/2015	Kreiner, Ryan	Northern Pike Minnow	65	no estimate, counts only	Total number captured or presence only	312	312	312	mm	Other	Good quality	FIS
7/6/2015	Kreiner, Ryan	Rainbow Trout	7	no estimate, counts only	Total number captured or presence only	185	427	305.3	mm	Other	Good quality	FIS
7/6/2015	Kreiner, Ryan	Smallmouth Bass	40	no estimate, counts only	Total number captured or presence only	160	425	218.3	mm	Other	Good quality	FIS
7/3/2015	Kreiner, Ryan	Brown Trout	1	no estimate, counts only	Total number captured or presence only	362	362	362	mm	Other	Good quality	FIS
7/3/2015	Kreiner, Ryan	Largescale Sucker	4	no estimate, counts only	Total number captured or presence only	413	470	435.3	mm	Other	Good quality	FIS
7/3/2015	Kreiner, Ryan	Northern Pike Minnow	12	no estimate, counts only	Total number captured or presence only	255	396	297.3	mm	Other	Good quality	FIS
7/3/2015	Kreiner, Ryan	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	433	433	433	mm	Other	Good quality	FIS
7/3/2015	Kreiner, Ryan	Smallmouth Bass	22	no estimate, counts only	Total number captured or presence only	162	391	215.3	mm	Other	Good quality	FIS
7/2/2015	Kreiner, Ryan		3			-	-	-	mm	Other		FIS

		Largescale Sucker		no estimate, counts only	Total number captured or presence only						Good quality	
7/2/2015	Kreiner, Ryan	Northern Pike Minnow	5	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
7/2/2015	Kreiner, Ryan	Rainbow Trout	6	no estimate, counts only	Total number captured or presence only	205	508	316	mm	Other	Good quality	FIS
7/2/2015	Kreiner, Ryan	Smallmouth Bass	9	no estimate, counts only	Total number captured or presence only	183	291	221.2	mm	Other	Good quality	FIS
7/2/2015	Kreiner, Ryan	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	370	370	370	mm	Other	Good quality	FIS
7/1/2015	Kreiner, Ryan	Brown Trout	4	no estimate, counts only	Total number captured or presence only	187	335	284.8	mm	Other	Good quality	FIS
7/1/2015	Kreiner, Ryan	Largescale Sucker	13	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
7/1/2015	Kreiner, Ryan	Northern Pike Minnow	18	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
7/1/2015	Kreiner, Ryan	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	276	473	364.7	mm	Other	Good quality	FIS
7/1/2015	Kreiner, Ryan	Smallmouth Bass	14	no estimate, counts only	Total number captured or presence only	177	300	219.4	mm	Other	Good quality	FIS
7/1/2015	Kreiner, Ryan		1			298	298	298	mm	Other		FIS

		Westslope Cutthroat Trout		no estimate, counts only	Total number captured or presence only						Good quality	
6/30/2015	Kreiner, Ryan	Largescale Sucker	5	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
6/30/2015	Kreiner, Ryan	Northern Pike Minnow	15	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
6/30/2015	Kreiner, Ryan	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	207	385	317.3	mm	Other	Good quality	FIS
6/30/2015	Kreiner, Ryan	Smallmouth Bass	5	no estimate, counts only	Total number captured or presence only	180	245	210.8	mm	Other	Good quality	FIS
6/29/2015	Kreiner, Ryan	Brown Trout	12	no estimate, counts only	Total number captured or presence only	207	515	329.2	mm	Other	Good quality	FIS
6/29/2015	Kreiner, Ryan	Largescale Sucker	14	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
6/29/2015	Kreiner, Ryan	Northern Pike Minnow	63	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
6/29/2015	Kreiner, Ryan	Rainbow Trout	6	no estimate, counts only	Total number captured or presence only	269	529	359.7	mm	Other	Good quality	FIS
6/29/2015	Kreiner, Ryan	Smallmouth Bass	40	no estimate, counts only	Total number captured or presence only	183	437	240.8	mm	Other	Good quality	FIS
6/29/2015	Kreiner, Ryan		3			229	332	270.7	mm	Other		FIS

		Westslope Cutthroat Trout		no estimate, counts only	Total number captured or presence only						Good quality	
6/27/2015	Kreiner, Ryan	Brown Trout	7	no estimate, counts only	Total number captured or presence only	262	454	328.4	mm	Other	Good quality	FIS
6/27/2015	Kreiner, Ryan	Largescale Sucker	2	no estimate, counts only	Total number captured or presence only	412	439	425.5	mm	Other	Good quality	FIS
6/27/2015	Kreiner, Ryan	Northern Pike Minnow	30	no estimate, counts only	Total number captured or presence only	268	422	337.4	mm	Other	Good quality	FIS
6/27/2015	Kreiner, Ryan	Rainbow Trout	4	no estimate, counts only	Total number captured or presence only	205	328	285	mm	Other	Good quality	FIS
6/27/2015	Kreiner, Ryan	Smallmouth Bass	10	no estimate, counts only	Total number captured or presence only	202	308	237.7	mm	Other	Good quality	FIS
6/26/2015	Kreiner, Ryan	Brown Trout	21	no estimate, counts only	Total number captured or presence only	207	543	335.7	mm	Other	Good quality	FIS
6/26/2015	Kreiner, Ryan	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
6/26/2015	Kreiner, Ryan	Northern Pike Minnow	67	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
6/26/2015	Kreiner, Ryan	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	223	339	298	mm	Other	Good quality	FIS
6/26/2015	Kreiner, Ryan		5			206	375	254.8	mm	Other		FIS

		Smallmouth Bass		no estimate, counts only	Total number captured or presence only						Good quality	
6/26/2015	Kreiner, Ryan	Westslope Cutthroat Trout	3	no estimate, counts only	Total number captured or presence only	221	372	282	mm	Other	Good quality	FIS
6/24/2015	Kreiner, Ryan	Brown Trout	13	no estimate, counts only	Total number captured or presence only	226	482	327.4	mm	Other	Good quality	FIS
6/24/2015	Kreiner, Ryan	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
6/24/2015	Kreiner, Ryan	Northern Pike Minnow	28	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
6/24/2015	Kreiner, Ryan	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	226	471	331.7	mm	Other	Good quality	FIS
6/24/2015	Kreiner, Ryan	Smallmouth Bass	6	no estimate, counts only	Total number captured or presence only	208	250	223.5	mm	Other	Good quality	FIS
6/23/2015	Kreiner, Ryan	Brown Trout	3	no estimate, counts only	Total number captured or presence only	294	303	298	mm	Other	Good quality	FIS
6/23/2015	Kreiner, Ryan	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
6/23/2015	Kreiner, Ryan	Northern Pike Minnow	15	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
6/23/2015	Kreiner, Ryan		2			213	313	263	mm	Other		FIS

		Rainbow Trout		no estimate, counts only	Total number captured or presence only						Good quality	
6/23/2015	Kreiner, Ryan	Smallmouth Bass	6	no estimate, counts only	Total number captured or presence only	203	350	244.2	mm	Other	Good quality	FIS
6/22/2015	Kreiner, Ryan	Brown Trout	19	no estimate, counts only	Total number captured or presence only	203	580	317	mm	Other	Good quality	FIS
6/22/2015	Kreiner, Ryan	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
6/22/2015	Kreiner, Ryan	Longnose Sucker	1	no estimate, counts only	Total number captured or presence only	392	392	392	mm	Other	Good quality	FIS
6/22/2015	Kreiner, Ryan	Northern Pike Minnow	159	no estimate, counts only	Total number captured or presence only	3	560	341.3	mm	Other	Good quality	FIS
6/22/2015	Kreiner, Ryan	Rainbow Trout	4	no estimate, counts only	Total number captured or presence only	235	402	317.5	mm	Other	Good quality	FIS
6/22/2015	Kreiner, Ryan	Smallmouth Bass	21	no estimate, counts only	Total number captured or presence only	192	388	244.7	mm	Other	Good quality	FIS
6/22/2015	Kreiner, Ryan	Walleye	1	no estimate, counts only	Total number captured or presence only	325	325	325	mm	Other	Good quality	FIS
6/22/2015	Kreiner, Ryan	Westslope Cutthroat Trout	2	no estimate, counts only	Total number captured or presence only	237	375	306	mm	Other	Good quality	FIS
6/19/2015	Kreiner, Ryan	Brown Trout	1			370	370	370	mm	Other		FIS

				no estimate, counts only	Total number captured or presence only						Good quality	
6/19/2015	Kreiner, Ryan	Largescale Sucker	3	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
6/19/2015	Kreiner, Ryan	Northern Pike Minnow	74	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
6/19/2015	Kreiner, Ryan	Rainbow Trout	9	no estimate, counts only	Total number captured or presence only	210	510	337.7	mm	Other	Good quality	FIS
6/19/2015	Kreiner, Ryan	Smallmouth Bass	11	no estimate, counts only	Total number captured or presence only	190	377	288.7	mm	Other	Good quality	FIS
6/18/2015	Kreiner, Ryan	Brown Trout	5	no estimate, counts only	Total number captured or presence only	256	410	317.4	mm	Other	Good quality	FIS
6/18/2015	Kreiner, Ryan	Largescale Sucker	14	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
6/18/2015	Kreiner, Ryan	Longnose Sucker	1	no estimate, counts only	Total number captured or presence only	393	393	393	mm	Other	Good quality	FIS
6/18/2015	Kreiner, Ryan	Northern Pike Minnow	196	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
6/18/2015	Kreiner, Ryan	Rainbow Trout	9	no estimate, counts only	Total number captured or presence only	259	485	358.7	mm	Other	Good quality	FIS
6/18/2015	Kreiner, Ryan		10			192	380	278.3	mm	Other		FIS

		Smallmouth Bass		no estimate, counts only	Total number captured or presence only						Good quality	
6/18/2015	Kreiner, Ryan	Westslope Cutthroat Trout	4	no estimate, counts only	Total number captured or presence only	320	468	391.8	mm	Other	Good quality	FIS
6/17/2015	Kreiner, Ryan	Brown Trout	2	no estimate, counts only	Total number captured or presence only	305	472	388.5	mm	Other	Good quality	FIS
6/17/2015	Kreiner, Ryan	Largescale Sucker	14	no estimate, counts only	Total number captured or presence only	305	477	382.4	mm	Other	Good quality	FIS
6/17/2015	Kreiner, Ryan	Northern Pike Minnow	234	no estimate, counts only	Total number captured or presence only	271	497	387.9	mm	Other	Good quality	FIS
6/17/2015	Kreiner, Ryan	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	272	272	272	mm	Other	Good quality	FIS
6/17/2015	Kreiner, Ryan	Smallmouth Bass	6	no estimate, counts only	Total number captured or presence only	253	404	305	mm	Other	Good quality	FIS
6/16/2015	Kreiner, Ryan	Brown Trout	3	no estimate, counts only	Total number captured or presence only	227	615	415	mm	Other	Good quality	FIS
6/16/2015	Kreiner, Ryan	Largescale Sucker	14	no estimate, counts only	Total number captured or presence only	302	416	361	mm	Other	Good quality	FIS
6/16/2015	Kreiner, Ryan	Longnose Sucker	1	no estimate, counts only	Total number captured or presence only	409	409	409	mm	Other	Good quality	FIS
6/16/2015	Kreiner, Ryan		261			-	-	-	mm	Other		FIS

		Northern Pike Minnow		no estimate, counts only	Total number captured or presence only						Good quality	
6/16/2015	Kreiner, Ryan	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	330	330	330	mm	Other	Good quality	FIS
6/16/2015	Kreiner, Ryan	Smallmouth Bass	1	no estimate, counts only	Total number captured or presence only	260	260	260	mm	Other	Good quality	FIS
6/15/2015	Kreiner, Ryan	Brown Trout	7	no estimate, counts only	Total number captured or presence only	291	474	355	mm	Other	Good quality	FIS
6/15/2015	Kreiner, Ryan	Largescale Sucker	94	no estimate, counts only	Total number captured or presence only	307	497	401.8	mm	Other	Good quality	FIS
6/15/2015	Kreiner, Ryan	Longnose Sucker	1	no estimate, counts only	Total number captured or presence only	428	428	428	mm	Other	Good quality	FIS
6/15/2015	Kreiner, Ryan	Northern Pike Minnow	332	no estimate, counts only	Total number captured or presence only	285	523	396.4	mm	Other	Good quality	FIS
6/15/2015	Kreiner, Ryan	Smallmouth Bass	7	no estimate, counts only	Total number captured or presence only	232	401	305.4	mm	Other	Good quality	FIS
6/15/2015	Kreiner, Ryan	Westslope Cutthroat Trout	2	no estimate, counts only	Total number captured or presence only	346	451	398.5	mm	Other	Good quality	FIS
6/12/2015	Kreiner, Ryan	Largescale Sucker	53	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
6/12/2015	Kreiner, Ryan		1			414	414	414	mm	Other		FIS

		Longnose Sucker		no estimate, counts only	Total number captured or presence only						Good quality	
6/12/2015	Kreiner, Ryan	Northern Pike Minnow	23	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
6/11/2015	Kreiner, Ryan	Largescale Sucker	39	no estimate, counts only	Total number captured or presence only	296	480	400	mm	Other	Good quality	FIS
6/11/2015	Kreiner, Ryan	Longnose Sucker	1	no estimate, counts only	Total number captured or presence only	421	421	421	mm	Other	Good quality	FIS
6/11/2015	Kreiner, Ryan	Northern Pike Minnow	191	no estimate, counts only	Total number captured or presence only	282	535	385.5	mm	Other	Good quality	FIS
6/11/2015	Kreiner, Ryan	Smallmouth Bass	5	no estimate, counts only	Total number captured or presence only	219	355	292.6	mm	Other	Good quality	FIS
6/11/2015	Kreiner, Ryan	Walleye	1	no estimate, counts only	Total number captured or presence only	282	282	282	mm	Other	Good quality	FIS
6/10/2015	Kreiner, Ryan	Brown Trout	1	no estimate, counts only	Total number captured or presence only	359	359	359	mm	Other	Good quality	FIS
6/10/2015	Kreiner, Ryan	Largescale Sucker	56	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
6/10/2015	Kreiner, Ryan	Longnose Sucker	1	no estimate, counts only	Total number captured or presence only	373	373	373	mm	Other	Good quality	FIS
6/10/2015	Kreiner, Ryan		235			-	-	-	mm	Other		FIS

		Northern Pike Minnow		no estimate, counts only	Total number captured or presence only						Good quality	
6/10/2015	Kreiner, Ryan	Smallmouth Bass	5	no estimate, counts only	Total number captured or presence only	248	386	318.6	mm	Other	Good quality	FIS
6/9/2015	Kreiner, Ryan	Largescale Sucker	39	no estimate, counts only	Total number captured or presence only	301	484	398	mm	Other	Good quality	FIS
6/9/2015	Kreiner, Ryan	Northern Pike Minnow	141	no estimate, counts only	Total number captured or presence only	260	542	397.1	mm	Other	Good quality	FIS
6/9/2015	Kreiner, Ryan	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	392	392	392	mm	Other	Good quality	FIS
6/9/2015	Kreiner, Ryan	Smallmouth Bass	5	no estimate, counts only	Total number captured or presence only	308	375	330.6	mm	Other	Good quality	FIS
6/8/2015	Kreiner, Ryan	Largescale Sucker	324	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
6/8/2015	Kreiner, Ryan	Northern Pike Minnow	252	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
6/8/2015	Kreiner, Ryan	Smallmouth Bass	6	no estimate, counts only	Total number captured or presence only	294	402	343.3	mm	Other	Good quality	FIS
6/5/2015	Kreiner, Ryan	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	436	436	436	mm	Other	Good quality	FIS
6/5/2015	Kreiner, Ryan		2			348	384	366	mm	Other		FIS

		Smallmouth Bass		no estimate, counts only	Total number captured or presence only						Good quality	
6/4/2015	Kreiner, Ryan	Largescale Sucker	2	no estimate, counts only	Total number captured or presence only	404	409	406.5	mm	Other	Good quality	FIS
6/4/2015	Kreiner, Ryan	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	460	460	460	mm	Other	Good quality	FIS
6/4/2015	Kreiner, Ryan	Smallmouth Bass	2	no estimate, counts only	Total number captured or presence only	279	375	327	mm	Other	Good quality	FIS
6/3/2015	Kreiner, Ryan	Brown Trout	3	no estimate, counts only	Total number captured or presence only	272	445	380	mm	Other	Good quality	FIS
6/3/2015	Kreiner, Ryan	Bull Trout	1	no estimate, counts only	Total number captured or presence only	520	520	520	mm	Other	Good quality	FIS
6/3/2015	Kreiner, Ryan	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	395	395	395	mm	Other	Good quality	FIS
6/3/2015	Kreiner, Ryan	Northern Pike Minnow	6	no estimate, counts only	Total number captured or presence only	340	550	408.3	mm	Other	Good quality	FIS
6/3/2015	Kreiner, Ryan	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	328	328	328	mm	Other	Good quality	FIS
6/2/2015	Kreiner, Ryan	Largescale Sucker	8	no estimate, counts only	Total number captured or presence only	312	535	434.6	mm	Other	Good quality	FIS
6/2/2015	Kreiner, Ryan		38			310	500	386.4	mm	Other		FIS

		Northern Pike Minnow		no estimate, counts only	Total number captured or presence only						Good quality	
6/2/2015	Kreiner, Ryan	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	322	322	322	mm	Other	Good quality	FIS
6/1/2015	Kreiner, Ryan	Brown Trout	1	no estimate, counts only	Total number captured or presence only	464	464	464	mm	Other	Good quality	FIS
6/1/2015	Kreiner, Ryan	Largescale Sucker	427	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
6/1/2015	Kreiner, Ryan	Longnose Sucker	2	no estimate, counts only	Total number captured or presence only	408	451	429.5	mm	Other	Good quality	FIS
6/1/2015	Kreiner, Ryan	Northern Pike Minnow	338	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
6/1/2015	Kreiner, Ryan	Peamouth	47	no estimate, counts only	Total number captured or presence only	276	349	310.9	mm	Other	Good quality	FIS
6/1/2015	Kreiner, Ryan	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	482	482	482	mm	Other	Good quality	FIS
6/1/2015	Kreiner, Ryan	Smallmouth Bass	3	no estimate, counts only	Total number captured or presence only	344	393	367.3	mm	Other	Good quality	FIS
5/29/2015	Kreiner, Ryan	Brown Trout	1	no estimate, counts only	Total number captured or presence only	510	510	510	mm	Other	Good quality	FIS
5/29/2015	Kreiner, Ryan		10			285	485	379.8	mm	Other		FIS

		Largescale Sucker		no estimate, counts only	Total number captured or presence only						Good quality	
5/29/2015	Kreiner, Ryan	Northern Pike Minnow	75	no estimate, counts only	Total number captured or presence only	338	565	410	mm	Other	Good quality	FIS
5/29/2015	Kreiner, Ryan	Peamouth	22	no estimate, counts only	Total number captured or presence only	272	364	321	mm	Other	Good quality	FIS
5/28/2015	Kreiner, Ryan	Northern Pike Minnow	23	no estimate, counts only	Total number captured or presence only	334	452	376.7	mm	Other	Good quality	FIS
5/28/2015	Kreiner, Ryan	Peamouth	2	no estimate, counts only	Total number captured or presence only	309	342	325.5	mm	Other	Good quality	FIS
5/27/2015	Kreiner, Ryan	Largescale Sucker	2	no estimate, counts only	Total number captured or presence only	355	397	376	mm	Other	Good quality	FIS
5/27/2015	Kreiner, Ryan	Northern Pike Minnow	4	no estimate, counts only	Total number captured or presence only	323	478	387.3	mm	Other	Good quality	FIS
5/27/2015	Kreiner, Ryan	Peamouth	3	no estimate, counts only	Total number captured or presence only	288	330	304	mm	Other	Good quality	FIS
5/26/2015	Kreiner, Ryan	Largescale Sucker	47	no estimate, counts only	Total number captured or presence only	346	518	439.2	mm	Other	Good quality	FIS
5/26/2015	Kreiner, Ryan	Longnose Sucker	1	no estimate, counts only	Total number captured or presence only	394	394	394	mm	Other	Good quality	FIS
5/26/2015	Kreiner, Ryan		56			294	533	440.3	mm	Other		FIS

		Northern Pike Minnow		no estimate, counts only	Total number captured or presence only						Good quality	
5/26/2015	Kreiner, Ryan	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	438	438	438	mm	Other	Good quality	FIS
5/26/2015	Kreiner, Ryan	Smallmouth Bass	2	no estimate, counts only	Total number captured or presence only	348	413	380.5	mm	Other	Good quality	FIS
5/24/2015	Kreiner, Ryan	Brown Trout	1	no estimate, counts only	Total number captured or presence only	510	510	510	mm	Other	Good quality	FIS
5/24/2015	Kreiner, Ryan	Largescale Sucker	776	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
5/24/2015	Kreiner, Ryan	Longnose Sucker	2	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
5/24/2015	Kreiner, Ryan	Northern Pike Minnow	73	no estimate, counts only	Total number captured or presence only	351	510	426.2	mm	Other	Good quality	FIS
5/24/2015	Kreiner, Ryan	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	455	455	455	mm	Other	Good quality	FIS
5/24/2015	Kreiner, Ryan	Smallmouth Bass	1	no estimate, counts only	Total number captured or presence only	375	375	375	mm	Other	Good quality	FIS
5/22/2015	Kreiner, Ryan	Largescale Sucker	336	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
5/22/2015	Kreiner, Ryan		16			-	-	-	mm	Other		FIS

		Northern Pike Minnow		no estimate, counts only	Total number captured or presence only						Good quality	
5/21/2015	Kreiner, Ryan	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	452	452	452	mm	Other	Good quality	FIS
5/21/2015	Kreiner, Ryan	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	453	453	453	mm	Other	Good quality	FIS
5/20/2015	Kreiner, Ryan	Brook Trout	1	no estimate, counts only	Total number captured or presence only	354	354	354	mm	Other	Good quality	FIS
5/20/2015	Kreiner, Ryan	Largescale Sucker	24	no estimate, counts only	Total number captured or presence only	280	488	425.2	mm	Other	Good quality	FIS
5/20/2015	Kreiner, Ryan	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	471	471	471	mm	Other	Good quality	FIS
5/20/2015	Kreiner, Ryan	Peamouth	1	no estimate, counts only	Total number captured or presence only	342	342	342	mm	Other	Good quality	FIS
5/19/2015	Kreiner, Ryan	Lake Trout	1	no estimate, counts only	Total number captured or presence only	463	463	463	mm	Other	Good quality	FIS
5/19/2015	Kreiner, Ryan	Largescale Sucker	417	no estimate, counts only	Total number captured or presence only	2	2	2	mm	Other	Good quality	FIS
5/19/2015	Kreiner, Ryan	Longnose Sucker	2	no estimate, counts only	Total number captured or presence only	397	429	413	mm	Other	Good quality	FIS
5/19/2015	Kreiner, Ryan		22			355	544	426.8	mm	Other		FIS

		Northern Pike Minnow		no estimate, counts only	Total number captured or presence only						Good quality	
5/19/2015	Kreiner, Ryan	Peamouth	14	no estimate, counts only	Total number captured or presence only	299	380	339.1	mm	Other	Good quality	FIS
5/19/2015	Kreiner, Ryan	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	201	330	265.5	mm	Other	Good quality	FIS
5/17/2015	Kreiner, Ryan	Brown Trout	3	no estimate, counts only	Total number captured or presence only	247	615	478	mm	Other	Good quality	FIS
5/17/2015	Kreiner, Ryan	Bull Trout	1	no estimate, counts only	Total number captured or presence only	519	519	519	mm	Other	Good quality	FIS
5/17/2015	Kreiner, Ryan	Largescale Sucker	707	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
5/17/2015	Kreiner, Ryan	Longnose Sucker	5	no estimate, counts only	Total number captured or presence only	385	422	401.5	mm	Other	Good quality	FIS
5/17/2015	Kreiner, Ryan	Northern Pike Minnow	44	no estimate, counts only	Total number captured or presence only	342	575	469.4	mm	Other	Good quality	FIS
5/17/2015	Kreiner, Ryan	Peamouth	31	no estimate, counts only	Total number captured or presence only	311	366	346.6	mm	Other	Good quality	FIS
5/17/2015	Kreiner, Ryan	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	300	300	300	mm	Other	Good quality	FIS
5/15/2015	Kreiner, Ryan	Brown Trout	2			196	607	401.5	mm	Other		FIS

				no estimate, counts only	Total number captured or presence only						Good quality	
5/15/2015	Kreiner, Ryan	Largescale Sucker	85	no estimate, counts only	Total number captured or presence only	373	553	457.3	mm	Other	Good quality	FIS
5/15/2015	Kreiner, Ryan	Northern Pike Minnow	7	no estimate, counts only	Total number captured or presence only	389	530	460.9	mm	Other	Good quality	FIS
5/15/2015	Kreiner, Ryan	Peamouth	1	no estimate, counts only	Total number captured or presence only	345	345	345	mm	Other	Good quality	FIS
5/14/2015	Kreiner, Ryan	Brown Trout	1	no estimate, counts only	Total number captured or presence only	243	243	243	mm	Other	Good quality	FIS
5/14/2015	Kreiner, Ryan	Largescale Sucker	46	no estimate, counts only	Total number captured or presence only	359	542	441	mm	Other	Good quality	FIS
5/14/2015	Kreiner, Ryan	Northern Pike Minnow	9	no estimate, counts only	Total number captured or presence only	370	555	474.2	mm	Other	Good quality	FIS
5/13/2015	Kreiner, Ryan	Largescale Sucker	175	no estimate, counts only	Total number captured or presence only	375	537	457.1	mm	Other	Good quality	FIS
5/13/2015	Kreiner, Ryan	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	383	383	383	mm	Other	Good quality	FIS
5/13/2015	Kreiner, Ryan	Peamouth	1	no estimate, counts only	Total number captured or presence only	325	325	325	mm	Other	Good quality	FIS
5/12/2015	Kreiner, Ryan	Brown Trout	1			-	-	-	mm	Other		FIS

				no estimate, counts only	Total number captured or presence only						Good quality	
5/12/2015	Kreiner, Ryan	Largescale Sucker	328	no estimate, counts only	Total number captured or presence only	402	525	452.2	mm	Other	Good quality	FIS
5/12/2015	Kreiner, Ryan	Longnose Sucker	1	no estimate, counts only	Total number captured or presence only	397	397	397	mm	Other	Good quality	FIS
5/12/2015	Kreiner, Ryan	Northern Pike Minnow	5	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
5/11/2015	Kreiner, Ryan	Brown Trout	4	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
5/11/2015	Kreiner, Ryan	Lake Trout	1	no estimate, counts only	Total number captured or presence only	487	487	487	mm	Other	Good quality	FIS
5/11/2015	Kreiner, Ryan	Largescale Sucker	191	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
5/11/2015	Kreiner, Ryan	Northern Pike Minnow	4	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
5/11/2015	Kreiner, Ryan	Rainbow Trout	4	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
5/11/2015	Kreiner, Ryan	Westslope Cutthroat Trout	2	no estimate, counts only	Total number captured or presence only	311	317	314	mm	Other	Good quality	FIS
5/8/2015	Kreiner, Ryan		2			445	457	451	mm	Other		FIS

		Largescale Sucker		no estimate, counts only	Total number captured or presence only						Good quality	
5/8/2015	Kreiner, Ryan	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	263	382	322.5	mm	Other	Good quality	FIS
5/7/2015	Kreiner, Ryan	Brown Trout	1	no estimate, counts only	Total number captured or presence only	231	231	231	mm	Other	Good quality	FIS
5/7/2015	Kreiner, Ryan	Largescale Sucker	50	no estimate, counts only	Total number captured or presence only	436	520	484.7	mm	Other	Good quality	FIS
5/7/2015	Kreiner, Ryan	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	257	257	257	mm	Other	Good quality	FIS
5/7/2015	Kreiner, Ryan	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	286	286	286	mm	Other	Good quality	FIS
5/6/2015	Kreiner, Ryan	Brown Trout	2	no estimate, counts only	Total number captured or presence only	243	410	326.5	mm	Other	Good quality	FIS
5/6/2015	Kreiner, Ryan	Largescale Sucker	286	no estimate, counts only	Total number captured or presence only	395	395	395	mm	Other	Good quality	FIS
5/6/2015	Kreiner, Ryan	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	455	455	455	mm	Other	Good quality	FIS
5/6/2015	Kreiner, Ryan	Rainbow Trout	4	no estimate, counts only	Total number captured or presence only	267	508	413.5	mm	Other	Good quality	FIS
5/5/2015	Kreiner, Ryan	Brown Trout	2			224	430	327	mm	Other		FIS

				no estimate, counts only	Total number captured or presence only						Good quality	
5/5/2015	Kreiner, Ryan	Largescale Sucker	79	no estimate, counts only	Total number captured or presence only	297	535	459.2	mm	Other	Good quality	FIS
5/5/2015	Kreiner, Ryan	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	308	395	351.5	mm	Other	Good quality	FIS
5/4/2015	Kreiner, Ryan	Largescale Sucker	533	no estimate, counts only	Total number captured or presence only	53	527	444.3	mm	Other	Good quality	FIS
5/4/2015	Kreiner, Ryan	Northern Pike Minnow	9	no estimate, counts only	Total number captured or presence only	411	610	484.7	mm	Other	Good quality	FIS
5/4/2015	Kreiner, Ryan	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	274	480	344.3	mm	Other	Good quality	FIS
5/4/2015	Kreiner, Ryan	Westslope Cutthroat Trout	2	no estimate, counts only	Total number captured or presence only	318	406	362	mm	Other	Good quality	FIS
5/1/2015	Kreiner, Ryan	Brown Trout	2	no estimate, counts only	Total number captured or presence only	282	386	334	mm	Other	Good quality	FIS
5/1/2015	Kreiner, Ryan	Largescale Sucker	200	no estimate, counts only	Total number captured or presence only	392	485	440.5	mm	Other	Good quality	FIS
5/1/2015	Kreiner, Ryan	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	261	261	261	mm	Other	Good quality	FIS
5/1/2015	Kreiner, Ryan		1			305	305	305	mm	Other		FIS

		Westslope Cutthroat Trout		no estimate, counts only	Total number captured or presence only						Good quality	
4/30/2015	Kreiner, Ryan	Brown Trout	1	no estimate, counts only	Total number captured or presence only	243	243	243	mm	Other	Good quality	FIS
4/30/2015	Kreiner, Ryan	Largescale Sucker	126	no estimate, counts only	Total number captured or presence only	393	498	429.8	mm	Other	Good quality	FIS
4/30/2015	Kreiner, Ryan	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	478	478	478	mm	Other	Good quality	FIS
4/30/2015	Kreiner, Ryan	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	383	383	383	mm	Other	Good quality	FIS
4/30/2015	Kreiner, Ryan	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	364	364	364	mm	Other	Good quality	FIS
4/29/2015	Kreiner, Ryan	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	205	205	205	mm	Other	Good quality	FIS
4/27/2015	Kreiner, Ryan	Brown Trout	1	no estimate, counts only	Total number captured or presence only	323	323	323	mm	Other	Good quality	FIS
4/27/2015	Kreiner, Ryan	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	441	441	441	mm	Other	Good quality	FIS
4/27/2015	Kreiner, Ryan	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	478	478	478	mm	Other	Good quality	FIS
4/24/2015	Kreiner, Ryan		14			410	528	459	mm	Other		FIS

		Largescale Sucker		no estimate, counts only	Total number captured or presence only						Good quality	
4/23/2015	Kreiner, Ryan	Largescale Sucker	135	no estimate, counts only	Total number captured or presence only	395	512	436.3	mm	Other	Good quality	FIS
4/23/2015	Kreiner, Ryan	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	529	529	529	mm	Other	Good quality	FIS
4/22/2015	Kreiner, Ryan	Lake Trout	1	no estimate, counts only	Total number captured or presence only	760	760	760	mm	Other	Good quality	FIS
4/22/2015	Kreiner, Ryan	Largescale Sucker	158	no estimate, counts only	Total number captured or presence only	401	513	440	mm	Other	Good quality	FIS
4/21/2015	Kreiner, Ryan	Largescale Sucker	172	no estimate, counts only	Total number captured or presence only	385	557	453	mm	Other	Good quality	FIS
4/21/2015	Kreiner, Ryan	Rainbow Trout	5	no estimate, counts only	Total number captured or presence only	273	397	311.4	mm	Other	Good quality	FIS
4/21/2015	Kreiner, Ryan	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	438	438	438	mm	Other	Good quality	FIS
4/20/2015	Kreiner, Ryan	Largescale Sucker	66	no estimate, counts only	Total number captured or presence only	420	508	446.2	mm	Other	Good quality	FIS
4/20/2015	Kreiner, Ryan	Rainbow Trout	8	no estimate, counts only	Total number captured or presence only	273	476	399	mm	Other	Good quality	FIS
4/20/2015	Kreiner, Ryan		1			316	316	316	mm	Other		FIS

		Westslope Cutthroat Trout		no estimate, counts only	Total number captured or presence only						Good quality	
4/20/2015	Kreiner, Ryan	Westslope X Rainbow	1	no estimate, counts only	Total number captured or presence only	458	458	458	mm	Other	Good quality	FIS
4/17/2015	Kreiner, Ryan	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	420	449	434.5	mm	Other	Good quality	FIS
4/14/2015	Kreiner, Ryan	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	374	374	374	mm	Other	Good quality	FIS
4/13/2015	Kreiner, Ryan	Lake Trout	1	no estimate, counts only	Total number captured or presence only	604	604	604	mm	Other	Good quality	FIS
4/13/2015	Kreiner, Ryan	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	308	423	365.5	mm	Other	Good quality	FIS
4/10/2015	Kreiner, Ryan	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	483	483	483	mm	Other	Good quality	FIS
4/6/2015	Kreiner, Ryan	Westslope X Rainbow	1	no estimate, counts only	Total number captured or presence only	510	510	510	mm	Other	Good quality	FIS
4/3/2015	Kreiner, Ryan	Brown Trout	1	no estimate, counts only	Total number captured or presence only	458	458	458	mm	Other	Good quality	FIS
4/3/2015	Kreiner, Ryan	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	501	501	501	mm	Other	Good quality	FIS
4/1/2015	Kreiner, Ryan		1			535	535	535	mm	Other		FIS

		Rainbow Trout		no estimate, counts only	Total number captured or presence only						Good quality	
3/23/2015	Kreiner, Ryan	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	420	420	420	mm	Other	Good quality	FIS
3/20/2015	Kreiner, Ryan	Rainbow Trout	9	no estimate, counts only	Total number captured or presence only	439	563	479.2	mm	Other	Good quality	FIS
3/18/2015	Kreiner, Ryan	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	363	419	391	mm	Other	Good quality	FIS
3/17/2015	Kreiner, Ryan	Rainbow Trout	10	no estimate, counts only	Total number captured or presence only	387	551	474.1	mm	Other	Good quality	FIS
3/17/2015	Kreiner, Ryan	Westslope X Rainbow	1	no estimate, counts only	Total number captured or presence only	610	610	610	mm	Other	Good quality	FIS
10/21/2014	Kreiner, Ryan	Mountain Whitefish	12	no estimate, counts only	Total number captured or presence only	317	390	344.1	mm	Other	Good quality	FIS
10/20/2014	Kreiner, Ryan	Brown Trout	1	no estimate, counts only	Total number captured or presence only	365	365	365	mm	Other	Good quality	FIS
10/20/2014	Kreiner, Ryan	Mountain Whitefish	21	no estimate, counts only	Total number captured or presence only	315	392	350.2	mm	Other	Good quality	FIS
10/20/2014	Kreiner, Ryan	Westslope X Rainbow	1	no estimate, counts only	Total number captured or presence only	414	414	414	mm	Other	Good quality	FIS
10/17/2014	Kreiner, Ryan		6			330	371	345.5	mm	Other		FIS

		Mountain Whitefish		no estimate, counts only	Total number captured or presence only						Good quality	
10/16/2014	Kreiner, Ryan	Brown Trout	1	no estimate, counts only	Total number captured or presence only	361	361	361	mm	Other	Good quality	FIS
10/16/2014	Kreiner, Ryan	Mountain Whitefish	7	no estimate, counts only	Total number captured or presence only	318	355	338.1	mm	Other	Good quality	FIS
10/16/2014	Kreiner, Ryan	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	280	492	386	mm	Other	Good quality	FIS
10/15/2014	Kreiner, Ryan	Mountain Whitefish	6	no estimate, counts only	Total number captured or presence only	322	365	341.7	mm	Other	Good quality	FIS
10/14/2014	Kreiner, Ryan	Mountain Whitefish	7	no estimate, counts only	Total number captured or presence only	328	387	357.9	mm	Other	Good quality	FIS
10/13/2014	Kreiner, Ryan	Brown Trout	4	no estimate, counts only	Total number captured or presence only	396	513	435.5	mm	Other	Good quality	FIS
10/13/2014	Kreiner, Ryan	Largescale Sucker	4	no estimate, counts only	Total number captured or presence only	441	501	478.8	mm	Other	Good quality	FIS
10/13/2014	Kreiner, Ryan	Mountain Whitefish	27	no estimate, counts only	Total number captured or presence only	319	424	353.2	mm	Other	Good quality	FIS
10/13/2014	Kreiner, Ryan	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	254	254	254	mm	Other	Good quality	FIS
10/13/2014	Kreiner, Ryan		2			291	425	358	mm	Other		FIS

		Rainbow Trout		no estimate, counts only	Total number captured or presence only						Good quality	
10/13/2014	Kreiner, Ryan	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	255	255	255	mm	Other	Good quality	FIS
10/10/2014	Kreiner, Ryan	Brown Trout	1	no estimate, counts only	Total number captured or presence only	489	489	489	mm	Other	Good quality	FIS
10/10/2014	Kreiner, Ryan	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	321	321	321	mm	Other	Good quality	FIS
10/10/2014	Kreiner, Ryan	Longnose Sucker	1	no estimate, counts only	Total number captured or presence only	422	422	422	mm	Other	Good quality	FIS
10/10/2014	Kreiner, Ryan	Mountain Whitefish	17	no estimate, counts only	Total number captured or presence only	303	380	348.8	mm	Other	Good quality	FIS
10/10/2014	Kreiner, Ryan	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	247	334	290.5	mm	Other	Good quality	FIS
10/9/2014	Kreiner, Ryan	Brown Trout	5	no estimate, counts only	Total number captured or presence only	385	575	499.4	mm	Other	Good quality	FIS
10/9/2014	Kreiner, Ryan	Largescale Sucker	3	no estimate, counts only	Total number captured or presence only	428	472	453.3	mm	Other	Good quality	FIS
10/9/2014	Kreiner, Ryan	Mountain Whitefish	22	no estimate, counts only	Total number captured or presence only	315	390	349.5	mm	Other	Good quality	FIS
10/9/2014	Kreiner, Ryan		3			238	573	399	mm	Other		FIS

		Rainbow Trout		no estimate, counts only	Total number captured or presence only						Good quality	
10/9/2014	Kreiner, Ryan	Westslope Cutthroat Trout	3	no estimate, counts only	Total number captured or presence only	180	368	283.3	mm	Other	Good quality	FIS
10/7/2014	Kreiner, Ryan	Brown Trout	1	no estimate, counts only	Total number captured or presence only	450	450	450	mm	Other	Good quality	FIS
10/7/2014	Kreiner, Ryan	Mountain Whitefish	3	no estimate, counts only	Total number captured or presence only	313	343	332.7	mm	Other	Good quality	FIS
10/7/2014	Kreiner, Ryan	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	347	347	347	mm	Other	Good quality	FIS
10/6/2014	Kreiner, Ryan	Brown Trout	2	no estimate, counts only	Total number captured or presence only	411	441	426	mm	Other	Good quality	FIS
10/6/2014	Kreiner, Ryan	Mountain Whitefish	8	no estimate, counts only	Total number captured or presence only	322	375	348.9	mm	Other	Good quality	FIS
10/6/2014	Kreiner, Ryan	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	243	243	243	mm	Other	Good quality	FIS
10/6/2014	Kreiner, Ryan	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	248	248	248	mm	Other	Good quality	FIS
10/6/2014	Kreiner, Ryan	Westslope X Rainbow	1	no estimate, counts only	Total number captured or presence only	298	298	298	mm	Other	Good quality	FIS
10/3/2014	Kreiner, Ryan	Brown Trout	1			460	460	460	mm	Other		FIS

				no estimate, counts only	Total number captured or presence only						Good quality	
10/3/2014	Kreiner, Ryan	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	432	432	432	mm	Other	Good quality	FIS
10/3/2014	Kreiner, Ryan	Mountain Whitefish	4	no estimate, counts only	Total number captured or presence only	340	358	350.3	mm	Other	Good quality	FIS
10/3/2014	Kreiner, Ryan	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	433	433	433	mm	Other	Good quality	FIS
10/3/2014	Kreiner, Ryan	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	287	287	287	mm	Other	Good quality	FIS
10/1/2014	Kreiner, Ryan	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	488	488	488	mm	Other	Good quality	FIS
10/1/2014	Kreiner, Ryan	Westslope Cutthroat Trout	2	no estimate, counts only	Total number captured or presence only	250	363	306.5	mm	Other	Good quality	FIS
9/30/2014	Kreiner, Ryan	Brown Trout	1	no estimate, counts only	Total number captured or presence only	482	482	482	mm	Other	Good quality	FIS
9/30/2014	Kreiner, Ryan	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	245	245	245	mm	Other	Good quality	FIS
9/29/2014	Kreiner, Ryan	Brown Trout	1	no estimate, counts only	Total number captured or presence only	428	428	428	mm	Other	Good quality	FIS
9/29/2014	Kreiner, Ryan	Lake Trout	1			685	685	685	mm	Other		FIS

				no estimate, counts only	Total number captured or presence only						Good quality	
9/29/2014	Kreiner, Ryan	Largescale Sucker	3	no estimate, counts only	Total number captured or presence only	450	472	459.7	mm	Other	Good quality	FIS
9/29/2014	Kreiner, Ryan	Mountain Whitefish	73	no estimate, counts only	Total number captured or presence only	295	400	344.2	mm	Other	Good quality	FIS
9/29/2014	Kreiner, Ryan	Northern Pike Minnow	2	no estimate, counts only	Total number captured or presence only	261	460	360.5	mm	Other	Good quality	FIS
9/29/2014	Kreiner, Ryan	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	251	465	390	mm	Other	Good quality	FIS
9/29/2014	Kreiner, Ryan	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	250	250	250	mm	Other	Good quality	FIS
9/26/2014	Kreiner, Ryan	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	455	455	455	mm	Other	Good quality	FIS
9/26/2014	Kreiner, Ryan	Mountain Whitefish	5	no estimate, counts only	Total number captured or presence only	326	341	334.8	mm	Other	Good quality	FIS
9/26/2014	Kreiner, Ryan	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	445	445	445	mm	Other	Good quality	FIS
9/26/2014	Kreiner, Ryan	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	575	575	575	mm	Other	Good quality	FIS
9/26/2014	Kreiner, Ryan		1			227	227	227	mm	Other		FIS

		Westslope Cutthroat Trout		no estimate, counts only	Total number captured or presence only						Good quality	
9/25/2014	Kreiner, Ryan	Brown Trout	1	no estimate, counts only	Total number captured or presence only	447	447	447	mm	Other	Good quality	FIS
9/25/2014	Kreiner, Ryan	Largescale Sucker	13	no estimate, counts only	Total number captured or presence only	413	488	458.2	mm	Other	Good quality	FIS
9/25/2014	Kreiner, Ryan	Mountain Whitefish	16	no estimate, counts only	Total number captured or presence only	317	428	356.8	mm	Other	Good quality	FIS
9/25/2014	Kreiner, Ryan	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	505	505	505	mm	Other	Good quality	FIS
9/25/2014	Kreiner, Ryan	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	268	268	268	mm	Other	Good quality	FIS
9/24/2014	Kreiner, Ryan	Brown Trout	2	no estimate, counts only	Total number captured or presence only	230	410	320	mm	Other	Good quality	FIS
9/24/2014	Kreiner, Ryan	Largescale Sucker	3	no estimate, counts only	Total number captured or presence only	482	510	494	mm	Other	Good quality	FIS
9/24/2014	Kreiner, Ryan	Mountain Whitefish	11	no estimate, counts only	Total number captured or presence only	308	350	332.5	mm	Other	Good quality	FIS
9/24/2014	Kreiner, Ryan	Northern Pike Minnow	2	no estimate, counts only	Total number captured or presence only	425	462	443.5	mm	Other	Good quality	FIS
9/24/2014	Kreiner, Ryan		3			220	240	231	mm	Other		FIS

		Rainbow Trout		no estimate, counts only	Total number captured or presence only						Good quality	
9/22/2014	Kreiner, Ryan	Brown Trout	3	no estimate, counts only	Total number captured or presence only	389	485	449.7	mm	Other	Good quality	FIS
9/22/2014	Kreiner, Ryan	Mountain Whitefish	7	no estimate, counts only	Total number captured or presence only	324	360	343	mm	Other	Good quality	FIS
9/22/2014	Kreiner, Ryan	Rainbow Trout	6	no estimate, counts only	Total number captured or presence only	195	471	337.3	mm	Other	Good quality	FIS
9/22/2014	Kreiner, Ryan	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	233	233	233	mm	Other	Good quality	FIS
9/19/2014	Kreiner, Ryan	Brown Trout	2	no estimate, counts only	Total number captured or presence only	426	476	451	mm	Other	Good quality	FIS
9/19/2014	Kreiner, Ryan	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	503	503	503	mm	Other	Good quality	FIS
9/19/2014	Kreiner, Ryan	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	207	231	219	mm	Other	Good quality	FIS
9/18/2014	Kreiner, Ryan	Northern Pike Minnow	2	no estimate, counts only	Total number captured or presence only	389	425	407	mm	Other	Good quality	FIS
9/17/2014	Kreiner, Ryan	Brown Trout	1	no estimate, counts only	Total number captured or presence only	499	499	499	mm	Other	Good quality	FIS
9/17/2014	Kreiner, Ryan		1			244	244	244	mm	Other		FIS

		Rainbow Trout		no estimate, counts only	Total number captured or presence only						Good quality	
9/16/2014	Kreiner, Ryan	Brown Trout	2	no estimate, counts only	Total number captured or presence only	415	573	494	mm	Other	Good quality	FIS
9/16/2014	Kreiner, Ryan	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	284	382	334.3	mm	Other	Good quality	FIS
9/16/2014	Kreiner, Ryan	Westslope X Rainbow	1	no estimate, counts only	Total number captured or presence only	446	446	446	mm	Other	Good quality	FIS
9/12/2014	Kreiner, Ryan	Largescale Sucker	2	no estimate, counts only	Total number captured or presence only	453	502	477.5	mm	Other	Good quality	FIS
9/11/2014	Kreiner, Ryan	Brown Trout	3	no estimate, counts only	Total number captured or presence only	397	563	479.3	mm	Other	Good quality	FIS
9/10/2014	Kreiner, Ryan	Brown Trout	1	no estimate, counts only	Total number captured or presence only	488	488	488	mm	Other	Good quality	FIS
9/9/2014	Kreiner, Ryan	Brown Trout	1	no estimate, counts only	Total number captured or presence only	405	405	405	mm	Other	Good quality	FIS
9/9/2014	Kreiner, Ryan	Mountain Whitefish	1	no estimate, counts only	Total number captured or presence only	355	355	355	mm	Other	Good quality	FIS
9/8/2014	Kreiner, Ryan	Largescale Sucker	5	no estimate, counts only	Total number captured or presence only	422	495	461	mm	Other	Good quality	FIS
9/8/2014	Kreiner, Ryan		1			460	460	460	mm	Other		FIS

		Northern Pike Minnow		no estimate, counts only	Total number captured or presence only						Good quality	
9/8/2014	Kreiner, Ryan	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	237	542	404	mm	Other	Good quality	FIS
9/5/2014	Kreiner, Ryan	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	365	365	365	mm	Other	Good quality	FIS
9/5/2014	Kreiner, Ryan	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	383	414	398.5	mm	Other	Good quality	FIS
9/4/2014	Kreiner, Ryan	Brown Trout	2	no estimate, counts only	Total number captured or presence only	398	467	432.5	mm	Other	Good quality	FIS
9/4/2014	Kreiner, Ryan	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	425	425	425	mm	Other	Good quality	FIS
9/4/2014	Kreiner, Ryan	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	337	507	400.3	mm	Other	Good quality	FIS
9/3/2014	Kreiner, Ryan	Largescale Sucker	2	no estimate, counts only	Total number captured or presence only	463	480	471.5	mm	Other	Good quality	FIS
9/2/2014	Kreiner, Ryan	Brown Trout	2	no estimate, counts only	Total number captured or presence only	375	467	421	mm	Other	Good quality	FIS
9/2/2014	Kreiner, Ryan	Largescale Sucker	19	no estimate, counts only	Total number captured or presence only	425	519	463.5	mm	Other	Good quality	FIS
9/2/2014	Kreiner, Ryan		3			292	432	379.3	mm	Other		FIS

		Northern Pike Minnow		no estimate, counts only	Total number captured or presence only						Good quality	
9/2/2014	Kreiner, Ryan	Smallmouth Bass	1	no estimate, counts only	Total number captured or presence only	195	195	195	mm	Other	Good quality	FIS
8/29/2014	Breidinger, Kenneth	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	411	411	411	mm	Other	Good quality	FIS
8/29/2014	Breidinger, Kenneth	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	223	465	321.3	mm	Other	Good quality	FIS
8/29/2014	Breidinger, Kenneth	Smallmouth Bass	3	no estimate, counts only	Total number captured or presence only	208	210	208.7	mm	Other	Good quality	FIS
8/28/2014	Breidinger, Kenneth	Largescale Sucker	2	no estimate, counts only	Total number captured or presence only	472	514	493	mm	Other	Good quality	FIS
8/27/2014	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	408	408	408	mm	Other	Good quality	FIS
8/27/2014	Breidinger, Kenneth	Largescale Sucker	4	no estimate, counts only	Total number captured or presence only	417	505	465	mm	Other	Good quality	FIS
8/27/2014	Breidinger, Kenneth	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	291	480	403	mm	Other	Good quality	FIS
8/26/2014	Breidinger, Kenneth	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	448	448	448	mm	Other	Good quality	FIS
8/26/2014			1			160	160	160	mm	Other		FIS

	Breidinger, Kenneth	Smallmouth Bass		no estimate, counts only	Total number captured or presence only						Good quality	
8/25/2014	Breidinger, Kenneth	Largescale Sucker	3	no estimate, counts only	Total number captured or presence only	421	432	427	mm	Other	Good quality	FIS
8/25/2014	Breidinger, Kenneth	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	308	308	308	mm	Other	Good quality	FIS
8/25/2014	Breidinger, Kenneth	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	394	494	450.7	mm	Other	Good quality	FIS
8/25/2014	Breidinger, Kenneth	Smallmouth Bass	1	no estimate, counts only	Total number captured or presence only	203	203	203	mm	Other	Good quality	FIS
8/22/2014	Breidinger, Kenneth	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	478	478	478	mm	Other	Good quality	FIS
8/22/2014	Breidinger, Kenneth	Smallmouth Bass	1	no estimate, counts only	Total number captured or presence only	217	217	217	mm	Other	Good quality	FIS
8/21/2014	Breidinger, Kenneth	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	332	332	332	mm	Other	Good quality	FIS
8/21/2014	Breidinger, Kenneth	Northern Pike Minnow	4	no estimate, counts only	Total number captured or presence only	311	501	373.8	mm	Other	Good quality	FIS
8/21/2014	Breidinger, Kenneth	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	299	435	367	mm	Other	Good quality	FIS
8/21/2014			21			152	383	187.4	mm	Other		FIS

	Breidinger, Kenneth	Smallmouth Bass		no estimate, counts only	Total number captured or presence only						Good quality	
8/19/2014	Breidinger, Kenneth	Mountain Whitefish	1	no estimate, counts only	Total number captured or presence only	382	382	382	mm	Other	Good quality	FIS
8/19/2014	Breidinger, Kenneth	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	271	271	271	mm	Other	Good quality	FIS
8/19/2014	Breidinger, Kenneth	Smallmouth Bass	11	no estimate, counts only	Total number captured or presence only	157	246	181.3	mm	Other	Good quality	FIS
8/18/2014	Breidinger, Kenneth	Largescale Sucker	3	no estimate, counts only	Total number captured or presence only	440	497	462.3	mm	Other	Good quality	FIS
8/18/2014	Breidinger, Kenneth	Northern Pike Minnow	7	no estimate, counts only	Total number captured or presence only	252	402	299.4	mm	Other	Good quality	FIS
8/18/2014	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	542	542	542	mm	Other	Good quality	FIS
8/18/2014	Breidinger, Kenneth	Smallmouth Bass	25	no estimate, counts only	Total number captured or presence only	146	307	197.5	mm	Other	Good quality	FIS
8/15/2014	Breidinger, Kenneth	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	370	370	370	mm	Other	Good quality	FIS
8/15/2014	Breidinger, Kenneth	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	340	340	340	mm	Other	Good quality	FIS
8/15/2014			8			152	205	168	mm	Other		FIS

	Breidinger, Kenneth	Smallmouth Bass		no estimate, counts only	Total number captured or presence only						Good quality	
8/14/2014	Breidinger, Kenneth	Largescale Sucker	3	no estimate, counts only	Total number captured or presence only	410	420	416.7	mm	Other	Good quality	FIS
8/14/2014	Breidinger, Kenneth	Northern Pike Minnow	10	no estimate, counts only	Total number captured or presence only	252	492	322.7	mm	Other	Good quality	FIS
8/14/2014	Breidinger, Kenneth	Smallmouth Bass	41	no estimate, counts only	Total number captured or presence only	157	246	180.6	mm	Other	Good quality	FIS
8/13/2014	Breidinger, Kenneth	Largescale Sucker	2	no estimate, counts only	Total number captured or presence only	380	430	405	mm	Other	Good quality	FIS
8/13/2014	Breidinger, Kenneth	Northern Pike Minnow	12	no estimate, counts only	Total number captured or presence only	232	371	305.8	mm	Other	Good quality	FIS
8/13/2014	Breidinger, Kenneth	Smallmouth Bass	72	no estimate, counts only	Total number captured or presence only	153	348	188.6	mm	Other	Good quality	FIS
8/12/2014	Breidinger, Kenneth	Largescale Sucker	4	no estimate, counts only	Total number captured or presence only	318	493	413	mm	Other	Good quality	FIS
8/12/2014	Breidinger, Kenneth	Northern Pike Minnow	5	no estimate, counts only	Total number captured or presence only	230	322	279.8	mm	Other	Good quality	FIS
8/12/2014	Breidinger, Kenneth	Smallmouth Bass	65	no estimate, counts only	Total number captured or presence only	154	340	197.1	mm	Other	Good quality	FIS
8/11/2014			4			252	320	282.3	mm	Other		FIS

	Breidinger, Kenneth	Northern Pike Minnow		no estimate, counts only	Total number captured or presence only						Good quality	
8/11/2014	Breidinger, Kenneth	Smallmouth Bass	135	no estimate, counts only	Total number captured or presence only	148	403	188.9	mm	Other	Good quality	FIS
8/8/2014	Breidinger, Kenneth	Largescale Sucker	22	no estimate, counts only	Total number captured or presence only	391	476	430.1	mm	Other	Good quality	FIS
8/8/2014	Breidinger, Kenneth	Northern Pike Minnow	13	no estimate, counts only	Total number captured or presence only	233	382	283.9	mm	Other	Good quality	FIS
8/8/2014	Breidinger, Kenneth	Smallmouth Bass	130	no estimate, counts only	Total number captured or presence only	147	354	193	mm	Other	Good quality	FIS
8/6/2014	Breidinger, Kenneth	Northern Pike Minnow	4	no estimate, counts only	Total number captured or presence only	238	357	276.8	mm	Other	Good quality	FIS
8/6/2014	Breidinger, Kenneth	Smallmouth Bass	58	no estimate, counts only	Total number captured or presence only	155	340	188.6	mm	Other	Good quality	FIS
8/5/2014	Breidinger, Kenneth	Largescale Sucker	16	no estimate, counts only	Total number captured or presence only	334	487	413.8	mm	Other	Good quality	FIS
8/5/2014	Breidinger, Kenneth	Northern Pike Minnow	3	no estimate, counts only	Total number captured or presence only	299	395	355.3	mm	Other	Good quality	FIS
8/5/2014	Breidinger, Kenneth	Smallmouth Bass	31	no estimate, counts only	Total number captured or presence only	156	284	192	mm	Other	Good quality	FIS
8/4/2014			28			381	477	417.6	mm	Other		FIS

	Breidinger, Kenneth	Largescale Sucker		no estimate, counts only	Total number captured or presence only						Good quality	
8/4/2014	Breidinger, Kenneth	Northern Pike Minnow	9	no estimate, counts only	Total number captured or presence only	238	455	309.3	mm	Other	Good quality	FIS
8/4/2014	Breidinger, Kenneth	Rainbow Trout	6	no estimate, counts only	Total number captured or presence only	265	395	325.5	mm	Other	Good quality	FIS
8/4/2014	Breidinger, Kenneth	Smallmouth Bass	150	no estimate, counts only	Total number captured or presence only	152	340	211.5	mm	Other	Good quality	FIS
8/1/2014	Breidinger, Kenneth	Largescale Sucker	3	no estimate, counts only	Total number captured or presence only	436	469	448	mm	Other	Good quality	FIS
8/1/2014	Breidinger, Kenneth	Northern Pike Minnow	14	no estimate, counts only	Total number captured or presence only	234	363	281.1	mm	Other	Good quality	FIS
8/1/2014	Breidinger, Kenneth	Smallmouth Bass	55	no estimate, counts only	Total number captured or presence only	147	373	226.6	mm	Other	Good quality	FIS
7/31/2014	Breidinger, Kenneth	Largescale Sucker	2	no estimate, counts only	Total number captured or presence only	427	448	437.5	mm	Other	Good quality	FIS
7/31/2014	Breidinger, Kenneth	Northern Pike Minnow	15	no estimate, counts only	Total number captured or presence only	232	389	281.6	mm	Other	Good quality	FIS
7/31/2014	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	531	531	531	mm	Other	Good quality	FIS
7/31/2014			39			164	333	215.7	mm	Other		FIS

	Breidinger, Kenneth	Smallmouth Bass		no estimate, counts only	Total number captured or presence only						Good quality	
7/30/2014	Breidinger, Kenneth	Brown Trout	2	no estimate, counts only	Total number captured or presence only	250	410	330	mm	Other	Good quality	FIS
7/30/2014	Breidinger, Kenneth	Largescale Sucker	9	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
7/30/2014	Breidinger, Kenneth	Northern Pike Minnow	178	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
7/30/2014	Breidinger, Kenneth	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	265	305	285	mm	Other	Good quality	FIS
7/30/2014	Breidinger, Kenneth	Smallmouth Bass	76	no estimate, counts only	Total number captured or presence only	165	430	210.4	mm	Other	Good quality	FIS
7/30/2014	Breidinger, Kenneth	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	230	230	230	mm	Other	Good quality	FIS
7/29/2014	Breidinger, Kenneth	Brown Trout	2	no estimate, counts only	Total number captured or presence only	402	427	414.5	mm	Other	Good quality	FIS
7/29/2014	Breidinger, Kenneth	Rainbow Trout	4	no estimate, counts only	Total number captured or presence only	275	451	385.8	mm	Other	Good quality	FIS
7/29/2014	Breidinger, Kenneth	Smallmouth Bass	23	no estimate, counts only	Total number captured or presence only	175	300	227.7	mm	Other	Good quality	FIS
7/27/2014		Brown Trout	4			390	412	401.8	mm	Other		FIS

	Breidinger, Kenneth			no estimate, counts only	Total number captured or presence only						Good quality	
7/27/2014	Breidinger, Kenneth	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	268	268	268	mm	Other	Good quality	FIS
7/27/2014	Breidinger, Kenneth	Northern Pike Minnow	7	no estimate, counts only	Total number captured or presence only	220	291	259	mm	Other	Good quality	FIS
7/27/2014	Breidinger, Kenneth	Rainbow Trout	10	no estimate, counts only	Total number captured or presence only	245	473	371.2	mm	Other	Good quality	FIS
7/27/2014	Breidinger, Kenneth	Smallmouth Bass	4	no estimate, counts only	Total number captured or presence only	195	303	240.5	mm	Other	Good quality	FIS
7/25/2014	Breidinger, Kenneth	Largescale Sucker	5	no estimate, counts only	Total number captured or presence only	293	477	383.2	mm	Other	Good quality	FIS
7/25/2014	Breidinger, Kenneth	Northern Pike Minnow	12	no estimate, counts only	Total number captured or presence only	223	420	270.8	mm	Other	Good quality	FIS
7/25/2014	Breidinger, Kenneth	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	392	399	395.5	mm	Other	Good quality	FIS
7/25/2014	Breidinger, Kenneth	Smallmouth Bass	12	no estimate, counts only	Total number captured or presence only	170	312	224.9	mm	Other	Good quality	FIS
7/24/2014	Breidinger, Kenneth	Brown Trout	2	no estimate, counts only	Total number captured or presence only	401	451	426	mm	Other	Good quality	FIS
7/24/2014			3			395	415	408	mm	Other		FIS

	Breidinger, Kenneth	Largescale Sucker		no estimate, counts only	Total number captured or presence only						Good quality	
7/24/2014	Breidinger, Kenneth	Northern Pike Minnow	13	no estimate, counts only	Total number captured or presence only	234	408	289.7	mm	Other	Good quality	FIS
7/24/2014	Breidinger, Kenneth	Rainbow Trout	5	no estimate, counts only	Total number captured or presence only	277	518	439.8	mm	Other	Good quality	FIS
7/24/2014	Breidinger, Kenneth	Smallmouth Bass	36	no estimate, counts only	Total number captured or presence only	163	392	224.4	mm	Other	Good quality	FIS
7/24/2014	Breidinger, Kenneth	Westslope X Rainbow	2	no estimate, counts only	Total number captured or presence only	409	419	414	mm	Other	Good quality	FIS
7/23/2014	Breidinger, Kenneth	Brown Trout	3	no estimate, counts only	Total number captured or presence only	330	415	376.7	mm	Other	Good quality	FIS
7/23/2014	Breidinger, Kenneth	Largescale Sucker	7	no estimate, counts only	Total number captured or presence only	245	450	347.9	mm	Other	Good quality	FIS
7/23/2014	Breidinger, Kenneth	Northern Pike Minnow	26	no estimate, counts only	Total number captured or presence only	215	520	296.5	mm	Other	Good quality	FIS
7/23/2014	Breidinger, Kenneth	Rainbow Trout	6	no estimate, counts only	Total number captured or presence only	235	540	392	mm	Other	Good quality	FIS
7/23/2014	Breidinger, Kenneth	Smallmouth Bass	38	no estimate, counts only	Total number captured or presence only	170	350	235.8	mm	Other	Good quality	FIS
7/23/2014			1			225	225	225	mm	Other		FIS

	Breidinger, Kenneth	Westslope Cutthroat Trout		no estimate, counts only	Total number captured or presence only						Good quality	
7/22/2014	Breidinger, Kenneth	Brown Trout	3	no estimate, counts only	Total number captured or presence only	385	430	407.7	mm	Other	Good quality	FIS
7/22/2014	Breidinger, Kenneth	Largescale Sucker	3	no estimate, counts only	Total number captured or presence only	297	400	357.3	mm	Other	Good quality	FIS
7/22/2014	Breidinger, Kenneth	Northern Pike Minnow	12	no estimate, counts only	Total number captured or presence only	200	422	287.1	mm	Other	Good quality	FIS
7/22/2014	Breidinger, Kenneth	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	288	420	354	mm	Other	Good quality	FIS
7/22/2014	Breidinger, Kenneth	Smallmouth Bass	27	no estimate, counts only	Total number captured or presence only	170	342	226.6	mm	Other	Good quality	FIS
7/22/2014	Breidinger, Kenneth	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	315	315	315	mm	Other	Good quality	FIS
7/21/2014	Breidinger, Kenneth	Largescale Sucker	6	no estimate, counts only	Total number captured or presence only	272	503	371.8	mm	Other	Good quality	FIS
7/21/2014	Breidinger, Kenneth	Northern Pike Minnow	5	no estimate, counts only	Total number captured or presence only	253	366	283.8	mm	Other	Good quality	FIS
7/21/2014	Breidinger, Kenneth	Smallmouth Bass	17	no estimate, counts only	Total number captured or presence only	169	325	229.3	mm	Other	Good quality	FIS
7/21/2014			2			341	343	342	mm	Other		FIS

	Breidinger, Kenneth	Westslope Cutthroat Trout		no estimate, counts only	Total number captured or presence only						Good quality	
7/20/2014	Breidinger, Kenneth	Brown Trout	6	no estimate, counts only	Total number captured or presence only	372	477	418.5	mm	Other	Good quality	FIS
7/20/2014	Breidinger, Kenneth	Largescale Sucker	53	no estimate, counts only	Total number captured or presence only	350	447	395.2	mm	Other	Good quality	FIS
7/20/2014	Breidinger, Kenneth	Northern Pike Minnow	17	no estimate, counts only	Total number captured or presence only	230	403	301.4	mm	Other	Good quality	FIS
7/20/2014	Breidinger, Kenneth	Rainbow Trout	14	no estimate, counts only	Total number captured or presence only	247	490	405.4	mm	Other	Good quality	FIS
7/20/2014	Breidinger, Kenneth	Smallmouth Bass	53	no estimate, counts only	Total number captured or presence only	165	328	238.8	mm	Other	Good quality	FIS
7/20/2014	Breidinger, Kenneth	Westslope Cutthroat Trout	2	no estimate, counts only	Total number captured or presence only	252	360	306	mm	Other	Good quality	FIS
7/19/2014	Breidinger, Kenneth	Brook Trout	1	no estimate, counts only	Total number captured or presence only	382	382	382	mm	Other	Good quality	FIS
7/19/2014	Breidinger, Kenneth	Brown Trout	6	no estimate, counts only	Total number captured or presence only	352	493	409.8	mm	Other	Good quality	FIS
7/19/2014	Breidinger, Kenneth	Largescale Sucker	65	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
7/19/2014			4			-	-	-	mm	Other		FIS

	Breidinger, Kenneth	Northern Pike Minnow		no estimate, counts only	Total number captured or presence only						Good quality	
7/19/2014	Breidinger, Kenneth	Rainbow Trout	9	no estimate, counts only	Total number captured or presence only	310	510	410.6	mm	Other	Good quality	FIS
7/19/2014	Breidinger, Kenneth	Smallmouth Bass	45	no estimate, counts only	Total number captured or presence only	158	346	227.2	mm	Other	Good quality	FIS
7/19/2014	Breidinger, Kenneth	Westslope X Rainbow	2	no estimate, counts only	Total number captured or presence only	281	305	293	mm	Other	Good quality	FIS
7/18/2014	Breidinger, Kenneth	Largescale Sucker	105	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
7/18/2014	Breidinger, Kenneth	Northern Pike Minnow	32	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
7/18/2014	Breidinger, Kenneth	Rainbow Trout	4	no estimate, counts only	Total number captured or presence only	222	362	298.3	mm	Other	Good quality	FIS
7/18/2014	Breidinger, Kenneth	Smallmouth Bass	51	no estimate, counts only	Total number captured or presence only	183	350	245.3	mm	Other	Good quality	FIS
7/17/2014	Breidinger, Kenneth	Brown Trout	2	no estimate, counts only	Total number captured or presence only	413	546	479.5	mm	Other	Good quality	FIS
7/17/2014	Breidinger, Kenneth	Largescale Sucker	1,293	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
7/17/2014			64			-	-	-	mm	Other		FIS

	Breidinger, Kenneth	Northern Pike Minnow		no estimate, counts only	Total number captured or presence only						Good quality	
7/17/2014	Breidinger, Kenneth	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	395	493	444	mm	Other	Good quality	FIS
7/17/2014	Breidinger, Kenneth	Smallmouth Bass	51	no estimate, counts only	Total number captured or presence only	109	348	251.7	mm	Other	Good quality	FIS
7/16/2014	Breidinger, Kenneth	Brown Trout	2	no estimate, counts only	Total number captured or presence only	4240	5090	4665	mm	Other	Good quality	FIS
7/16/2014	Breidinger, Kenneth	Largescale Sucker	295	no estimate, counts only	Total number captured or presence only	3320	4590	4067.5	mm	Other	Good quality	FIS
7/16/2014	Breidinger, Kenneth	Northern Pike Minnow	161	no estimate, counts only	Total number captured or presence only	2540	5200	3666	mm	Other	Good quality	FIS
7/16/2014	Breidinger, Kenneth	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	3010	4380	3473.3	mm	Other	Good quality	FIS
7/16/2014	Breidinger, Kenneth	Smallmouth Bass	45	no estimate, counts only	Total number captured or presence only	1980	3710	2721.1	mm	Other	Good quality	FIS
7/15/2014	Breidinger, Kenneth	Largescale Sucker	4	no estimate, counts only	Total number captured or presence only	372	433	402	mm	Other	Good quality	FIS
7/15/2014	Breidinger, Kenneth	Northern Pike Minnow	9	no estimate, counts only	Total number captured or presence only	351	490	396.4	mm	Other	Good quality	FIS
7/15/2014			10			245	333	284.3	mm	Other		FIS

	Breidinger, Kenneth	Smallmouth Bass		no estimate, counts only	Total number captured or presence only						Good quality	
7/14/2014	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	438	438	438	mm	Other	Good quality	FIS
7/14/2014	Breidinger, Kenneth	Largescale Sucker	235	no estimate, counts only	Total number captured or presence only	293	437	392.7	mm	Other	Good quality	FIS
7/14/2014	Breidinger, Kenneth	Largescale Sucker	65	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
7/14/2014	Breidinger, Kenneth	Northern Pike Minnow	3	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
7/14/2014	Breidinger, Kenneth	Northern Pike Minnow	47	no estimate, counts only	Total number captured or presence only	302	525	386.5	mm	Other	Good quality	FIS
7/14/2014	Breidinger, Kenneth	Smallmouth Bass	9	no estimate, counts only	Total number captured or presence only	221	330	270.1	mm	Other	Good quality	FIS
7/14/2014	Breidinger, Kenneth	Smallmouth Bass	8	no estimate, counts only	Total number captured or presence only	212	307	270.5	mm	Other	Good quality	FIS
7/13/2014	Breidinger, Kenneth	Brown Trout	4	no estimate, counts only	Total number captured or presence only	395	431	416.5	mm	Other	Good quality	FIS
7/13/2014	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	443	443	443	mm	Other	Good quality	FIS
7/13/2014			35			-	-	-	mm	Other		FIS

	Breidinger, Kenneth	Largescale Sucker		no estimate, counts only	Total number captured or presence only						Good quality	
7/13/2014	Breidinger, Kenneth	Largescale Sucker	250	no estimate, counts only	Total number captured or presence only	365	473	412.5	mm	Other	Good quality	FIS
7/13/2014	Breidinger, Kenneth	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
7/13/2014	Breidinger, Kenneth	Northern Pike Minnow	12	no estimate, counts only	Total number captured or presence only	235	532	372.2	mm	Other	Good quality	FIS
7/13/2014	Breidinger, Kenneth	Rainbow Trout	4	no estimate, counts only	Total number captured or presence only	362	462	425.5	mm	Other	Good quality	FIS
7/13/2014	Breidinger, Kenneth	Smallmouth Bass	3	no estimate, counts only	Total number captured or presence only	247	266	254	mm	Other	Good quality	FIS
7/12/2014	Breidinger, Kenneth	Largescale Sucker	164	no estimate, counts only	Total number captured or presence only	381	487	416.6	mm	Other	Good quality	FIS
7/12/2014	Breidinger, Kenneth	Northern Pike Minnow	230	no estimate, counts only	Total number captured or presence only	306	489	383.6	mm	Other	Good quality	FIS
7/12/2014	Breidinger, Kenneth	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	331	454	392.5	mm	Other	Good quality	FIS
7/11/2014	Breidinger, Kenneth	Largescale Sucker	38	no estimate, counts only	Total number captured or presence only	351	490	428.5	mm	Other	Good quality	FIS
7/11/2014			44			250	424	368.2	mm	Other		FIS

	Breidinger, Kenneth	Northern Pike Minnow		no estimate, counts only	Total number captured or presence only						Good quality	
7/10/2014	Breidinger, Kenneth	Northern Pike Minnow	7	no estimate, counts only	Total number captured or presence only	309	417	361.7	mm	Other	Good quality	FIS
7/10/2014	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	460	460	460	mm	Other	Good quality	FIS
7/9/2014	Breidinger, Kenneth	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	376	376	376	mm	Other	Good quality	FIS
7/8/2014	Breidinger, Kenneth	Largescale Sucker	2	no estimate, counts only	Total number captured or presence only	370	472	421	mm	Other	Good quality	FIS
7/8/2014	Breidinger, Kenneth	Northern Pike Minnow	2	no estimate, counts only	Total number captured or presence only	320	370	345	mm	Other	Good quality	FIS
7/7/2014	Breidinger, Kenneth	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	425	425	425	mm	Other	Good quality	FIS
7/7/2014	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	429	429	429	mm	Other	Good quality	FIS
7/5/2014	Breidinger, Kenneth	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	322	322	322	mm	Other	Good quality	FIS
6/30/2014	Breidinger, Kenneth	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	422	422	422	mm	Other	Good quality	FIS
6/25/2014			1			419	419	419	mm	Other		FIS

	Breidinger, Kenneth	Largescale Sucker		no estimate, counts only	Total number captured or presence only						Good quality	
5/21/2014	Breidinger, Kenneth	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	437	437	437	mm	Other	Good quality	FIS
5/19/2014	Breidinger, Kenneth	Westslope Cutthroat Trout	3	no estimate, counts only	Total number captured or presence only	417	438	430.3	mm	Other	Good quality	FIS
5/16/2014	Breidinger, Kenneth	Bull Trout	1	no estimate, counts only	Total number captured or presence only	523	523	523	mm	Other	Good quality	FIS
5/16/2014	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	480	480	480	mm	Other	Good quality	FIS
5/12/2014	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	265	265	265	mm	Other	Good quality	FIS
5/8/2014	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	107	107	107	mm	Other	Good quality	FIS
5/7/2014	Breidinger, Kenneth	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	307	307	307	mm	Other	Good quality	FIS
5/6/2014	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	452	452	452	mm	Other	Good quality	FIS
5/5/2014	Breidinger, Kenneth	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	426	426	426	mm	Other	Good quality	FIS
4/28/2014		Brown Trout	1			397	397	397	mm	Other		FIS

	Breidinger, Kenneth			no estimate, counts only	Total number captured or presence only						Good quality	
4/23/2014	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	328	328	328	mm	Other	Good quality	FIS
4/23/2014	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	456	456	456	mm	Other	Good quality	FIS
4/23/2014	Breidinger, Kenneth	Westslope X Rainbow	1	no estimate, counts only	Total number captured or presence only	463	463	463	mm	Other	Good quality	FIS
4/16/2014	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	434	434	434	mm	Other	Good quality	FIS
4/14/2014	Breidinger, Kenneth	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	382	382	382	mm	Other	Good quality	FIS
4/11/2014	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	305	305	305	mm	Other	Good quality	FIS
4/11/2014	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	379	379	379	mm	Other	Good quality	FIS
4/11/2014	Breidinger, Kenneth	Westslope Cutthroat Trout	3	no estimate, counts only	Total number captured or presence only	375	467	423.7	mm	Other	Good quality	FIS
4/10/2014	Breidinger, Kenneth	Rainbow Trout	7	no estimate, counts only	Total number captured or presence only	348	510	437.1	mm	Other	Good quality	FIS
4/10/2014			2			402	420	411	mm	Other		FIS

	Breidinger, Kenneth	Westslope Cutthroat Trout		no estimate, counts only	Total number captured or presence only						Good quality	
4/9/2014	Breidinger, Kenneth	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	398	444	421	mm	Other	Good quality	FIS
4/9/2014	Breidinger, Kenneth	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	395	395	395	mm	Other	Good quality	FIS
4/8/2014	Breidinger, Kenneth	Rainbow Trout	6	no estimate, counts only	Total number captured or presence only	315	517	417	mm	Other	Good quality	FIS
4/8/2014	Breidinger, Kenneth	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	366	366	366	mm	Other	Good quality	FIS
4/7/2014	Breidinger, Kenneth	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	400	418	409	mm	Other	Good quality	FIS
4/4/2014	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	505	505	505	mm	Other	Good quality	FIS
4/2/2014	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	439	439	439	mm	Other	Good quality	FIS
4/1/2014	Breidinger, Kenneth	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	473	514	493.5	mm	Other	Good quality	FIS
3/31/2014	Breidinger, Kenneth	Rainbow Trout	17	no estimate, counts only	Total number captured or presence only	355	530	438.4	mm	Other	Good quality	FIS
3/31/2014			4			358	453	414.5	mm	Other		FIS

	Breidinger, Kenneth	Westslope Cutthroat Trout		no estimate, counts only	Total number captured or presence only						Good quality	
3/31/2014	Breidinger, Kenneth	Westslope X Rainbow	3	no estimate, counts only	Total number captured or presence only	421	482	443.7	mm	Other	Good quality	FIS
3/28/2014	Breidinger, Kenneth	Rainbow Trout	13	no estimate, counts only	Total number captured or presence only	400	530	470.8	mm	Other	Good quality	FIS
3/28/2014	Breidinger, Kenneth	Westslope X Rainbow	1	no estimate, counts only	Total number captured or presence only	555	555	555	mm	Other	Good quality	FIS
10/15/2013	Breidinger, Kenneth	Brown Trout	7	no estimate, counts only	Total number captured or presence only	350	507	446.6	mm	Other	Good quality	FIS
10/15/2013	Breidinger, Kenneth	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	434	434	434	mm	Other	Good quality	FIS
10/11/2013	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	479	479	479	mm	Other	Good quality	FIS
10/11/2013	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	308	308	308	mm	Other	Good quality	FIS
10/9/2013	Breidinger, Kenneth	Brown Trout	2	no estimate, counts only	Total number captured or presence only	402	496	449	mm	Other	Good quality	FIS
10/9/2013	Breidinger, Kenneth	Westslope Cutthroat Trout	3	no estimate, counts only	Total number captured or presence only	336	396	362	mm	Other	Good quality	FIS
10/8/2013		Brown Trout	1			468	468	468	mm	Other		FIS

	Breidinger, Kenneth			no estimate, counts only	Total number captured or presence only						Good quality	
10/8/2013	Breidinger, Kenneth	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	415	500	457.5	mm	Other	Good quality	FIS
10/7/2013	Breidinger, Kenneth	Brown Trout	4	no estimate, counts only	Total number captured or presence only	498	665	582.5	mm	Other	Good quality	FIS
10/4/2013	Breidinger, Kenneth	Brown Trout	2	no estimate, counts only	Total number captured or presence only	340	410	375	mm	Other	Good quality	FIS
10/4/2013	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	490	490	490	mm	Other	Good quality	FIS
9/25/2013	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	456	456	456	mm	Other	Good quality	FIS
9/24/2013	Breidinger, Kenneth	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	307	439	356	mm	Other	Good quality	FIS
9/24/2013	Breidinger, Kenneth	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	374	374	374	mm	Other	Good quality	FIS
9/23/2013	Breidinger, Kenneth	Rainbow Trout	12	no estimate, counts only	Total number captured or presence only	287	482	385.1	mm	Other	Good quality	FIS
9/23/2013	Breidinger, Kenneth	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	351	351	351	mm	Other	Good quality	FIS
9/20/2013			1			388	388	388	mm	Other		FIS

	Breidinger, Kenneth	Largescale Sucker		no estimate, counts only	Total number captured or presence only						Good quality	
9/20/2013	Breidinger, Kenneth	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	314	342	329.3	mm	Other	Good quality	FIS
9/19/2013	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	318	318	318	mm	Other	Good quality	FIS
9/18/2013	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	344	344	344	mm	Other	Good quality	FIS
9/17/2013	Breidinger, Kenneth	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	448	448	448	mm	Other	Good quality	FIS
9/17/2013	Breidinger, Kenneth	Mountain Whitefish	1	no estimate, counts only	Total number captured or presence only	339	339	339	mm	Other	Good quality	FIS
9/16/2013	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	536	536	536	mm	Other	Good quality	FIS
9/15/2013	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	376	376	376	mm	Other	Good quality	FIS
9/15/2013	Breidinger, Kenneth	Largescale Sucker	3	no estimate, counts only	Total number captured or presence only	430	471	449	mm	Other	Good quality	FIS
9/15/2013	Breidinger, Kenneth	Rainbow Trout	5	no estimate, counts only	Total number captured or presence only	192	432	312.8	mm	Other	Good quality	FIS
9/13/2013			1			452	452	452	mm	Other		FIS

	Breidinger, Kenneth	Largescale Sucker		no estimate, counts only	Total number captured or presence only						Good quality	
9/13/2013	Breidinger, Kenneth	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	364	364	364	mm	Other	Good quality	FIS
9/13/2013	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	300	300	300	mm	Other	Good quality	FIS
9/12/2013	Breidinger, Kenneth	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	433	433	433	mm	Other	Good quality	FIS
9/12/2013	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	393	393	393	mm	Other	Good quality	FIS
9/11/2013	Breidinger, Kenneth	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	493	493	493	mm	Other	Good quality	FIS
9/11/2013	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	307	307	307	mm	Other	Good quality	FIS
9/10/2013	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	455	455	455	mm	Other	Good quality	FIS
9/10/2013	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	300	300	300	mm	Other	Good quality	FIS
9/8/2013	Breidinger, Kenneth	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	313	327	320	mm	Other	Good quality	FIS
9/8/2013			1			317	317	317	mm	Other		FIS

	Breidinger, Kenneth	Westslope Cutthroat Trout		no estimate, counts only	Total number captured or presence only						Good quality	
9/6/2013	Breidinger, Kenneth	Brown Trout	2	no estimate, counts only	Total number captured or presence only	351	394	372.5	mm	Other	Good quality	FIS
9/6/2013	Breidinger, Kenneth	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	444	444	444	mm	Other	Good quality	FIS
9/6/2013	Breidinger, Kenneth	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	259	423	341	mm	Other	Good quality	FIS
9/6/2013	Breidinger, Kenneth	Westslope X Rainbow	1	no estimate, counts only	Total number captured or presence only	422	422	422	mm	Other	Good quality	FIS
9/5/2013	Breidinger, Kenneth	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	437	437	437	mm	Other	Good quality	FIS
9/5/2013	Breidinger, Kenneth	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	339	448	393.5	mm	Other	Good quality	FIS
9/4/2013	Breidinger, Kenneth	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	247	331	289	mm	Other	Good quality	FIS
9/3/2013	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	400	400	400	mm	Other	Good quality	FIS
9/1/2013	Breidinger, Kenneth	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	411	432	424.7	mm	Other	Good quality	FIS
8/30/2013			2			410	450	430	mm	Other		FIS

	Breidinger, Kenneth	Largescale Sucker		no estimate, counts only	Total number captured or presence only						Good quality	
8/28/2013	Breidinger, Kenneth	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	430	430	430	mm	Other	Good quality	FIS
8/26/2013	Breidinger, Kenneth	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	260	260	260	mm	Other	Good quality	FIS
8/23/2013	Breidinger, Kenneth	Largescale Sucker	2	no estimate, counts only	Total number captured or presence only	407	464	435.5	mm	Other	Good quality	FIS
8/21/2013	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	218	218	218	mm	Other	Good quality	FIS
8/20/2013	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	211	211	211	mm	Other	Good quality	FIS
8/19/2013	Breidinger, Kenneth	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	259	259	259	mm	Other	Good quality	FIS
8/19/2013	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	502	502	502	mm	Other	Good quality	FIS
8/16/2013	Breidinger, Kenneth	Largescale Sucker	2	no estimate, counts only	Total number captured or presence only	446	448	447	mm	Other	Good quality	FIS
8/14/2013	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	296	296	296	mm	Other	Good quality	FIS
8/12/2013			3			386	431	411.3	mm	Other		FIS

	Breidinger, Kenneth	Largescale Sucker		no estimate, counts only	Total number captured or presence only						Good quality	
8/12/2013	Breidinger, Kenneth	Northern Pike Minnow	3	no estimate, counts only	Total number captured or presence only	278	356	305.3	mm	Other	Good quality	FIS
8/12/2013	Breidinger, Kenneth	Smallmouth Bass	2	no estimate, counts only	Total number captured or presence only	252	299	275.5	mm	Other	Good quality	FIS
8/9/2013	Breidinger, Kenneth	Bull Trout	1	no estimate, counts only	Total number captured or presence only	482	482	482	mm	Other	Good quality	FIS
8/9/2013	Breidinger, Kenneth	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	196	309	252.5	mm	Other	Good quality	FIS
8/9/2013	Breidinger, Kenneth	Smallmouth Bass	2	no estimate, counts only	Total number captured or presence only	253	356	304.5	mm	Other	Good quality	FIS
8/6/2013	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	376	376	376	mm	Other	Good quality	FIS
8/6/2013	Breidinger, Kenneth	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	208	440	331.7	mm	Other	Good quality	FIS
8/4/2013	Breidinger, Kenneth	Brown Trout	4	no estimate, counts only	Total number captured or presence only	365	455	399.8	mm	Other	Good quality	FIS
8/4/2013	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	285	285	285	mm	Other	Good quality	FIS
8/2/2013		Brown Trout	1			334	334	334	mm	Other		FIS

	Breidinger, Kenneth			no estimate, counts only	Total number captured or presence only						Good quality	
8/2/2013	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	187	187	187	mm	Other	Good quality	FIS
7/30/2013	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	275	275	275	mm	Other	Good quality	FIS
7/29/2013	Breidinger, Kenneth	Northern Pike Minnow	2	no estimate, counts only	Total number captured or presence only	261	353	307	mm	Other	Good quality	FIS
7/29/2013	Breidinger, Kenneth	Smallmouth Bass	2	no estimate, counts only	Total number captured or presence only	300	322	311	mm	Other	Good quality	FIS
7/27/2013	Breidinger, Kenneth	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	390	390	390	mm	Other	Good quality	FIS
7/27/2013	Breidinger, Kenneth	Northern Pike Minnow	3	no estimate, counts only	Total number captured or presence only	238	454	341.3	mm	Other	Good quality	FIS
7/27/2013	Breidinger, Kenneth	Rainbow Trout	4	no estimate, counts only	Total number captured or presence only	188	339	257.8	mm	Other	Good quality	FIS
7/25/2013	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	432	432	432	mm	Other	Good quality	FIS
7/25/2013	Breidinger, Kenneth	Northern Pike Minnow	3	no estimate, counts only	Total number captured or presence only	262	405	351	mm	Other	Good quality	FIS
7/25/2013			3			177	337	249.7	mm	Other		FIS

	Breidinger, Kenneth	Rainbow Trout		no estimate, counts only	Total number captured or presence only						Good quality	
7/23/2013	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	401	401	401	mm	Other	Good quality	FIS
7/23/2013	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	188	188	188	mm	Other	Good quality	FIS
7/22/2013	Breidinger, Kenneth	Brown Trout	2	no estimate, counts only	Total number captured or presence only	347	374	360.5	mm	Other	Good quality	FIS
7/22/2013	Breidinger, Kenneth	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	169	343	278.3	mm	Other	Good quality	FIS
7/20/2013	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	321	321	321	mm	Other	Good quality	FIS
7/20/2013	Breidinger, Kenneth	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	251	251	251	mm	Other	Good quality	FIS
7/20/2013	Breidinger, Kenneth	Rainbow Trout	6	no estimate, counts only	Total number captured or presence only	180	495	296	mm	Other	Good quality	FIS
7/19/2013	Breidinger, Kenneth	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	183	362	270.3	mm	Other	Good quality	FIS
7/18/2013	Breidinger, Kenneth	Brown Trout	4	no estimate, counts only	Total number captured or presence only	304	412	375.3	mm	Other	Good quality	FIS
7/18/2013			3			176	349	263.3	mm	Other		FIS

	Breidinger, Kenneth	Rainbow Trout		no estimate, counts only	Total number captured or presence only						Good quality	
7/18/2013	Breidinger, Kenneth	Westslope X Rainbow	1	no estimate, counts only	Total number captured or presence only	193	193	193	mm	Other	Good quality	FIS
7/17/2013	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	428	428	428	mm	Other	Good quality	FIS
7/17/2013	Breidinger, Kenneth	Rainbow Trout	4	no estimate, counts only	Total number captured or presence only	210	403	320.3	mm	Other	Good quality	FIS
7/16/2013	Breidinger, Kenneth	Rainbow Trout	6	no estimate, counts only	Total number captured or presence only	194	451	293.3	mm	Other	Good quality	FIS
7/15/2013	Breidinger, Kenneth	Brown Trout	2	no estimate, counts only	Total number captured or presence only	320	455	387.5	mm	Other	Good quality	FIS
7/15/2013	Breidinger, Kenneth	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	360	360	360	mm	Other	Good quality	FIS
7/15/2013	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	358	358	358	mm	Other	Good quality	FIS
7/13/2013	Breidinger, Kenneth	Rainbow Trout	6	no estimate, counts only	Total number captured or presence only	171	587	349	mm	Other	Good quality	FIS
7/13/2013	Breidinger, Kenneth	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	281	281	281	mm	Other	Good quality	FIS
7/12/2013		Brown Trout	3			281	387	341	mm	Other		FIS

	Breidinger, Kenneth			no estimate, counts only	Total number captured or presence only						Good quality	
7/12/2013	Breidinger, Kenneth	Rainbow Trout	4	no estimate, counts only	Total number captured or presence only	260	410	316.8	mm	Other	Good quality	FIS
7/11/2013	Breidinger, Kenneth	Brown Trout	12	no estimate, counts only	Total number captured or presence only	264	553	370	mm	Other	Good quality	FIS
7/11/2013	Breidinger, Kenneth	Rainbow Trout	5	no estimate, counts only	Total number captured or presence only	279	482	404.2	mm	Other	Good quality	FIS
7/11/2013	Breidinger, Kenneth	Westslope Cutthroat Trout	2	no estimate, counts only	Total number captured or presence only	356	358	357	mm	Other	Good quality	FIS
7/10/2013	Breidinger, Kenneth	Brown Trout	5	no estimate, counts only	Total number captured or presence only	378	439	415.6	mm	Other	Good quality	FIS
7/10/2013	Breidinger, Kenneth	Rainbow Trout	9	no estimate, counts only	Total number captured or presence only	296	510	361.8	mm	Other	Good quality	FIS
7/10/2013	Breidinger, Kenneth	Westslope Cutthroat Trout	2	no estimate, counts only	Total number captured or presence only	286	345	315.5	mm	Other	Good quality	FIS
7/9/2013	Breidinger, Kenneth	Brown Trout	5	no estimate, counts only	Total number captured or presence only	268	377	334.6	mm	Other	Good quality	FIS
7/9/2013	Breidinger, Kenneth	Largescale Sucker	4	no estimate, counts only	Total number captured or presence only	331	450	399.3	mm	Other	Good quality	FIS
7/9/2013			5			325	503	382	mm	Other		FIS

	Breidinger, Kenneth	Rainbow Trout		no estimate, counts only	Total number captured or presence only						Good quality	
7/9/2013	Breidinger, Kenneth	Westslope Cutthroat Trout	3	no estimate, counts only	Total number captured or presence only	342	368	351	mm	Other	Good quality	FIS
7/8/2013	Breidinger, Kenneth	Brown Trout	6	no estimate, counts only	Total number captured or presence only	371	483	407.3	mm	Other	Good quality	FIS
7/8/2013	Breidinger, Kenneth	Largescale Sucker	4	no estimate, counts only	Total number captured or presence only	308	449	389.3	mm	Other	Good quality	FIS
7/8/2013	Breidinger, Kenneth	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	353	353	353	mm	Other	Good quality	FIS
7/8/2013	Breidinger, Kenneth	Rainbow Trout	8	no estimate, counts only	Total number captured or presence only	267	435	352.3	mm	Other	Good quality	FIS
7/8/2013	Breidinger, Kenneth	Westslope Cutthroat Trout	2	no estimate, counts only	Total number captured or presence only	315	372	343.5	mm	Other	Good quality	FIS
7/8/2013	Breidinger, Kenneth	Westslope X Rainbow	2	no estimate, counts only	Total number captured or presence only	356	377	366.5	mm	Other	Good quality	FIS
7/6/2013	Breidinger, Kenneth	Brown Trout	2	no estimate, counts only	Total number captured or presence only	394	425	409.5	mm	Other	Good quality	FIS
7/6/2013	Breidinger, Kenneth	Largescale Sucker	3	no estimate, counts only	Total number captured or presence only	428	450	439.3	mm	Other	Good quality	FIS
7/6/2013			1			440	440	440	mm	Other		FIS

	Breidinger, Kenneth	Northern Pike Minnow		no estimate, counts only	Total number captured or presence only						Good quality	
7/6/2013	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	423	423	423	mm	Other	Good quality	FIS
7/5/2013	Breidinger, Kenneth	Brown Trout	9	no estimate, counts only	Total number captured or presence only	330	455	390.7	mm	Other	Good quality	FIS
7/5/2013	Breidinger, Kenneth	Brown Trout	3	no estimate, counts only	Total number captured or presence only	320	440	383.3	mm	Other	Good quality	FIS
7/5/2013	Breidinger, Kenneth	Largescale Sucker	79	no estimate, counts only	Total number captured or presence only	319	470	416.3	mm	Other	Good quality	FIS
7/5/2013	Breidinger, Kenneth	Largescale Sucker	14	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
7/5/2013	Breidinger, Kenneth	Mountain Whitefish	1	no estimate, counts only	Total number captured or presence only	348	348	348	mm	Other	Good quality	FIS
7/5/2013	Breidinger, Kenneth	Northern Pike Minnow	5	no estimate, counts only	Total number captured or presence only	348	502	447	mm	Other	Good quality	FIS
7/5/2013	Breidinger, Kenneth	Northern Pike Minnow	12	no estimate, counts only	Total number captured or presence only	353	470	400.8	mm	Other	Good quality	FIS
7/5/2013	Breidinger, Kenneth	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	320	440	360.7	mm	Other	Good quality	FIS
7/5/2013			3			322	359	335	mm	Other		FIS

	Breidinger, Kenneth	Westslope Cutthroat Trout		no estimate, counts only	Total number captured or presence only						Good quality	
7/5/2013	Breidinger, Kenneth	Westslope Cutthroat Trout	2	no estimate, counts only	Total number captured or presence only	257	410	333.5	mm	Other	Good quality	FIS
7/5/2013	Breidinger, Kenneth	Westslope X Rainbow	2	no estimate, counts only	Total number captured or presence only	408	433	420.5	mm	Other	Good quality	FIS
7/3/2013	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	390	390	390	mm	Other	Good quality	FIS
7/3/2013	Breidinger, Kenneth	Largescale Sucker	12	no estimate, counts only	Total number captured or presence only	370	466	421.3	mm	Other	Good quality	FIS
7/3/2013	Breidinger, Kenneth	Northern Pike Minnow	3	no estimate, counts only	Total number captured or presence only	342	380	357	mm	Other	Good quality	FIS
7/3/2013	Breidinger, Kenneth	Smallmouth Bass	1	no estimate, counts only	Total number captured or presence only	331	331	331	mm	Other	Good quality	FIS
7/2/2013	Breidinger, Kenneth	Largescale Sucker	11	no estimate, counts only	Total number captured or presence only	338	462	404.5	mm	Other	Good quality	FIS
7/2/2013	Breidinger, Kenneth	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	342	342	342	mm	Other	Good quality	FIS
7/2/2013	Breidinger, Kenneth	Smallmouth Bass	1	no estimate, counts only	Total number captured or presence only	362	362	362	mm	Other	Good quality	FIS
7/1/2013			5			330	447	398	mm	Other		FIS

	Breidinger, Kenneth	Largescale Sucker		no estimate, counts only	Total number captured or presence only						Good quality	
7/1/2013	Breidinger, Kenneth	Northern Pike Minnow	4	no estimate, counts only	Total number captured or presence only	335	417	359	mm	Other	Good quality	FIS
6/27/2013	Breidinger, Kenneth	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	329	329	329	mm	Other	Good quality	FIS
6/26/2013	Breidinger, Kenneth	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	389	389	389	mm	Other	Good quality	FIS
6/25/2013	Breidinger, Kenneth	Largescale Sucker	5	no estimate, counts only	Total number captured or presence only	422	433	427.6	mm	Other	Good quality	FIS
6/24/2013	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	450	450	450	mm	Other	Good quality	FIS
6/24/2013	Breidinger, Kenneth	Largescale Sucker	286	no estimate, counts only	Total number captured or presence only	330	503	422.7	mm	Other	Good quality	FIS
6/24/2013	Breidinger, Kenneth	Longnose Sucker	1	no estimate, counts only	Total number captured or presence only	362	362	362	mm	Other	Good quality	FIS
6/24/2013	Breidinger, Kenneth	Northern Pike Minnow	37	no estimate, counts only	Total number captured or presence only	318	532	374.8	mm	Other	Good quality	FIS
6/24/2013	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	512	512	512	mm	Other	Good quality	FIS
6/21/2013			6			325	450	416.8	mm	Other		FIS

	Breidinger, Kenneth	Largescale Sucker		no estimate, counts only	Total number captured or presence only						Good quality	
6/20/2013	Breidinger, Kenneth	Largescale Sucker	243	no estimate, counts only	Total number captured or presence only	352	499	426.7	mm	Other	Good quality	FIS
6/20/2013	Breidinger, Kenneth	Northern Pike Minnow	46	no estimate, counts only	Total number captured or presence only	310	507	396.4	mm	Other	Good quality	FIS
6/19/2013	Breidinger, Kenneth	Largescale Sucker	439	no estimate, counts only	Total number captured or presence only	341	505	417.3	mm	Other	Good quality	FIS
6/19/2013	Breidinger, Kenneth	Northern Pike Minnow	245	no estimate, counts only	Total number captured or presence only	317	570	383.5	mm	Other	Good quality	FIS
6/18/2013	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	675	675	675	mm	Other	Good quality	FIS
6/18/2013	Breidinger, Kenneth	Largescale Sucker	326	no estimate, counts only	Total number captured or presence only	326	478	422.9	mm	Other	Good quality	FIS
6/18/2013	Breidinger, Kenneth	Northern Pike Minnow	5	no estimate, counts only	Total number captured or presence only	360	436	393	mm	Other	Good quality	FIS
6/17/2013	Breidinger, Kenneth	Largescale Sucker	40	no estimate, counts only	Total number captured or presence only	373	513	431.2	mm	Other	Good quality	FIS
6/12/2013	Breidinger, Kenneth	Largescale Sucker	15	no estimate, counts only	Total number captured or presence only	378	470	432.7	mm	Other	Good quality	FIS
6/11/2013		Brown Trout	1			514	514	514	mm	Other		FIS

	Breidinger, Kenneth			no estimate, counts only	Total number captured or presence only						Good quality	
6/11/2013	Breidinger, Kenneth	Largescale Sucker	13	no estimate, counts only	Total number captured or presence only	397	469	437.4	mm	Other	Good quality	FIS
6/11/2013	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	466	466	466	mm	Other	Good quality	FIS
6/10/2013	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	427	427	427	mm	Other	Good quality	FIS
6/10/2013	Breidinger, Kenneth	Largescale Sucker	165	no estimate, counts only	Total number captured or presence only	371	529	433.2	mm	Other	Good quality	FIS
6/10/2013	Breidinger, Kenneth	Northern Pike Minnow	4	no estimate, counts only	Total number captured or presence only	346	434	393	mm	Other	Good quality	FIS
6/8/2013	Breidinger, Kenneth	Largescale Sucker	223	no estimate, counts only	Total number captured or presence only	366	510	440.2	mm	Other	Good quality	FIS
6/7/2013	Breidinger, Kenneth	Bull Trout	1	no estimate, counts only	Total number captured or presence only	596	596	596	mm	Other	Good quality	FIS
6/7/2013	Breidinger, Kenneth	Largescale Sucker	69	no estimate, counts only	Total number captured or presence only	383	513	441	mm	Other	Good quality	FIS
6/6/2013	Breidinger, Kenneth	Largescale Sucker	2	no estimate, counts only	Total number captured or presence only	452	489	470.5	mm	Other	Good quality	FIS
6/5/2013			3			417	457	440.3	mm	Other		FIS

	Breidinger, Kenneth	Largescale Sucker		no estimate, counts only	Total number captured or presence only						Good quality	
5/29/2013	Breidinger, Kenneth	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	497	497	497	mm	Other	Good quality	FIS
5/18/2013	Breidinger, Kenneth	Largescale Sucker	2	no estimate, counts only	Total number captured or presence only	397	438	417.5	mm	Other	Good quality	FIS
5/17/2013	Breidinger, Kenneth	Largescale Sucker	2	no estimate, counts only	Total number captured or presence only	417	435	426	mm	Other	Good quality	FIS
5/16/2013	Breidinger, Kenneth	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	439	439	439	mm	Other	Good quality	FIS
5/14/2013	Breidinger, Kenneth	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	510	510	510	mm	Other	Good quality	FIS
5/14/2013	Breidinger, Kenneth	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	404	404	404	mm	Other	Good quality	FIS
5/13/2013	Breidinger, Kenneth	Largescale Sucker	5	no estimate, counts only	Total number captured or presence only	430	522	463	mm	Other	Good quality	FIS
5/11/2013	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	251	251	251	mm	Other	Good quality	FIS
5/11/2013	Breidinger, Kenneth	Largescale Sucker	14	no estimate, counts only	Total number captured or presence only	371	509	451.6	mm	Other	Good quality	FIS
5/10/2013			328			321	541	442.3	mm	Other		FIS

	Breidinger, Kenneth	Largescale Sucker		no estimate, counts only	Total number captured or presence only						Good quality	
5/10/2013	Breidinger, Kenneth	Longnose Sucker	1	no estimate, counts only	Total number captured or presence only	426	426	426	mm	Other	Good quality	FIS
5/9/2013	Breidinger, Kenneth	Largescale Sucker	162	no estimate, counts only	Total number captured or presence only	390	526	455.4	mm	Other	Good quality	FIS
5/9/2013	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	343	343	343	mm	Other	Good quality	FIS
5/9/2013	Breidinger, Kenneth	Westslope X Rainbow	1	no estimate, counts only	Total number captured or presence only	423	423	423	mm	Other	Good quality	FIS
5/8/2013	Breidinger, Kenneth	Largescale Sucker	220	no estimate, counts only	Total number captured or presence only	370	561	450.1	mm	Other	Good quality	FIS
5/8/2013	Breidinger, Kenneth	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	480	480	480	mm	Other	Good quality	FIS
5/8/2013	Breidinger, Kenneth	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	362	446	404	mm	Other	Good quality	FIS
5/8/2013	Breidinger, Kenneth	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	329	329	329	mm	Other	Good quality	FIS
5/7/2013	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	304	304	304	mm	Other	Good quality	FIS
5/7/2013		Bull Trout	1			478	478	478	mm	Other		FIS

	Breidinger, Kenneth			no estimate, counts only	Total number captured or presence only						Good quality	
5/7/2013	Breidinger, Kenneth	Bull Trout	1	no estimate, counts only	Total number captured or presence only	478	478	478	mm	Other	Good quality	FIS
5/7/2013	Breidinger, Kenneth	Largescale Sucker	57	no estimate, counts only	Total number captured or presence only	394	483	442.3	mm	Other	Good quality	FIS
5/7/2013	Breidinger, Kenneth	Rainbow Trout	6	no estimate, counts only	Total number captured or presence only	301	400	354.7	mm	Other	Good quality	FIS
5/7/2013	Breidinger, Kenneth	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	385	385	385	mm	Other	Good quality	FIS
5/6/2013	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	296	296	296	mm	Other	Good quality	FIS
5/6/2013	Breidinger, Kenneth	Bull Trout	1	no estimate, counts only	Total number captured or presence only	576	576	576	mm	Other	Good quality	FIS
5/6/2013	Breidinger, Kenneth	Bull Trout	1	no estimate, counts only	Total number captured or presence only	576	576	576	mm	Other	Good quality	FIS
5/6/2013	Breidinger, Kenneth	Largescale Sucker	4	no estimate, counts only	Total number captured or presence only	421	470	443.5	mm	Other	Good quality	FIS
5/6/2013	Breidinger, Kenneth	Rainbow Trout	13	no estimate, counts only	Total number captured or presence only	295	432	383.9	mm	Other	Good quality	FIS
5/6/2013			10			347	406	382.5	mm	Other		FIS

	Breidinger, Kenneth	Westslope Cutthroat Trout		no estimate, counts only	Total number captured or presence only						Good quality	
5/3/2013	Breidinger, Kenneth	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	508	508	508	mm	Other	Good quality	FIS
5/3/2013	Breidinger, Kenneth	Westslope X Rainbow	1	no estimate, counts only	Total number captured or presence only	453	453	453	mm	Other	Good quality	FIS
5/2/2013	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	421	421	421	mm	Other	Good quality	FIS
5/2/2013	Breidinger, Kenneth	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	416	416	416	mm	Other	Good quality	FIS
4/30/2013	Breidinger, Kenneth	Bull Trout	1	no estimate, counts only	Total number captured or presence only	598	598	598	mm	Other	Good quality	FIS
4/30/2013	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	378	378	378	mm	Other	Good quality	FIS
4/29/2013	Breidinger, Kenneth	Brown Trout	2	no estimate, counts only	Total number captured or presence only	282	302	292	mm	Other	Good quality	FIS
4/29/2013	Breidinger, Kenneth	Rainbow Trout	6	no estimate, counts only	Total number captured or presence only	342	491	405.5	mm	Other	Good quality	FIS
4/29/2013	Breidinger, Kenneth	Westslope Cutthroat Trout	3	no estimate, counts only	Total number captured or presence only	346	432	375.7	mm	Other	Good quality	FIS
4/8/2013			5			400	553	457.2	mm	Other		FIS

	Breidinger, Kenneth	Rainbow Trout		no estimate, counts only	Total number captured or presence only						Good quality	
4/8/2013	Breidinger, Kenneth	Westslope Cutthroat Trout	2	no estimate, counts only	Total number captured or presence only	348	363	355.5	mm	Other	Good quality	FIS
4/8/2013	Breidinger, Kenneth	Westslope X Rainbow	1	no estimate, counts only	Total number captured or presence only	419	419	419	mm	Other	Good quality	FIS
4/5/2013	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	505	505	505	mm	Other	Good quality	FIS
4/5/2013	Breidinger, Kenneth	Westslope Cutthroat Trout	2	no estimate, counts only	Total number captured or presence only	412	433	422.5	mm	Other	Good quality	FIS
4/4/2013	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	350	350	350	mm	Other	Good quality	FIS
4/4/2013	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	454	454	454	mm	Other	Good quality	FIS
4/3/2013	Breidinger, Kenneth	Rainbow Trout	5	no estimate, counts only	Total number captured or presence only	337	517	454.8	mm	Other	Good quality	FIS
4/3/2013	Breidinger, Kenneth	Westslope Cutthroat Trout	3	no estimate, counts only	Total number captured or presence only	356	402	385	mm	Other	Good quality	FIS
4/3/2013	Breidinger, Kenneth	Westslope X Rainbow	3	no estimate, counts only	Total number captured or presence only	423	451	433.3	mm	Other	Good quality	FIS
4/2/2013			5			405	475	443	mm	Other		FIS

	Breidinger, Kenneth	Rainbow Trout		no estimate, counts only	Total number captured or presence only						Good quality	
4/2/2013	Breidinger, Kenneth	Westslope Cutthroat Trout	2	no estimate, counts only	Total number captured or presence only	420	445	432.5	mm	Other	Good quality	FIS
4/1/2013	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	330	330	330	mm	Other	Good quality	FIS
4/1/2013	Breidinger, Kenneth	Rainbow Trout	10	no estimate, counts only	Total number captured or presence only	306	537	450.5	mm	Other	Good quality	FIS
4/1/2013	Breidinger, Kenneth	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	410	410	410	mm	Other	Good quality	FIS
3/29/2013	Breidinger, Kenneth	Rainbow Trout	5	no estimate, counts only	Total number captured or presence only	339	480	405.4	mm	Other	Good quality	FIS
3/18/2013	Breidinger, Kenneth	Rainbow Trout	8	no estimate, counts only	Total number captured or presence only	282	502	428.6	mm	Other	Good quality	FIS
3/18/2013	Breidinger, Kenneth	Westslope X Rainbow	1	no estimate, counts only	Total number captured or presence only	441	441	441	mm	Other	Good quality	FIS
3/15/2013	Breidinger, Kenneth	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	453	533	498.3	mm	Other	Good quality	FIS
10/15/2012	Breidinger, Kenneth	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	355	355	355	mm	Other	Good quality	FIS
10/11/2012		Brown Trout	1			482	482	482	mm	Other		FIS

	Breidinger, Kenneth			no estimate, counts only	Total number captured or presence only						Good quality	
10/8/2012	Breidinger, Kenneth	Brown Trout	2	no estimate, counts only	Total number captured or presence only	440	580	510	mm	Other	Good quality	FIS
10/8/2012	Breidinger, Kenneth	Mountain Whitefish	1	no estimate, counts only	Total number captured or presence only	303	303	303	mm	Other	Good quality	FIS
10/8/2012	Breidinger, Kenneth	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	360	492	426	mm	Other	Good quality	FIS
10/5/2012	Breidinger, Kenneth	Brown Trout	2	no estimate, counts only	Total number captured or presence only	251	415	333	mm	Other	Good quality	FIS
10/4/2012	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	222	222	222	mm	Other	Good quality	FIS
10/4/2012	Breidinger, Kenneth	Mountain Whitefish	8	no estimate, counts only	Total number captured or presence only	288	356	309.1	mm	Other	Good quality	FIS
10/4/2012	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	229	229	229	mm	Other	Good quality	FIS
10/3/2012	Breidinger, Kenneth	Mountain Whitefish	1	no estimate, counts only	Total number captured or presence only	371	371	371	mm	Other	Good quality	FIS
10/3/2012	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	306	306	306	mm	Other	Good quality	FIS
10/2/2012			2			304	333	318.5	mm	Other		FIS

	Breidinger, Kenneth	Mountain Whitefish		no estimate, counts only	Total number captured or presence only						Good quality	
10/2/2012	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	298	298	298	mm	Other	Good quality	FIS
10/1/2012	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	328	328	328	mm	Other	Good quality	FIS
10/1/2012	Breidinger, Kenneth	Mountain Whitefish	3	no estimate, counts only	Total number captured or presence only	290	346	322	mm	Other	Good quality	FIS
10/1/2012	Breidinger, Kenneth	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	258	265	261.5	mm	Other	Good quality	FIS
10/1/2012	Breidinger, Kenneth	Westslope X Rainbow	1	no estimate, counts only	Total number captured or presence only	343	343	343	mm	Other	Good quality	FIS
9/28/2012	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	586	586	586	mm	Other	Good quality	FIS
9/28/2012	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	343	343	343	mm	Other	Good quality	FIS
9/27/2012	Breidinger, Kenneth	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	300	404	340.3	mm	Other	Good quality	FIS
9/26/2012	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	347	347	347	mm	Other	Good quality	FIS
9/25/2012			2			335	356	345.5	mm	Other		FIS

	Breidinger, Kenneth	Westslope Cutthroat Trout		no estimate, counts only	Total number captured or presence only						Good quality	
9/24/2012	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	275	275	275	mm	Other	Good quality	FIS
9/24/2012	Breidinger, Kenneth	Mountain Whitefish	1	no estimate, counts only	Total number captured or presence only	337	337	337	mm	Other	Good quality	FIS
9/24/2012	Breidinger, Kenneth	Rainbow Trout	10	no estimate, counts only	Total number captured or presence only	203	450	306.4	mm	Other	Good quality	FIS
9/21/2012	Breidinger, Kenneth	Mountain Whitefish	1	no estimate, counts only	Total number captured or presence only	354	354	354	mm	Other	Good quality	FIS
9/20/2012	Breidinger, Kenneth	Mountain Whitefish	1	no estimate, counts only	Total number captured or presence only	305	305	305	mm	Other	Good quality	FIS
9/20/2012	Breidinger, Kenneth	Rainbow Trout	4	no estimate, counts only	Total number captured or presence only	265	356	306	mm	Other	Good quality	FIS
9/19/2012	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	503	503	503	mm	Other	Good quality	FIS
9/19/2012	Breidinger, Kenneth	Mountain Whitefish	1	no estimate, counts only	Total number captured or presence only	322	322	322	mm	Other	Good quality	FIS
9/19/2012	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	290	290	290	mm	Other	Good quality	FIS
9/18/2012			1			305	305	305	mm	Other		FIS

	Breidinger, Kenneth	Rainbow Trout		no estimate, counts only	Total number captured or presence only						Good quality	
9/16/2012	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	615	615	615	mm	Other	Good quality	FIS
9/12/2012	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	275	275	275	mm	Other	Good quality	FIS
9/11/2012	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	444	444	444	mm	Other	Good quality	FIS
9/11/2012	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	227	227	227	mm	Other	Good quality	FIS
9/9/2012	Breidinger, Kenneth	Mountain Whitefish	1	no estimate, counts only	Total number captured or presence only	302	302	302	mm	Other	Good quality	FIS
9/9/2012	Breidinger, Kenneth	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	500	500	500	mm	Other	Good quality	FIS
9/9/2012	Breidinger, Kenneth	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	346	346	346	mm	Other	Good quality	FIS
9/7/2012	Breidinger, Kenneth	Mountain Whitefish	1	no estimate, counts only	Total number captured or presence only	383	383	383	mm	Other	Good quality	FIS
9/7/2012	Breidinger, Kenneth	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	222	261	241.5	mm	Other	Good quality	FIS
9/7/2012			1			378	378	378	mm	Other		FIS

	Breidinger, Kenneth	Westslope Cutthroat Trout		no estimate, counts only	Total number captured or presence only						Good quality	
9/6/2012	Breidinger, Kenneth	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	417	417	417	mm	Other	Good quality	FIS
9/6/2012	Breidinger, Kenneth	Mountain Whitefish	1	no estimate, counts only	Total number captured or presence only	290	290	290	mm	Other	Good quality	FIS
9/6/2012	Breidinger, Kenneth	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	280	339	309.5	mm	Other	Good quality	FIS
9/5/2012	Breidinger, Kenneth	Mountain Whitefish	1	no estimate, counts only	Total number captured or presence only	398	398	398	mm	Other	Good quality	FIS
9/5/2012	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	265	265	265	mm	Other	Good quality	FIS
9/4/2012	Breidinger, Kenneth	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	274	484	379	mm	Other	Good quality	FIS
9/2/2012	Breidinger, Kenneth	Brown Trout	2	no estimate, counts only	Total number captured or presence only	355	431	393	mm	Other	Good quality	FIS
9/2/2012	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	422	422	422	mm	Other	Good quality	FIS
8/31/2012	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	339	339	339	mm	Other	Good quality	FIS
8/31/2012			4			231	335	275.5	mm	Other		FIS

	Breidinger, Kenneth	Rainbow Trout		no estimate, counts only	Total number captured or presence only						Good quality	
8/30/2012	Breidinger, Kenneth	Largescale Sucker	2	no estimate, counts only	Total number captured or presence only	247	426	336.5	mm	Other	Good quality	FIS
8/30/2012	Breidinger, Kenneth	Rainbow Trout	4	no estimate, counts only	Total number captured or presence only	242	416	301	mm	Other	Good quality	FIS
8/29/2012	Breidinger, Kenneth	Rainbow Trout	4	no estimate, counts only	Total number captured or presence only	238	374	296.5	mm	Other	Good quality	FIS
8/28/2012	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	398	398	398	mm	Other	Good quality	FIS
8/28/2012	Breidinger, Kenneth	Largescale Sucker	2	no estimate, counts only	Total number captured or presence only	416	431	423.5	mm	Other	Good quality	FIS
8/26/2012	Breidinger, Kenneth	Rainbow Trout	4	no estimate, counts only	Total number captured or presence only	247	450	344.8	mm	Other	Good quality	FIS
8/24/2012	Breidinger, Kenneth	Largescale Sucker	6	no estimate, counts only	Total number captured or presence only	410	541	460.3	mm	Other	Good quality	FIS
8/24/2012	Breidinger, Kenneth	Smallmouth Bass	1	no estimate, counts only	Total number captured or presence only	264	264	264	mm	Other	Good quality	FIS
8/22/2012	Breidinger, Kenneth	Largescale Sucker	2	no estimate, counts only	Total number captured or presence only	479	519	499	mm	Other	Good quality	FIS
8/22/2012			2			285	326	305.5	mm	Other		FIS

	Breidinger, Kenneth	Smallmouth Bass		no estimate, counts only	Total number captured or presence only						Good quality	
8/21/2012	Breidinger, Kenneth	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	350	350	350	mm	Other	Good quality	FIS
8/21/2012	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	240	240	240	mm	Other	Good quality	FIS
8/21/2012	Breidinger, Kenneth	Smallmouth Bass	4	no estimate, counts only	Total number captured or presence only	272	422	312.8	mm	Other	Good quality	FIS
8/19/2012	Breidinger, Kenneth	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	461	461	461	mm	Other	Good quality	FIS
8/19/2012	Breidinger, Kenneth	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	452	452	452	mm	Other	Good quality	FIS
8/19/2012	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	232	232	232	mm	Other	Good quality	FIS
8/17/2012	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	320	320	320	mm	Other	Good quality	FIS
8/17/2012	Breidinger, Kenneth	Smallmouth Bass	1	no estimate, counts only	Total number captured or presence only	335	335	335	mm	Other	Good quality	FIS
8/16/2012	Breidinger, Kenneth	Largescale Sucker	4	no estimate, counts only	Total number captured or presence only	446	489	468.5	mm	Other	Good quality	FIS
8/16/2012			1			482	482	482	mm	Other		FIS

	Breidinger, Kenneth	Rainbow Trout		no estimate, counts only	Total number captured or presence only						Good quality	
8/16/2012	Breidinger, Kenneth	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	372	372	372	mm	Other	Good quality	FIS
8/14/2012	Breidinger, Kenneth	Largescale Sucker	3	no estimate, counts only	Total number captured or presence only	433	449	440	mm	Other	Good quality	FIS
8/14/2012	Breidinger, Kenneth	Northern Pike Minnow	2	no estimate, counts only	Total number captured or presence only	297	298	297.5	mm	Other	Good quality	FIS
8/13/2012	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	382	382	382	mm	Other	Good quality	FIS
8/12/2012	Breidinger, Kenneth	Largescale Sucker	2	no estimate, counts only	Total number captured or presence only	490	508	499	mm	Other	Good quality	FIS
8/12/2012	Breidinger, Kenneth	Smallmouth Bass	1	no estimate, counts only	Total number captured or presence only	280	280	280	mm	Other	Good quality	FIS
8/11/2012	Breidinger, Kenneth	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	419	419	419	mm	Other	Good quality	FIS
8/11/2012	Breidinger, Kenneth	Smallmouth Bass	1	no estimate, counts only	Total number captured or presence only	275	275	275	mm	Other	Good quality	FIS
8/10/2012	Breidinger, Kenneth	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	349	349	349	mm	Other	Good quality	FIS
8/9/2012			2			244	313	278.5	mm	Other		FIS

	Breidinger, Kenneth	Smallmouth Bass		no estimate, counts only	Total number captured or presence only						Good quality	
8/8/2012	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	387	387	387	mm	Other	Good quality	FIS
8/8/2012	Breidinger, Kenneth	Largescale Sucker	3	no estimate, counts only	Total number captured or presence only	411	486	450	mm	Other	Good quality	FIS
8/8/2012	Breidinger, Kenneth	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	485	485	485	mm	Other	Good quality	FIS
8/8/2012	Breidinger, Kenneth	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	251	354	289.3	mm	Other	Good quality	FIS
8/8/2012	Breidinger, Kenneth	Smallmouth Bass	4	no estimate, counts only	Total number captured or presence only	247	295	275.8	mm	Other	Good quality	FIS
8/7/2012	Breidinger, Kenneth	Northern Pike Minnow	2	no estimate, counts only	Total number captured or presence only	211	360	285.5	mm	Other	Good quality	FIS
8/6/2012	Breidinger, Kenneth	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	309	425	367	mm	Other	Good quality	FIS
8/4/2012	Breidinger, Kenneth	Brown Trout	2	no estimate, counts only	Total number captured or presence only	320	385	352.5	mm	Other	Good quality	FIS
8/4/2012	Breidinger, Kenneth	Rainbow Trout	7	no estimate, counts only	Total number captured or presence only	192	410	305.4	mm	Other	Good quality	FIS
8/3/2012			1			475	475	475	mm	Other		FIS

	Breidinger, Kenneth	Largescale Sucker		no estimate, counts only	Total number captured or presence only						Good quality	
8/3/2012	Breidinger, Kenneth	Rainbow Trout	4	no estimate, counts only	Total number captured or presence only	205	356	287.5	mm	Other	Good quality	FIS
8/2/2012	Breidinger, Kenneth	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	348	348	348	mm	Other	Good quality	FIS
8/2/2012	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	324	324	324	mm	Other	Good quality	FIS
8/1/2012	Breidinger, Kenneth	Rainbow Trout	4	no estimate, counts only	Total number captured or presence only	270	437	356.8	mm	Other	Good quality	FIS
7/31/2012	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	395	395	395	mm	Other	Good quality	FIS
7/31/2012	Breidinger, Kenneth	Largescale Sucker	2	no estimate, counts only	Total number captured or presence only	421	425	423	mm	Other	Good quality	FIS
7/31/2012	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	285	285	285	mm	Other	Good quality	FIS
7/31/2012	Breidinger, Kenneth	Smallmouth Bass	2	no estimate, counts only	Total number captured or presence only	236	249	242.5	mm	Other	Good quality	FIS
7/31/2012	Breidinger, Kenneth	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	258	258	258	mm	Other	Good quality	FIS
7/29/2012		Brown Trout	1			302	302	302	mm	Other		FIS

	Breidinger, Kenneth			no estimate, counts only	Total number captured or presence only						Good quality	
7/29/2012	Breidinger, Kenneth	Largescale Sucker	2	no estimate, counts only	Total number captured or presence only	380	460	420	mm	Other	Good quality	FIS
7/29/2012	Breidinger, Kenneth	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	400	400	400	mm	Other	Good quality	FIS
7/29/2012	Breidinger, Kenneth	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	312	325	318.5	mm	Other	Good quality	FIS
7/29/2012	Breidinger, Kenneth	Smallmouth Bass	2	no estimate, counts only	Total number captured or presence only	250	278	264	mm	Other	Good quality	FIS
7/28/2012	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	444	444	444	mm	Other	Good quality	FIS
7/28/2012	Breidinger, Kenneth	Largescale Sucker	4	no estimate, counts only	Total number captured or presence only	410	567	462.5	mm	Other	Good quality	FIS
7/28/2012	Breidinger, Kenneth	Rainbow Trout	4	no estimate, counts only	Total number captured or presence only	212	312	265.8	mm	Other	Good quality	FIS
7/28/2012	Breidinger, Kenneth	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	224	224	224	mm	Other	Good quality	FIS
7/28/2012	Breidinger, Kenneth	Westslope X Rainbow	1	no estimate, counts only	Total number captured or presence only	403	403	403	mm	Other	Good quality	FIS
7/27/2012		Brown Trout	2			363	405	384	mm	Other		FIS

	Breidinger, Kenneth			no estimate, counts only	Total number captured or presence only						Good quality	
7/27/2012	Breidinger, Kenneth	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	417	417	417	mm	Other	Good quality	FIS
7/27/2012	Breidinger, Kenneth	Rainbow Trout	7	no estimate, counts only	Total number captured or presence only	197	469	307.1	mm	Other	Good quality	FIS
7/27/2012	Breidinger, Kenneth	Smallmouth Bass	2	no estimate, counts only	Total number captured or presence only	215	410	312.5	mm	Other	Good quality	FIS
7/26/2012	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	397	397	397	mm	Other	Good quality	FIS
7/26/2012	Breidinger, Kenneth	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	437	437	437	mm	Other	Good quality	FIS
7/26/2012	Breidinger, Kenneth	Rainbow Trout	5	no estimate, counts only	Total number captured or presence only	315	501	375.4	mm	Other	Good quality	FIS
7/26/2012	Breidinger, Kenneth	Smallmouth Bass	3	no estimate, counts only	Total number captured or presence only	278	302	289.7	mm	Other	Good quality	FIS
7/26/2012	Breidinger, Kenneth	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	322	322	322	mm	Other	Good quality	FIS
7/25/2012	Breidinger, Kenneth	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	387	387	387	mm	Other	Good quality	FIS
7/25/2012			3			208	337	264.3	mm	Other		FIS

	Breidinger, Kenneth	Rainbow Trout		no estimate, counts only	Total number captured or presence only						Good quality	
7/25/2012	Breidinger, Kenneth	Smallmouth Bass	3	no estimate, counts only	Total number captured or presence only	244	292	265	mm	Other	Good quality	FIS
7/25/2012	Breidinger, Kenneth	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	322	322	322	mm	Other	Good quality	FIS
7/24/2012	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	268	268	268	mm	Other	Good quality	FIS
7/24/2012	Breidinger, Kenneth	Largescale Sucker	3	no estimate, counts only	Total number captured or presence only	424	464	440.7	mm	Other	Good quality	FIS
7/24/2012	Breidinger, Kenneth	Northern Pike Minnow	2	no estimate, counts only	Total number captured or presence only	418	507	462.5	mm	Other	Good quality	FIS
7/24/2012	Breidinger, Kenneth	Rainbow Trout	4	no estimate, counts only	Total number captured or presence only	206	331	264.8	mm	Other	Good quality	FIS
7/24/2012	Breidinger, Kenneth	Smallmouth Bass	3	no estimate, counts only	Total number captured or presence only	255	296	273.3	mm	Other	Good quality	FIS
7/24/2012	Breidinger, Kenneth	Westslope Cutthroat Trout	2	no estimate, counts only	Total number captured or presence only	227	353	290	mm	Other	Good quality	FIS
7/23/2012	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	394	394	394	mm	Other	Good quality	FIS
7/23/2012			1			425	425	425	mm	Other		FIS

	Breidinger, Kenneth	Largescale Sucker		no estimate, counts only	Total number captured or presence only						Good quality	
7/23/2012	Breidinger, Kenneth	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	437	513	466	mm	Other	Good quality	FIS
7/23/2012	Breidinger, Kenneth	Smallmouth Bass	1	no estimate, counts only	Total number captured or presence only	220	220	220	mm	Other	Good quality	FIS
7/22/2012	Breidinger, Kenneth	Largescale Sucker	8	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
7/22/2012	Breidinger, Kenneth	Northern Pike Minnow	6	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
7/22/2012	Breidinger, Kenneth	Rainbow Trout	8	no estimate, counts only	Total number captured or presence only	318	454	375.3	mm	Other	Good quality	FIS
7/22/2012	Breidinger, Kenneth	Westslope Cutthroat Trout	3	no estimate, counts only	Total number captured or presence only	356	421	382.7	mm	Other	Good quality	FIS
7/21/2012	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	305	305	305	mm	Other	Good quality	FIS
7/21/2012	Breidinger, Kenneth	Largescale Sucker	99	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
7/21/2012	Breidinger, Kenneth	Northern Pike Minnow	12	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
7/21/2012			15			231	452	345.1	mm	Other		FIS

	Breidinger, Kenneth	Rainbow Trout		no estimate, counts only	Total number captured or presence only						Good quality	
7/21/2012	Breidinger, Kenneth	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	390	390	390	mm	Other	Good quality	FIS
7/21/2012	Breidinger, Kenneth	Westslope X Rainbow	2	no estimate, counts only	Total number captured or presence only	297	451	374	mm	Other	Good quality	FIS
7/20/2012	Breidinger, Kenneth	Largescale Sucker	3	no estimate, counts only	Total number captured or presence only	396	448	428.7	mm	Other	Good quality	FIS
7/20/2012	Breidinger, Kenneth	Northern Pike Minnow	10	no estimate, counts only	Total number captured or presence only	302	425	365.3	mm	Other	Good quality	FIS
7/20/2012	Breidinger, Kenneth	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	311	388	349.5	mm	Other	Good quality	FIS
7/19/2012	Breidinger, Kenneth	Brown Trout	4	no estimate, counts only	Total number captured or presence only	302	431	372.5	mm	Other	Good quality	FIS
7/19/2012	Breidinger, Kenneth	Largescale Sucker	35	no estimate, counts only	Total number captured or presence only	368	488	418.6	mm	Other	Good quality	FIS
7/19/2012	Breidinger, Kenneth	Northern Pike Minnow	5	no estimate, counts only	Total number captured or presence only	335	437	371.4	mm	Other	Good quality	FIS
7/19/2012	Breidinger, Kenneth	Rainbow Trout	16	no estimate, counts only	Total number captured or presence only	260	466	339.1	mm	Other	Good quality	FIS
7/19/2012			1			342	342	342	mm	Other		FIS

	Breidinger, Kenneth	Rainbow X Cutthroat Trout		no estimate, counts only	Total number captured or presence only						Good quality	
7/18/2012	Breidinger, Kenneth	Brown Trout	3	no estimate, counts only	Total number captured or presence only	290	365	332.3	mm	Other	Good quality	FIS
7/18/2012	Breidinger, Kenneth	Largescale Sucker	18	no estimate, counts only	Total number captured or presence only	370	480	406.4	mm	Other	Good quality	FIS
7/18/2012	Breidinger, Kenneth	Northern Pike Minnow	2	no estimate, counts only	Total number captured or presence only	338	372	355	mm	Other	Good quality	FIS
7/18/2012	Breidinger, Kenneth	Rainbow Trout	4	no estimate, counts only	Total number captured or presence only	277	418	367.5	mm	Other	Good quality	FIS
7/18/2012	Breidinger, Kenneth	Westslope X Rainbow	1	no estimate, counts only	Total number captured or presence only	396	396	396	mm	Other	Good quality	FIS
7/17/2012	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	380	380	380	mm	Other	Good quality	FIS
7/17/2012	Breidinger, Kenneth	Largescale Sucker	48	no estimate, counts only	Total number captured or presence only	378	455	426.6	mm	Other	Good quality	FIS
7/17/2012	Breidinger, Kenneth	Rainbow Trout	5	no estimate, counts only	Total number captured or presence only	296	517	362.2	mm	Other	Good quality	FIS
7/17/2012	Breidinger, Kenneth	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	335	335	335	mm	Other	Good quality	FIS
7/16/2012			37			385	475	424.5	mm	Other		FIS

	Breidinger, Kenneth	Largescale Sucker		no estimate, counts only	Total number captured or presence only						Good quality	
7/16/2012	Breidinger, Kenneth	Northern Pike Minnow	2	no estimate, counts only	Total number captured or presence only	265	395	330	mm	Other	Good quality	FIS
7/15/2012	Breidinger, Kenneth	Largescale Sucker	3	no estimate, counts only	Total number captured or presence only	418	455	442	mm	Other	Good quality	FIS
7/14/2012	Breidinger, Kenneth	Largescale Sucker	469	no estimate, counts only	Total number captured or presence only	-	485	390.5	mm	Other	Good quality	FIS
7/14/2012	Breidinger, Kenneth	Mountain Whitefish	1	no estimate, counts only	Total number captured or presence only	370	370	370	mm	Other	Good quality	FIS
7/14/2012	Breidinger, Kenneth	Northern Pike Minnow	127	no estimate, counts only	Total number captured or presence only	-	503	338.6	mm	Other	Good quality	FIS
7/14/2012	Breidinger, Kenneth	Smallmouth Bass	2	no estimate, counts only	Total number captured or presence only	320	334	327	mm	Other	Good quality	FIS
7/13/2012	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	391	391	391	mm	Other	Good quality	FIS
7/13/2012	Breidinger, Kenneth	Largescale Sucker	204	no estimate, counts only	Total number captured or presence only	-	484	399.7	mm	Other	Good quality	FIS
7/13/2012	Breidinger, Kenneth	Northern Pike Minnow	211	no estimate, counts only	Total number captured or presence only	-	487	374.3	mm	Other	Good quality	FIS
7/13/2012			1			415	415	415	mm	Other		FIS

	Breidinger, Kenneth	Rainbow Trout		no estimate, counts only	Total number captured or presence only						Good quality	
7/12/2012	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	463	463	463	mm	Other	Good quality	FIS
7/12/2012	Breidinger, Kenneth	Largescale Sucker	100	no estimate, counts only	Total number captured or presence only	-	452	406.6	mm	Other	Good quality	FIS
7/12/2012	Breidinger, Kenneth	Northern Pike Minnow	157	no estimate, counts only	Total number captured or presence only	-	452	355.1	mm	Other	Good quality	FIS
7/12/2012	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	432	432	432	mm	Other	Good quality	FIS
7/11/2012	Breidinger, Kenneth	Largescale Sucker	111	no estimate, counts only	Total number captured or presence only	-	472	404.4	mm	Other	Good quality	FIS
7/11/2012	Breidinger, Kenneth	Northern Pike Minnow	46	no estimate, counts only	Total number captured or presence only	-	512	353.7	mm	Other	Good quality	FIS
7/10/2012	Breidinger, Kenneth	Largescale Sucker	124	no estimate, counts only	Total number captured or presence only	365	465	416	mm	Other	Good quality	FIS
7/10/2012	Breidinger, Kenneth	Northern Pike Minnow	182	no estimate, counts only	Total number captured or presence only	320	530	370.7	mm	Other	Good quality	FIS
7/10/2012	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	435	435	435	mm	Other	Good quality	FIS
7/9/2012			133			-	468	365.9	mm	Other		FIS

	Breidinger, Kenneth	Largescale Sucker		no estimate, counts only	Total number captured or presence only						Good quality	
7/9/2012	Breidinger, Kenneth	Northern Pike Minnow	151	no estimate, counts only	Total number captured or presence only	-	521	328.4	mm	Other	Good quality	FIS
7/9/2012	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	450	450	450	mm	Other	Good quality	FIS
7/8/2012	Breidinger, Kenneth	Brown Trout	3	no estimate, counts only	Total number captured or presence only	377	550	490.7	mm	Other	Good quality	FIS
7/8/2012	Breidinger, Kenneth	Largescale Sucker	8	no estimate, counts only	Total number captured or presence only	380	430	411.4	mm	Other	Good quality	FIS
7/8/2012	Breidinger, Kenneth	Northern Pike Minnow	3	no estimate, counts only	Total number captured or presence only	348	495	407.7	mm	Other	Good quality	FIS
7/8/2012	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	465	465	465	mm	Other	Good quality	FIS
7/5/2012	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	4300	4300	4300	mm	Other	Good quality	FIS
6/4/2012	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	459	459	459	mm	Other	Good quality	FIS
6/2/2012	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	450	450	450	mm	Other	Good quality	FIS
5/21/2012		Bull Trout	1			563	563	563	mm	Other		FIS

	Breidinger, Kenneth			no estimate, counts only	Total number captured or presence only						Good quality	
5/18/2012	Breidinger, Kenneth	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	450	450	450	mm	Other	Good quality	FIS
5/15/2012	Breidinger, Kenneth	Bull Trout	1	no estimate, counts only	Total number captured or presence only	510	510	510	mm	Other	Good quality	FIS
5/15/2012	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	515	515	515	mm	Other	Good quality	FIS
5/14/2012	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	440	440	440	mm	Other	Good quality	FIS
5/10/2012	Breidinger, Kenneth	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	385	432	405.7	mm	Other	Good quality	FIS
5/9/2012	Breidinger, Kenneth	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	405	468	436.5	mm	Other	Good quality	FIS
5/9/2012	Breidinger, Kenneth	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	372	372	372	mm	Other	Good quality	FIS
4/24/2012	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	228	228	228	mm	Other	Good quality	FIS
4/15/2012	Breidinger, Kenneth	Rainbow Trout	4	no estimate, counts only	Total number captured or presence only	382	456	415	mm	Other	Good quality	FIS
4/13/2012		Lake Trout	1			620	620	620	mm	Other		FIS

	Breidinger, Kenneth			no estimate, counts only	Total number captured or presence only						Good quality	
4/13/2012	Breidinger, Kenneth	Rainbow Trout	8	no estimate, counts only	Total number captured or presence only	313	491	434.5	mm	Other	Good quality	FIS
4/13/2012	Breidinger, Kenneth	Rainbow X Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	412	412	412	mm	Other	Good quality	FIS
4/12/2012	Breidinger, Kenneth	Rainbow Trout	10	no estimate, counts only	Total number captured or presence only	375	542	444	mm	Other	Good quality	FIS
4/12/2012	Breidinger, Kenneth	Westslope Cutthroat Trout	2	no estimate, counts only	Total number captured or presence only	382	418	400	mm	Other	Good quality	FIS
4/11/2012	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	433	433	433	mm	Other	Good quality	FIS
4/3/2012	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	474	474	474	mm	Other	Good quality	FIS
4/1/2012	Breidinger, Kenneth	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	410	525	472.3	mm	Other	Good quality	FIS
4/1/2012	Breidinger, Kenneth	Rainbow X Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	500	500	500	mm	Other	Good quality	FIS
4/1/2012	Breidinger, Kenneth	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	407	407	407	mm	Other	Good quality	FIS
3/30/2012			3			441	519	488.3	mm	Other		FIS

	Breidinger, Kenneth	Rainbow Trout		no estimate, counts only	Total number captured or presence only						Good quality	
3/20/2012	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	492	492	492	mm	Other	Good quality	FIS
3/18/2012	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	423	423	423	mm	Other	Good quality	FIS
3/16/2012	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	528	528	528	mm	Other	Good quality	FIS
3/14/2012	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	471	471	471	mm	Other	Good quality	FIS
10/17/2011	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	600	600	600	mm	Other	Good quality	FIS
10/17/2011	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	433	433	433	mm	Other	Good quality	FIS
10/14/2011	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	466	466	466	mm	Other	Good quality	FIS
10/13/2011	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	262	262	262	mm	Other	Good quality	FIS
10/12/2011	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	468	468	468	mm	Other	Good quality	FIS
10/12/2011			1			361	361	361	mm	Other		FIS

	Breidinger, Kenneth	Westslope Cutthroat Trout		no estimate, counts only	Total number captured or presence only						Good quality	
10/11/2011	Breidinger, Kenneth	Mountain Whitefish	1	no estimate, counts only	Total number captured or presence only	307	307	307	mm	Other	Good quality	FIS
10/11/2011	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	516	516	516	mm	Other	Good quality	FIS
10/10/2011	Breidinger, Kenneth	Rainbow Trout	6	no estimate, counts only	Total number captured or presence only	243	477	323.7	mm	Other	Good quality	FIS
10/10/2011	Breidinger, Kenneth	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	362	362	362	mm	Other	Good quality	FIS
10/10/2011	Breidinger, Kenneth	Westslope X Rainbow	1	no estimate, counts only	Total number captured or presence only	375	375	375	mm	Other	Good quality	FIS
10/6/2011	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	390	390	390	mm	Other	Good quality	FIS
10/6/2011	Breidinger, Kenneth	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	232	418	302	mm	Other	Good quality	FIS
10/5/2011	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	569	569	569	mm	Other	Good quality	FIS
10/5/2011	Breidinger, Kenneth	Largescale Sucker	2	no estimate, counts only	Total number captured or presence only	458	482	470	mm	Other	Good quality	FIS
10/5/2011			5			309	381	336.6	mm	Other		FIS

	Breidinger, Kenneth	Mountain Whitefish		no estimate, counts only	Total number captured or presence only						Good quality	
10/5/2011	Breidinger, Kenneth	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	368	483	418.7	mm	Other	Good quality	FIS
10/4/2011	Breidinger, Kenneth	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	237	365	309.7	mm	Other	Good quality	FIS
10/3/2011	Breidinger, Kenneth	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	392	392	392	mm	Other	Good quality	FIS
10/3/2011	Breidinger, Kenneth	Mountain Whitefish	8	no estimate, counts only	Total number captured or presence only	282	417	335.4	mm	Other	Good quality	FIS
10/3/2011	Breidinger, Kenneth	Rainbow Trout	7	no estimate, counts only	Total number captured or presence only	272	472	380.4	mm	Other	Good quality	FIS
9/30/2011	Breidinger, Kenneth	Westslope X Rainbow	1	no estimate, counts only	Total number captured or presence only	227	227	227	mm	Other	Good quality	FIS
9/29/2011	Breidinger, Kenneth	Mountain Whitefish	1	no estimate, counts only	Total number captured or presence only	354	354	354	mm	Other	Good quality	FIS
9/28/2011	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	373	373	373	mm	Other	Good quality	FIS
9/27/2011	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	525	525	525	mm	Other	Good quality	FIS
9/27/2011			2			302	329	315.5	mm	Other		FIS

	Breidinger, Kenneth	Rainbow Trout		no estimate, counts only	Total number captured or presence only						Good quality	
9/27/2011	Breidinger, Kenneth	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	353	353	353	mm	Other	Good quality	FIS
9/27/2011	Breidinger, Kenneth	Westslope X Rainbow	1	no estimate, counts only	Total number captured or presence only	256	256	256	mm	Other	Good quality	FIS
9/25/2011	Breidinger, Kenneth	Brown Trout	2	no estimate, counts only	Total number captured or presence only	407	470	438.5	mm	Other	Good quality	FIS
9/22/2011	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	472	472	472	mm	Other	Good quality	FIS
9/21/2011	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	365	365	365	mm	Other	Good quality	FIS
9/18/2011	Breidinger, Kenneth	Brown Trout	2	no estimate, counts only	Total number captured or presence only	424	465	444.5	mm	Other	Good quality	FIS
9/18/2011	Breidinger, Kenneth	Mountain Whitefish	1	no estimate, counts only	Total number captured or presence only	326	326	326	mm	Other	Good quality	FIS
9/15/2011	Hanson, Jon	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	498	498	498	mm	Other	Good quality	FIS
9/14/2011	Hanson, Jon	Brown Trout	2	no estimate, counts only	Total number captured or presence only	432	514	473	mm	Other	Good quality	FIS
9/14/2011	Hanson, Jon		4			423	458	437	mm	Other		FIS

		Largescale Sucker		no estimate, counts only	Total number captured or presence only						Good quality	
9/14/2011	Hanson, Jon	Rainbow Trout	5	no estimate, counts only	Total number captured or presence only	219	521	349.6	mm	Other	Good quality	FIS
9/13/2011	Hanson, Jon	Brown Trout	1	no estimate, counts only	Total number captured or presence only	395	395	395	mm	Other	Good quality	FIS
9/13/2011	Breidinger, Kenneth	Largescale Sucker	6	no estimate, counts only	Total number captured or presence only	200	478	397.7	mm	Boat shocking with boom	Good quality	FIS
9/13/2011	Hanson, Jon	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	342	342	342	mm	Other	Good quality	FIS
9/13/2011	Breidinger, Kenneth	Smallmouth Bass	3	no estimate, counts only	Total number captured or presence only	244	462	323.3	mm	Boat shocking with boom	Good quality	FIS
9/11/2011	Hanson, Jon	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	446	446	446	mm	Other	Good quality	FIS
9/11/2011	Hanson, Jon	Northern Pike Minnow	3	no estimate, counts only	Total number captured or presence only	341	487	417	mm	Other	Good quality	FIS
9/11/2011	Hanson, Jon	Rainbow Trout	5	no estimate, counts only	Total number captured or presence only	230	451	345.8	mm	Other	Good quality	FIS
9/11/2011	Hanson, Jon	Smallmouth Bass	6	no estimate, counts only	Total number captured or presence only	214	300	250.2	mm	Other	Good quality	FIS
9/11/2011	Hanson, Jon		2			360	396	378	mm	Other		FIS

		Westslope Cutthroat Trout		no estimate, counts only	Total number captured or presence only						Good quality	
9/9/2011	Hanson, Jon	Largescale Sucker	3	no estimate, counts only	Total number captured or presence only	401	477	438.7	mm	Other	Good quality	FIS
9/9/2011	Hanson, Jon	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	268	282	275	mm	Other	Good quality	FIS
9/9/2011	Hanson, Jon	Smallmouth Bass	1	no estimate, counts only	Total number captured or presence only	260	260	260	mm	Other	Good quality	FIS
9/7/2011	Hanson, Jon	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	271	271	271	mm	Other	Good quality	FIS
9/6/2011	Hanson, Jon	Brown Trout	1	no estimate, counts only	Total number captured or presence only	300	300	300	mm	Other	Good quality	FIS
9/3/2011	Hanson, Jon	Brown Trout	1	no estimate, counts only	Total number captured or presence only	353	353	353	mm	Other	Good quality	FIS
9/3/2011	Hanson, Jon	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	223	354	288.5	mm	Other	Good quality	FIS
9/2/2011	Hanson, Jon	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	302	490	396	mm	Other	Good quality	FIS
9/1/2011	Hanson, Jon	Brown Trout	1	no estimate, counts only	Total number captured or presence only	256	256	256	mm	Other	Good quality	FIS
9/1/2011	Hanson, Jon		5			195	474	326.4	mm	Other		FIS

		Rainbow Trout		no estimate, counts only	Total number captured or presence only						Good quality	
8/31/2011	Hanson, Jon	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	443	510	472.7	mm	Other	Good quality	FIS
8/30/2011	Hanson, Jon	Brown Trout	1	no estimate, counts only	Total number captured or presence only	230	230	230	mm	Other	Good quality	FIS
8/30/2011	Hanson, Jon	Northern Pike Minnow	4	no estimate, counts only	Total number captured or presence only	341	412	366.8	mm	Other	Good quality	FIS
8/30/2011	Hanson, Jon	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	357	400	378.5	mm	Other	Good quality	FIS
8/30/2011	Hanson, Jon	Smallmouth Bass	1	no estimate, counts only	Total number captured or presence only	222	222	222	mm	Other	Good quality	FIS
8/29/2011	Hanson, Jon	Longnose Sucker	3	no estimate, counts only	Total number captured or presence only	262	350	317.3	mm	Other	Good quality	FIS
8/29/2011	Hanson, Jon	Northern Pike Minnow	51	no estimate, counts only	Total number captured or presence only	365	365	365	mm	Other	Good quality	FIS
8/29/2011	Hanson, Jon	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	346	470	408	mm	Other	Good quality	FIS
8/29/2011	Hanson, Jon	Smallmouth Bass	8	no estimate, counts only	Total number captured or presence only	218	264	238.2	mm	Other	Good quality	FIS
8/28/2011	Hanson, Jon		2			235	243	239	mm	Other		FIS

		Largescale Sucker		no estimate, counts only	Total number captured or presence only						Good quality	
8/28/2011	Hanson, Jon	Longnose Sucker	1	no estimate, counts only	Total number captured or presence only	358	358	358	mm	Other	Good quality	FIS
8/28/2011	Hanson, Jon	Northern Pike Minnow	16	no estimate, counts only	Total number captured or presence only	351	352	351.5	mm	Other	Good quality	FIS
8/28/2011	Hanson, Jon	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	350	455	390	mm	Other	Good quality	FIS
8/28/2011	Hanson, Jon	Smallmouth Bass	16	no estimate, counts only	Total number captured or presence only	199	290	232.5	mm	Other	Good quality	FIS
8/27/2011	Hanson, Jon	Northern Pike Minnow	28	no estimate, counts only	Total number captured or presence only	255	385	323	mm	Other	Good quality	FIS
8/27/2011	Hanson, Jon	Smallmouth Bass	5	no estimate, counts only	Total number captured or presence only	200	270	236.6	mm	Other	Good quality	FIS
8/26/2011	Hanson, Jon	Largescale Sucker	11	no estimate, counts only	Total number captured or presence only	202	442	267.9	mm	Other	Good quality	FIS
8/26/2011	Hanson, Jon	Longnose Sucker	3	no estimate, counts only	Total number captured or presence only	351	365	357.3	mm	Other	Good quality	FIS
8/26/2011	Hanson, Jon	Northern Pike Minnow	49	no estimate, counts only	Total number captured or presence only	185	440	327	mm	Other	Good quality	FIS
8/26/2011	Hanson, Jon		1			362	362	362	mm	Other		FIS

		Rainbow Trout		no estimate, counts only	Total number captured or presence only						Good quality	
8/26/2011	Hanson, Jon	Smallmouth Bass	24	no estimate, counts only	Total number captured or presence only	186	310	232.9	mm	Other	Good quality	FIS
8/26/2011	Hanson, Jon	Westslope X Rainbow	1	no estimate, counts only	Total number captured or presence only	242	242	242	mm	Other	Good quality	FIS
8/25/2011	Hanson, Jon	Brown Trout	1	no estimate, counts only	Total number captured or presence only	182	182	182	mm	Other	Good quality	FIS
8/25/2011	Hanson, Jon	Largescale Sucker	22	no estimate, counts only	Total number captured or presence only	208	475	329.7	mm	Other	Good quality	FIS
8/25/2011	Hanson, Jon	Longnose Sucker	2	no estimate, counts only	Total number captured or presence only	315	345	330	mm	Other	Good quality	FIS
8/25/2011	Hanson, Jon	Northern Pike Minnow	32	no estimate, counts only	Total number captured or presence only	280	382	332.2	mm	Other	Good quality	FIS
8/25/2011	Hanson, Jon	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	202	482	342	mm	Other	Good quality	FIS
8/25/2011	Hanson, Jon	Smallmouth Bass	19	no estimate, counts only	Total number captured or presence only	197	403	234.7	mm	Other	Good quality	FIS
8/25/2011	Hanson, Jon	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	337	337	337	mm	Other	Good quality	FIS
8/24/2011	Hanson, Jon	Brown Trout	2			335	515	425	mm	Other		FIS

				no estimate, counts only	Total number captured or presence only						Good quality	
8/24/2011	Hanson, Jon	Largescale Sucker	22	no estimate, counts only	Total number captured or presence only	128	470	356	mm	Other	Good quality	FIS
8/24/2011	Hanson, Jon	Northern Pike Minnow	191	no estimate, counts only	Total number captured or presence only	302	405	333.8	mm	Other	Good quality	FIS
8/24/2011	Hanson, Jon	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	402	456	429	mm	Other	Good quality	FIS
8/24/2011	Hanson, Jon	Smallmouth Bass	33	no estimate, counts only	Total number captured or presence only	138	450	244.4	mm	Other	Good quality	FIS
8/23/2011	Hanson, Jon	Brown Trout	1	no estimate, counts only	Total number captured or presence only	405	405	405	mm	Other	Good quality	FIS
8/23/2011	Hanson, Jon	Largescale Sucker	287	no estimate, counts only	Total number captured or presence only	190	475	417.8	mm	Other	Good quality	FIS
8/23/2011	Hanson, Jon	Northern Pike Minnow	566	no estimate, counts only	Total number captured or presence only	277	413	335	mm	Other	Good quality	FIS
8/23/2011	Hanson, Jon	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	325	325	325	mm	Other	Good quality	FIS
8/23/2011	Hanson, Jon	Smallmouth Bass	19	no estimate, counts only	Total number captured or presence only	165	293	242.6	mm	Other	Good quality	FIS
8/22/2011	Hanson, Jon		55			322	500	420.8	mm	Other		FIS

		Largescale Sucker		no estimate, counts only	Total number captured or presence only						Good quality	
8/22/2011	Hanson, Jon	Northern Pike Minnow	53	no estimate, counts only	Total number captured or presence only	205	485	349.4	mm	Other	Good quality	FIS
7/13/2011	Hanson, Jon	Northern Pike Minnow	2	no estimate, counts only	Total number captured or presence only	365	392	378.5	mm	Other	Good quality	FIS
7/13/2011	Hanson, Jon	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	461	461	461	mm	Other	Good quality	FIS
6/23/2011	Breidinger, Kenneth	Lake Whitefish	6	no estimate, counts only	Total number captured or presence only	417	482	441.2	mm	Boat shocking with boom	Good quality	FIS
6/23/2011	Breidinger, Kenneth	Largescale Sucker	25	no estimate, counts only	Total number captured or presence only	205	508	449.9	mm	Boat shocking with boom	Good quality	FIS
6/23/2011	Breidinger, Kenneth	Longnose Sucker	21	no estimate, counts only	Total number captured or presence only	441	502	465.6	mm	Boat shocking with boom	Good quality	FIS
6/23/2011	Breidinger, Kenneth	Mountain Whitefish	8	no estimate, counts only	Total number captured or presence only	236	285	264.1	mm	Boat shocking with boom	Good quality	FIS
6/23/2011	Breidinger, Kenneth	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	520	520	520	mm	Boat shocking with boom	Good quality	FIS
6/23/2011	Breidinger, Kenneth	Peamouth	30	no estimate, counts only	Total number captured or presence only	244	346	324.9	mm	Boat shocking with boom	Good quality	FIS
6/23/2011			2			372	400	386	mm			FIS

	Breidinger, Kenneth	Rainbow Trout		no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
6/23/2011	Breidinger, Kenneth	Smallmouth Bass	4	no estimate, counts only	Total number captured or presence only	202	370	258.5	mm	Boat shocking with boom	Good quality	FIS
6/22/2011	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	357	357	357	mm	Boat shocking with boom	Good quality	FIS
6/22/2011	Breidinger, Kenneth	Lake Whitefish	12	no estimate, counts only	Total number captured or presence only	371	441	414.3	mm	Boat shocking with boom	Good quality	FIS
6/22/2011	Breidinger, Kenneth	Largescale Sucker	17	no estimate, counts only	Total number captured or presence only	371	580	463.4	mm	Boat shocking with boom	Good quality	FIS
6/22/2011	Breidinger, Kenneth	Longnose Sucker	3	no estimate, counts only	Total number captured or presence only	431	483	451.3	mm	Boat shocking with boom	Good quality	FIS
6/22/2011	Breidinger, Kenneth	Mountain Whitefish	4	no estimate, counts only	Total number captured or presence only	245	277	262.5	mm	Boat shocking with boom	Good quality	FIS
6/22/2011	Breidinger, Kenneth	Peamouth	8	no estimate, counts only	Total number captured or presence only	271	345	322.6	mm	Boat shocking with boom	Good quality	FIS
6/22/2011	Breidinger, Kenneth	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	331	385	363.7	mm	Boat shocking with boom	Good quality	FIS
6/22/2011	Breidinger, Kenneth	Westslope X Rainbow	1	no estimate, counts only	Total number captured or presence only	160	160	160	mm	Boat shocking with boom	Good quality	FIS
6/15/2011		Brown Trout	1			462	462	462	mm			FIS

	Breidinger, Kenneth			no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
6/15/2011	Breidinger, Kenneth	Lake Whitefish	19	no estimate, counts only	Total number captured or presence only	330	500	433.2	mm	Boat shocking with boom	Good quality	FIS
6/15/2011	Breidinger, Kenneth	Largescale Sucker	15	no estimate, counts only	Total number captured or presence only	262	551	445.7	mm	Boat shocking with boom	Good quality	FIS
6/15/2011	Breidinger, Kenneth	Longnose Sucker	5	no estimate, counts only	Total number captured or presence only	442	462	449.4	mm	Boat shocking with boom	Good quality	FIS
6/15/2011	Breidinger, Kenneth	Mountain Whitefish	13	no estimate, counts only	Total number captured or presence only	248	470	331	mm	Boat shocking with boom	Good quality	FIS
6/15/2011	Breidinger, Kenneth	Northern Pike Minnow	3	no estimate, counts only	Total number captured or presence only	326	486	430.7	mm	Boat shocking with boom	Good quality	FIS
6/15/2011	Breidinger, Kenneth	Peamouth	30	no estimate, counts only	Total number captured or presence only	286	446	331.5	mm	Boat shocking with boom	Good quality	FIS
6/15/2011	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	416	416	416	mm	Boat shocking with boom	Good quality	FIS
6/15/2011	Breidinger, Kenneth	Smallmouth Bass	1	no estimate, counts only	Total number captured or presence only	372	372	372	mm	Boat shocking with boom	Good quality	FIS
6/14/2011	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	440	440	440	mm	Boat shocking with boom	Good quality	FIS
6/14/2011			24			369	464	423.6	mm			FIS

	Breidinger, Kenneth	Lake Whitefish		no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
6/14/2011	Breidinger, Kenneth	Largescale Sucker	29	no estimate, counts only	Total number captured or presence only	391	565	455.7	mm	Boat shocking with boom	Good quality	FIS
6/14/2011	Breidinger, Kenneth	Longnose Sucker	11	no estimate, counts only	Total number captured or presence only	417	502	470.4	mm	Boat shocking with boom	Good quality	FIS
6/14/2011	Breidinger, Kenneth	Mountain Whitefish	13	no estimate, counts only	Total number captured or presence only	254	410	341.4	mm	Boat shocking with boom	Good quality	FIS
6/14/2011	Breidinger, Kenneth	Northern Pike	1	no estimate, counts only	Total number captured or presence only	442	442	442	mm	Boat shocking with boom	Good quality	FIS
6/14/2011	Breidinger, Kenneth	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	321	321	321	mm	Boat shocking with boom	Good quality	FIS
6/14/2011	Breidinger, Kenneth	Peamouth	37	no estimate, counts only	Total number captured or presence only	298	354	324.6	mm	Boat shocking with boom	Good quality	FIS
6/14/2011	Breidinger, Kenneth	Rainbow Trout	10	no estimate, counts only	Total number captured or presence only	210	435	356	mm	Boat shocking with boom	Good quality	FIS
6/14/2011	Breidinger, Kenneth	Smallmouth Bass	1	no estimate, counts only	Total number captured or presence only	305	305	305	mm	Boat shocking with boom	Good quality	FIS
6/8/2011	Breidinger, Kenneth	Brown Trout	3	no estimate, counts only	Total number captured or presence only	120	353	229.3	mm	Boat shocking with boom	Good quality	FIS
6/8/2011			38			360	492	418	mm			FIS

	Breidinger, Kenneth	Lake Whitefish		no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
6/8/2011	Breidinger, Kenneth	Largescale Sucker	32	no estimate, counts only	Total number captured or presence only	325	512	451.8	mm	Boat shocking with boom	Good quality	FIS
6/8/2011	Breidinger, Kenneth	Longnose Sucker	23	no estimate, counts only	Total number captured or presence only	238	542	456.6	mm	Boat shocking with boom	Good quality	FIS
6/8/2011	Breidinger, Kenneth	Mountain Whitefish	14	no estimate, counts only	Total number captured or presence only	165	460	313.5	mm	Boat shocking with boom	Good quality	FIS
6/8/2011	Breidinger, Kenneth	Northern Pike	1	no estimate, counts only	Total number captured or presence only	521	521	521	mm	Boat shocking with boom	Good quality	FIS
6/8/2011	Breidinger, Kenneth	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	508	508	508	mm	Boat shocking with boom	Good quality	FIS
6/8/2011	Breidinger, Kenneth	Peamouth	11	no estimate, counts only	Total number captured or presence only	282	338	323	mm	Boat shocking with boom	Good quality	FIS
6/8/2011	Breidinger, Kenneth	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	130	375	264	mm	Boat shocking with boom	Good quality	FIS
6/8/2011	Breidinger, Kenneth	Smallmouth Bass	7	no estimate, counts only	Total number captured or presence only	200	380	264.6	mm	Boat shocking with boom	Good quality	FIS
6/7/2011	Breidinger, Kenneth	Brown Trout	2	no estimate, counts only	Total number captured or presence only	182	286	234	mm	Boat shocking with boom	Good quality	FIS
6/7/2011			33			143	530	419.5	mm			FIS

	Breidinger, Kenneth	Lake Whitefish		no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
6/7/2011	Breidinger, Kenneth	Largescale Sucker	27	no estimate, counts only	Total number captured or presence only	223	544	458.1	mm	Boat shocking with boom	Good quality	FIS
6/7/2011	Breidinger, Kenneth	Longnose Sucker	15	no estimate, counts only	Total number captured or presence only	428	502	470.1	mm	Boat shocking with boom	Good quality	FIS
6/7/2011	Breidinger, Kenneth	Mountain Whitefish	10	no estimate, counts only	Total number captured or presence only	232	283	260.6	mm	Boat shocking with boom	Good quality	FIS
6/7/2011	Breidinger, Kenneth	Northern Pike Minnow	3	no estimate, counts only	Total number captured or presence only	145	542	282.3	mm	Boat shocking with boom	Good quality	FIS
6/7/2011	Breidinger, Kenneth	Peamouth	4	no estimate, counts only	Total number captured or presence only	312	355	331.3	mm	Boat shocking with boom	Good quality	FIS
6/7/2011	Breidinger, Kenneth	Pumpkinseed	1	no estimate, counts only	Total number captured or presence only	135	135	135	mm	Boat shocking with boom	Good quality	FIS
6/7/2011	Breidinger, Kenneth	Rainbow Trout	16	no estimate, counts only	Total number captured or presence only	155	421	280.8	mm	Boat shocking with boom	Good quality	FIS
6/7/2011	Breidinger, Kenneth	Smallmouth Bass	3	no estimate, counts only	Total number captured or presence only	205	292	244	mm	Boat shocking with boom	Good quality	FIS
6/7/2011	Breidinger, Kenneth	Westslope Cutthroat Trout	2	no estimate, counts only	Total number captured or presence only	272	280	276	mm	Boat shocking with boom	Good quality	FIS
5/31/2011		Brown Trout	3			206	260	227	mm			FIS

	Breidinger, Kenneth			no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
5/31/2011	Breidinger, Kenneth	Bull Trout	3	no estimate, counts only	Total number captured or presence only	180	482	303	mm	Boat shocking with boom	Good quality	FIS
5/31/2011	Breidinger, Kenneth	Lake Whitefish	53	no estimate, counts only	Total number captured or presence only	383	502	433	mm	Boat shocking with boom	Good quality	FIS
5/31/2011	Breidinger, Kenneth	Largescale Sucker	22	no estimate, counts only	Total number captured or presence only	138	562	440.3	mm	Boat shocking with boom	Good quality	FIS
5/31/2011	Breidinger, Kenneth	Longnose Sucker	37	no estimate, counts only	Total number captured or presence only	412	535	465.4	mm	Boat shocking with boom	Good quality	FIS
5/31/2011	Breidinger, Kenneth	Mountain Whitefish	16	no estimate, counts only	Total number captured or presence only	175	408	285.2	mm	Boat shocking with boom	Good quality	FIS
5/31/2011	Breidinger, Kenneth	Northern Pike	2	no estimate, counts only	Total number captured or presence only	408	549	478.5	mm	Boat shocking with boom	Good quality	FIS
5/31/2011	Breidinger, Kenneth	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	442	442	442	mm	Boat shocking with boom	Good quality	FIS
5/31/2011	Breidinger, Kenneth	Peamouth	2	no estimate, counts only	Total number captured or presence only	310	318	314	mm	Boat shocking with boom	Good quality	FIS
5/31/2011	Breidinger, Kenneth	Rainbow Trout	25	no estimate, counts only	Total number captured or presence only	170	485	317	mm	Boat shocking with boom	Good quality	FIS
5/31/2011			6			72	340	220.7	mm			FIS

	Breidinger, Kenneth	Smallmouth Bass		no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
5/31/2011	Breidinger, Kenneth	Walleye	1	no estimate, counts only	Total number captured or presence only	480	480	480	mm	Boat shocking with boom	Good quality	FIS
5/31/2011	Breidinger, Kenneth	Westslope Cutthroat Trout	4	no estimate, counts only	Total number captured or presence only	286	299	289.8	mm	Boat shocking with boom	Good quality	FIS
5/23/2011	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	183	183	183	mm	Boat shocking with boom	Good quality	FIS
5/23/2011	Breidinger, Kenneth	Lake Whitefish	25	no estimate, counts only	Total number captured or presence only	343	486	429.6	mm	Boat shocking with boom	Good quality	FIS
5/23/2011	Breidinger, Kenneth	Largescale Sucker	24	no estimate, counts only	Total number captured or presence only	133	512	443	mm	Boat shocking with boom	Good quality	FIS
5/23/2011	Hanson, Jon	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	445	445	445	mm	Other	Good quality	FIS
5/23/2011	Breidinger, Kenneth	Longnose Sucker	24	no estimate, counts only	Total number captured or presence only	434	532	479.9	mm	Boat shocking with boom	Good quality	FIS
5/23/2011	Breidinger, Kenneth	Mountain Whitefish	13	no estimate, counts only	Total number captured or presence only	156	428	282.2	mm	Boat shocking with boom	Good quality	FIS
5/23/2011	Breidinger, Kenneth	Northern Pike	2	no estimate, counts only	Total number captured or presence only	656	688	672	mm	Boat shocking with boom	Good quality	FIS
5/23/2011	Hanson, Jon		1			417	417	417	mm	Other		FIS

		Northern Pike Minnow		no estimate, counts only	Total number captured or presence only						Good quality	
5/23/2011	Breidinger, Kenneth	Peamouth	1	no estimate, counts only	Total number captured or presence only	344	344	344	mm	Boat shocking with boom	Good quality	FIS
5/23/2011	Breidinger, Kenneth	Rainbow Trout	14	no estimate, counts only	Total number captured or presence only	141	410	265.7	mm	Boat shocking with boom	Good quality	FIS
5/23/2011	Breidinger, Kenneth	Smallmouth Bass	5	no estimate, counts only	Total number captured or presence only	172	340	261	mm	Boat shocking with boom	Good quality	FIS
5/23/2011	Breidinger, Kenneth	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	350	350	350	mm	Boat shocking with boom	Good quality	FIS
5/23/2011	Breidinger, Kenneth	Westslope X Rainbow	1	no estimate, counts only	Total number captured or presence only	285	285	285	mm	Boat shocking with boom	Good quality	FIS
5/18/2011	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	162	162	162	mm	Boat shocking with boom	Good quality	FIS
5/18/2011	Breidinger, Kenneth	Largescale Sucker	9	no estimate, counts only	Total number captured or presence only	405	521	455.1	mm	Boat shocking with boom	Good quality	FIS
5/18/2011	Breidinger, Kenneth	Longnose Sucker	11	no estimate, counts only	Total number captured or presence only	432	520	483	mm	Boat shocking with boom	Good quality	FIS
5/18/2011	Breidinger, Kenneth	Mountain Whitefish	12	no estimate, counts only	Total number captured or presence only	135	271	186.8	mm	Boat shocking with boom	Good quality	FIS
5/18/2011			1			722	722	722	mm			FIS

	Breidinger, Kenneth	Northern Pike		no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
5/18/2011	Breidinger, Kenneth	Peamouth	1	no estimate, counts only	Total number captured or presence only	348	348	348	mm	Boat shocking with boom	Good quality	FIS
5/18/2011	Breidinger, Kenneth	Rainbow Trout	7	no estimate, counts only	Total number captured or presence only	70	470	308.7	mm	Boat shocking with boom	Good quality	FIS
5/18/2011	Breidinger, Kenneth	Smallmouth Bass	5	no estimate, counts only	Total number captured or presence only	168	251	226.2	mm	Boat shocking with boom	Good quality	FIS
5/18/2011	Breidinger, Kenneth	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	272	272	272	mm	Boat shocking with boom	Good quality	FIS
5/17/2011	Hanson, Jon	Largescale Sucker	2	no estimate, counts only	Total number captured or presence only	404	420	412	mm	Other	Good quality	FIS
5/17/2011	Hanson, Jon	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	415	415	415	mm	Other	Good quality	FIS
5/16/2011	Hanson, Jon	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	345	345	345	mm	Other	Good quality	FIS
5/13/2011	Hanson, Jon	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	443	443	443	mm	Other	Good quality	FIS
5/12/2011	Hanson, Jon	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	445	445	445	mm	Other	Good quality	FIS
5/11/2011	Hanson, Jon		1			422	422	422	mm	Other		FIS

		Largescale Sucker		no estimate, counts only	Total number captured or presence only						Good quality	
5/11/2011	Hanson, Jon	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	371	371	371	mm	Other	Good quality	FIS
5/9/2011	Hanson, Jon	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	395	395	395	mm	Other	Good quality	FIS
5/6/2011	Hanson, Jon	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	424	424	424	mm	Other	Good quality	FIS
5/5/2011	Hanson, Jon	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Other	Good quality	FIS
5/2/2011	Breidinger, Kenneth	Largescale Sucker	31	no estimate, counts only	Total number captured or presence only	428	557	483.7	mm	Boat shocking with boom	Good quality	FIS
5/2/2011	Breidinger, Kenneth	Longnose Sucker	2	no estimate, counts only	Total number captured or presence only	441	525	483	mm	Boat shocking with boom	Good quality	FIS
5/2/2011	Breidinger, Kenneth	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	485	485	485	mm	Boat shocking with boom	Good quality	FIS
5/2/2011	Breidinger, Kenneth	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	165	422	328.3	mm	Boat shocking with boom	Good quality	FIS
4/29/2011	Hanson, Jon	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	422	422	422	mm	Other	Good quality	FIS
4/28/2011	Hanson, Jon		3			422	472	444	mm	Other		FIS

		Rainbow Trout		no estimate, counts only	Total number captured or presence only						Good quality	
4/28/2011	Hanson, Jon	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	381	381	381	mm	Other	Good quality	FIS
4/27/2011	Hanson, Jon	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	392	459	425.5	mm	Other	Good quality	FIS
4/27/2011	Hanson, Jon	Westslope X Rainbow	1	no estimate, counts only	Total number captured or presence only	434	434	434	mm	Other	Good quality	FIS
4/26/2011	Hanson, Jon	Bull Trout	1	no estimate, counts only	Total number captured or presence only	547	547	547	mm	Other	Good quality	FIS
4/26/2011	Hanson, Jon	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	415	415	415	mm	Other	Good quality	FIS
4/26/2011	Hanson, Jon	Longnose Sucker	1	no estimate, counts only	Total number captured or presence only	452	452	452	mm	Other	Good quality	FIS
4/26/2011	Hanson, Jon	Rainbow Trout	9	no estimate, counts only	Total number captured or presence only	338	481	429.6	mm	Other	Good quality	FIS
4/26/2011	Hanson, Jon	Westslope Cutthroat Trout	4	no estimate, counts only	Total number captured or presence only	390	413	403.5	mm	Other	Good quality	FIS
4/25/2011	Hanson, Jon	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	385	385	385	mm	Other	Good quality	FIS
4/24/2011	Hanson, Jon		1			440	440	440	mm	Other		FIS

		Rainbow Trout		no estimate, counts only	Total number captured or presence only						Good quality	
4/21/2011	Hanson, Jon	Brown Trout	1	no estimate, counts only	Total number captured or presence only	171	171	171	mm	Other	Good quality	FIS
4/21/2011	Hanson, Jon	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	450	450	450	mm	Other	Good quality	FIS
4/19/2011	Hanson, Jon	Rainbow Trout	6	no estimate, counts only	Total number captured or presence only	418	488	458.2	mm	Other	Good quality	FIS
4/19/2011	Hanson, Jon	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	377	377	377	mm	Other	Good quality	FIS
4/17/2011	Hanson, Jon	Lake Trout	1	no estimate, counts only	Total number captured or presence only	630	630	630	mm	Other	Good quality	FIS
4/17/2011	Hanson, Jon	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	440	477	458.5	mm	Other	Good quality	FIS
4/17/2011	Hanson, Jon	Rainbow X Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	463	463	463	mm	Other	Good quality	FIS
4/15/2011	Hanson, Jon	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	550	550	550	mm	Other	Good quality	FIS
4/15/2011	Hanson, Jon	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	368	368	368	mm	Other	Good quality	FIS
4/15/2011	Hanson, Jon		1			472	472	472	mm	Other		FIS

		Westslope X Rainbow		no estimate, counts only	Total number captured or presence only						Good quality	
4/14/2011	Hanson, Jon	Brown Trout	2	no estimate, counts only	Total number captured or presence only	297	366	331.5	mm	Other	Good quality	FIS
4/14/2011	Hanson, Jon	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	490	490	490	mm	Other	Good quality	FIS
4/13/2011	Hanson, Jon	Bull Trout	1	no estimate, counts only	Total number captured or presence only	365	365	365	mm	Other	Good quality	FIS
4/13/2011	Hanson, Jon	Rainbow Trout	4	no estimate, counts only	Total number captured or presence only	429	482	455.5	mm	Other	Good quality	FIS
4/13/2011	Hanson, Jon	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	396	396	396	mm	Other	Good quality	FIS
4/11/2011	Hanson, Jon	Rainbow Trout	5	no estimate, counts only	Total number captured or presence only	426	565	481	mm	Other	Good quality	FIS
4/10/2011	Hanson, Jon	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	467	520	493.5	mm	Other	Good quality	FIS
4/9/2011	Hanson, Jon	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	421	508	472.3	mm	Other	Good quality	FIS
4/8/2011	Hanson, Jon	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	467	467	467	mm	Other	Good quality	FIS
4/5/2011	Hanson, Jon		9			461	535	495.3	mm	Other		FIS

		Rainbow Trout		no estimate, counts only	Total number captured or presence only						Good quality	
4/4/2011	Hanson, Jon	Rainbow Trout	6	no estimate, counts only	Total number captured or presence only	433	515	467.8	mm	Other	Good quality	FIS
4/2/2011	Hanson, Jon	Rainbow Trout	4	no estimate, counts only	Total number captured or presence only	421	465	434.8	mm	Other	Good quality	FIS
4/1/2011	Hanson, Jon	Rainbow Trout	3	no estimate, counts only	Total number captured or presence only	460	515	486.3	mm	Other	Good quality	FIS
4/1/2011	Hanson, Jon	Westslope X Rainbow	2	no estimate, counts only	Total number captured or presence only	421	477	449	mm	Other	Good quality	FIS
3/31/2011	Hanson, Jon	Rainbow Trout	6	no estimate, counts only	Total number captured or presence only	458	552	499	mm	Other	Good quality	FIS
3/30/2011	Hanson, Jon	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	370	370	370	mm	Other	Good quality	FIS
3/29/2011	Hanson, Jon	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	461	470	465.5	mm	Other	Good quality	FIS
3/28/2011	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	305	305	305	mm	Boat shocking with boom	Good quality	FIS
3/28/2011	Breidinger, Kenneth	Largescale Sucker	31	no estimate, counts only	Total number captured or presence only	220	525	446.5	mm	Boat shocking with boom	Good quality	FIS
3/28/2011			5			248	400	362.2	mm			FIS

	Breidinger, Kenneth	Mountain Whitefish		no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
3/28/2011	Hanson, Jon	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	507	507	507	mm	Other	Good quality	FIS
3/28/2011	Breidinger, Kenneth	Rainbow Trout	6	no estimate, counts only	Total number captured or presence only	135	522	318	mm	Boat shocking with boom	Good quality	FIS
3/28/2011	Breidinger, Kenneth	Yellow Perch	1	no estimate, counts only	Total number captured or presence only	174	174	174	mm	Boat shocking with boom	Good quality	FIS
3/27/2011	Hanson, Jon	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	390	390	390	mm	Other	Good quality	FIS
3/25/2011	Breidinger, Kenneth	Brown Trout	2	no estimate, counts only	Total number captured or presence only	215	270	242.5	mm	Boat shocking with boom	Good quality	FIS
3/25/2011	Breidinger, Kenneth	Lake Whitefish	1	no estimate, counts only	Total number captured or presence only	465	465	465	mm	Boat shocking with boom	Good quality	FIS
3/25/2011	Breidinger, Kenneth	Largescale Sucker	22	no estimate, counts only	Total number captured or presence only	408	631	456.1	mm	Boat shocking with boom	Good quality	FIS
3/25/2011	Breidinger, Kenneth	Mountain Whitefish	11	no estimate, counts only	Total number captured or presence only	231	387	277.5	mm	Boat shocking with boom	Good quality	FIS
3/21/2011	Hanson, Jon	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	82	82	82	mm	Other	Good quality	FIS
3/21/2011	Hanson, Jon		1			499	499	499	mm	Other		FIS

		Rainbow Trout		no estimate, counts only	Total number captured or presence only						Good quality	
3/18/2011	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	357	357	357	mm	Boat shocking with boom	Good quality	FIS
3/18/2011	Breidinger, Kenneth	Largescale Sucker	19	no estimate, counts only	Total number captured or presence only	402	638	465.6	mm	Boat shocking with boom	Good quality	FIS
3/18/2011	Breidinger, Kenneth	Mountain Whitefish	5	no estimate, counts only	Total number captured or presence only	220	266	241.2	mm	Boat shocking with boom	Good quality	FIS
3/18/2011	Breidinger, Kenneth	Rainbow Trout	8	no estimate, counts only	Total number captured or presence only	401	543	474	mm	Boat shocking with boom	Good quality	FIS
3/18/2011	Breidinger, Kenneth	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	305	305	305	mm	Boat shocking with boom	Good quality	FIS

Section: Thompson Falls res
River Miles: 65.8 to 66.8

Date	Collector	Species	Est.	Sec. Unit	Method	Length Min	Max	Avg.	Unit	Gear	Data Rating	Source
4/12/2016	Kreiner, Ryan	Black Bullhead	11	no estimate, counts only	Total number captured or presence only	48	232	180.5	mm	Boat shocking with boom	Good quality	FIS
4/12/2016	Kreiner, Ryan	Largemouth Bass	43	no estimate, counts only	Total number captured or presence only	63	413	259.7	mm	Boat shocking with boom	Good quality	FIS
4/12/2016	Kreiner, Ryan	Largescale Sucker	5	no estimate, counts only	Total number captured or presence only	292	571	491	mm	Boat shocking with boom	Good quality	FIS
4/12/2016	Kreiner, Ryan		1			380	380	380	mm			FIS

		Mountain Whitefish		no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
4/12/2016	Kreiner, Ryan	Northern Pike	12	no estimate, counts only	Total number captured or presence only	265	642	368.3	mm	Boat shocking with boom	Good quality	FIS
4/12/2016	Kreiner, Ryan	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	110	110	110	mm	Boat shocking with boom	Good quality	FIS
4/12/2016	Kreiner, Ryan	Pumpkinseed	65	no estimate, counts only	Total number captured or presence only	61	175	129.8	mm	Boat shocking with boom	Good quality	FIS
4/12/2016	Kreiner, Ryan	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	527	527	527	mm	Boat shocking with boom	Good quality	FIS
4/12/2016	Kreiner, Ryan	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	401	401	401	mm	Boat shocking with boom	Good quality	FIS
4/12/2016	Kreiner, Ryan	Yellow Perch	67	no estimate, counts only	Total number captured or presence only	78	255	173.6	mm	Boat shocking with boom	Good quality	FIS
10/13/2015	Kreiner, Ryan	Black Bullhead	139	no estimate, counts only	Total number captured or presence only	163	266	197.5	mm	Gill netting	Good quality	FIS
10/13/2015	Kreiner, Ryan	Largemouth Bass	2	no estimate, counts only	Total number captured or presence only	133	180	156.5	mm	Gill netting	Good quality	FIS
10/13/2015	Kreiner, Ryan	Largescale Sucker	2	no estimate, counts only	Total number captured or presence only	486	505	495.5	mm	Gill netting	Good quality	FIS
10/13/2015	Kreiner, Ryan		30			271	689	450.4	mm	Gill netting		FIS

		Northern Pike		no estimate, counts only	Total number captured or presence only						Good quality	
10/13/2015	Kreiner, Ryan	Northern Pike Minnow	8	no estimate, counts only	Total number captured or presence only	389	511	466.4	mm	Gill netting	Good quality	FIS
10/13/2015	Kreiner, Ryan	Pumpkinseed	4	no estimate, counts only	Total number captured or presence only	125	156	135.3	mm	Gill netting	Good quality	FIS
10/13/2015	Kreiner, Ryan	Yellow Bullhead	1	no estimate, counts only	Total number captured or presence only	245	245	245	mm	Gill netting	Good quality	FIS
10/13/2015	Kreiner, Ryan	Yellow Perch	13	no estimate, counts only	Total number captured or presence only	145	257	216.2	mm	Gill netting	Good quality	FIS
4/14/2015	Kreiner, Ryan	Black Bullhead	13	no estimate, counts only	Total number captured or presence only	105	215	148.2	mm	Boat shocking with boom	Good quality	FIS
4/14/2015	Kreiner, Ryan	Largemouth Bass	16	no estimate, counts only	Total number captured or presence only	138	456	260.4	mm	Boat shocking with boom	Good quality	FIS
4/14/2015	Kreiner, Ryan	Northern Pike	28	no estimate, counts only	Total number captured or presence only	157	553	355.3	mm	Boat shocking with boom	Good quality	FIS
4/14/2015	Kreiner, Ryan	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	377	377	377	mm	Boat shocking with boom	Good quality	FIS
4/14/2015	Kreiner, Ryan	Pumpkinseed	3	no estimate, counts only	Total number captured or presence only	93	132	114	mm	Boat shocking with boom	Good quality	FIS
4/14/2015	Kreiner, Ryan		1			392	392	392	mm			FIS

		Rainbow Trout		no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
4/14/2015	Kreiner, Ryan	Yellow Perch	38	no estimate, counts only	Total number captured or presence only	127	232	184.1	mm	Boat shocking with boom	Good quality	FIS
10/16/2014	Kreiner, Ryan	Black Bullhead	12	no estimate, counts only	Total number captured or presence only	136	219	190.9	mm	Gill netting	Good quality	FIS
10/16/2014	Kreiner, Ryan	Largemouth Bass	1	no estimate, counts only	Total number captured or presence only	251	251	251	mm	Gill netting	Good quality	FIS
10/16/2014	Kreiner, Ryan	Largescale Sucker	7	no estimate, counts only	Total number captured or presence only	460	575	500.1	mm	Gill netting	Good quality	FIS
10/16/2014	Kreiner, Ryan	Northern Pike	15	no estimate, counts only	Total number captured or presence only	301	752	452	mm	Gill netting	Good quality	FIS
10/16/2014	Kreiner, Ryan	Northern Pike Minnow	5	no estimate, counts only	Total number captured or presence only	376	543	453.8	mm	Gill netting	Good quality	FIS
10/16/2014	Kreiner, Ryan	Surveyed; no fish captured	0	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Gill netting	Good quality	FIS
10/16/2014	Kreiner, Ryan	Yellow Perch	6	no estimate, counts only	Total number captured or presence only	186	280	230.3	mm	Gill netting	Good quality	FIS
4/14/2014	Breidinger, Kenneth	Black Bullhead	3	no estimate, counts only	Total number captured or presence only	148	157	152.3	mm	Boat shocking with boom	Good quality	FIS
4/14/2014		Brown Trout	1			402	402	402	mm			FIS

	Breidinger, Kenneth			no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
4/14/2014	Breidinger, Kenneth	Largemouth Bass	5	no estimate, counts only	Total number captured or presence only	166	359	215.8	mm	Boat shocking with boom	Good quality	FIS
4/14/2014	Breidinger, Kenneth	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	553	553	553	mm	Boat shocking with boom	Good quality	FIS
4/14/2014	Breidinger, Kenneth	Northern Pike	21	no estimate, counts only	Total number captured or presence only	286	541	363.1	mm	Boat shocking with boom	Good quality	FIS
4/14/2014	Breidinger, Kenneth	Northern Pike Minnow	2	no estimate, counts only	Total number captured or presence only	435	458	446.5	mm	Boat shocking with boom	Good quality	FIS
4/14/2014	Breidinger, Kenneth	Pumpkinseed	1	no estimate, counts only	Total number captured or presence only	96	96	96	mm	Boat shocking with boom	Good quality	FIS
4/14/2014	Breidinger, Kenneth	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	431	431	431	mm	Boat shocking with boom	Good quality	FIS
4/14/2014	Breidinger, Kenneth	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	258	258	258	mm	Boat shocking with boom	Good quality	FIS
4/14/2014	Breidinger, Kenneth	Yellow Perch	28	no estimate, counts only	Total number captured or presence only	143	222	174.3	mm	Boat shocking with boom	Good quality	FIS
10/23/2013	Breidinger, Kenneth	Largescale Sucker	4	no estimate, counts only	Total number captured or presence only	457	506	483.8	mm	Gill netting	Good quality	FIS
10/23/2013			16			300	491	380.8	mm	Gill netting		FIS

	Breidinger, Kenneth	Northern Pike		no estimate, counts only	Total number captured or presence only						Good quality	
10/23/2013	Breidinger, Kenneth	Northern Pike Minnow	4	no estimate, counts only	Total number captured or presence only	436	510	475	mm	Gill netting	Good quality	FIS
10/23/2013	Breidinger, Kenneth	Smallmouth Bass	1	no estimate, counts only	Total number captured or presence only	365	365	365	mm	Gill netting	Good quality	FIS
10/23/2013	Breidinger, Kenneth	Surveyed; no fish captured	0	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Gill netting	Good quality	FIS
10/23/2013	Breidinger, Kenneth	Yellow Perch	2	no estimate, counts only	Total number captured or presence only	233	235	234	mm	Gill netting	Good quality	FIS
4/11/2013	Breidinger, Kenneth	Brown Trout	2	no estimate, counts only	Total number captured or presence only	106	277	191.5	mm	Boat shocking with boom	Good quality	FIS
4/11/2013	Breidinger, Kenneth	Largemouth Bass	2	no estimate, counts only	Total number captured or presence only	376	408	392	mm	Boat shocking with boom	Good quality	FIS
4/11/2013	Breidinger, Kenneth	Largescale Sucker	2	no estimate, counts only	Total number captured or presence only	217	565	391	mm	Boat shocking with boom	Good quality	FIS
4/11/2013	Breidinger, Kenneth	Northern Pike	30	no estimate, counts only	Total number captured or presence only	207	547	282.9	mm	Boat shocking with boom	Good quality	FIS
4/11/2013	Breidinger, Kenneth	Northern Pike Minnow	3	no estimate, counts only	Total number captured or presence only	180	370	270.7	mm	Boat shocking with boom	Good quality	FIS
4/11/2013			6			262	523	354	mm			FIS

	Breidinger, Kenneth	Rainbow Trout		no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
4/11/2013	Breidinger, Kenneth	Yellow Perch	46	no estimate, counts only	Total number captured or presence only	123	216	154.8	mm	Boat shocking with boom	Good quality	FIS
10/11/2012	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	438	438	438	mm	Gill netting	Good quality	FIS
10/11/2012	Breidinger, Kenneth	Largescale Sucker	10	no estimate, counts only	Total number captured or presence only	466	522	491	mm	Gill netting	Good quality	FIS
10/11/2012	Breidinger, Kenneth	Northern Pike	19	no estimate, counts only	Total number captured or presence only	209	751	440.6	mm	Gill netting	Good quality	FIS
10/11/2012	Breidinger, Kenneth	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	459	459	459	mm	Gill netting	Good quality	FIS
10/11/2012	Breidinger, Kenneth	Rainbow Trout	4	no estimate, counts only	Total number captured or presence only	401	485	444.5	mm	Gill netting	Good quality	FIS
10/11/2012	Breidinger, Kenneth	Surveyed; no fish captured	0	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Gill netting	Good quality	FIS
10/11/2012	Breidinger, Kenneth	Yellow Perch	4	no estimate, counts only	Total number captured or presence only	183	212	196	mm	Gill netting	Good quality	FIS
4/16/2012	Breidinger, Kenneth	Black Bullhead	1	no estimate, counts only	Total number captured or presence only	202	202	202	mm	Boat shocking with boom	Good quality	FIS
4/16/2012		Brown Trout	7			91	205	171.3	mm			FIS

	Breidinger, Kenneth			no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
4/16/2012	Breidinger, Kenneth	Bull Trout	1	no estimate, counts only	Total number captured or presence only	222	222	222	mm	Boat shocking with boom	Good quality	FIS
4/16/2012	Breidinger, Kenneth	Largemouth Bass	10	no estimate, counts only	Total number captured or presence only	175	395	245.4	mm	Boat shocking with boom	Good quality	FIS
4/16/2012	Breidinger, Kenneth	Largescale Sucker	25	no estimate, counts only	Total number captured or presence only	81	560	304.2	mm	Boat shocking with boom	Good quality	FIS
4/16/2012	Breidinger, Kenneth	Longnose Sucker	6	no estimate, counts only	Total number captured or presence only	167	326	208.5	mm	Boat shocking with boom	Good quality	FIS
4/16/2012	Breidinger, Kenneth	Mountain Whitefish	1	no estimate, counts only	Total number captured or presence only	312	312	312	mm	Boat shocking with boom	Good quality	FIS
4/16/2012	Breidinger, Kenneth	Northern Pike	10	no estimate, counts only	Total number captured or presence only	261	552	374.2	mm	Boat shocking with boom	Good quality	FIS
4/16/2012	Breidinger, Kenneth	Northern Pike Minnow	17	no estimate, counts only	Total number captured or presence only	76	160	122	mm	Boat shocking with boom	Good quality	FIS
4/16/2012	Breidinger, Kenneth	Peamouth	1	no estimate, counts only	Total number captured or presence only	125	125	125	mm	Boat shocking with boom	Good quality	FIS
4/16/2012	Breidinger, Kenneth	Pumpkinseed	2	no estimate, counts only	Total number captured or presence only	83	102	92.5	mm	Boat shocking with boom	Good quality	FIS
4/16/2012			4			235	430	308.5	mm			FIS

	Breidinger, Kenneth	Rainbow Trout		no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
4/16/2012	Breidinger, Kenneth	Smallmouth Bass	1	no estimate, counts only	Total number captured or presence only	136	136	136	mm	Boat shocking with boom	Good quality	FIS
4/16/2012	Breidinger, Kenneth	Westslope Cutthroat Trout	2	no estimate, counts only	Total number captured or presence only	242	276	259	mm	Boat shocking with boom	Good quality	FIS
4/16/2012	Breidinger, Kenneth	Yellow Perch	11	no estimate, counts only	Total number captured or presence only	122	225	175.9	mm	Boat shocking with boom	Good quality	FIS
10/5/2011	Breidinger, Kenneth	Largemouth Bass	1	no estimate, counts only	Total number captured or presence only	212	212	212	mm	Gill netting	Good quality	FIS
10/5/2011	Breidinger, Kenneth	Largescale Sucker	5	no estimate, counts only	Total number captured or presence only	437	512	472.4	mm	Gill netting	Good quality	FIS
10/5/2011	Breidinger, Kenneth	Longnose Sucker	5	no estimate, counts only	Total number captured or presence only	175	520	356.6	mm	Gill netting	Good quality	FIS
10/5/2011	Breidinger, Kenneth	Northern Pike	8	no estimate, counts only	Total number captured or presence only	492	618	567.6	mm	Gill netting	Good quality	FIS
10/5/2011	Breidinger, Kenneth	Smallmouth Bass	1	no estimate, counts only	Total number captured or presence only	352	352	352	mm	Gill netting	Good quality	FIS
10/5/2011	Breidinger, Kenneth	Westslope Cutthroat Trout	2	no estimate, counts only	Total number captured or presence only	252	304	278	mm	Gill netting	Good quality	FIS
10/5/2011			3			165	181	172.3	mm	Gill netting		FIS

	Breidinger, Kenneth	Yellow Perch		no estimate, counts only	Total number captured or presence only						Good quality	
4/13/2011	Hanson, Jon	Largemouth Bass	7	no estimate, counts only	Total number captured or presence only	116	434	207.4	mm	Boat shocking with boom	Good quality	FIS
4/13/2011	Hanson, Jon	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	440	440	440	mm	Boat shocking with boom	Good quality	FIS
4/13/2011	Hanson, Jon	Northern Pike	17	no estimate, counts only	Total number captured or presence only	218	544	320.8	mm	Boat shocking with boom	Good quality	FIS
4/13/2011	Hanson, Jon	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	205	205	205	mm	Boat shocking with boom	Good quality	FIS
4/13/2011	Hanson, Jon	Pumpkinseed	5	no estimate, counts only	Total number captured or presence only	130	150	139.8	mm	Boat shocking with boom	Good quality	FIS
4/13/2011	Hanson, Jon	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	320	320	320	mm	Boat shocking with boom	Good quality	FIS
4/13/2011	Hanson, Jon	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	265	265	265	mm	Boat shocking with boom	Good quality	FIS
4/13/2011	Hanson, Jon	Yellow Perch	1	no estimate, counts only	Total number captured or presence only	210	210	210	mm	Boat shocking with boom	Good quality	FIS
10/14/2010	Hanson, Jon	Largescale Sucker	5	no estimate, counts only	Total number captured or presence only	472	562	505.6	mm	Gill netting	Good quality	FIS
10/14/2010	Hanson, Jon		1			510	510	510	mm	Gill netting		FIS

		Longnose Sucker		no estimate, counts only	Total number captured or presence only						Good quality	
10/14/2010	Hanson, Jon	Northern Pike	20	no estimate, counts only	Total number captured or presence only	240	637	490.8	mm	Gill netting	Good quality	FIS
10/14/2010	Hanson, Jon	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	352	352	352	mm	Gill netting	Good quality	FIS
10/14/2010	Hanson, Jon	Peamouth	1	no estimate, counts only	Total number captured or presence only	308	308	308	mm	Gill netting	Good quality	FIS
10/14/2010	Hanson, Jon	Pumpkinseed	1	no estimate, counts only	Total number captured or presence only	145	145	145	mm	Gill netting	Good quality	FIS
10/14/2010	Hanson, Jon	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	428	428	428	mm	Gill netting	Good quality	FIS
10/14/2010	Hanson, Jon	Yellow Perch	8	no estimate, counts only	Total number captured or presence only	150	245	215.1	mm	Gill netting	Good quality	FIS
4/28/2010	Hanson, Jon	Black Bullhead	1	no estimate, counts only	Total number captured or presence only	227	227	227	mm	Boat shocking with boom	Good quality	FIS
4/28/2010	Hanson, Jon	Largemouth Bass	3	no estimate, counts only	Total number captured or presence only	342	400	367.3	mm	Boat shocking with boom	Good quality	FIS
4/28/2010	Hanson, Jon	Largescale Sucker	3	no estimate, counts only	Total number captured or presence only	213	490	328	mm	Boat shocking with boom	Good quality	FIS
4/28/2010	Hanson, Jon		14			243	432	285.2	mm			FIS

		Northern Pike		no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
4/28/2010	Hanson, Jon	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	503	503	503	mm	Boat shocking with boom	Good quality	FIS
4/28/2010	Hanson, Jon	Pumpkinseed	2	no estimate, counts only	Total number captured or presence only	130	138	134	mm	Boat shocking with boom	Good quality	FIS
4/28/2010	Hanson, Jon	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	258	258	258	mm	Boat shocking with boom	Good quality	FIS
4/28/2010	Hanson, Jon	Yellow Perch	25	no estimate, counts only	Total number captured or presence only	110	203	155	mm	Boat shocking with boom	Good quality	FIS
10/19/2009	Hanson, Jon	Largescale Sucker	6	no estimate, counts only	Total number captured or presence only	471	564	510.3	mm	Gill netting	Good quality	FIS
10/19/2009	Hanson, Jon	Northern Pike	21	no estimate, counts only	Total number captured or presence only	284	806	413.6	mm	Gill netting	Good quality	FIS
10/19/2009	Hanson, Jon	Northern Pike Minnow	2	no estimate, counts only	Total number captured or presence only	502	511	506.5	mm	Gill netting	Good quality	FIS
4/20/2009	Hanson, Jon	Largemouth Bass	20	no estimate, counts only	Total number captured or presence only	269	434	323.2	mm	Boat shocking with boom	Good quality	FIS
4/20/2009	Hanson, Jon	Largescale Sucker	11	no estimate, counts only	Total number captured or presence only	201	533	397.4	mm	Boat shocking with boom	Good quality	FIS
4/20/2009	Hanson, Jon		10			292	644	541.2	mm			FIS

		Northern Pike		no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
4/20/2009	Hanson, Jon	Northern Pike Minnow	7	no estimate, counts only	Total number captured or presence only	152	235	186.7	mm	Boat shocking with boom	Good quality	FIS
4/20/2009	Hanson, Jon	Pumpkinseed	2	no estimate, counts only	Total number captured or presence only	78	152	115	mm	Boat shocking with boom	Good quality	FIS
4/20/2009	Hanson, Jon	Redside Shiner	1	no estimate, counts only	Total number captured or presence only	96	96	96	mm	Boat shocking with boom	Good quality	FIS
4/20/2009	Hanson, Jon	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	268	268	268	mm	Boat shocking with boom	Good quality	FIS
4/20/2009	Hanson, Jon	Yellow Bullhead	2	no estimate, counts only	Total number captured or presence only	230	230	230	mm	Boat shocking with boom	Good quality	FIS
4/20/2009	Hanson, Jon	Yellow Perch	3	no estimate, counts only	Total number captured or presence only	120	233	165.7	mm	Boat shocking with boom	Good quality	FIS
10/8/2008	Hanson, Jon	Black Bullhead	6	no estimate, counts only	Total number captured or presence only	220	255	237.8	mm	Gill netting	Good quality	FIS
10/8/2008	Hanson, Jon	Largescale Sucker	5	no estimate, counts only	Total number captured or presence only	450	492	472	mm	Gill netting	Good quality	FIS
10/8/2008	Hanson, Jon	Northern Pike	12	no estimate, counts only	Total number captured or presence only	500	680	574.5	mm	Gill netting	Good quality	FIS
10/8/2008	Hanson, Jon		1			495	495	495	mm	Gill netting		FIS

		Northern Pike Minnow		no estimate, counts only	Total number captured or presence only						Good quality	
10/8/2008	Hanson, Jon	Pumpkinseed	18	no estimate, counts only	Total number captured or presence only	95	165	124.3	mm	Gill netting	Good quality	FIS
10/8/2008	Hanson, Jon	Surveyed; no fish captured	0	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Gill netting	Good quality	FIS
10/8/2008	Hanson, Jon	Yellow Perch	2	no estimate, counts only	Total number captured or presence only	140	145	142.5	mm	Gill netting	Good quality	FIS
4/21/2008	Hanson, Jon	Black Bullhead	8	no estimate, counts only	Total number captured or presence only	210	240	223.5	mm	Boat shocking with boom	Good quality	FIS
4/21/2008	Hanson, Jon	Largemouth Bass	34	no estimate, counts only	Total number captured or presence only	125	402	274.9	mm	Boat shocking with boom	Good quality	FIS
4/21/2008	Hanson, Jon	Largescale Sucker	2	no estimate, counts only	Total number captured or presence only	405	495	450	mm	Boat shocking with boom	Good quality	FIS
4/21/2008	Hanson, Jon	Northern Pike	14	no estimate, counts only	Total number captured or presence only	470	710	566.6	mm	Boat shocking with boom	Good quality	FIS
4/21/2008	Hanson, Jon	Pumpkinseed	10	no estimate, counts only	Total number captured or presence only	65	160	110.5	mm	Boat shocking with boom	Good quality	FIS
4/21/2008	Hanson, Jon	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	196	196	196	mm	Boat shocking with boom	Good quality	FIS
4/21/2008	Hanson, Jon		1			291	291	291	mm			FIS

		Westslope Cutthroat Trout		no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
4/21/2008	Hanson, Jon	Yellow Perch	40	no estimate, counts only	Total number captured or presence only	75	215	142.9	mm	Boat shocking with boom	Good quality	FIS

Section: Thompson Falls Reservoir (Upper)
River Miles: 69.1 to 71.6

Date	Collector	Species	Est.	Sec. Unit	Method	Length Min	Max	Avg.	Unit	Gear	Data Rating	Source
4/27/2016	Kreiner, Ryan	Bull Trout	1	no estimate, counts only	Total number captured or presence only	592	592	592	mm	Boat shocking with boom	Good quality	FIS
4/17/2015	Kreiner, Ryan	Bull Trout	2	no estimate, counts only	Total number captured or presence only	558	653	605.5	mm	Boat shocking with boom	Good quality	FIS

Section: Thompson Falls reservoir
River Miles: 69.1 to 71.6

Date	Collector	Species	Est.	Sec. Unit	Method	Length Min	Max	Avg.	Unit	Gear	Data Rating	Source
4/11/2016	Kreiner, Ryan	Black Bullhead	1	no estimate, counts only	Total number captured or presence only	182	182	182	mm	Boat shocking with boom	Good quality	FIS
4/11/2016	Kreiner, Ryan	Brown Trout	9	no estimate, counts only	Total number captured or presence only	105	475	246.6	mm	Boat shocking with boom	Good quality	FIS
4/11/2016	Kreiner, Ryan	Bull Trout	1	no estimate, counts only	Total number captured or presence only	247	247	247	mm	Boat shocking with boom	Good quality	FIS
4/11/2016	Kreiner, Ryan	Largescale Sucker	81	no estimate, counts only	Total number captured or presence only	90	604	318	mm	Boat shocking with boom	Good quality	FIS
4/11/2016	Kreiner, Ryan		1			420	420	420	mm			FIS

		Mountain Whitefish		no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
4/11/2016	Kreiner, Ryan	Northern Pike	22	no estimate, counts only	Total number captured or presence only	205	545	310.8	mm	Boat shocking with boom	Good quality	FIS
4/11/2016	Kreiner, Ryan	Northern Pike Minnow	27	no estimate, counts only	Total number captured or presence only	280	550	384.2	mm	Boat shocking with boom	Good quality	FIS
4/11/2016	Kreiner, Ryan	Pumpkinseed	2	no estimate, counts only	Total number captured or presence only	117	121	119	mm	Boat shocking with boom	Good quality	FIS
4/11/2016	Kreiner, Ryan	Rainbow Trout	29	no estimate, counts only	Total number captured or presence only	83	507	284.8	mm	Boat shocking with boom	Good quality	FIS
4/11/2016	Kreiner, Ryan	Smallmouth Bass	13	no estimate, counts only	Total number captured or presence only	72	311	185.2	mm	Boat shocking with boom	Good quality	FIS
4/11/2016	Kreiner, Ryan	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	265	265	265	mm	Boat shocking with boom	Good quality	FIS
4/11/2016	Kreiner, Ryan	Westslope X Rainbow	1	no estimate, counts only	Total number captured or presence only	315	315	315	mm	Boat shocking with boom	Good quality	FIS
4/11/2016	Kreiner, Ryan	Yellow Perch	27	no estimate, counts only	Total number captured or presence only	53	201	110.5	mm	Boat shocking with boom	Good quality	FIS
10/13/2015	Kreiner, Ryan	Black Bullhead	2	no estimate, counts only	Total number captured or presence only	188	193	190.5	mm	Gill netting	Good quality	FIS
10/13/2015	Kreiner, Ryan		6			450	558	486.8	mm	Gill netting		FIS

		Largescale Sucker		no estimate, counts only	Total number captured or presence only						Good quality	
10/13/2015	Kreiner, Ryan	Northern Pike	16	no estimate, counts only	Total number captured or presence only	225	704	546.6	mm	Gill netting	Good quality	FIS
10/13/2015	Kreiner, Ryan	Northern Pike Minnow	2	no estimate, counts only	Total number captured or presence only	455	532	493.5	mm	Gill netting	Good quality	FIS
10/13/2015	Kreiner, Ryan	Smallmouth Bass	1	no estimate, counts only	Total number captured or presence only	256	256	256	mm	Gill netting	Good quality	FIS
10/13/2015	Kreiner, Ryan	Surveyed; no fish captured	0	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Gill netting	Good quality	FIS
10/13/2015	Kreiner, Ryan	Yellow Perch	5	no estimate, counts only	Total number captured or presence only	215	252	233.6	mm	Gill netting	Good quality	FIS
4/13/2015	Kreiner, Ryan	Brown Trout	8	no estimate, counts only	Total number captured or presence only	113	443	294.8	mm	Boat shocking with boom	Good quality	FIS
4/13/2015	Kreiner, Ryan	Bull Trout	1	no estimate, counts only	Total number captured or presence only	219	219	219	mm	Boat shocking with boom	Good quality	FIS
4/13/2015	Kreiner, Ryan	Largescale Sucker	31	no estimate, counts only	Total number captured or presence only	85	455	301.3	mm	Boat shocking with boom	Good quality	FIS
4/13/2015	Kreiner, Ryan	Mountain Whitefish	1	no estimate, counts only	Total number captured or presence only	263	263	263	mm	Boat shocking with boom	Good quality	FIS
4/13/2015	Kreiner, Ryan		13			252	536	391.2	mm			FIS

		Northern Pike		no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
4/13/2015	Kreiner, Ryan	Northern Pike Minnow	18	no estimate, counts only	Total number captured or presence only	338	563	405.1	mm	Boat shocking with boom	Good quality	FIS
4/13/2015	Kreiner, Ryan	Rainbow Trout	13	no estimate, counts only	Total number captured or presence only	133	452	340.7	mm	Boat shocking with boom	Good quality	FIS
4/13/2015	Kreiner, Ryan	Smallmouth Bass	4	no estimate, counts only	Total number captured or presence only	112	128	116	mm	Boat shocking with boom	Good quality	FIS
4/13/2015	Kreiner, Ryan	Westslope Cutthroat Trout	2	no estimate, counts only	Total number captured or presence only	287	288	287.5	mm	Boat shocking with boom	Good quality	FIS
4/13/2015	Kreiner, Ryan	Yellow Perch	2	no estimate, counts only	Total number captured or presence only	205	228	216.5	mm	Boat shocking with boom	Good quality	FIS
10/16/2014	Kreiner, Ryan	Largescale Sucker	1	no estimate, counts only	Total number captured or presence only	525	525	525	mm	Gill netting	Good quality	FIS
10/16/2014	Kreiner, Ryan	Longnose Sucker	1	no estimate, counts only	Total number captured or presence only	465	465	465	mm	Gill netting	Good quality	FIS
10/16/2014	Kreiner, Ryan	Northern Pike	10	no estimate, counts only	Total number captured or presence only	495	705	598.9	mm	Gill netting	Good quality	FIS
10/16/2014	Kreiner, Ryan	Smallmouth Bass	4	no estimate, counts only	Total number captured or presence only	267	355	317.5	mm	Gill netting	Good quality	FIS
10/16/2014	Kreiner, Ryan		0			-	-	-	mm	Gill netting		FIS

		Surveyed; no fish captured		no estimate, counts only	Total number captured or presence only						Good quality	
4/15/2014	Breidinger, Kenneth	Black Bullhead	1	no estimate, counts only	Total number captured or presence only	157	157	157	mm	Boat shocking with boom	Good quality	FIS
4/15/2014	Breidinger, Kenneth	Brown Trout	8	no estimate, counts only	Total number captured or presence only	102	422	260.1	mm	Boat shocking with boom	Good quality	FIS
4/15/2014	Breidinger, Kenneth	Bull Trout	1	no estimate, counts only	Total number captured or presence only	577	577	577	mm	Boat shocking with boom	Good quality	FIS
4/15/2014	Breidinger, Kenneth	Largescale Sucker	66	no estimate, counts only	Total number captured or presence only	104	562	330.1	mm	Boat shocking with boom	Good quality	FIS
4/15/2014	Breidinger, Kenneth	Mountain Whitefish	3	no estimate, counts only	Total number captured or presence only	248	309	283.7	mm	Boat shocking with boom	Good quality	FIS
4/15/2014	Breidinger, Kenneth	Northern Pike	17	no estimate, counts only	Total number captured or presence only	262	560	395.5	mm	Boat shocking with boom	Good quality	FIS
4/15/2014	Breidinger, Kenneth	Northern Pike Minnow	41	no estimate, counts only	Total number captured or presence only	110	541	393.7	mm	Boat shocking with boom	Good quality	FIS
4/15/2014	Breidinger, Kenneth	Pumpkinseed	1	no estimate, counts only	Total number captured or presence only	82	82	82	mm	Boat shocking with boom	Good quality	FIS
4/15/2014	Breidinger, Kenneth	Rainbow Trout	18	no estimate, counts only	Total number captured or presence only	73	491	255.9	mm	Boat shocking with boom	Good quality	FIS
4/15/2014			1			83	83	83	mm			FIS

	Breidinger, Kenneth	Redside Shiner		no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
4/15/2014	Breidinger, Kenneth	Smallmouth Bass	5	no estimate, counts only	Total number captured or presence only	55	377	174.2	mm	Boat shocking with boom	Good quality	FIS
4/15/2014	Breidinger, Kenneth	Westslope Cutthroat Trout	6	no estimate, counts only	Total number captured or presence only	238	351	301.5	mm	Boat shocking with boom	Good quality	FIS
4/15/2014	Breidinger, Kenneth	Westslope X Rainbow	1	no estimate, counts only	Total number captured or presence only	391	391	391	mm	Boat shocking with boom	Good quality	FIS
4/15/2014	Breidinger, Kenneth	Whitefish	1	no estimate, counts only	Total number captured or presence only	327	327	327	mm	Boat shocking with boom	Good quality	FIS
4/15/2014	Breidinger, Kenneth	Yellow Perch	4	no estimate, counts only	Total number captured or presence only	79	227	150.5	mm	Boat shocking with boom	Good quality	FIS
10/23/2013	Breidinger, Kenneth	Black Bullhead	1	no estimate, counts only	Total number captured or presence only	131	131	131	mm	Gill netting	Good quality	FIS
10/23/2013	Breidinger, Kenneth	Largescale Sucker	2	no estimate, counts only	Total number captured or presence only	470	500	485	mm	Gill netting	Good quality	FIS
10/23/2013	Breidinger, Kenneth	Northern Pike	5	no estimate, counts only	Total number captured or presence only	287	569	483.4	mm	Gill netting	Good quality	FIS
10/23/2013	Breidinger, Kenneth	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	323	323	323	mm	Gill netting	Good quality	FIS
10/23/2013			0			-	-	-	mm	Gill netting		FIS

	Breidinger, Kenneth	Surveyed; no fish captured		no estimate, counts only	Total number captured or presence only						Good quality	
10/23/2013	Breidinger, Kenneth	Yellow Perch	3	no estimate, counts only	Total number captured or presence only	145	262	186	mm	Gill netting	Good quality	FIS
4/10/2013	Breidinger, Kenneth	Brown Trout	27	no estimate, counts only	Total number captured or presence only	100	431	241.4	mm	Boat shocking with boom	Good quality	FIS
4/10/2013	Breidinger, Kenneth	Bull Trout	1	no estimate, counts only	Total number captured or presence only	260	260	260	mm	Boat shocking with boom	Good quality	FIS
4/10/2013	Breidinger, Kenneth	Largescale Sucker	72	no estimate, counts only	Total number captured or presence only	127	532	249.8	mm	Boat shocking with boom	Good quality	FIS
4/10/2013	Breidinger, Kenneth	Mountain Whitefish	21	no estimate, counts only	Total number captured or presence only	118	427	301	mm	Boat shocking with boom	Good quality	FIS
4/10/2013	Breidinger, Kenneth	Northern Pike	11	no estimate, counts only	Total number captured or presence only	131	630	324.9	mm	Boat shocking with boom	Good quality	FIS
4/10/2013	Breidinger, Kenneth	Northern Pike Minnow	29	no estimate, counts only	Total number captured or presence only	132	530	284.3	mm	Boat shocking with boom	Good quality	FIS
4/10/2013	Breidinger, Kenneth	Rainbow Trout	44	no estimate, counts only	Total number captured or presence only	103	462	271.8	mm	Boat shocking with boom	Good quality	FIS
4/10/2013	Breidinger, Kenneth	Redside Shiner	1	no estimate, counts only	Total number captured or presence only	101	101	101	mm	Boat shocking with boom	Good quality	FIS
4/10/2013			1			82	82	82	mm			FIS

	Breidinger, Kenneth	Smallmouth Bass		no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
4/10/2013	Breidinger, Kenneth	Westslope Cutthroat Trout	21	no estimate, counts only	Total number captured or presence only	222	405	287	mm	Boat shocking with boom	Good quality	FIS
4/10/2013	Breidinger, Kenneth	Westslope X Rainbow	1	no estimate, counts only	Total number captured or presence only	292	292	292	mm	Boat shocking with boom	Good quality	FIS
10/11/2012	Breidinger, Kenneth	Brown Trout	1	no estimate, counts only	Total number captured or presence only	234	234	234	mm	Gill netting	Good quality	FIS
10/11/2012	Breidinger, Kenneth	Largescale Sucker	3	no estimate, counts only	Total number captured or presence only	469	553	524.3	mm	Gill netting	Good quality	FIS
10/11/2012	Breidinger, Kenneth	Northern Pike	5	no estimate, counts only	Total number captured or presence only	529	726	624.2	mm	Gill netting	Good quality	FIS
10/11/2012	Breidinger, Kenneth	Northern Pike Minnow	2	no estimate, counts only	Total number captured or presence only	344	380	362	mm	Gill netting	Good quality	FIS
10/11/2012	Breidinger, Kenneth	Smallmouth Bass	3	no estimate, counts only	Total number captured or presence only	270	337	311.3	mm	Gill netting	Good quality	FIS
10/11/2012	Breidinger, Kenneth	Surveyed; no fish captured	0	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Gill netting	Good quality	FIS
4/17/2012	Breidinger, Kenneth	Brown Trout	21	no estimate, counts only	Total number captured or presence only	161	435	220.1	mm	Boat shocking with boom	Good quality	FIS
4/17/2012		Bull Trout	1			260	260	260	mm			FIS

	Breidinger, Kenneth			no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
4/17/2012	Breidinger, Kenneth	Largescale Sucker	122	no estimate, counts only	Total number captured or presence only	80	530	232.7	mm	Boat shocking with boom	Good quality	FIS
4/17/2012	Breidinger, Kenneth	Mountain Whitefish	20	no estimate, counts only	Total number captured or presence only	115	380	199.8	mm	Boat shocking with boom	Good quality	FIS
4/17/2012	Breidinger, Kenneth	Northern Pike	3	no estimate, counts only	Total number captured or presence only	210	282	252.3	mm	Boat shocking with boom	Good quality	FIS
4/17/2012	Breidinger, Kenneth	Northern Pike Minnow	36	no estimate, counts only	Total number captured or presence only	65	586	228	mm	Boat shocking with boom	Good quality	FIS
4/17/2012	Breidinger, Kenneth	Rainbow Trout	46	no estimate, counts only	Total number captured or presence only	135	485	218.5	mm	Boat shocking with boom	Good quality	FIS
4/17/2012	Breidinger, Kenneth	Rainbow X Cutthroat Trout	2	no estimate, counts only	Total number captured or presence only	210	250	230	mm	Boat shocking with boom	Good quality	FIS
4/17/2012	Breidinger, Kenneth	Redside Shiner	1	no estimate, counts only	Total number captured or presence only	90	90	90	mm	Boat shocking with boom	Good quality	FIS
4/17/2012	Breidinger, Kenneth	Smallmouth Bass	2	no estimate, counts only	Total number captured or presence only	102	318	210	mm	Boat shocking with boom	Good quality	FIS
4/17/2012	Breidinger, Kenneth	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	285	285	285	mm	Boat shocking with boom	Good quality	FIS
10/5/2011			1			500	500	500	mm	Gill netting		FIS

	Breidinger, Kenneth	Largescale Sucker		no estimate, counts only	Total number captured or presence only						Good quality	
10/5/2011	Breidinger, Kenneth	Northern Pike	2	no estimate, counts only	Total number captured or presence only	222	590	406	mm	Gill netting	Good quality	FIS
10/5/2011	Breidinger, Kenneth	Northern Pike Minnow	3	no estimate, counts only	Total number captured or presence only	356	368	361	mm	Gill netting	Good quality	FIS
10/5/2011	Breidinger, Kenneth	Peamouth	1	no estimate, counts only	Total number captured or presence only	188	188	188	mm	Gill netting	Good quality	FIS
10/5/2011	Breidinger, Kenneth	Surveyed; no fish captured	0	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Gill netting	Good quality	FIS
10/5/2011	Breidinger, Kenneth	Yellow Perch	1	no estimate, counts only	Total number captured or presence only	150	150	150	mm	Gill netting	Good quality	FIS
4/14/2011	Hanson, Jon	Brown Trout	8	no estimate, counts only	Total number captured or presence only	104	236	165.3	mm	Boat shocking with boom	Good quality	FIS
4/14/2011	Hanson, Jon	Largescale Sucker	61	no estimate, counts only	Total number captured or presence only	71	590	142.3	mm	Boat shocking with boom	Good quality	FIS
4/14/2011	Hanson, Jon	Mountain Whitefish	12	no estimate, counts only	Total number captured or presence only	106	356	181.9	mm	Boat shocking with boom	Good quality	FIS
4/14/2011	Hanson, Jon	Northern Pike	8	no estimate, counts only	Total number captured or presence only	306	593	505.4	mm	Boat shocking with boom	Good quality	FIS
4/14/2011	Hanson, Jon		17			69	430	153.1	mm			FIS

		Northern Pike Minnow		no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
4/14/2011	Hanson, Jon	Rainbow Trout	31	no estimate, counts only	Total number captured or presence only	107	465	247.2	mm	Boat shocking with boom	Good quality	FIS
4/14/2011	Hanson, Jon	Smallmouth Bass	1	no estimate, counts only	Total number captured or presence only	106	106	106	mm	Boat shocking with boom	Good quality	FIS
4/14/2011	Hanson, Jon	Westslope Cutthroat Trout	3	no estimate, counts only	Total number captured or presence only	262	349	291.7	mm	Boat shocking with boom	Good quality	FIS
4/14/2011	Hanson, Jon	Yellow Perch	7	no estimate, counts only	Total number captured or presence only	130	196	154.1	mm	Boat shocking with boom	Good quality	FIS
10/14/2010	Hanson, Jon	Largescale Sucker	3	no estimate, counts only	Total number captured or presence only	501	544	526.7	mm	Gill netting	Good quality	FIS
10/14/2010	Hanson, Jon	Northern Pike	4	no estimate, counts only	Total number captured or presence only	531	688	591.8	mm	Gill netting	Good quality	FIS
10/14/2010	Hanson, Jon	Northern Pike Minnow	2	no estimate, counts only	Total number captured or presence only	395	462	428.5	mm	Gill netting	Good quality	FIS
10/14/2010	Hanson, Jon	Rainbow Trout	1	no estimate, counts only	Total number captured or presence only	413	413	413	mm	Gill netting	Good quality	FIS
10/14/2010	Hanson, Jon	Smallmouth Bass	1	no estimate, counts only	Total number captured or presence only	345	345	345	mm	Gill netting	Good quality	FIS
10/14/2010	Hanson, Jon		1			143	143	143	mm	Gill netting		FIS

		Yellow Perch		no estimate, counts only	Total number captured or presence only						Good quality	
4/29/2010	Hanson, Jon	Brown Trout	5	no estimate, counts only	Total number captured or presence only	105	247	166.2	mm	Boat shocking with boom	Good quality	FIS
4/29/2010	Hanson, Jon	Largescale Sucker	15	no estimate, counts only	Total number captured or presence only	132	525	318.1	mm	Boat shocking with boom	Good quality	FIS
4/29/2010	Hanson, Jon	Longnose Sucker	1	no estimate, counts only	Total number captured or presence only	220	220	220	mm	Boat shocking with boom	Good quality	FIS
4/29/2010	Hanson, Jon	Mountain Whitefish	1	no estimate, counts only	Total number captured or presence only	185	185	185	mm	Boat shocking with boom	Good quality	FIS
4/29/2010	Hanson, Jon	Northern Pike	8	no estimate, counts only	Total number captured or presence only	307	407	348.9	mm	Boat shocking with boom	Good quality	FIS
4/29/2010	Hanson, Jon	Northern Pike Minnow	3	no estimate, counts only	Total number captured or presence only	281	552	391	mm	Boat shocking with boom	Good quality	FIS
4/29/2010	Hanson, Jon	Rainbow Trout	26	no estimate, counts only	Total number captured or presence only	100	415	283.4	mm	Boat shocking with boom	Good quality	FIS
4/29/2010	Hanson, Jon	Westslope Cutthroat Trout	3	no estimate, counts only	Total number captured or presence only	290	333	309	mm	Boat shocking with boom	Good quality	FIS
4/29/2010	Hanson, Jon	Yellow Perch	1	no estimate, counts only	Total number captured or presence only	92	92	92	mm	Boat shocking with boom	Good quality	FIS
10/19/2009	Hanson, Jon		6			399	466	437.8	mm	Gill netting		FIS

		Largescale Sucker		no estimate, counts only	Total number captured or presence only						Good quality	
10/19/2009	Hanson, Jon	Northern Pike	10	no estimate, counts only	Total number captured or presence only	333	911	575.6	mm	Gill netting	Good quality	FIS
10/19/2009	Hanson, Jon	Northern Pike Minnow	6	no estimate, counts only	Total number captured or presence only	386	524	472.8	mm	Gill netting	Good quality	FIS
10/19/2009	Hanson, Jon	Pumpkinseed	1	no estimate, counts only	Total number captured or presence only	109	109	109	mm	Gill netting	Good quality	FIS
10/19/2009	Hanson, Jon	Rainbow Trout	2	no estimate, counts only	Total number captured or presence only	245	434	339.5	mm	Gill netting	Good quality	FIS
10/19/2009	Hanson, Jon	Surveyed; no fish captured	0	no estimate, counts only	Total number captured or presence only	-	-	-	mm	Gill netting	Good quality	FIS
10/19/2009	Hanson, Jon	Yellow Perch	1	no estimate, counts only	Total number captured or presence only	190	190	190	mm	Gill netting	Good quality	FIS
4/21/2009	Hanson, Jon	Brown Trout	2	no estimate, counts only	Total number captured or presence only	182	495	338.5	mm	Boat shocking with boom	Good quality	FIS
4/21/2009	Hanson, Jon	Lake Trout	1	no estimate, counts only	Total number captured or presence only	465	465	465	mm	Boat shocking with boom	Good quality	FIS
4/21/2009	Hanson, Jon	Largescale Sucker	51	no estimate, counts only	Total number captured or presence only	93	475	249.4	mm	Boat shocking with boom	Good quality	FIS
4/21/2009	Hanson, Jon		1			395	395	395	mm			FIS

		Mountain Whitefish		no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
4/21/2009	Hanson, Jon	Northern Pike	6	no estimate, counts only	Total number captured or presence only	290	532	435.5	mm	Boat shocking with boom	Good quality	FIS
4/21/2009	Hanson, Jon	Northern Pike Minnow	6	no estimate, counts only	Total number captured or presence only	140	505	296.7	mm	Boat shocking with boom	Good quality	FIS
4/21/2009	Hanson, Jon	Rainbow Trout	6	no estimate, counts only	Total number captured or presence only	128	171	151.7	mm	Boat shocking with boom	Good quality	FIS
4/21/2009	Hanson, Jon	Redside Shiner	2	no estimate, counts only	Total number captured or presence only	97	122	109.5	mm	Boat shocking with boom	Good quality	FIS
4/21/2009	Hanson, Jon	Smallmouth Bass	2	no estimate, counts only	Total number captured or presence only	95	230	162.5	mm	Boat shocking with boom	Good quality	FIS
10/8/2008	Hanson, Jon	Largescale Sucker	3	no estimate, counts only	Total number captured or presence only	430	460	441.7	mm	Gill netting	Good quality	FIS
10/8/2008	Hanson, Jon	Northern Pike	1	no estimate, counts only	Total number captured or presence only	540	540	540	mm	Gill netting	Good quality	FIS
10/8/2008	Hanson, Jon	Northern Pike Minnow	1	no estimate, counts only	Total number captured or presence only	490	490	490	mm	Gill netting	Good quality	FIS
10/8/2008	Hanson, Jon	Smallmouth Bass	1	no estimate, counts only	Total number captured or presence only	358	358	358	mm	Gill netting	Good quality	FIS
10/8/2008	Hanson, Jon		0			-	-	-	mm	Gill netting		FIS

		Surveyed; no fish captured		no estimate, counts only	Total number captured or presence only						Good quality	
4/17/2008	Hanson, Jon	Brown Trout	1	no estimate, counts only	Total number captured or presence only	200	200	200	mm	Boat shocking with boom	Good quality	FIS
4/17/2008	Hanson, Jon	Largescale Sucker	118	no estimate, counts only	Total number captured or presence only	95	545	348.3	mm	Boat shocking with boom	Good quality	FIS
4/17/2008	Hanson, Jon	Mountain Whitefish	8	no estimate, counts only	Total number captured or presence only	130	155	145.3	mm	Boat shocking with boom	Good quality	FIS
4/17/2008	Hanson, Jon	Northern Pike	2	no estimate, counts only	Total number captured or presence only	340	451	395.5	mm	Boat shocking with boom	Good quality	FIS
4/17/2008	Hanson, Jon	Northern Pike Minnow	15	no estimate, counts only	Total number captured or presence only	80	721	261.1	mm	Boat shocking with boom	Good quality	FIS
4/17/2008	Hanson, Jon	Pumpkinseed	1	no estimate, counts only	Total number captured or presence only	105	105	105	mm	Boat shocking with boom	Good quality	FIS
4/17/2008	Hanson, Jon	Rainbow Trout	7	no estimate, counts only	Total number captured or presence only	172	442	251.1	mm	Boat shocking with boom	Good quality	FIS
4/17/2008	Hanson, Jon	Redside Shiner	16	no estimate, counts only	Total number captured or presence only	65	122	92.1	mm	Boat shocking with boom	Good quality	FIS
4/17/2008	Hanson, Jon	Smallmouth Bass	1	no estimate, counts only	Total number captured or presence only	80	80	80	mm	Boat shocking with boom	Good quality	FIS
4/17/2008	Hanson, Jon		5			220	460	302.8	mm			FIS

		Westslope Cutthroat Trout		no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
4/17/2008	Hanson, Jon	Yellow Perch	5	no estimate, counts only	Total number captured or presence only	70	142	100.6	mm	Boat shocking with boom	Good quality	FIS
4/14/2008	Hanson, Jon	Brown Trout	1	no estimate, counts only	Total number captured or presence only	462	462	462	mm	Boat shocking with boom	Good quality	FIS
4/14/2008	Hanson, Jon	Largemouth Bass	1	no estimate, counts only	Total number captured or presence only	296	296	296	mm	Boat shocking with boom	Good quality	FIS
4/14/2008	Hanson, Jon	Largescale Sucker	99	no estimate, counts only	Total number captured or presence only	130	550	387.8	mm	Boat shocking with boom	Good quality	FIS
4/14/2008	Hanson, Jon	Northern Pike	5	no estimate, counts only	Total number captured or presence only	250	598	392.2	mm	Boat shocking with boom	Good quality	FIS
4/14/2008	Hanson, Jon	Northern Pike Minnow	11	no estimate, counts only	Total number captured or presence only	90	400	276.5	mm	Boat shocking with boom	Good quality	FIS
4/14/2008	Hanson, Jon	Rainbow Trout	4	no estimate, counts only	Total number captured or presence only	100	253	183.3	mm	Boat shocking with boom	Good quality	FIS
4/14/2008	Hanson, Jon	Redside Shiner	7	no estimate, counts only	Total number captured or presence only	90	102	99.3	mm	Boat shocking with boom	Good quality	FIS
4/14/2008	Hanson, Jon	Westslope Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	245	245	245	mm	Boat shocking with boom	Good quality	FIS
4/14/2008	Hanson, Jon		1			198	198	198	mm			FIS

		Yellow Perch		no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	

Section: N/A
River Miles: 70.7 to 72.5

Date	Collector	Species	Est.	Sec. Unit	Method	Length Min	Max	Avg.	Unit	Gear	Data Rating	Source
8/1/1985	Berg, Rod	Brown Trout	2	per 1000 ft.	Peterson mark-recapture	8.3	-	-	in	Backpack shocking	Medium quality	FWP
8/1/1985	Berg, Rod	Bull Trout	2	per 1000 ft.	Peterson mark-recapture	8.3	-	-	in	Backpack shocking	Medium quality	FWP
8/1/1985	Berg, Rod	Westslope Cutthroat Trout	4	per 1000 ft.	Peterson mark-recapture	8.3	-	-	in	Backpack shocking	Medium quality	FWP

Section: N/A
River Miles: 72.5 to 72.6

Date	Collector	Species	Est.	Sec. Unit	Method	Length Min	Max	Avg.	Unit	Gear	Data Rating	Source
8/1/1985	Berg, Rod	Bull Trout	25	per 1000 ft.	Peterson mark-recapture	8.3	-	-	in	Unknown	Medium quality	FWP

Section: Above islands
River Miles: 75.5 to 79.4

Date	Collector	Species	Est.	Sec. Unit	Method	Length Min	Max	Avg.	Unit	Gear	Data Rating	Source
10/23/2013	Breidinger, Kenneth	Brown Trout	4	no estimate, counts only	Total number captured or presence only	173	369	300.3	mm	Boat shocking with boom	Good quality	FIS
10/23/2013	Breidinger, Kenneth	Largescale Sucker	55	no estimate, counts only	Total number captured or presence only	119	604	435.5	mm	Boat shocking with boom	Good quality	FIS
10/23/2013	Breidinger, Kenneth	Longnose Dace	1	no estimate, counts only	Total number captured or presence only	92	92	92	mm	Boat shocking with boom	Good quality	FIS
10/23/2013	Breidinger, Kenneth	Longnose Sucker	2	no estimate, counts only	Total number captured or presence only	206	214	210	mm	Boat shocking with boom	Good quality	FIS
10/23/2013			115			135	411	284.3	mm			FIS

	Breidinger, Kenneth	Mountain Whitefish		no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
10/23/2013	Breidinger, Kenneth	Northern Pike	9	no estimate, counts only	Total number captured or presence only	270	667	444.1	mm	Boat shocking with boom	Good quality	FIS
10/23/2013	Breidinger, Kenneth	Northern Pike Minnow	35	no estimate, counts only	Total number captured or presence only	144	541	396.4	mm	Boat shocking with boom	Good quality	FIS
10/23/2013	Breidinger, Kenneth	Rainbow Trout	13	no estimate, counts only	Total number captured or presence only	224	482	364.6	mm	Boat shocking with boom	Good quality	FIS
10/23/2013	Breidinger, Kenneth	Redside Shiner	7	no estimate, counts only	Total number captured or presence only	79	122	95.4	mm	Boat shocking with boom	Good quality	FIS
10/23/2013	Breidinger, Kenneth	Smallmouth Bass	9	no estimate, counts only	Total number captured or presence only	67	328	204	mm	Boat shocking with boom	Good quality	FIS
10/23/2013	Breidinger, Kenneth	Westslope Cutthroat Trout	5	no estimate, counts only	Total number captured or presence only	226	353	303.6	mm	Boat shocking with boom	Good quality	FIS
10/23/2013	Breidinger, Kenneth	Westslope X Rainbow	2	no estimate, counts only	Total number captured or presence only	333	385	359	mm	Boat shocking with boom	Good quality	FIS
10/23/2013	Breidinger, Kenneth	Yellow Perch	1	no estimate, counts only	Total number captured or presence only	159	159	159	mm	Boat shocking with boom	Good quality	FIS
10/22/2013	Breidinger, Kenneth	Brown Trout	4	no estimate, counts only	Total number captured or presence only	223	468	385.5	mm	Boat shocking with boom	Good quality	FIS
10/22/2013			95			248	662	486.6	mm			FIS

	Breidinger, Kenneth	Largescale Sucker		no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
10/22/2013	Breidinger, Kenneth	Mountain Whitefish	106	no estimate, counts only	Total number captured or presence only	126	475	293.9	mm	Boat shocking with boom	Good quality	FIS
10/22/2013	Breidinger, Kenneth	Northern Pike	11	no estimate, counts only	Total number captured or presence only	321	658	436.6	mm	Boat shocking with boom	Good quality	FIS
10/22/2013	Breidinger, Kenneth	Northern Pike Minnow	20	no estimate, counts only	Total number captured or presence only	345	525	421.9	mm	Boat shocking with boom	Good quality	FIS
10/22/2013	Breidinger, Kenneth	Rainbow Trout	11	no estimate, counts only	Total number captured or presence only	243	440	334.3	mm	Boat shocking with boom	Good quality	FIS
10/22/2013	Breidinger, Kenneth	Westslope Cutthroat Trout	5	no estimate, counts only	Total number captured or presence only	202	368	254.8	mm	Boat shocking with boom	Good quality	FIS
10/22/2013	Breidinger, Kenneth	Yellow Perch	1	no estimate, counts only	Total number captured or presence only	135	135	135	mm	Boat shocking with boom	Good quality	FIS
10/23/2012	Breidinger, Kenneth	Brown Trout	13	no estimate, counts only	Total number captured or presence only	202	340	275.5	mm	Boat shocking with boom	Good quality	FIS
10/23/2012	Breidinger, Kenneth	Largescale Sucker	49	no estimate, counts only	Total number captured or presence only	155	568	453.8	mm	Boat shocking with boom	Good quality	FIS
10/23/2012	Breidinger, Kenneth	Longnose Sucker	1	no estimate, counts only	Total number captured or presence only	410	410	410	mm	Boat shocking with boom	Good quality	FIS
10/23/2012			191			112	442	255.5	mm			FIS

	Breidinger, Kenneth	Mountain Whitefish		no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
10/23/2012	Breidinger, Kenneth	Northern Pike	11	no estimate, counts only	Total number captured or presence only	348	750	530.6	mm	Boat shocking with boom	Good quality	FIS
10/23/2012	Breidinger, Kenneth	Northern Pike Minnow	26	no estimate, counts only	Total number captured or presence only	147	488	381.3	mm	Boat shocking with boom	Good quality	FIS
10/23/2012	Breidinger, Kenneth	Rainbow Trout	17	no estimate, counts only	Total number captured or presence only	195	406	284.5	mm	Boat shocking with boom	Good quality	FIS
10/23/2012	Breidinger, Kenneth	Redside Shiner	2	no estimate, counts only	Total number captured or presence only	106	123	114.5	mm	Boat shocking with boom	Good quality	FIS
10/23/2012	Breidinger, Kenneth	Smallmouth Bass	2	no estimate, counts only	Total number captured or presence only	213	288	250.5	mm	Boat shocking with boom	Good quality	FIS
10/23/2012	Breidinger, Kenneth	Westslope Cutthroat Trout	2	no estimate, counts only	Total number captured or presence only	265	300	282.5	mm	Boat shocking with boom	Good quality	FIS
10/22/2012	Breidinger, Kenneth	Brown Trout	3	no estimate, counts only	Total number captured or presence only	227	321	272.7	mm	Boat shocking with boom	Good quality	FIS
10/22/2012	Breidinger, Kenneth	Largescale Sucker	52	no estimate, counts only	Total number captured or presence only	308	562	464.8	mm	Boat shocking with boom	Good quality	FIS
10/22/2012	Breidinger, Kenneth	Mountain Whitefish	206	no estimate, counts only	Total number captured or presence only	111	428	273.1	mm	Boat shocking with boom	Good quality	FIS
10/22/2012			1			325	325	325	mm			FIS

	Breidinger, Kenneth	Northern Pike		no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
10/22/2012	Breidinger, Kenneth	Northern Pike Minnow	23	no estimate, counts only	Total number captured or presence only	353	551	442.2	mm	Boat shocking with boom	Good quality	FIS
10/22/2012	Breidinger, Kenneth	Rainbow Trout	20	no estimate, counts only	Total number captured or presence only	227	471	332.1	mm	Boat shocking with boom	Good quality	FIS
10/22/2012	Breidinger, Kenneth	Rainbow X Cutthroat Trout	1	no estimate, counts only	Total number captured or presence only	231	231	231	mm	Boat shocking with boom	Good quality	FIS
10/6/2011	Breidinger, Kenneth	Brown Trout	4	no estimate, counts only	Total number captured or presence only	218	239	228.8	mm	Boat shocking with boom	Good quality	FIS
10/6/2011	Breidinger, Kenneth	Largescale Sucker	73	no estimate, counts only	Total number captured or presence only	84	572	384.3	mm	Boat shocking with boom	Good quality	FIS
10/6/2011	Breidinger, Kenneth	Longnose Sucker	2	no estimate, counts only	Total number captured or presence only	187	210	198.5	mm	Boat shocking with boom	Good quality	FIS
10/6/2011	Breidinger, Kenneth	Mountain Whitefish	229	no estimate, counts only	Total number captured or presence only	93	534	229	mm	Boat shocking with boom	Good quality	FIS
10/6/2011	Breidinger, Kenneth	Northern Pike	7	no estimate, counts only	Total number captured or presence only	290	711	578.9	mm	Boat shocking with boom	Good quality	FIS
10/6/2011	Breidinger, Kenneth	Northern Pike Minnow	39	no estimate, counts only	Total number captured or presence only	135	550	375.6	mm	Boat shocking with boom	Good quality	FIS
10/6/2011			10			208	417	307.7	mm			FIS

	Breidinger, Kenneth	Rainbow Trout		no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
10/6/2011	Breidinger, Kenneth	Redside Shiner	9	no estimate, counts only	Total number captured or presence only	86	125	111.6	mm	Boat shocking with boom	Good quality	FIS
10/6/2011	Breidinger, Kenneth	Smallmouth Bass	6	no estimate, counts only	Total number captured or presence only	102	330	192	mm	Boat shocking with boom	Good quality	FIS
10/6/2011	Breidinger, Kenneth	Westslope Cutthroat Trout	3	no estimate, counts only	Total number captured or presence only	217	321	262.3	mm	Boat shocking with boom	Good quality	FIS
10/6/2011	Breidinger, Kenneth	Yellow Perch	1	no estimate, counts only	Total number captured or presence only	148	148	148	mm	Boat shocking with boom	Good quality	FIS
10/5/2011	Breidinger, Kenneth	Brown Trout	3	no estimate, counts only	Total number captured or presence only	130	240	192.7	mm	Boat shocking with boom	Good quality	FIS
10/5/2011	Breidinger, Kenneth	Largescale Sucker	77	no estimate, counts only	Total number captured or presence only	101	565	470.1	mm	Boat shocking with boom	Good quality	FIS
10/5/2011	Breidinger, Kenneth	Mountain Whitefish	107	no estimate, counts only	Total number captured or presence only	112	404	218.6	mm	Boat shocking with boom	Good quality	FIS
10/5/2011	Breidinger, Kenneth	Northern Pike	4	no estimate, counts only	Total number captured or presence only	550	680	600.8	mm	Boat shocking with boom	Good quality	FIS
10/5/2011	Breidinger, Kenneth	Northern Pike Minnow	31	no estimate, counts only	Total number captured or presence only	122	518	303.7	mm	Boat shocking with boom	Good quality	FIS
10/5/2011			29			170	477	294.3	mm			FIS

	Breidinger, Kenneth	Rainbow Trout		no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
10/5/2011	Breidinger, Kenneth	Westslope Cutthroat Trout	5	no estimate, counts only	Total number captured or presence only	240	416	337.6	mm	Boat shocking with boom	Good quality	FIS
10/13/2010	Hanson, Jon	Brown Trout	3	no estimate, counts only	Total number captured or presence only	210	250	231.7	mm	Boat shocking with boom	Good quality	FIS
10/13/2010	Hanson, Jon	Largescale Sucker	69	no estimate, counts only	Total number captured or presence only	80	580	404.9	mm	Boat shocking with boom	Good quality	FIS
10/13/2010	Hanson, Jon	Longnose Dace	1	no estimate, counts only	Total number captured or presence only	105	105	105	mm	Boat shocking with boom	Good quality	FIS
10/13/2010	Hanson, Jon	Mountain Whitefish	103	no estimate, counts only	Total number captured or presence only	101	505	261.2	mm	Boat shocking with boom	Good quality	FIS
10/13/2010	Hanson, Jon	Northern Pike	7	no estimate, counts only	Total number captured or presence only	560	698	604.6	mm	Boat shocking with boom	Good quality	FIS
10/13/2010	Hanson, Jon	Northern Pike Minnow	45	no estimate, counts only	Total number captured or presence only	70	520	368.8	mm	Boat shocking with boom	Good quality	FIS
10/13/2010	Hanson, Jon	Rainbow Trout	18	no estimate, counts only	Total number captured or presence only	210	472	365.6	mm	Boat shocking with boom	Good quality	FIS
10/13/2010	Hanson, Jon	Redside Shiner	3	no estimate, counts only	Total number captured or presence only	75	115	91.7	mm	Boat shocking with boom	Good quality	FIS
10/13/2010	Hanson, Jon		3			160	325	218.3	mm			FIS

		Smallmouth Bass		no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
10/13/2010	Hanson, Jon	Westslope Cutthroat Trout	2	no estimate, counts only	Total number captured or presence only	351	390	370.5	mm	Boat shocking with boom	Good quality	FIS
10/13/2010	Hanson, Jon	Yellow Perch	1	no estimate, counts only	Total number captured or presence only	161	161	161	mm	Boat shocking with boom	Good quality	FIS
10/12/2010	Hanson, Jon	Brown Trout	2	no estimate, counts only	Total number captured or presence only	240	475	357.5	mm	Boat shocking with boom	Good quality	FIS
10/12/2010	Hanson, Jon	Bull Trout	1	no estimate, counts only	Total number captured or presence only	325	325	325	mm	Boat shocking with boom	Good quality	FIS
10/12/2010	Hanson, Jon	Largescale Sucker	64	no estimate, counts only	Total number captured or presence only	105	560	454.5	mm	Boat shocking with boom	Good quality	FIS
10/12/2010	Hanson, Jon	Longnose Sucker	1	no estimate, counts only	Total number captured or presence only	300	300	300	mm	Boat shocking with boom	Good quality	FIS
10/12/2010	Hanson, Jon	Mountain Whitefish	112	no estimate, counts only	Total number captured or presence only	115	370	167	mm	Boat shocking with boom	Good quality	FIS
10/12/2010	Hanson, Jon	Northern Pike	1	no estimate, counts only	Total number captured or presence only	545	545	545	mm	Boat shocking with boom	Good quality	FIS
10/12/2010	Hanson, Jon	Northern Pike Minnow	26	no estimate, counts only	Total number captured or presence only	120	452	350.7	mm	Boat shocking with boom	Good quality	FIS
10/12/2010	Hanson, Jon		11			215	460	333.2	mm			FIS

		Rainbow Trout		no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
10/12/2010	Hanson, Jon	Redside Shiner	2	no estimate, counts only	Total number captured or presence only	105	130	117.5	mm	Boat shocking with boom	Good quality	FIS
10/12/2010	Hanson, Jon	Smallmouth Bass	1	no estimate, counts only	Total number captured or presence only	100	100	100	mm	Boat shocking with boom	Good quality	FIS
10/12/2010	Hanson, Jon	Westslope Cutthroat Trout	3	no estimate, counts only	Total number captured or presence only	270	380	331.7	mm	Boat shocking with boom	Good quality	FIS

Section: Paradise to Plains
River Miles: 94.1 to 101.2

Date	Collector	Species	Est.	Sec. Unit	Method	Length Min	Max	Avg.	Unit	Gear	Data Rating	Source
10/29/2014	Kreiner, Ryan	Brown Trout	15	no estimate, counts only	Total number captured or presence only	162	505	308.9	mm	Boat shocking with boom	Good quality	FIS
10/29/2014	Kreiner, Ryan	Bull Trout	1	no estimate, counts only	Total number captured or presence only	315	315	315	mm	Boat shocking with boom	Good quality	FIS
10/29/2014	Kreiner, Ryan	Largescale Sucker	120	no estimate, counts only	Total number captured or presence only	201	533	331.8	mm	Boat shocking with boom	Good quality	FIS
10/29/2014	Kreiner, Ryan	Mountain Whitefish	63	no estimate, counts only	Total number captured or presence only	137	432	260.7	mm	Boat shocking with boom	Good quality	FIS
10/29/2014	Kreiner, Ryan	Northern Pike	1	no estimate, counts only	Total number captured or presence only	665	665	665	mm	Boat shocking with boom	Good quality	FIS
10/29/2014	Kreiner, Ryan		69			132	530	337	mm			FIS

		Northern Pike Minnow		no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
10/29/2014	Kreiner, Ryan	Peamouth	1	no estimate, counts only	Total number captured or presence only	407	407	407	mm	Boat shocking with boom	Good quality	FIS
10/29/2014	Kreiner, Ryan	Rainbow Trout	45	no estimate, counts only	Total number captured or presence only	211	425	266.8	mm	Boat shocking with boom	Good quality	FIS
10/29/2014	Kreiner, Ryan	Redside Shiner	1	no estimate, counts only	Total number captured or presence only	155	155	155	mm	Boat shocking with boom	Good quality	FIS
10/29/2014	Kreiner, Ryan	Smallmouth Bass	4	no estimate, counts only	Total number captured or presence only	45	218	131.3	mm	Boat shocking with boom	Good quality	FIS
10/29/2014	Kreiner, Ryan	Westslope Cutthroat Trout	22	no estimate, counts only	Total number captured or presence only	213	403	278.7	mm	Boat shocking with boom	Good quality	FIS
10/29/2014	Kreiner, Ryan	Westslope X Rainbow	1	no estimate, counts only	Total number captured or presence only	282	282	282	mm	Boat shocking with boom	Good quality	FIS
10/21/2014	Kreiner, Ryan	Brown Trout	2	no estimate, counts only	Total number captured or presence only	252	460	356	mm	Boat shocking with boom	Good quality	FIS
10/21/2014	Kreiner, Ryan	Largescale Sucker	190	no estimate, counts only	Total number captured or presence only	116	575	382.9	mm	Boat shocking with boom	Good quality	FIS
10/21/2014	Kreiner, Ryan	Longnose Sucker	1	no estimate, counts only	Total number captured or presence only	392	392	392	mm	Boat shocking with boom	Good quality	FIS
10/21/2014	Kreiner, Ryan		118			137	425	323.3	mm			FIS

		Mountain Whitefish		no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
10/21/2014	Kreiner, Ryan	Northern Pike Minnow	264	no estimate, counts only	Total number captured or presence only	145	565	275.4	mm	Boat shocking with boom	Good quality	FIS
10/21/2014	Kreiner, Ryan	Peamouth	1	no estimate, counts only	Total number captured or presence only	412	412	412	mm	Boat shocking with boom	Good quality	FIS
10/21/2014	Kreiner, Ryan	Rainbow Trout	20	no estimate, counts only	Total number captured or presence only	215	482	318.4	mm	Boat shocking with boom	Good quality	FIS
10/21/2014	Kreiner, Ryan	Smallmouth Bass	21	no estimate, counts only	Total number captured or presence only	110	402	187.6	mm	Boat shocking with boom	Good quality	FIS
10/21/2014	Kreiner, Ryan	Westslope Cutthroat Trout	11	no estimate, counts only	Total number captured or presence only	217	437	298.2	mm	Boat shocking with boom	Good quality	FIS
10/21/2014	Kreiner, Ryan	Westslope X Rainbow	4	no estimate, counts only	Total number captured or presence only	237	460	302.3	mm	Boat shocking with boom	Good quality	FIS
10/21/2014	Kreiner, Ryan	Yellow Perch	1	no estimate, counts only	Total number captured or presence only	131	131	131	mm	Boat shocking with boom	Good quality	FIS
10/30/2012	Breidinger, Kenneth	Brown Trout	25	no estimate, counts only	Total number captured or presence only	110	447	250.5	mm	Boat shocking with boom	Good quality	FIS
10/30/2012	Breidinger, Kenneth	Bull Trout	2	no estimate, counts only	Total number captured or presence only	444	472	458	mm	Boat shocking with boom	Good quality	FIS
10/30/2012			523			94	567	295.7	mm			FIS

	Breidinger, Kenneth	Largescale Sucker		no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
10/30/2012	Breidinger, Kenneth	Longnose Sucker	1	no estimate, counts only	Total number captured or presence only	524	524	524	mm	Boat shocking with boom	Good quality	FIS
10/30/2012	Breidinger, Kenneth	Mountain Whitefish	265	no estimate, counts only	Total number captured or presence only	192	469	275.2	mm	Boat shocking with boom	Good quality	FIS
10/30/2012	Breidinger, Kenneth	Northern Pike	1	no estimate, counts only	Total number captured or presence only	702	702	702	mm	Boat shocking with boom	Good quality	FIS
10/30/2012	Breidinger, Kenneth	Northern Pike Minnow	266	no estimate, counts only	Total number captured or presence only	142	612	275.7	mm	Boat shocking with boom	Good quality	FIS
10/30/2012	Breidinger, Kenneth	Peamouth	5	no estimate, counts only	Total number captured or presence only	183	392	243	mm	Boat shocking with boom	Good quality	FIS
10/30/2012	Breidinger, Kenneth	Rainbow Trout	53	no estimate, counts only	Total number captured or presence only	172	467	317.5	mm	Boat shocking with boom	Good quality	FIS
10/30/2012	Breidinger, Kenneth	Redside Shiner	29	no estimate, counts only	Total number captured or presence only	64	146	109.9	mm	Boat shocking with boom	Good quality	FIS
10/30/2012	Breidinger, Kenneth	Smallmouth Bass	1	no estimate, counts only	Total number captured or presence only	66	66	66	mm	Boat shocking with boom	Good quality	FIS
10/30/2012	Breidinger, Kenneth	Westslope Cutthroat Trout	18	no estimate, counts only	Total number captured or presence only	216	425	270.3	mm	Boat shocking with boom	Good quality	FIS
10/30/2012			3			250	415	332	mm			FIS

	Breidinger, Kenneth	Westslope X Rainbow		no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
10/20/2011	Breidinger, Kenneth	Brown Trout	21	no estimate, counts only	Total number captured or presence only	95	383	205.2	mm	Boat shocking with boom	Good quality	FIS
10/20/2011	Breidinger, Kenneth	Largescale Sucker	124	no estimate, counts only	Total number captured or presence only	71	573	269.3	mm	Boat shocking with boom	Good quality	FIS
10/20/2011	Breidinger, Kenneth	Mountain Whitefish	192	no estimate, counts only	Total number captured or presence only	98	462	213.2	mm	Boat shocking with boom	Good quality	FIS
10/20/2011	Breidinger, Kenneth	Northern Pike	2	no estimate, counts only	Total number captured or presence only	310	489	399.5	mm	Boat shocking with boom	Good quality	FIS
10/20/2011	Breidinger, Kenneth	Northern Pike Minnow	110	no estimate, counts only	Total number captured or presence only	125	550	248.6	mm	Boat shocking with boom	Good quality	FIS
10/20/2011	Breidinger, Kenneth	Peamouth	1	no estimate, counts only	Total number captured or presence only	395	395	395	mm	Boat shocking with boom	Good quality	FIS
10/20/2011	Breidinger, Kenneth	Rainbow Trout	113	no estimate, counts only	Total number captured or presence only	146	459	224.9	mm	Boat shocking with boom	Good quality	FIS
10/20/2011	Breidinger, Kenneth	Redside Shiner	42	no estimate, counts only	Total number captured or presence only	85	140	110	mm	Boat shocking with boom	Good quality	FIS
10/20/2011	Breidinger, Kenneth	Smallmouth Bass	5	no estimate, counts only	Total number captured or presence only	53	342	122.6	mm	Boat shocking with boom	Good quality	FIS
10/20/2011			18			208	376	249.5	mm			FIS

	Breidinger, Kenneth	Westslope Cutthroat Trout		no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
10/20/2011	Breidinger, Kenneth	Yellow Perch	1	no estimate, counts only	Total number captured or presence only	211	211	211	mm	Boat shocking with boom	Good quality	FIS
10/11/2011	Breidinger, Kenneth	Largescale Sucker	182	no estimate, counts only	Total number captured or presence only	102	577	355.3	mm	Boat shocking with boom	Good quality	FIS
10/11/2011	Breidinger, Kenneth	Longnose Sucker	1	no estimate, counts only	Total number captured or presence only	170	170	170	mm	Boat shocking with boom	Good quality	FIS
10/11/2011	Breidinger, Kenneth	Mountain Whitefish	82	no estimate, counts only	Total number captured or presence only	97	417	249.2	mm	Boat shocking with boom	Good quality	FIS
10/11/2011	Breidinger, Kenneth	Northern Pike Minnow	141	no estimate, counts only	Total number captured or presence only	116	530	261.7	mm	Boat shocking with boom	Good quality	FIS
10/11/2011	Breidinger, Kenneth	Rainbow Trout	38	no estimate, counts only	Total number captured or presence only	175	493	236.2	mm	Boat shocking with boom	Good quality	FIS
10/11/2011	Breidinger, Kenneth	Smallmouth Bass	2	no estimate, counts only	Total number captured or presence only	181	190	185.5	mm	Boat shocking with boom	Good quality	FIS
10/11/2011	Breidinger, Kenneth	Westslope Cutthroat Trout	8	no estimate, counts only	Total number captured or presence only	202	402	271.3	mm	Boat shocking with boom	Good quality	FIS
10/11/2011	Breidinger, Kenneth	Yellow Perch	5	no estimate, counts only	Total number captured or presence only	47	171	143.6	mm	Boat shocking with boom	Good quality	FIS
10/20/2010	Hanson, Jon	Brown Trout	2			195	281	238	mm			FIS

				no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
10/20/2010	Hanson, Jon	Largescale Sucker	41	no estimate, counts only	Total number captured or presence only	138	552	374	mm	Boat shocking with boom	Good quality	FIS
10/20/2010	Hanson, Jon	Mountain Whitefish	50	no estimate, counts only	Total number captured or presence only	112	410	266.9	mm	Boat shocking with boom	Good quality	FIS
10/20/2010	Hanson, Jon	Northern Pike Minnow	67	no estimate, counts only	Total number captured or presence only	92	532	257.9	mm	Boat shocking with boom	Good quality	FIS
10/20/2010	Hanson, Jon	Rainbow Trout	15	no estimate, counts only	Total number captured or presence only	188	418	277.3	mm	Boat shocking with boom	Good quality	FIS
10/20/2010	Hanson, Jon	Redside Shiner	2	no estimate, counts only	Total number captured or presence only	78	88	83	mm	Boat shocking with boom	Good quality	FIS
10/20/2010	Hanson, Jon	Smallmouth Bass	1	no estimate, counts only	Total number captured or presence only	132	132	132	mm	Boat shocking with boom	Good quality	FIS
10/20/2010	Hanson, Jon	Westslope Cutthroat Trout	13	no estimate, counts only	Total number captured or presence only	256	462	356.6	mm	Boat shocking with boom	Good quality	FIS
10/20/2010	Hanson, Jon	Yellow Perch	1	no estimate, counts only	Total number captured or presence only	75	75	75	mm	Boat shocking with boom	Good quality	FIS
10/19/2010	Hanson, Jon	Brown Trout	8	no estimate, counts only	Total number captured or presence only	195	350	237.4	mm	Boat shocking with boom	Good quality	FIS
10/19/2010	Hanson, Jon		53			147	570	384.1	mm			FIS

		Largescale Sucker		no estimate, counts only	Total number captured or presence only					Boat shocking with boom	Good quality	
10/19/2010	Hanson, Jon	Mountain Whitefish	35	no estimate, counts only	Total number captured or presence only	115	370	222.1	mm	Boat shocking with boom	Good quality	FIS
10/19/2010	Hanson, Jon	Northern Pike Minnow	97	no estimate, counts only	Total number captured or presence only	115	521	337	mm	Boat shocking with boom	Good quality	FIS
10/19/2010	Hanson, Jon	Rainbow Trout	30	no estimate, counts only	Total number captured or presence only	125	430	257	mm	Boat shocking with boom	Good quality	FIS
10/19/2010	Hanson, Jon	Redside Shiner	1	no estimate, counts only	Total number captured or presence only	91	91	91	mm	Boat shocking with boom	Good quality	FIS
10/19/2010	Hanson, Jon	Smallmouth Bass	1	no estimate, counts only	Total number captured or presence only	115	115	115	mm	Boat shocking with boom	Good quality	FIS
10/19/2010	Hanson, Jon	Westslope Cutthroat Trout	4	no estimate, counts only	Total number captured or presence only	250	383	315	mm	Boat shocking with boom	Good quality	FIS

Section: Paradise to Plains
River Miles: 94.6 to 100.9

Date	Collector	Species	Est.	Sec. Unit	Method	Length Min	Max	Avg.	Unit	Gear	Data Rating	Source
10/19/2010	Hanson, Jon	Brown Trout	4.3	fish/hour	Catch per unit effort	195	350	237.4	mm	Electrofishing	Good quality	FWP
10/19/2010	Hanson, Jon	Brown Trout	1.1	fish/hour	Catch per unit effort	195	281	238	mm	Electrofishing	Good quality	FWP
10/19/2010	Hanson, Jon	Largescale Sucker	28.3	fish/hour	Catch per unit effort	147	570	384.1	mm	Electrofishing	Good quality	FWP
10/19/2010	Hanson, Jon	Largescale Sucker	23.2	fish/hour	Catch per unit effort	138	552	374	mm	Electrofishing	Good quality	FWP
10/19/2010	Hanson, Jon		18.7	fish/hour		115	370	222.1	mm	Electrofishing		FWP

		Mountain Whitefish			Catch per unit effort						Good quality	
10/19/2010	Hanson, Jon	Mountain Whitefish	28.2	fish/hour	Catch per unit effort	112	410	266.9	mm	Electrofishing	Good quality	FWP
10/19/2010	Hanson, Jon	Northern Pike Minnow	39	fish/hour	Catch per unit effort	92	532	257.9	mm	Electrofishing	Good quality	FWP
10/19/2010	Hanson, Jon	Northern Pike Minnow	51.9	fish/hour	Catch per unit effort	115	521	335.9	mm	Electrofishing	Good quality	FWP
10/19/2010	Hanson, Jon	Rainbow Trout	16	fish/hour	Catch per unit effort	125	430	257	mm	Electrofishing	Good quality	FWP
10/19/2010	Hanson, Jon	Rainbow Trout	7.3	fish/hour	Catch per unit effort	188	418	277.3	mm	Electrofishing	Good quality	FWP
10/19/2010	Hanson, Jon	Redside Shiner	0.5	fish/hour	Catch per unit effort	-	-	91	mm	Electrofishing	Good quality	FWP
10/19/2010	Hanson, Jon	Redside Shiner	1.1	fish/hour	Catch per unit effort	78	88	83	mm	Electrofishing	Good quality	FWP
10/19/2010	Hanson, Jon	Smallmouth Bass	0.6	fish/hour	Catch per unit effort	-	-	132	mm	Electrofishing	Good quality	FWP
10/19/2010	Hanson, Jon	Smallmouth Bass	0.5	fish/hour	Catch per unit effort	-	-	115	mm	Electrofishing	Good quality	FWP
10/19/2010	Hanson, Jon	Westslope Cutthroat Trout	7.3	fish/hour	Catch per unit effort	256	462	356.6	mm	Electrofishing	Good quality	FWP
10/19/2010	Hanson, Jon	Westslope Cutthroat Trout	2.1	fish/hour	Catch per unit effort	250	383	315	mm	Electrofishing	Good quality	FWP
10/19/2010	Hanson, Jon	Yellow Perch	0.6	fish/hour	Catch per unit effort	-	-	75	mm	Electrofishing	Good quality	FWP

Section: QUINNS
River Miles: 102.9 to 108.6

Date	Collector	Species	Est.	Sec. Unit	Method	Length Min	Max	Avg.	Unit	Gear	Data Rating	Source
10/3/2011	Schmetterling, David	Brown Trout	1	no estimate, counts only	Total number captured or presence only	212	212	212	mm	Boat shocking with boom	Good quality	FIS
10/3/2011	Schmetterling, David	Rainbow Trout	36	no estimate, counts only	Total number captured or presence only	175	480	270.6	mm	Boat shocking with boom	Good quality	FIS
10/3/2011	Schmetterling, David	Westslope Cutthroat Trout	4	no estimate,	Total number captured	205	387	300.5	mm	Boat shocking with boom	Good quality	FIS

				counts only	or presence only							
10/13/2010	Schmetterling, David	Brown Trout	1	no estimate, counts only	Total number captured or presence only	349	349	349	mm	Boat shocking with boom	Good quality	FIS
10/13/2010	Schmetterling, David	Bull Trout	1	no estimate, counts only	Total number captured or presence only	270	270	270	mm	Boat shocking with boom	Good quality	FIS
10/13/2010	Schmetterling, David	Rainbow Trout	77	no estimate, counts only	Total number captured or presence only	195	505	372.7	mm	Boat shocking with boom	Good quality	FIS
10/13/2010	Schmetterling, David	Westslope Cutthroat Trout	47	no estimate, counts only	Total number captured or presence only	208	485	360.3	mm	Boat shocking with boom	Good quality	FIS
10/7/2010	Schmetterling, David	Brown Trout	2	no estimate, counts only	Total number captured or presence only	200	434	317	mm	Boat shocking with boom	Good quality	FIS
10/7/2010	Schmetterling, David	Rainbow Trout	28	no estimate, counts only	Total number captured or presence only	181	452	361.5	mm	Boat shocking with boom	Good quality	FIS
10/7/2010	Schmetterling, David	Westslope Cutthroat Trout	28	no estimate, counts only	Total number captured or presence only	240	410	358.7	mm	Boat shocking with boom	Good quality	FIS
10/6/2010	Schmetterling, David	Brown Trout	2	no estimate, counts only	Total number captured or presence only	358	511	434.5	mm	Boat shocking with boom	Good quality	FIS
10/6/2010	Schmetterling, David	Northern Pike	1	no estimate, counts only	Total number captured or presence only	570	570	570	mm	Boat shocking with boom	Good quality	FIS
10/6/2010	Schmetterling, David	Rainbow Trout	56	no estimate, counts only	Total number captured or	192	490	380	mm	Boat shocking with boom	Good quality	FIS

					presence only							
10/6/2010	Schmetterling, David	Smallmouth Bass	1	no estimate, counts only	Total number captured or presence only	306	306	306	mm	Boat shocking with boom	Good quality	FIS
10/6/2010	Schmetterling, David	Westslope Cutthroat Trout	38	no estimate, counts only	Total number captured or presence only	222	485	357	mm	Boat shocking with boom	Good quality	FIS
9/25/1990	Berg, Rod	Rainbow Trout	54	no estimate, counts only	Total number captured or presence only	207	468	342.7	mm	Boat shocking with boom	Good quality	FIS
9/25/1990	Berg, Rod	Westslope Cutthroat Trout	7	no estimate, counts only	Total number captured or presence only	250	356	306.3	mm	Boat shocking with boom	Good quality	FIS
9/24/1990	Berg, Rod	Brown Trout	2	no estimate, counts only	Total number captured or presence only	425	444	434.5	mm	Boat shocking with boom	Good quality	FIS
9/24/1990	Berg, Rod	Rainbow Trout	47	no estimate, counts only	Total number captured or presence only	200	447	352.3	mm	Boat shocking with boom	Good quality	FIS
9/24/1990	Berg, Rod	Westslope Cutthroat Trout	10	no estimate, counts only	Total number captured or presence only	246	386	314.2	mm	Boat shocking with boom	Good quality	FIS
9/22/1990	Berg, Rod	Brown Trout	4	no estimate, counts only	Total number captured or presence only	350	523	407.3	mm	Boat shocking with boom	Good quality	FIS
9/22/1990	Berg, Rod	Bull Trout	1	no estimate, counts only	Total number captured or presence only	269	269	269	mm	Boat shocking with boom	Good quality	FIS
9/22/1990	Berg, Rod	Rainbow Trout	72	no estimate, counts only	Total number captured or	205	478	343.3	mm	Boat shocking with boom	Good quality	FIS

					presence only							
9/22/1990	Berg, Rod	Westslope Cutthroat Trout	8	no estimate, counts only	Total number captured or presence only	228	359	307.3	mm	Boat shocking with boom	Good quality	FIS
9/21/1990	Berg, Rod	Brown Trout	4	no estimate, counts only	Total number captured or presence only	200	507	386	mm	Boat shocking with boom	Good quality	FIS
9/21/1990	Berg, Rod	Rainbow Trout	51	no estimate, counts only	Total number captured or presence only	204	451	336.4	mm	Boat shocking with boom	Good quality	FIS
9/21/1990	Berg, Rod	Westslope Cutthroat Trout	13	no estimate, counts only	Total number captured or presence only	243	408	313.3	mm	Boat shocking with boom	Good quality	FIS
9/10/1990	Berg, Rod	Brown Trout	4	no estimate, counts only	Total number captured or presence only	229	470	303.8	mm	Boat shocking with boom	Good quality	FIS
9/10/1990	Berg, Rod	Bull Trout	1	no estimate, counts only	Total number captured or presence only	340	340	340	mm	Boat shocking with boom	Good quality	FIS
9/10/1990	Berg, Rod	Rainbow Trout	81	no estimate, counts only	Total number captured or presence only	195	483	329.9	mm	Boat shocking with boom	Good quality	FIS
9/10/1990	Berg, Rod	Westslope Cutthroat Trout	19	no estimate, counts only	Total number captured or presence only	236	395	319.1	mm	Boat shocking with boom	Good quality	FIS
9/7/1990	Berg, Rod	Brown Trout	1	no estimate, counts only	Total number captured or presence only	336	336	336	mm	Boat shocking with boom	Good quality	FIS
9/7/1990	Berg, Rod	Bull Trout	1	no estimate, counts only	Total number captured or	391	391	391	mm	Boat shocking with boom	Good quality	FIS

IPaC **U.S. Fish & Wildlife Service**

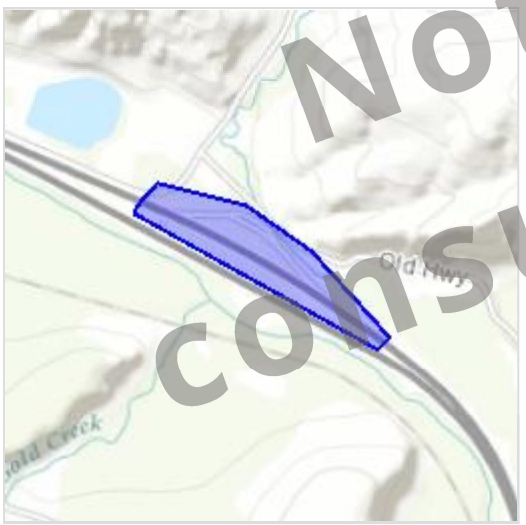
IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Powell County, Montana



Not for consultation

Local office

Montana Ecological Services Field Office

(406) 449-5225
(406) 449-5339

585 Shepard Way, Suite 1
Helena, MT 59601-6287

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

Not for consultation

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species

[1] are managed by the Endangered Species Program of the U.S. Fish and Wildlife Service.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.

The following species are potentially affected by activities in this location:

Birds

NAME	STATUS
Yellow-billed Cuckoo Coccyzus americanus There is a **proposed** critical habitat for this species. Your location is outside the proposed critical habitat. https://ecos.fws.gov/ecp/species/3911	Threatened

Fishes

NAME	STATUS
Bull Trout Salvelinus confluentus There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat. https://ecos.fws.gov/ecp/species/8212	Threatened

Mammals

NAME	STATUS
Canada Lynx Lynx canadensis There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat. https://ecos.fws.gov/ecp/species/3652	Threatened
Grizzly Bear Ursus arctos horribilis No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/7642	Threatened
North American Wolverine Gulo gulo luscus No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/5123	Proposed Threatened

Not for consultation

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act

[1] and the Bald and Golden Eagle Protection Act[2].

Any activity that results in the take (to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct) of migratory birds or eagles is prohibited unless authorized by the U.S. Fish and Wildlife Service

[3]. There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

Any person or organization who plans or conducts activities that may result in the take of migratory birds is responsible for complying with the appropriate regulations and implementing appropriate conservation measures.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Conservation measures for birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Year-round bird occurrence data http://www.birdscanada.org/birdmon/default/datasummaries.jsp

Not for consultation

The migratory birds species listed below are species of particular conservation concern (e.g. Birds of Conservation Concern) that may be potentially affected by activities in this location. It is not a list of every bird species you may find in this location, nor a guarantee that all of the bird species on this list will be found on or near this location. Although it is important to try to avoid and minimize impacts to all birds, special attention should be made to avoid and minimize impacts to birds of priority concern. To view available data on other bird species that may occur in your project area, please visit the AKN Histogram Tools and Other Bird Data Resources. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

NAME	SEASON(S)
American Bittern Botaurus lentiginosus https://ecos.fws.gov/ecp/species/6582	Breeding
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Brewer's Sparrow Spizella breweri https://ecos.fws.gov/ecp/species/9291	Breeding
Calliope Hummingbird Stellula calliope https://ecos.fws.gov/ecp/species/9526	Breeding
Cassin's Finch Carpodacus cassinii https://ecos.fws.gov/ecp/species/9462	Breeding
Common Tern Sterna hirundo https://ecos.fws.gov/ecp/species/4963	Breeding
Fox Sparrow Passerella iliaca	Breeding
Golden Eagle Aquila chrysaetos https://ecos.fws.gov/ecp/species/1680	Year-round
Grasshopper Sparrow Ammodramus savannarum https://ecos.fws.gov/ecp/species/8879	Breeding

Not for consultation

Lewis's Woodpecker Melanerpes lewis https://ecos.fws.gov/ecp/species/9408	Breeding
Loggerhead Shrike Lanius ludovicianus https://ecos.fws.gov/ecp/species/8833	Breeding
Long-billed Curlew Numenius americanus https://ecos.fws.gov/ecp/species/5511	Breeding
Olive-sided Flycatcher Contopus cooperi https://ecos.fws.gov/ecp/species/3914	Breeding
Peregrine Falcon Falco peregrinus https://ecos.fws.gov/ecp/species/8831	Breeding
Rufous Hummingbird selasphorus rufus https://ecos.fws.gov/ecp/species/8002	Breeding
Short-eared Owl Asio flammeus https://ecos.fws.gov/ecp/species/9295	Year-round
Sprague's Pipit Anthus spragueii https://ecos.fws.gov/ecp/species/8964	Breeding
Swainson's Hawk Buteo swainsoni https://ecos.fws.gov/ecp/species/1098	Breeding
Upland Sandpiper Bartramia longicauda https://ecos.fws.gov/ecp/species/9294	Breeding
Western Grebe aechmophorus occidentalis https://ecos.fws.gov/ecp/species/6743	Breeding
Williamson's Sapsucker Sphyrapicus thyroideus https://ecos.fws.gov/ecp/species/8832	Breeding

Not for consultation

Willow Flycatcher Empidonax traillii Breeding
https://ecos.fws.gov/ecp/species/3482

What does IPaC use to generate the list of migratory bird species potentially occurring in my specified location?

Landbirds:

Migratory birds that are displayed on the IPaC species list are based on ranges in the latest edition of the National Geographic Guide, Birds of North America (6th Edition, 2011 by Jon L. Dunn, and Jonathan Alderfer). Although these ranges are coarse in nature, a number of U.S. Fish and Wildlife Service migratory bird biologists agree that these maps are some of the best range maps to date. These ranges were clipped to a specific Bird Conservation Region (BCR) or USFWS Region/Regions, if it was indicated in the 2008 list of Birds of Conservation Concern (BCC) that a species was a BCC species only in a particular Region/Regions. Additional modifications have been made to some ranges based on more local or refined range information and/or information provided by U.S. Fish and Wildlife Service biologists with species expertise. All migratory birds that show in areas on land in IPaC are those that appear in the 2008 Birds of Conservation Concern report.

Atlantic Seabirds:

Ranges in IPaC for birds off the Atlantic coast are derived from species distribution models developed by the National Oceanic and Atmospheric Association (NOAA) National Centers for Coastal Ocean Science (NCCOS) using the best available seabird survey data for the offshore Atlantic Coastal region to date. NOAANCCOS assisted USFWS in developing seasonal species ranges from their models for specific use in IPaC. Some of these birds are not BCC species but were of interest for inclusion because they may occur in high abundance off the coast at different times throughout the year, which potentially makes them more susceptible to certain types of development and activities taking place in that area. For more refined details about the abundance and richness of bird species within your project area off the Atlantic Coast, see the Northeast Ocean Data Portal. The Portal also offers data and information about other types of taxa that may be helpful in your project review.

Not for consultation

About the NOAANCCOS models: the models were developed as part of the NOAANCCOS project: Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf. The models resulting from this project are being used in a number of decision-support/mapping products in order to help guide decision-making on activities off the Atlantic Coast with the goal of reducing impacts to migratory birds. One such product is the Northeast Ocean Data Portal, which can be used to explore details about the relative occurrence and abundance of bird species in a particular area off the Atlantic Coast.

All migratory bird range maps within IPaC are continuously being updated as new and better information becomes available.

Can I get additional information about the levels of occurrence in my project area of specific birds or groups of birds listed in IPaC?

Landbirds:

The Avian Knowledge Network (AKN) provides a tool currently called the "Histogram Tool", which draws from the data within the AKN (latest,survey, point count, citizen science datasets) to create a view of relative abundance of species within a particular location over the course of the year. The results of the tool depict the frequency of detection of a species in survey events, averaged between multiple datasets within AKN in a particular week of the year. You may access the histogram tools through the Migratory Bird Programs AKN Histogram Tools webpage.

The tool is currently available for 4 regions (California, Northeast U.S., Southeast U.S. and Midwest), which encompasses the following 32 states: Alabama, Arkansas, California, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, New Hampshire, New Jersey, New York, North, Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Tennessee, Vermont, Virginia, West Virginia, and Wisconsin.

In the near future, there are plans to expand this tool nationwide within the AKN, and allow the graphs produced to appear with the list of trust resources generated by IPaC, providing you with an additional level of detail about the level of occurrence of the species of particular concern potentially occurring in your project area throughout the course of the year.

Atlantic Seabirds:

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAANCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Not for consultation

Facilities

Wildlife refuges

Any activity proposed on National Wildlife Refuge lands must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGES AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND

- PEMA
- PEMF

FRESHWATER FORESTED/SHRUB WETLAND

- PSSA

A full description for each wetland code can be found at the National Wetlands Inventory website: https://ecos.fws.gov/ipac/wetlands/decoder

Not for consultation

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Not for consultation

IPaC **U.S. Fish & Wildlife Service**

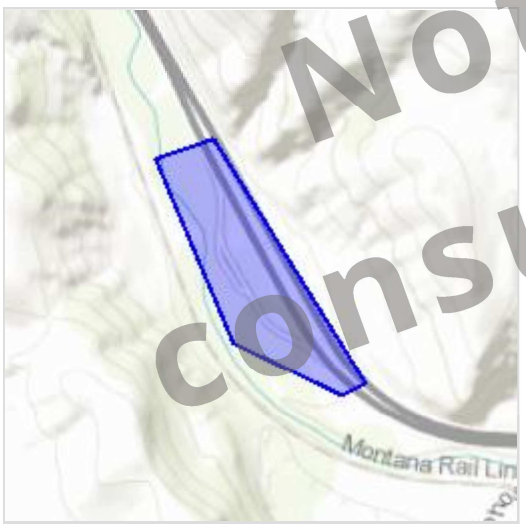
IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Powell County, Montana



Not for consultation

Local office

Montana Ecological Services Field Office

(406) 449-5225
(406) 449-5339

585 Shepard Way, Suite 1
Helena, MT 59601-6287

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

Not for consultation

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species

[1] are managed by the Endangered Species Program of the U.S. Fish and Wildlife Service.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.

The following species are potentially affected by activities in this location:

Birds

NAME	STATUS
Yellow-billed Cuckoo Coccyzus americanus There is a **proposed** critical habitat for this species. Your location is outside the proposed critical habitat. https://ecos.fws.gov/ecp/species/3911	Threatened

Fishes

NAME	STATUS
Bull Trout Salvelinus confluentus There is a **final** critical habitat designated for this species. Your location overlaps the designated critical habitat. https://ecos.fws.gov/ecp/species/8212	Threatened

Mammals

NAME	STATUS
Canada Lynx Lynx canadensis There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat. https://ecos.fws.gov/ecp/species/3652	Threatened
Grizzly Bear Ursus arctos horribilis No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/7642	Threatened
North American Wolverine Gulo gulo luscus No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/5123	Proposed Threatened

Not for consultation

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

This location overlaps the critical habitat for the following species:

NAME	TYPE
Bull Trout Salvelinus confluentus https://ecos.fws.gov/ecp/species/8212#crithab	Final designated

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act

[1] and the Bald and Golden Eagle Protection Act[2].

Any activity that results in the take (to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct) of migratory birds or eagles is prohibited unless authorized by the U.S. Fish and Wildlife Service

[3]. There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

Any person or organization who plans or conducts activities that may result in the take of migratory birds is responsible for complying with the appropriate regulations and implementing appropriate conservation measures.

Not for consultation

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Conservation measures for birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php

- Year-round bird occurrence data
  http://www.birdscanada.org/birdmon/default/datasummaries.jsp

The migratory birds species listed below are species of particular conservation concern (e.g. Birds of Conservation Concern) that may be potentially affected by activities in this location. It is not a list of every bird species you may find in this location, nor a guarantee that all of the bird species on this list will be found on or near this location. Although it is important to try to avoid and minimize impacts to all birds, special attention should be made to avoid and minimize impacts to birds of priority concern. To view available data on other bird species that may occur in your project area, please visit the AKN Histogram Tools and Other Bird Data Resources. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

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Cassin's Finch Carpodacus cassinii https://ecos.fws.gov/ecp/species/9462	Breeding
Common Tern Sterna hirundo https://ecos.fws.gov/ecp/species/4963	Breeding
Fox Sparrow Passerella iliaca	Breeding
Golden Eagle Aquila chrysaetos https://ecos.fws.gov/ecp/species/1680	Year-round

Not for consultation

Grasshopper Sparrow Ammodramus savannarum Breeding
https://ecos.fws.gov/ecp/species/8879

Lewis's Woodpecker Melanerpes lewis Breeding
https://ecos.fws.gov/ecp/species/9408

Loggerhead Shrike Lanius ludovicianus Breeding
https://ecos.fws.gov/ecp/species/8833

Long-billed Curlew Numenius americanus Breeding
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Olive-sided Flycatcher Contopus cooperi Breeding
https://ecos.fws.gov/ecp/species/3914

Peregrine Falcon Falco peregrinus Breeding
https://ecos.fws.gov/ecp/species/8831

Rufous Hummingbird selasphorus rufus Breeding
https://ecos.fws.gov/ecp/species/8002

Short-eared Owl Asio flammeus Year-round
https://ecos.fws.gov/ecp/species/9295

Sprague's Pipit Anthus spragueii Breeding
https://ecos.fws.gov/ecp/species/8964

Swainson's Hawk Buteo swainsoni Breeding
https://ecos.fws.gov/ecp/species/1098

Upland Sandpiper Bartramia longicauda Breeding
https://ecos.fws.gov/ecp/species/9294

Western Grebe aechmophorus occidentalis Breeding
https://ecos.fws.gov/ecp/species/6743

Not for consultation

Williamson's Sapsucker Sphyrapicus thyroideus https://ecos.fws.gov/ecp/species/8832	Breeding
Willow Flycatcher Empidonax traillii https://ecos.fws.gov/ecp/species/3482	Breeding

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Not for consultation

Facilities

Wildlife refuges

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THERE ARE NO REFUGES AT THIS LOCATION.

Fish hatcheries

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Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

This location overlaps the following wetlands:

RIVERINE

- R2UBH
- R2USA

A full description for each wetland code can be found at the National Wetlands Inventory website: https://ecos.fws.gov/ipac/wetlands/decoder

Not for Consultation

Data limitations

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Data exclusions

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Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

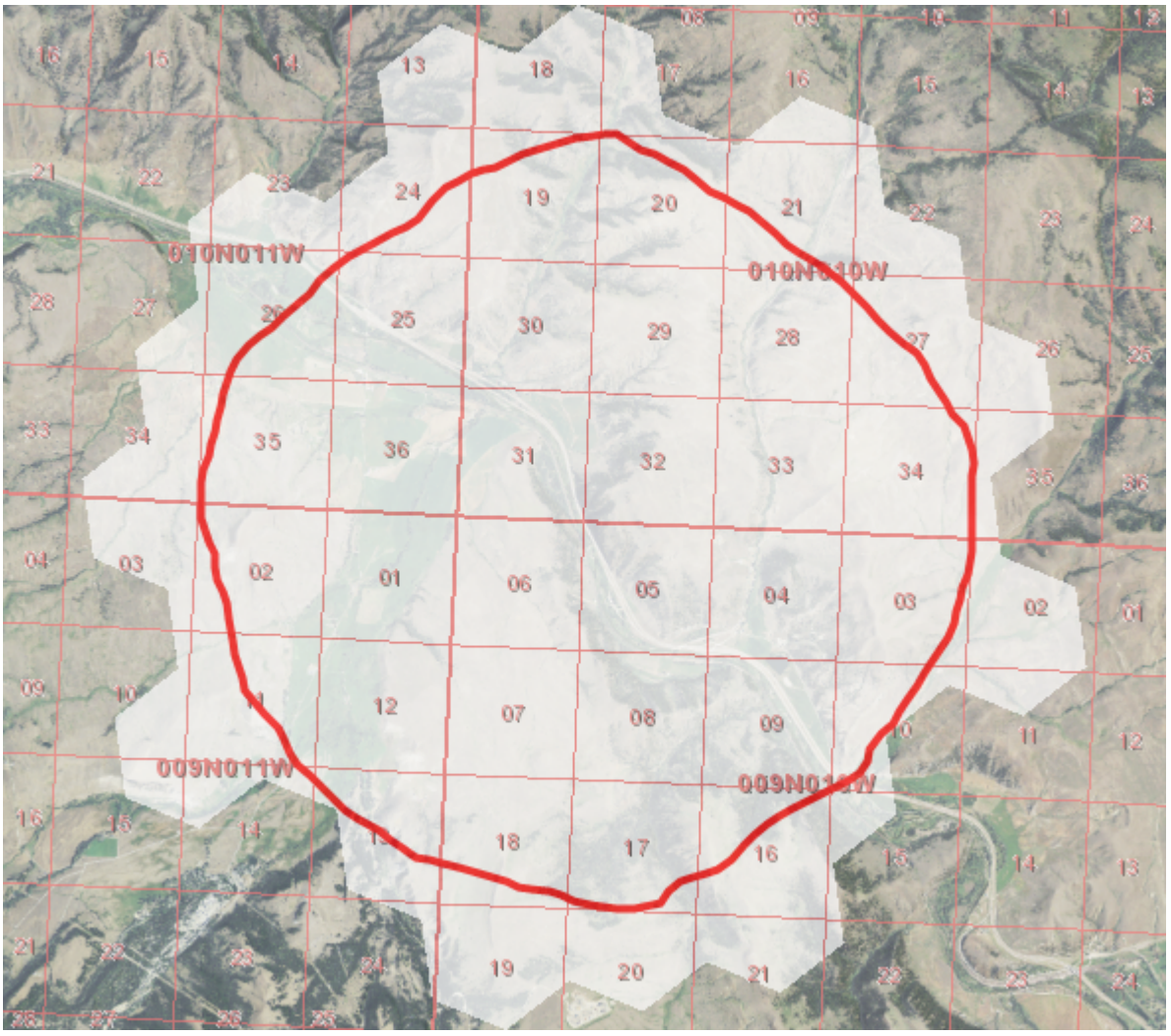
Not for consultation

Environmental Summary

MONTANA
Natural Heritage Program
1515 East 6th Avenue
Helena, MT 59620
(406) 444-0241
mtnhp.org



Latitude	Longitude
46.51104	-112.81393
46.63055	-112.96951



Suggested Citation

Montana Natural Heritage Program Environmental Summary Report.

For Latitude 46.51104 to 46.63055 and Longitude -112.81393 to -112.96951. Retrieved on 5/11/2017.

The Montana Natural Heritage Program is a program of the Montana State Library's Natural Resource Information System. It is operated as a special program under the Office of the Vice President for Research and Creative Scholarship at the University of Montana, Missoula.

The Montana Natural Heritage Program is part of NatureServe – a network of over 80 similar programs in states, provinces and nations throughout the Western Hemisphere, working to provide comprehensive status and distribution information for species and ecosystems.

Montana Natural Heritage Program · Montana State Library · University of Montana · NatureServe

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- Species Summary
- Structured Surveys
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- Land Management Summary
- Biological Reports
- Appendix
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  - Data Use Terms and Conditions
  - Suggested Contacts for State and Federal Natural Resource Agencies
  - Introduction to Species Summary
  - Introduction to Land Cover Summary
  - Introduction to Wetland and Riparian Summary
  - Introduction to Land Management Summary
  - Additional Information Resources

Introduction to Environmental Summary Report

The Environmental Summary report for your area of interest consists of introductory and related materials in this PDF and an Excel workbook with worksheets summarizing information managed in the Montana Natural Heritage Program's (MTNHP) databases for: (1) species occurrences; (2) other observed species without Species Occurrences; (3) other species potentially present based on their range, presence of associated habitats, or predictive distribution model output if available; (4) structured surveys (organized efforts following a protocol capable of detecting one or more species); (5) land cover mapped as ecological systems; (6) wetland and riparian mapping; (7) land management categories; and (8) biological reports associated with plant and animal observations. In order to do this in a consistent manner across Montana and allow for rapid delivery of summaries, we have intersected this information with a uniform grid of hexagons that have been used for planning efforts across the western United States (e.g. Western Association of Fish and Wildlife Agencies - Crucial Habitat Assessment Tool). Each hexagon is one square mile in area and approximately one kilometer in length on each side. Summary information for each data layer is then stored with each hexagon and those summaries are added up to an overall summary for the report area you have requested. Users should be aware that summaries do not correspond to the exact boundaries of the polygon they have specified, but instead are a summary across all hexagons intersected by the polygon they specified.

In presenting this information, MTNHP is working towards assisting the user with rapidly assessing the known or potential species and biological communities, land management categories, and biological reports associated with the report area. We remind users that this information is likely incomplete and may be inaccurate as surveys to document species are lacking in many areas of the state, species' range polygons often include regions of unsuitable habitat, methods of predicting the presence of species or communities are constantly improving, and information is constantly being added and updated in our databases. **Field verification by professional biologists of the absence or presence of species and biological communities in a report area will always be an important obligation of users of our data. Users are encouraged to only use this environmental summary report as a starting point for more in depth analyses and are encouraged to contact state, federal, and tribal resource management agencies for additional data or management guidelines relevant to your efforts. Please see the Appendix for introductory materials to each section of the report, additional information resources, and a list of relevant agency contacts.**

MONTANA Natural Heritage Program

A program of the **Montana State Library's Natural Resource Information System** operated by the **University of Montana**.

Legend

Range Icons	Model Icons	Num Obs
I Introduced Range	O Optimal Suitability	Count of obs with 'good precision' (<=1000m)
Y Year-round Range	M Moderate Suitability	
S Summer Range	L Low Suitability	+ indicates additional 'poor precision' obs (1001m-10,000m)
W Winter Range	N Suitable (native range)	
M Migratory Range	I Suitable (introduced range)	
H Historic Range	U Generally Unsuitable	

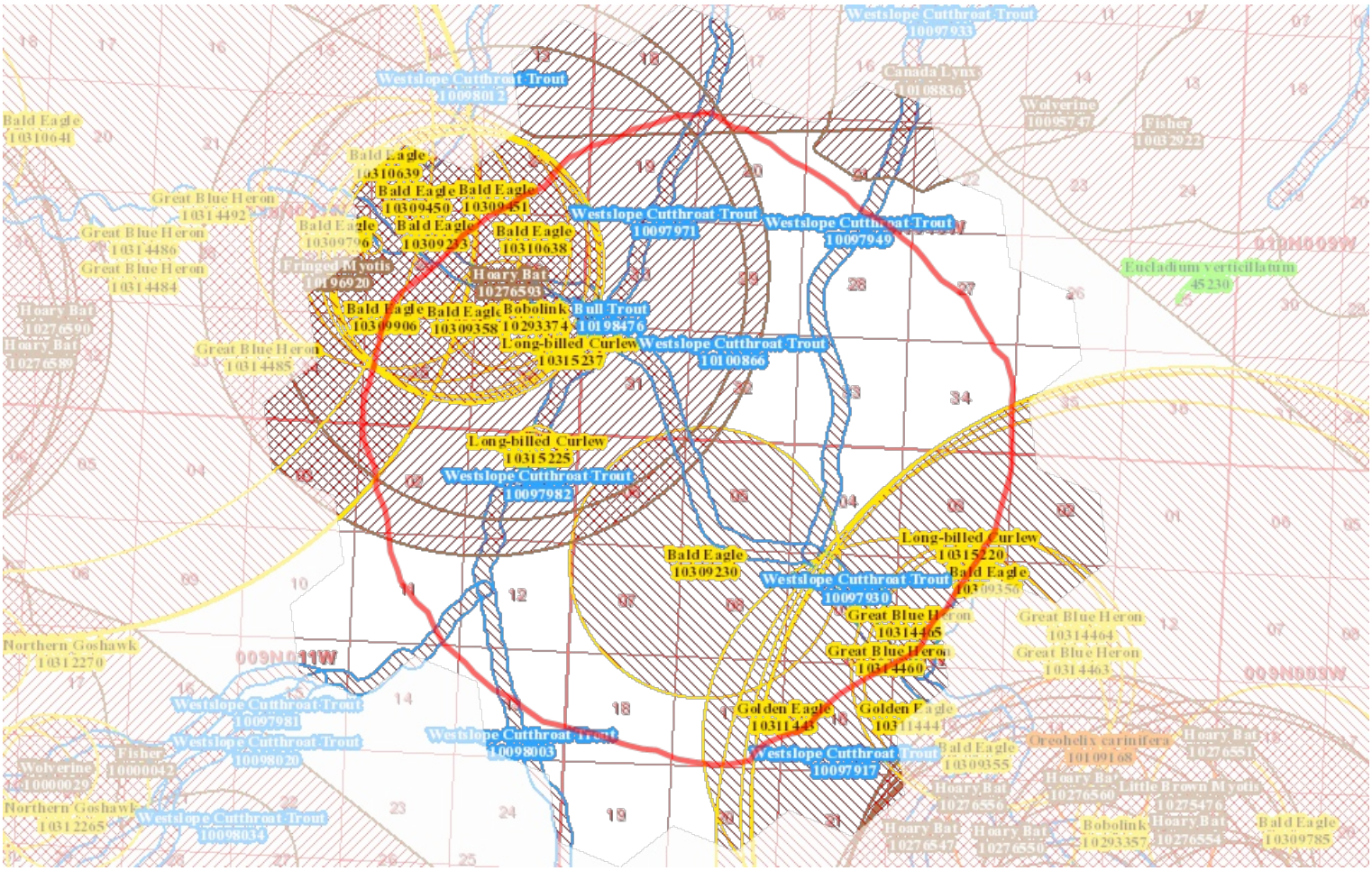


Latitude	Longitude
46.51104	-112.81393
46.63055	-112.96951

Species Summary

Filtered by:

MT_Status='Species of Concern','Special Status','Important Animal Habitat','Potential SOC'



Species Occurrences

	# SO	# Obs	Range	Model	Common Habitat	Occasional Habitat
M - Canada Lynx *(Lynx canadensis)* SOC	1		Y S W	L U	<1%	<1%

USFS: **Threatened (LT) in Forests (BD, BRT)**

Species of Concern Global: **G5** State: **S3** USFWS: **LT** **Threatened, Critical Habitat (LT,CH) in Forests (CG, FLAT, HLC, KOOT, LOLO)**
BLM: **SPECIAL STATUS** FWP SWAP: **SGCN3**

Delineation Criteria Areas designated as Critical Habitat for the species by the U.S. Fish and Wildlife Service on September 12, 2014 because they currently contain physical and biological features (e.g. boreal forests with snowshoe hare) essential to the conservation of the species and state and other lands within the outer boundaries of USFWS Critical Habitat polygons. (Last Updated: Dec 15, 2014)

M - Fisher *(Pekania pennanti)* SOC	1		Y S W	U	<1%	<1%

Species of Concern Global: **G5** State: **S3** USFS: **Sensitive - Known (SK) in Forests (BD, BRT, FLAT, HLC, KOOT, LOLO)** BLM: **SENSITIVE**
FWP SWAP: **SGCN3**

Delineation Criteria Confirmed area of occupancy based on the documented presence of adults or juveniles within tracking regions containing core habitat for the species. Outer boundaries of tracking regions are defined by areas of forest cover on individual mountain ranges or clusters of adjacent mountain ranges with continuous forest cover. (Last Updated: Aug 27, 2014)

M - Fringed Myotis *(Myotis thysanodes)* SOC	1	1	Y S M	M L U	<1%	

Species of Concern Global: **G4** State: **S3** BLM: **SENSITIVE** FWP SWAP: **SGCN3**

Delineation Criteria Confirmed area of occupancy based on the documented presence (mistnet captures, definitively identified acoustic recordings, and definitively identified roosting individuals) of adults or juveniles. Point observation location is buffered by a minimum distance of 4,200 meters in order to encompass the 95% confidence interval for nightly foraging distance reported for another bat species (Townsend's Big-eared Bat) that has similar wing structure, flight capability, and foraging strategy. Otherwise the point observation is buffered by the locational uncertainty associated with the observation up to a maximum distance of 10,000 meters. (Last Updated: Jun 22, 2016)

M - Hoary Bat *(Lasiurus cinereus)* SOC	5	1	S M	M L	1%	6%

Species of Concern Global: **G3G4** State: **S3** FWP SWAP: **SGCN3**

Delineation Criteria Confirmed area of occupancy based on the documented presence (mistnet captures, definitively identified acoustic recordings, and definitively identified roosting individuals) of adults or juveniles during the active season. Point observation location is buffered by a minimum distance of 3,500 meters in order to be conservative about encompassing the maximum reported foraging distance for the congeneric Lasiurus borealis and otherwise buffered by the locational uncertainty associated with the observation up to a maximum distance of 10,000 meters. (Last Updated: Dec 21, 2016)

B - Bald Eagle *(Haliaeetus leucocephalus)* **SSS**	11	63	Y S W M	M L U	1%	<1%

Special Status Species Global: **G5** State: **S4** USFWS: **DM; BGEPA; MBTA; BCC10; BCC11; BCC17**
USFS: **Sensitive - Known (SK) in Forests (BD, BRT, CG, FLAT, HLC, KOOT, LOLO)** BLM: **SENSITIVE** PIF: **2**

Delineation Criteria Confirmed nesting area buffered by a minimum distance of 2,000 meters in order to be conservative about encompassing the breeding territory and area commonly used for renesting and otherwise buffered by the locational uncertainty associated with the observation up to a maximum distance of 10,000 meters. (Last Updated: Mar 23, 2017)

B - Bobolink *(Dolichonyx oryzivorus)* **SOC**	4	3	S M	M L U	<1%	<1%

Species of Concern Global: **G5** State: **S3B** USFWS: **MBTA** FWP SWAP: **SGCN3** PIF: **3**

Delineation Criteria Confirmed breeding area based on the presence of a nest, chicks, or territorial adults during the breeding season. Point observation location is buffered by a minimum distance of 150 meters in order to conservatively encompass male territory size reported for the species and otherwise is buffered by the locational uncertainty associated with the observation up to a maximum distance of 10,000 meters. (Last Updated: Dec 23, 2016)

B - Golden Eagle *(Aquila chrysaetos)* **SOC**	2	2	Y S W M	M L	<1%	<1%

Species of Concern Global: **G5** State: **S3** USFWS: **BGEPA; MBTA; BCC17** BLM: **SENSITIVE** FWP SWAP: **SGCN3**

Delineation Criteria Confirmed nesting area buffered by a minimum distance of 3,000 meters in order to be conservative about encompassing the entire breeding territory and area commonly used for renesting and otherwise buffered by the locational uncertainty associated with the observation up to a maximum distance of 10,000 meters. (Last Updated: Mar 24, 2017)

B - Great Blue Heron *(Ardea herodias)* **SOC**	8	+	Y S W M	M L U	3%	

Species of Concern Global: **G5** State: **S3** USFWS: **MBTA** FWP SWAP: **SGCN3**

Delineation Criteria Confirmed nesting area buffered by a minimum distance of 6,500 meters in order to be conservative about encompassing the areas commonly used for foraging near the breeding colony and otherwise buffered by the locational uncertainty associated with the observation up to a maximum distance of 10,000 meters. (Last Updated: Mar 31, 2017)

B - Long-billed Curlew *(Numenius americanus)* **SOC**	4	4	S M	M L U	56%	<1%

Species of Concern Global: **G5** State: **S3B** USFWS: **MBTA; BCC10; BCC11; BCC17** BLM: **SENSITIVE** FWP SWAP: **SGCN3** PIF: **2**

Delineation Criteria Confirmed breeding area based on the presence of a nest, chicks, or territorial adults during the breeding season. Point observation location is buffered by a minimum distance of 200 meters in order to approximate the breeding territory size reported for the species in Idaho and otherwise is buffered by the locational uncertainty associated with the observation up to a maximum distance of 10,000 meters. (Last Updated: Apr 03, 2017)

F - Bull Trout *(Salvelinus confluentus)* **SOC**	1	+	Y S W	Not Available		

Species of Concern Global: **G4** State: **S2** USFWS: **LT** USFS: **Threatened, Critical Habitat (LT,CH) in Forests (BD, BRT, FLAT, HLC, KOOT, LOLO)**
BLM: **SPECIAL STATUS** FWP SWAP: **SGCN2**

Delineation Criteria Stream reaches and standing water bodies where the species is believed to be present based on the professional judgement of a fisheries biologist, potentially supported by habitat assessment, direct capture, or confirmed presence in adjacent areas. In order to reflect the importance of adjacent terrestrial habitats to survival, stream reaches are buffered 100 meters, standing water bodies greater than 1 acre are buffered 50 meters, and standing water bodies less than 1 acre are buffered 30 meters into the terrestrial habitat based on PACFISH/INFISH Riparian Conservation Area standards. (Last Updated: Jul 12, 2016)

F - Westslope Cutthroat Trout *(Oncorhynchus clarkii lewisi)* **SOC**	9	+	Y S W H	Not Available		

Species of Concern Global: **G4T3** State: **S2** USFS: **Sensitive - Known (SK) in Forests (BD, BRT, CG, FLAT, HLC, KOOT, LOLO)** BLM: **SENSITIVE**
FWP SWAP: **SGCN2**

Delineation Criteria Stream reaches and standing water bodies where the species presence has been confirmed through direct capture or where they are believed to be present based on the professional judgement of a fisheries biologist due to confirmed presence in adjacent areas. In order to reflect the importance of adjacent terrestrial habitats to survival, stream reaches are buffered 100 meters, standing water bodies greater than 1 acre are buffered 50 meters, and standing water bodies less than 1 acre are buffered 30 meters into the terrestrial habitat based on PACFISH/INFISH Riparian Conservation Area standards. (Last Updated: May 08, 2015)

Other Observed Species

	# Obs	Range	Model	Common Habitat	Occasional Habitat
M - Silver-haired Bat *(Lasionycteris noctivagans)* **PSOC**	1	Y S W M	M L	<1%	6%

Potential Species of Concern Global: **G3G4** State: **S4**

B - Clark's Nutcracker *(Nucifraga columbiana)* **SOC**	+	Y S W M	M L	<1%	

Species of Concern Global: **G5** State: **S3** USFWS: **MBTA** FWP SWAP: **SGCN3** PIF: **3**

B - Ferruginous Hawk *(Buteo regalis)* **SOC**	+	S M	Not Available	19%	<1%

Species of Concern Global: **G4** State: **S3B** USFWS: **MBTA; BCC10; BCC17** BLM: **SENSITIVE** FWP SWAP: **SGCN3** PIF: **2**

B - Great Gray Owl *(Strix nebulosa)* **SOC**	+	Y S W M	L U	<1%	5%

Species of Concern Global: **G5** State: **S3** USFWS: **MBTA** BLM: **SENSITIVE** FWP SWAP: **SGCN3, SGIN** PIF: **3**

B - Sharp-tailed Grouse *(Tympanuchus phasianellus)* **SOC**	1	H	Not Available	<1%	<1%

Species of Concern Global: **G5** State: **S1,S4** FWP SWAP: **SGCN1** PIF: **2**

B - Veery *(Catharus fuscescens)* **SOC**	1	S M	M L U	<1%	<1%

Species of Concern Global: **G5** State: **S3B** USFWS: **MBTA** BLM: **SENSITIVE** FWP SWAP: **SGCN3** PIF: **2**

Other Potential Species

	Range	Model	Common Habitat	Occasional Habitat
M - Bison *(Bos bison)* **SOC**	H	Not Available	<1%	<1%

Species of Concern Global: **G4** State: **S2** FWP SWAP: **SGCN2**

M - Dwarf Shrew *(Sorex nanus)* **SOC**	Y S W	M L U	19%	<1%

Species of Concern Global: **G4** State: **S2S3** FWP SWAP: **SGCN2-3**

M - Grizzly Bear *(Ursus arctos)* **SOC**	Y S W H	L U	<1%	19%
Species of Concern Global: **G4** State: **S2S3** USFWS: **LT,XN** USFS: **Threatened (LT) in Forests (BD, CG, FLAT, HLC, KOOT, LOLO)** BLM: **SENSITIVE** FWP SWAP: **SGCN2-3**				
M - Hoary Marmot *(Marmota caligata)* **PSOC**	Y S W	U	2%	<1%
Potential Species of Concern Global: **G5** State: **S3S4** FWP SWAP: **SGIN**				
M - Little Brown Myotis *(Myotis lucifugus)* **SOC**	Y S W M	M L	1%	<1%
Species of Concern Global: **G3** State: **S3** FWP SWAP: **SGCN3**				
M - Porcupine *(Erethizon dorsatum)* **PSOC**	Y S W	Not Available	<1%	
Potential Species of Concern Global: **G5** State: **S4** FWP SWAP: **SGIN**				
M - Preble's Shrew *(Sorex preblei)* **SOC**	Y S W	M L	<1%	<1%
Species of Concern Global: **G4** State: **S3** FWP SWAP: **SGCN3**				
M - Pygmy Shrew *(Sorex hoyi)* **SOC**	Y S W	M L	<1%	
Species of Concern Global: **G5** State: **S3** FWP SWAP: **SGCN3**				
M - Spotted Bat *(Euderma maculatum)* **SOC**	M	L U	<1%	6%
Species of Concern Global: **G4** State: **S3** USFS: **Sensitive - Known (SK) in Forests (BD, CG)** BLM: **SENSITIVE** FWP SWAP: **SGCN3, SGIN**				
M - Townsend's Big-eared Bat *(Corynorhinus townsendii)* **SOC**	Y S W M	M L U	<1%	<1%
Species of Concern Global: **G4** State: **S3** USFS: **Sensitive - Known (SK) in Forests (BD, BRT, CG, FLAT, HLC, KOOT, LOLO)** BLM: **SENSITIVE** FWP SWAP: **SGCN3**				
M - Water Vole *(Microtus richardsoni)* **PSOC**	Y S W	Not Available	1%	<1%
Potential Species of Concern Global: **G5** State: **S4**				
M - Western Spotted Skunk *(Spilogale gracilis)* **PSOC**	Y S W	Not Available	5%	<1%
Potential Species of Concern Global: **G5** State: **SU** FWP SWAP: **SGIN**				
M - Wolverine *(Gulo gulo)* **SOC**	Y S W	L U	<1%	<1%
Species of Concern Global: **G4** State: **S3** USFWS: **P** USFS: **Proposed (P) in Forests (BD, BRT, CG, FLAT, HLC, KOOT, LOLO)** BLM: **SENSITIVE** FWP SWAP: **SGCN3**				
M - Yuma Myotis *(Myotis yumanensis)* **PSOC**	Y S W M	Not Available		
Potential Species of Concern Global: **G5** State: **S3S4** FWP SWAP: **SGIN**				
B - American Bittern *(Botaurus lentiginosus)* **SOC**	S M	M L U	3%	
Species of Concern Global: **G4** State: **S3B** USFWS: **MBTA; BCC11; BCC17** BLM: **SENSITIVE** FWP SWAP: **SGCN3** PIF: **3**				
B - American White Pelican *(Pelecanus erythrorhynchos)* **SOC**	M	Not Available	1%	
Species of Concern Global: **G4** State: **S3B** USFWS: **MBTA** FWP SWAP: **SGCN3** PIF: **3**				
B - Barrow's Goldeneye *(Bucephala islandica)* **PSOC**	Y S W M	Not Available	<1%	
Potential Species of Concern Global: **G5** State: **S4** USFWS: **MBTA** FWP SWAP: **SGIN** PIF: **2**				
B - Black Swift *(Cypseloides niger)* **SOC**	S M	L U	1%	
Species of Concern Global: **G4** State: **S1B** USFWS: **MBTA; BCC10** FWP SWAP: **SGCN1, SGIN** PIF: **2**				
B - Black Tern *(Chlidonias niger)* **SOC**	S M	M L U	1%	2%
Species of Concern Global: **G4** State: **S3B** USFWS: **MBTA; BCC11** BLM: **SENSITIVE** FWP SWAP: **SGCN3** PIF: **2**				
B - Black-backed Woodpecker *(Picoides arcticus)* **SOC**	Y S W M	L U	<1%	
Species of Concern Global: **G5** State: **S3** USFWS: **MBTA** USFS: **Sensitive - Known (SK) in Forests (BD, BRT, CG, FLAT, HLC, KOOT, LOLO)** BLM: **SENSITIVE** FWP SWAP: **SGCN3** PIF: **1**				
B - Black-crowned Night-Heron *(Nycticorax nycticorax)* **SOC**	M	Not Available	2%	
Species of Concern Global: **G5** State: **S3B** USFWS: **MBTA** FWP SWAP: **SGCN3** PIF: **3**				
B - Black-necked Stilt *(Himantopus mexicanus)* **SOC**	M	Not Available	<1%	2%
Species of Concern Global: **G5** State: **S3B** USFWS: **MBTA** FWP SWAP: **SGCN3** PIF: **3**				
B - Boreal Owl *(Aegolius funereus)* **PSOC**	Y S W M	U	<1%	<1%
Potential Species of Concern Global: **G5** State: **S3S4** USFWS: **MBTA** FWP SWAP: **SGIN** PIF: **3**				
B - Brewer's Sparrow *(Spizella breweri)* **SOC**	S M	L U	19%	
Species of Concern Global: **G5** State: **S3B** USFWS: **MBTA; BCC10; BCC17** BLM: **SENSITIVE** FWP SWAP: **SGCN3** PIF: **2**				
B - Brown Creeper *(Certhia americana)* **SOC**	Y S W M	L U	<1%	<1%
Species of Concern Global: **G5** State: **S3** USFWS: **MBTA** FWP SWAP: **SGCN3** PIF: **1**				
B - Caspian Tern *(Hydroprogne caspia)* **SOC**	M	Not Available	1%	3%
Species of Concern Global: **G5** State: **S2B** USFWS: **MBTA** BLM: **SENSITIVE** FWP SWAP: **SGCN2** PIF: **2**				
B - Cassin's Finch *(Haemorhous cassinii)* **SOC**	Y S W M	M L U	<1%	
Species of Concern Global: **G5** State: **S3** USFWS: **MBTA; BCC10** FWP SWAP: **SGCN3** PIF: **3**				
B - Clark's Grebe *(Aechmophorus clarkii)* **SOC**	M	Not Available	<1%	
Species of Concern Global: **G5** State: **S3B** USFWS: **MBTA** FWP SWAP: **SGCN3** PIF: **3**				
B - Common Loon *(Gavia immer)* **SOC**	M	Not Available	<1%	
Species of Concern Global: **G5** State: **S3B** USFWS: **MBTA** USFS: **Sensitive - Known (SK) in Forests (FLAT, KOOT, LOLO)** FWP SWAP: **SGCN3** PIF: **1**				
B - Common Poorwill *(Phalaenoptilus nuttallii)* **PSOC**	S M	Not Available	5%	<1%
Potential Species of Concern Global: **G5** State: **S4B** USFWS: **MBTA** FWP SWAP: **SGIN** PIF: **3**				
B - Common Tern *(Sterna hirundo)* **SOC**	S M	L U	<1%	

Species of Concern Global: **G5** State: **S3B** USFWS: **MBTA** BLM: **SENSITIVE** FWP SWAP: **SGCN3** PIF: **2**

B - Evening Grosbeak *(Coccothraustes vespertinus)* **SOC** — Y S W M | M L U | <1% | <1%

Species of Concern Global: **G5** State: **S3** USFWS: **MBTA** FWP SWAP: **SGCN3**

B - Flammulated Owl *(Psiloscops flammeolus)* **SOC** — S M | L U | <1% | <1%

USFS: **Sensitive - Known (SK) in Forests (BD, BRT, FLAT, HLC, KOOT, LOLO)**
Species of Concern Global: **G4** State: **S3B** USFWS: **MBTA; BCC10** **Sensitive - Suspected (SS) in Forests (CG)**
BLM: **SENSITIVE** FWP SWAP: **SGCN3** PIF: **1**

B - Forster's Tern *(Sterna forsteri)* **SOC** — S M | Not Available | 1% | 3%

Species of Concern Global: **G5** State: **S3B** USFWS: **MBTA** BLM: **SENSITIVE** FWP SWAP: **SGCN3** PIF: **2**

B - Franklin's Gull *(Leucophaeus pipixcan)* **SOC** — M | Not Available | 1% | 6%

Species of Concern Global: **G4G5** State: **S3B** USFWS: **MBTA** BLM: **SENSITIVE** FWP SWAP: **SGCN3** PIF: **2**

B - Gray-crowned Rosy-Finch *(Leucosticte tephrocotis)* **SOC** — Y S W M | U | 2%

Species of Concern Global: **G5** State: **S2B,S5N** USFWS: **MBTA** FWP SWAP: **SGCN2, SGIN**

B - Green-tailed Towhee *(Pipilo chlorurus)* **SOC** — S M | M L | 1% | <1%

Species of Concern Global: **G5** State: **S3B** USFWS: **MBTA** FWP SWAP: **SGCN3** PIF: **3**

B - Harlequin Duck *(Histrionicus histrionicus)* **SOC** — S M | Not Available | 3% | 1%

Species of Concern Global: **G4** State: **S2B** USFWS: **MBTA** USFS: **Sensitive - Known (SK) in Forests (BD, CG, FLAT, HLC, KOOT, LOLO)**
FWP SWAP: **SGCN2** PIF: **1**

B - Hooded Merganser *(Lophodytes cucullatus)* **PSOC** — Y S W M | Not Available | 1%

Potential Species of Concern Global: **G5** State: **S4** USFWS: **MBTA** FWP SWAP: **SGIN** PIF: **2**

B - Horned Grebe *(Podiceps auritus)* **SOC** — M | Not Available | <1%

Species of Concern Global: **G5** State: **S3B** USFWS: **MBTA; BCC11; BCC17** FWP SWAP: **SGCN3** PIF: **2**

B - Lewis's Woodpecker *(Melanerpes lewis)* **SOC** — S M | M L | 3% | <1%

Species of Concern Global: **G4** State: **S2B** USFWS: **MBTA; BCC10; BCC17** FWP SWAP: **SGCN2** PIF: **2**

B - Loggerhead Shrike *(Lanius ludovicianus)* **SOC** — M | Not Available | <1% | <1%

Species of Concern Global: **G4** State: **S3B** USFWS: **MBTA; BCC10; BCC17** BLM: **SENSITIVE** FWP SWAP: **SGCN3** PIF: **2**

B - Northern Goshawk *(Accipiter gentilis)* **SOC** — Y S W M | L U | 1% | <1%

Species of Concern Global: **G5** State: **S3** USFWS: **MBTA** FWP SWAP: **SGCN3** PIF: **2**

B - Northern Hawk Owl *(Surnia ulula)* **SOC** — W M | Not Available | <1% | <1%

Species of Concern Global: **G5** State: **S3** USFWS: **MBTA** FWP SWAP: **SGCN3, SGIN**

B - Pacific Wren *(Troglodytes pacificus)* **SOC** — Y S W | U | <1% | 1%

Species of Concern Global: **G5** State: **S3** USFWS: **MBTA** FWP SWAP: **SGCN3** PIF: **2**

B - Peregrine Falcon *(Falco peregrinus)* **SOC** — Y S W M | L U | 5% | 19%

Species of Concern Global: **G4** State: **S3** USFWS: **DM; MBTA; BCC10; BCC11; BCC17**
USFS: **Sensitive - Known (SK) in Forests (BD, BRT, CG, FLAT, HLC, KOOT, LOLO)** BLM: **SENSITIVE** FWP SWAP: **SGCN3** PIF: **2**

B - Pileated Woodpecker *(Dryocopus pileatus)* **SOC** — Y S W M | L U | <1% | 1%

Species of Concern Global: **G5** State: **S3** USFWS: **MBTA** FWP SWAP: **SGCN3** PIF: **2**

B - Rufous Hummingbird *(Selasphorus rufus)* **PSOC** — S M | Not Available | <1% | 19%

Potential Species of Concern Global: **G5** State: **S4B** USFWS: **MBTA** PIF: **3**

B - Sage Thrasher *(Oreoscoptes montanus)* **SOC** — S M | L U | 19%

Species of Concern Global: **G5** State: **S3B** USFWS: **MBTA; BCC10; BCC17** BLM: **SENSITIVE** FWP SWAP: **SGCN3** PIF: **3**

B - Short-eared Owl *(Asio flammeus)* **PSOC** — Y S W M | Not Available | 6% | <1%

Potential Species of Concern Global: **G5** State: **S4** USFWS: **MBTA; BCC11; BCC17** PIF: **3**

B - Tennessee Warbler *(Oreothlypis peregrina)* **PSOC** — M | Not Available | <1%

Potential Species of Concern Global: **G5** State: **S3S4B** USFWS: **MBTA**

B - Trumpeter Swan *(Cygnus buccinator)* **SOC** — M | Not Available | 1%

Species of Concern Global: **G4** State: **S3** USFWS: **MBTA** USFS: **Sensitive - Known (SK) in Forests (BD, CG)** BLM: **SENSITIVE** FWP SWAP: **SGCN3**
PIF: **1**

B - Varied Thrush *(Ixoreus naevius)* **SOC** — S M | U | <1% | <1%

Species of Concern Global: **G5** State: **S3B** USFWS: **MBTA** FWP SWAP: **SGCN3** PIF: **3**

B - Western Screech-Owl *(Megascops kennicottii)* **PSOC** — Y S W M | Not Available | 5% | <1%

Potential Species of Concern Global: **G5** State: **S3S4** USFWS: **MBTA** FWP SWAP: **SGIN** PIF: **3**

B - White-faced Ibis *(Plegadis chihi)* **SOC** — S M | Not Available | <1%

Species of Concern Global: **G5** State: **S3B** USFWS: **MBTA** BLM: **SENSITIVE** FWP SWAP: **SGCN3** PIF: **2**

B - Yellow-billed Cuckoo *(Coccyzus americanus)* **SOC** — S M | M L U | 3%

Species of Concern Global: **G5** State: **S3B** USFWS: **PS: LT; MBTA; BCC10** USFS: **Threatened (LT) in Forests (BRT, LOLO)** BLM: **SENSITIVE**
FWP SWAP: **SGCN3, SGIN** PIF: **2**

A - Northern Leopard Frog *(Lithobates pipiens)* **SOC** — H | Not Available | 1%

USFS: **Sensitive - Known (SK) in Forests (CG, HLC, KOOT)**
Species of Concern Global: **G5** State: **S1,S4** **Sensitive - Suspected (SS) in Forests (BRT, FLAT, LOLO)** BLM: **SENSITIVE** FWP SWAP: **SGCN1**

A - Western Toad *(Anaxyrus boreas)* **SOC** — Y S W | L U | <1% | <1%

Species of Concern Global: **G4** State: **S2** USFS: **Sensitive - Known (SK) in Forests (BD, BRT, CG, FLAT, HLC, KOOT, LOLO)** BLM: **SENSITIVE**
FWP SWAP: **SGCN2**

F - Arctic Grayling *(Thymallus arcticus)* **SOC**	I	Not Available		
Species of Concern Global: **G5** State: **S1** USFS: **Sensitive - Known (SK) in Forests (BD)** BLM: **SENSITIVE** FWP SWAP: **SGCN1**				
I - Aeshna constricta *(Lance-tipped Darner)* **PSOC**	Y S W	Not Available	1%	
Potential Species of Concern Global: **G5** State: **S1S3**				
I - Aeshna eremita *(Lake Darner)* **PSOC**	Y S W	Not Available	2%	
Potential Species of Concern Global: **G5** State: **S3S4**				
I - Aeshna juncea *(Sedge Darner)* **PSOC**	Y S M	Not Available	<1%	1%
Potential Species of Concern Global: **G5** State: **S3S5**				
I - Aeshna sitchensis *(Zigzag Darner)* **PSOC**	Y S W	Not Available	2%	<1%
Potential Species of Concern Global: **G5** State: **S2S3**				
I - Aeshna subarctica *(Subarctic Darner)* **SOC**	Y S W	Not Available	<1%	1%
Species of Concern Global: **G5** State: **S1S2**				
I - Aeshna tuberculifera *(Black-tipped Darner)* **PSOC**	Y S W	Not Available	<1%	1%
Potential Species of Concern Global: **G4** State: **S2S4**				
I - Agapetus montanus *(An Agapetus Caddisfly)* **PSOC**	Y S W	Not Available		
Potential Species of Concern Global: **G3** State: **S3**				
I - Apodemia mormo *(Mormon Metalmark)* **PSOC**	Y S W	Not Available		
Potential Species of Concern Global: **G5** State: **S3S5**				
I - Argia alberta *(Paiute Dancer)* **PSOC**	Y S W	Not Available		3%
Potential Species of Concern Global: **G4** State: **S2S3**				
I - Argia emma *(Emma's Dancer)* **PSOC**	Y S W	Not Available	1%	
Potential Species of Concern Global: **G5** State: **S3S5**				
I - Argia vivida *(Vivid Dancer)* **PSOC**	Y S W	Not Available	2%	1%
Potential Species of Concern Global: **G5** State: **S3S5**				
I - Caudatella edmundsi *(Northern Rocky Mountains Refugium Mayfly)* **PSOC**	Y S W	Not Available		
Potential Species of Concern Global: **G3G4** State: **S3**				
I - Chlosyne whitneyi *(Rockslide Checkerspot)* **PSOC**	Y S W	Not Available		
Potential Species of Concern Global: **G4G5** State: **S3S5**				
I - Colias gigantea *(Giant Sulphur)* **PSOC**	Y S W	Not Available	2%	3%
Potential Species of Concern Global: **G5** State: **S3**				
I - Discus shimekii *(Striate Disc)* **SOC**	Y S W	Not Available		
Species of Concern Global: **G5** State: **S1**				
I - Enallagma clausum *(Alkali Bluet)* **PSOC**	Y S W	Not Available	<1%	1%
Potential Species of Concern Global: **G5** State: **S2S4**				
I - Euphydryas gillettii *(Gillette's Checkerspot)* **SOC**	Y S W	Not Available	<1%	<1%
Species of Concern Global: **G3** State: **S2**				
I - Grylloblatta campodeiformis *(Northern Rock Crawler)* **PSOC**	Y S W	Not Available		
Potential Species of Concern Global: **GNR** State: **S3S4**				
I - Ladona julia *(Chalk-fronted Corporal)* **PSOC**	Y S W	Not Available	<1%	
Potential Species of Concern Global: **G5** State: **S3S4**				
I - Leucorrhinia borealis *(Boreal Whiteface)* **SOC**	Y S W	Not Available	<1%	1%
Species of Concern Global: **G5** State: **S1**				
I - Leucorrhinia glacialis *(Crimson-ringed Whiteface)* **PSOC**	Y S W	Not Available	<1%	1%
Potential Species of Concern Global: **G5** State: **S3**				
I - Libellula saturata *(Flame Skimmer)* **PSOC**	Y S W	Not Available	<1%	3%
Potential Species of Concern Global: **G5** State: **S2S4**				
I - Limenitis arthemis *(Red-spotted Admiral)* **PSOC**	Y S W	Not Available	<1%	<1%
Potential Species of Concern Global: **G5** State: **S2S3**				
I - Margaritifera falcata *(Western Pearlshell)* **SOC**	Y S W	Not Available		
Species of Concern Global: **G4G5** State: **S2** USFS: **Sensitive - Known (SK) in Forests (BD, BRT, CG, HLC, KOOT, LOLO) Sensitive - Suspected (SS) in Forests (FLAT)** BLM: **SENSITIVE** FWP SWAP: **SGCN2**				
I - Ophiogomphus occidentis *(Sinuous Snaketail)* **PSOC**	Y S W	Not Available	1%	
Potential Species of Concern Global: **G4** State: **S2S4**				
I - Oreohelix carinifera *(Keeled Mountainsnail)* **SOC**	Y S W	Not Available		
Species of Concern Global: **G1** State: **S1**				
I - Papilio indra *(Indra Swallowtail)* **PSOC**	Y S W	Not Available		
Potential Species of Concern Global: **G5** State: **S2S3**				
I - Polygonia progne *(Gray Comma)* **SOC**	Y S W	Not Available	<1%	
Species of Concern Global: **G4G5** State: **S2**				
I - Pristiloma wascoense *(Shiny Tightcoil)* **SOC**	Y S W	Not Available		

Species of Concern Global: **G3** State: **S1S3**					
I - Rhionaeschna californica *(California Darner)* **PSOC**	Y S W	Not Available	<1%	1%
Potential Species of Concern Global: **G5** State: **S3S5**					
I - Rhionaeschna multicolor *(Blue-eyed Darner)* **PSOC**	Y S W	Not Available	1%	
Potential Species of Concern Global: **G5** State: **S2S4**					
I - Rhyacophila potteri *(A Rhyacophilan Caddisfly)* **SOC**	Y S W	Not Available		
Species of Concern Global: **G3** State: **S2**					
I - Sericostriata surdickae *(Northern Rocky Mountains Refugium Caddisfly)* **PSOC**	Y S W	Not Available		
Potential Species of Concern Global: **G3** State: **S3**					
I - Somatochlora albicincta *(Ringed Emerald)* **PSOC**	Y S W	Not Available	1%	3%
Potential Species of Concern Global: **G5** State: **S1S3**					
I - Somatochlora hudsonica *(Hudsonian Emerald)* **PSOC**	Y S W	Not Available	<1%	1%
Potential Species of Concern Global: **G5** State: **S2S4**					
I - Somatochlora minor *(Ocellated Emerald)* **PSOC**	Y S M	Not Available	1%	2%
Potential Species of Concern Global: **G5** State: **S2S4**					
I - Somatochlora semicircularis *(Mountain Emerald)* **PSOC**	Y S W	Not Available	<1%	
Potential Species of Concern Global: **G5** State: **S3S5**					
I - Sympetrum madidum *(Red-veined Meadowhawk)* **PSOC**	Y S W	Not Available	<1%	1%
Potential Species of Concern Global: **G4** State: **S2S3**					
I - Udosarx lyrata *(Lyre Mantleslug)* **SOC**	Y S W	Not Available		
Species of Concern Global: **G2** State: **S1**					



Latitude	Longitude
46.51104	-112.81393
46.63055	-112.96951

Structured Surveys

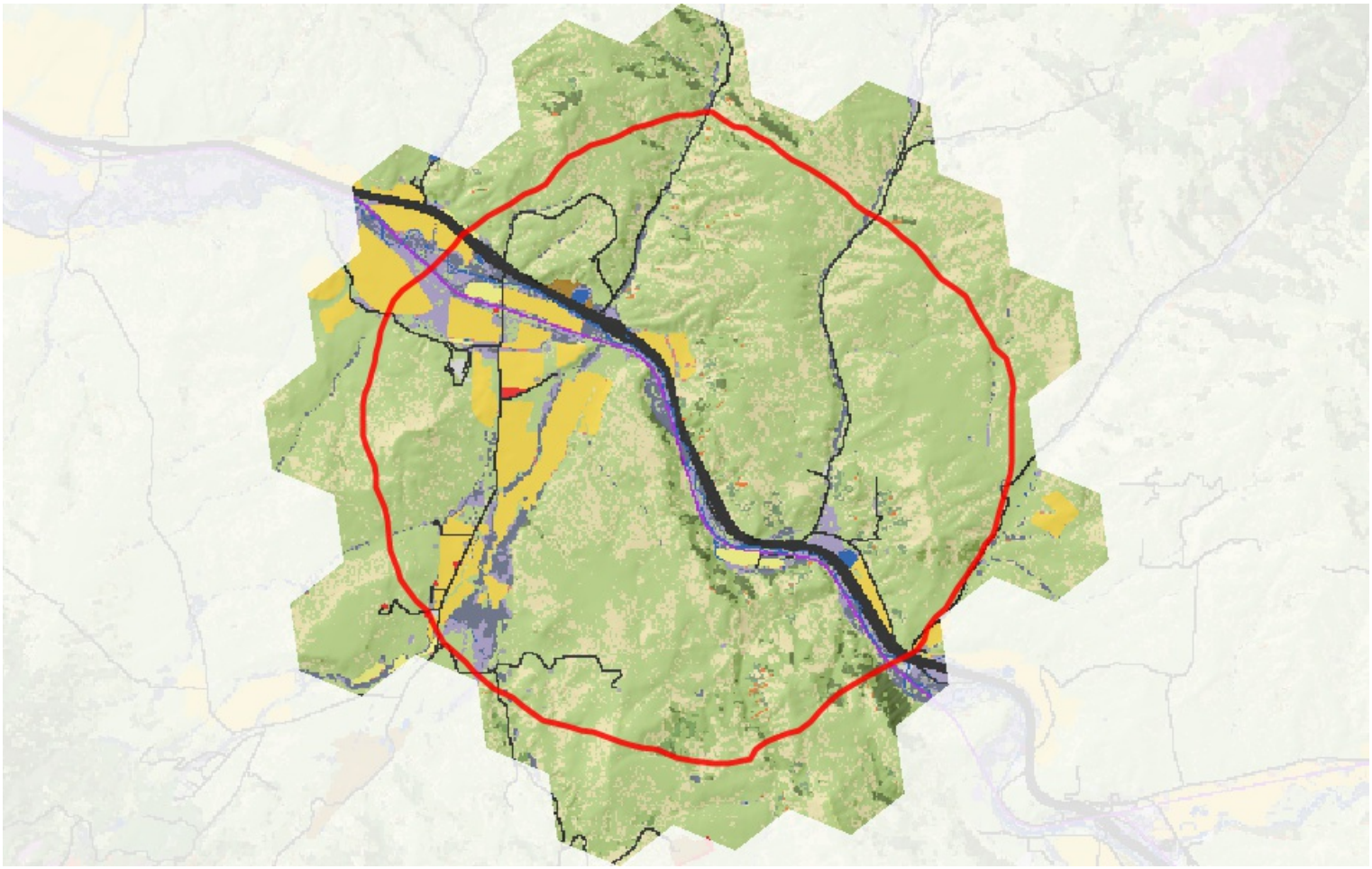
The Montana Natural Heritage Program (MTNHP) records information on the locations where more than 80 different types of well-defined repeatable survey protocols capable of detecting an animal species or suite of animal species have been conducted by state, federal, tribal, university, or private consulting biologists. Examples of structured survey protocols tracked by MTNHP include: visual encounter and dip net surveys for pond breeding amphibians, point counts for birds, call playback surveys for selected bird species, visual surveys of migrating raptors, kick net stream reach surveys for macroinvertebrates, visual encounter cover object surveys for terrestrial mollusks, bat acoustic or mist net surveys, pitfall and/or snap trap surveys for small terrestrial mammals, track or camera trap surveys for large mammals, and trap surveys for turtles. Whenever possible, photographs of survey locations are stored in MTNHP databases.

MTNHP does not typically manage information on structured surveys for plants; surveys for invasive species may be a future exception.

Within the report area you have requested, structured surveys are summarized by the number of each type of structured survey protocol that has been conducted, the number of species detections/observations resulting from these surveys, and the most recent year a survey has been conducted.

AR-Amphibian/Reptile Lentic *(Lentic Amphibian/Reptile Surveys)*	**Survey Count**: 1	**Obs Count**: 2	**Recent Survey**: 2010
B-Bald Eagle Nest *(Bald Eagle Nest Survey)*	**Survey Count**: 51	**Obs Count**: 45	**Recent Survey**: 2016
B-Grid-based Point Count *(RMBO Generalized Random-tesselation Stratification)*	**Survey Count**: 5	**Obs Count**: 43	**Recent Survey**: 2011
B-Long-billed Curlew *(Long-billed Curlew, Road-based, Point Count)*	**Survey Count**: 4	**Obs Count**: 3	**Recent Survey**: 2012
B-Point Count *(Bird Point Count)*	**Survey Count**: 6	**Obs Count**: 70	**Recent Survey**: 2009
B-Raptor nest *(Raptor Nest Survey)*	**Survey Count**: 2	**Obs Count**: 2	**Recent Survey**: 2010
I-Bumble Bee *(Bumble Bee Collection Surveys)*	**Survey Count**: 1	**Obs Count**: 5	**Recent Survey**: 2014
I-Mussel *(Stream Mussel Survey)*	**Survey Count**: 1	**Obs Count**:	**Recent Survey**: 2012
I-Odonates/Butterfly VES *(Visual Encounter Survey for Damselfly/Dragonfly/Butterfly)*	**Survey Count**: 1	**Obs Count**: 1	**Recent Survey**: 2012
M-Bat Acoustic *(Bat Acoustic Survey)*	**Survey Count**: 3	**Obs Count**: 4	**Recent Survey**: 2010

Land Cover Summary



25,557 Acres (0.03% of Montana)

Notes on and Appropriate Uses of Land Cover

The Land Cover data used in Map Viewer are based on classifications of 30-meter Landsat satellite imagery. The base data were classified as part of the national ReGAP project, using imagery from the late 1990s and early 2000s. Classification accuracy varies from system to system, but statewide and local assessments have not been completed to-date. Generally, systems occurring as small patches (e.g., fens, mountain mahogany shrublands) or those making up smaller percentages of various administrative boundaries (e.g. all of those listed under the Additional Limited Land Cover folder below) will be less accurately classified than systems occurring as matrices or large patches (e.g., mixed grass prairie, lodgepole pine forests). Similarly, areas where land use and land cover has changed significantly over the past decade may not be correctly classified. Users are cautioned that the appropriate scale for use of the data is 1:100,000. Accuracy improvements are ongoing. To submit updated information, please email **mtnhp@mt.gov**.



56% (*14,241 Acres*)

Grassland Systems

Montane Grassland

Rocky Mountain Lower Montane, Foothill, and Valley Grassland

This grassland system of the northern Rocky Mountains is found at lower montane to foothill elevations in mountains and valleys throughout Montana. These grasslands are floristically similar to Big Sagebrush Steppe but are defined by shorter summers, colder winters, and young soils derived from recent glacial and alluvial material. They are found at elevations from 548 - 1,650 meters (1,800-5,413 feet). In the lower montane zone, they range from small meadows to large open parks surrounded by conifers; below the lower treeline, they occur as extensive foothill and valley grasslands. Soils are relatively deep, fine-textured, often with coarse fragments, and non-saline. Microphytic crust may be present in high-quality occurrences. This system is typified by cool-season perennial bunch grasses and forbs (>25%) cover, with a sparse shrub cover (<10%). Rough fescue (*Festuca campestris*) is dominant in the northwestern portion of the state and Idaho fescue (*Festuca idahoensis*) is dominant or co-dominant throughout the range of the system. Bluebunch wheatgrass (*Pseudoroegneria spicata*) occurs as a co-dominant throughout the range as well, especially on xeric sites. Western wheatgrass (*Pascopyrum smithii*) is consistently present, often with appreciable coverage (>10%) in lower elevation occurrences in western Montana and virtually always present, with relatively high coverages (>25%), on the edge of the Northwestern Great Plains region. Species diversity ranges from a high of more than 50 per 400 square

meter plot on mesic sites to 15 (or fewer) on xeric and disturbed sites. Most occurrences have at least 25 vascular species present. Farmland conversion, noxious species invasion, fire suppression, heavy grazing and oil and gas development are major threats to this system.



19% (*4,977 Acres*)

Shrubland, Steppe and Savanna Systems

Sagebrush Steppe

Montane Sagebrush Steppe

This system dominates the montane and subalpine landscape of southwestern Montana from valley bottoms to subalpine ridges and is found as far north as Glacier National Park. It can also be seen in the island mountain ranges of the north-central and south-central portions of the state. It primarily occurs on deep-soiled to stony flats, ridges, nearly flat ridgetops, and mountain slopes. In general, this system occurs in areas of gentle topography, fine soils, subsurface moisture or mesic conditions, within zones of higher precipitation and areas of snow accumulation. It occurs on all slopes and aspects, variable substrates and all soil types. The shrub component of this system is generally dominated by mountain big sagebrush (*Artemisia tridentata ssp. vaseyana*). Other co-dominant shrubs include silver sagebrush (*Artemisia cana ssp. viscidula)*, subalpine big sagebrush (*Artemisia tridentata ssp. spiciformis*), three tip sagebrush (*Artemisia tripartita* ssp*. tripartita*) and antelope bitterbrush (*Purshia tridentata*). Little sagebrush (*Artemisia arbuscula ssp. arbuscula*) shrublands are only found in southwestern Montana on sites with a perched water table. Wyoming big sagebrush (*Artemisia tridentata ssp. wyomingensis*) sites may be included within this system if occurrences are at montane elevations, and are associated with montane graminoids such as Idaho fescue (*Festuca idahoensis),* spike fescue (*Leucopoa kingii*), or poverty oatgrass (*Danthonia intermedia)*. In ares where sage has been eliminated by human activities like burning, disking or poisoning, other shrubs may be dominant, especially rubber rabbitbrush (*Ericameria nauseosa*), and green rabbitbrush (*Chrysothamnus viscidiflorus*). Because of the mesic site conditions, most occurrences support a diverse herbaceous undergrowth of grasses and forbs. Shrub canopy cover is extremely variable, ranging from 10 percent to as high as 40 or 50 percent.



6% (*1,627 Acres*)

Human Land Use

Agriculture

Cultivated Crops

These areas used for the production of crops, such as corn, soybeans, small grains, sunflowers, vegetables, and cotton, typically on an annual cycle. Agricultural plant cover is variable depending on season and type of farming. Other areas include more stable land cover of orchards and vineyards.



5% (*1,345 Acres*)

Forest and Woodland Systems

Conifer-dominated forest and woodland (xeric-mesic)

Rocky Mountain Ponderosa Pine Woodland and Savanna

This system occurs on warm, dry, exposed sites in the foothills of the Rocky Mountains in west-central and central Montana, at the ecotone between grasslands or shrublands and more mesic coniferous forests. Elevations range from 1,066 to 1,676 meters (3,500-5,500 feet), with higher elevation examples mostly confined to central Montana. Occurrences are found on all slopes and aspects; however, moderately steep to very steep slopes or ridgetops are most common. True savanna types are infrequent; the system is more characteristically an open forest with a grassy understory. In the western part of the state, this system is seen mostly on dry slopes in the rainshadow of the Bitterroot Mountains. East of the Continental Divide, it is most widespread around Helena and Lewistown, although it occurs throughout mountain ranges as far east as the Little Rocky and Bearpaw Mountains. Ponderosa pine (*Pinus ponderosa*) is the dominant conifer. Douglas-fir (*Pseudotsuga menziesii*) and western larch (*Larix occidentalis*) may be present in the tree canopy in the more western areas, but are usually absent. In central Montana, limber pine (*Pinus flexilis*) and horizontal juniper (*Juniperus horizontalis*) are frequently components. Although the understory of ponderosa pine forests is often shrubby in other states, in Montana, habitats are mostly dominated by graminoids, although bitterbrush (*Purshia tridentata*), white snowberry (*Symphoricarpos albus*), and skunkrush (*Rhus trilobata*) occur in forests on benchlands and rocky slopes in the central portion of the state. Understory vegetation is more typically grasses and forbs that resprout following low to moderate intensity surface fires. Prolonged drought, beetle kill and exotic invasion are rapidly changing the dynamics of this system.



3% (*652 Acres*)

Wetland and Riparian Systems

Floodplain and Riparian

Northern Rocky Mountain Lower Montane Riparian Woodland and Shrubland

This ecological system is found throughout the Rocky Mountain and Colorado Plateau regions. In Montana, sites occur at elevations of 609-1,219 meters (2,000-4,000 feet) west of the Continental Divide. East of the Continental Divide, this system ranges up to 1,676 meters (5,500 feet). It generally comprises a mosaic of multiple communities that are tree-dominated with a diverse shrub component. It is dependent on a natural hydrologic regime with annual to episodic flooding, so it is usually found within the flood zone of rivers, on islands, sand or cobble bars, and along streambanks. It can form large, wide occurrences on mid-channel islands in larger rivers, or narrow bands on small, rocky canyon tributaries and well-drained benches. It is also typically found in backwater channels and other perennially wet but less scoured sites, such as floodplains, swales and irrigation ditches. In some locations, occurrences extend into moderately high intermountain basins where the adjacent vegetation is sage steppe. Black cottonwood (*Populus balsamifera* ssp. *trichocarpa*) is the key indicator species. Other dominant trees may include boxelder maple (*Acer negundo*), narrowleaf cottonwood (*Populus angustifolia*), eastern cottonwood (*Populus deltoides*), Douglas-fir (*Pseudotsuga menziesii*), peachleaf willow (*Salix amygdaloides*), or Rocky Mountain juniper (*Juniperus scopulorum*). Dominant shrubs include Rocky Mountain maple (*Acer glabrum*), thinleaf alder (*Alnus incana*), river birch (*Betula occidentalis*), redoiser dogwood (*Cornus sericea*), hawthorne (*Crataegus* species), chokecherry (*Prunus virginiana*), skunkbush sumac (*Rhus trilobata*), willows (*Salix* species), rose (*Rosa* species), silver buffaloberry (*Shepherdia argentea*), or snowberry (*Symphoricarpos* species).



2% (*564*

Wetland and Riparian Systems

Wet meadow

Alpine-Montane Wet Meadow

These moderate-to-high-elevation systems are found throughout the Rocky Mountains, dominated by herbaceous

***Acres*)** species found on wetter sites with very low-velocity surface and subsurface flows. Occurrences range in elevation from montane to alpine at 1,000 to 3,353 meters (3,280-11,000 feet). This system typically occurs in cold, moist basins, seeps and alluvial terraces of headwater streams or as a narrow strip adjacent to alpine lakes (Hansen et al., 1996). Wet meadows are typically found on flat areas or gentle slopes, but may also occur on sub-irrigated sites with slopes up to 10 percent. In alpine regions, sites are typically small depressions located below late-melting snow patches or on snowbeds. The growing season may only last for one to two months. Soils of this system may be mineral or organic. In either case, soils show typical hydric soil characteristics, including high organic content and/or low chroma and redoximorphic features. This system often occurs as a mosaic of several plant associations, often dominated by graminoids such as tufted hairgrass (*Deschampsia caespitosa*), and a diversity of montane or alpine sedges such as small-head sedge (*Carex illota*), small-winged sedge (*Carex microptera*), black alpine sedge (*Carex nigricans*), Holmâ €™s Rocky Mountain sedge (*Carex scopulorum*) shortstalk sedge (*Carex podocarpa*) and Paysonâ€™s sedge (*Carex paysonis*). Drummondâ€™s rush (*Juncus drummondii*), Mertenâ€™s rush (*Juncus mertensianus*), and high elevation bluegrasses (*Poa arctica* and *Poa alpina*) are often present. Forbs such as arrow-leaf groundsel (*Senecio triangularis*), slender-sepal marsh marigold (*Caltha leptosepala*), and spreading globeflower (*Trollius laxus*) often form high cover in higher elevation meadows. Wet meadows are associated with snowmelt and are usually not subjected to high disturbance events such as flooding.

2%
(*464 Acres*)

Human Land Use
Developed

Other Roads

County, city and or rural roads generally open to motor vehicles.

2%
(*443 Acres*)

Human Land Use
Developed

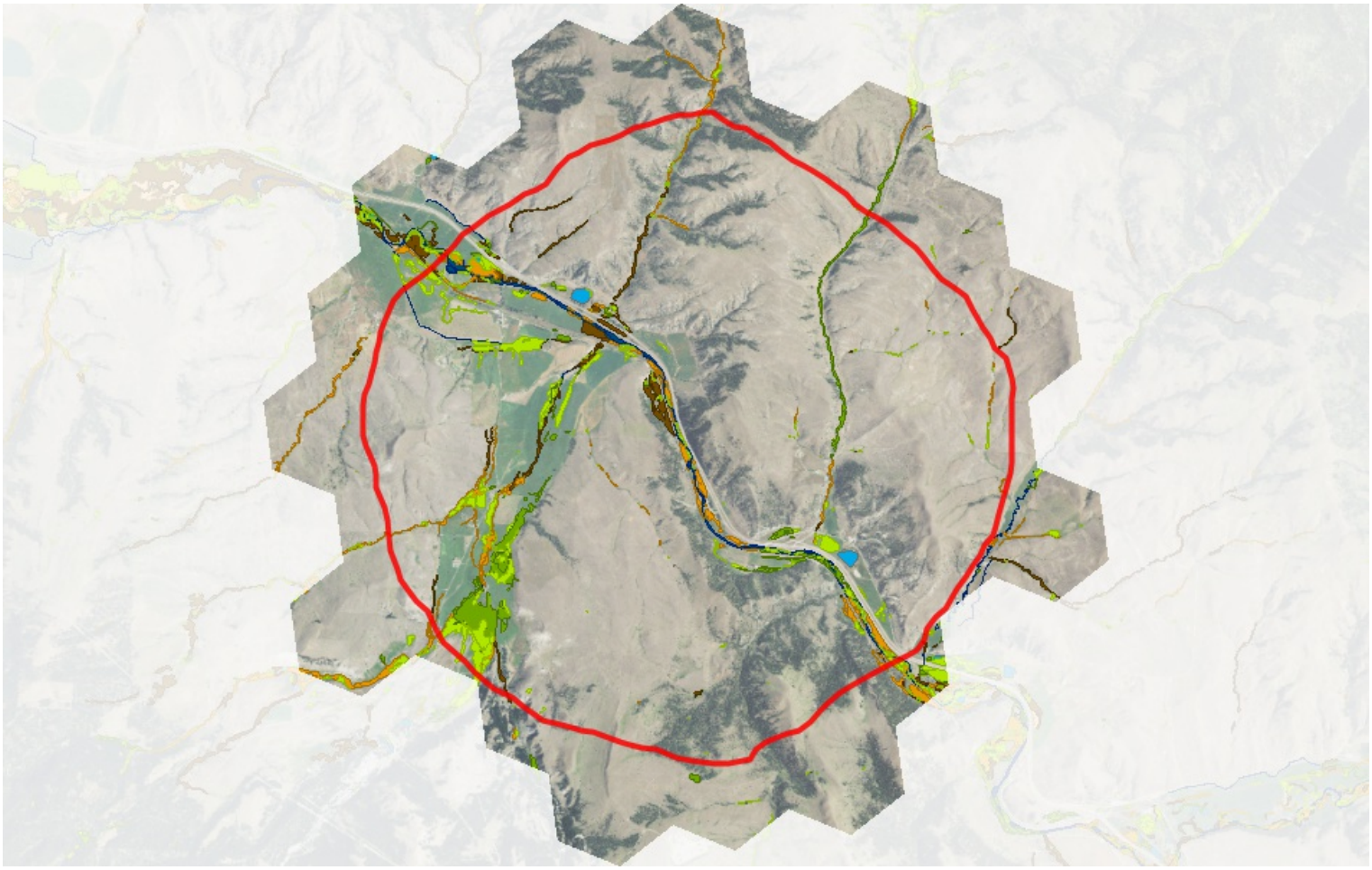
Interstate

National Highway System (NHS) limited access highways and their shoulders and rights of way.



Latitude	Longitude
46.51104	-112.81393
46.63055	-112.96951

Wetland Summary



25,557 Acres (0.03% of Montana)

Notes on Appropriate Uses of Wetland and Riparian Mapping

Federal, State, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands differently than the NWI. MTNHP Wetland and Riparian Mapping data are intended for use in publications at a scale of 1:12,000 or smaller. Historic wetland mapping is intended for use in publications at a scale of 1:24,000 or smaller. Mapped wetlands do not represent precise wetland boundaries, and digital wetland data cannot substitute for an on-site determination of jurisdictional wetlands.

Wetland and Riparian Mapping

Explain

		Acres	
Palustrine			
PAB	Aquatic Bed	35	Wetlands with vegetation growing on or below the water surface for most of the growing season.
PUS	Unconsolidated Shore	<1	Wetlands with less than 75% areal cover of stones, boulders, or bedrock. AND with less than 30% vegetative cover AND the wetland is irregularly exposed due to seasonal or irregular flooding and subsequent drying.
PEM	Emergent	384	Wetlands with erect, rooted herbaceous vegetation present during most of the growing season.
PSS	Scrub-Shrub	224	Wetlands dominated by woody vegetation less than 6 meters (20 feet) tall. Woody vegetation includes tree saplings and trees that are stunted due to environmental conditions.
Riverine (Rivers)			
Lower Perennial			
R2UB	Unconsolidated Bottom	88	Stream channels where the substrate is at least 25% mud, silt or other fine particles.
R2US	Unconsolidated Shore	32	Shorelines with less than 75% areal cover of stones, boulders, or bedrock and less than 30% vegetation cover. The area is also irregularly exposed due to seasonal or irregular flooding and subsequent

			drying.
Intermittent			
R4SB	Streambed	16	Active channel that contains periodic water flow.
Riparian			
Lotic			
Rp1SS	Scrub-Shrub	275	This type of riparian area is dominated by woody vegetation that is less than 6 meters (20 feet) tall. Woody vegetation includes tree saplings and trees that are stunted due to environmental conditions.
Rp1FO	Forested	185	This riparian class has woody vegetation that is greater than 6 meters (20 feet) tall.
Rp1EM	Emergent	1	Riparian areas that have erect, rooted herbaceous vegetation during most of the growing season.



Latitude	Longitude
46.51104	-112.81393
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Land Management Summary



25,557 Acres (0.03% of Montana)

Land Management Summary *Explain*

	Ownership	Tribal	Easements	Other Boundaries (possible overlap)
Public Lands	**1,577 Acres (6%)**			
Federal	**217 Acres (1%)**			
US Bureau of Land Management	**217 Acres (1%)**			
BLM Owned	**217 Acres (1%)**			
State	**1,359 Acres (5%)**			
Montana State Trust Lands	**1,294 Acres (5%)**			
MT State Trust Owned	**1,294 Acres (5%)**			
Montana Department of Corrections	**65 Acres (<1%)**			
MTDOC Owned	**65 Acres (<1%)**			
MTDOC Experimental Areas				**65 Acres**
Deer Lodge State Prison Ranch				65 Acres
Local	**1 Acres (<1%)**			
Local Government	**1 Acres (<1%)**			
Local Government Owned	**1 Acres (<1%)**			
Conservation Easements			**294 Acres (1%)**	
Private			**294 Acres (1%)**	
Five Valleys Land Trust			**294 Acres (1%)**	
Private Lands or Unknown Ownership	**23,686 Acres (93%)**			



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Biological Reports

Within the report area you have requested, citations for all reports and publications associated with plant or animal observations in Montana Natural Heritage Program (MTNHP) databases are listed and, where possible, links to the documents are included.

The MTNHP plans to include reports associated with terrestrial and aquatic communities in the future as allowed for by staff resources. If you know of reports or publications associated with species or biological communities within the report area that are not shown in this report, please let us know: mtnhp@mt.gov

Introduction to Montana Natural Heritage Program

P.O. Box 201800 • 1515 East Sixth Avenue • Helena, MT 59620-1800 • fax 406.444.0266 • tel 406.444.0241 • mtnhp.org

Introduction

The Montana Natural Heritage Program (MTNHP) is Montana's source for reliable and objective information on Montana's native species and habitats, emphasizing those of conservation concern. MTNHP was created by the Montana legislature in 1983 as part of the Natural Resource Information System (NRIS) at the Montana State Library (MSL). MTNHP is "a program of information acquisition, storage, and retrieval for data relating to the flora, fauna, and biological community types of Montana" (MCA 90-15-102). MTNHP's activities are guided by statute (MCA 90-15) as well as through ongoing interaction with, and feedback from, principal data source agencies such as Montana Fish, Wildlife, and Parks, the Montana Department of Environmental Quality, the Montana Department of Natural Resources and Conservation, the Montana University System, the US Forest Service, and the US Bureau of Land Management. The enabling legislation for MTNHP provides the State Library with the option to contract the operation of the Program. Since 2006, MTNHP has been operated as a program under the Office of the Vice President for Research and Creative Scholarship at the University of Montana (UM) through a renewable 2-year contract with the MSL. Since the first staff was hired in 1985, the Program has logged a long record of success, and developed into a highly respected, service-oriented program. MTNHP is widely recognized as one of the most advanced and effective of over 80 natural heritage programs throughout the Western Hemisphere.

Vision

Our vision is that public agencies, the private sector, the education sector, and the general public will trust and rely upon MTNHP as the source for information and expertise on Montana's species and habitats, especially those of conservation concern. We strive to provide easy access to our information in order for users to save time and money, speed environmental reviews, and inform decision making.

Core Values

- We endeavor to be a single statewide source of accurate and up-to-date information on Montana's plants, animals, and aquatic and terrestrial biological communities.
- We actively listen to our data users and work responsively to meet their information and training needs.
- We strive to provide neutral, trusted, timely, and equitable service to all of our information users.
- We make every effort to be transparent to our data users in setting work priorities and providing data products.

Confidentiality

All information requests made to the Montana Natural Heritage Program are considered library records and are protected from disclosure by the Montana Library Records Confidentiality Act (MCA 22-1-11).

Information Managed

Information managed at the Montana Natural Heritage Program includes: (1) lists of, and basic information on, plant and animal species and biological communities; (2) plant and animal surveys, observations, species occurrences, predictive distribution models, range polygons, and conservation status ranks; and (3) land cover and wetland and riparian mapping and the conservation status of these and other biological communities.

Data Use Terms and Conditions

- Montana Natural Heritage Program (MTNHP) products and services are based on biological data and the objective interpretation of those data by professional scientists. MTNHP does not advocate any particular philosophy of natural resource protection, management, development, or public policy.
- MTNHP has no natural resource management or regulatory authority. Products, statements, and services from MTNHP are intended to inform parties as to the state of scientific knowledge about certain natural resources, and to further develop that knowledge. The information is not intended as natural resource management guidelines or prescriptions or a determination of environmental impacts. MTNHP recommends consultation with appropriate state, federal, and tribal resource management agencies and authorities in the area where your project is located.
- Information on the status and spatial distribution of biological resources produced by MTNHP are intended to inform parties of the state-wide status, known occurrence, or the likelihood of the presence of those resources. **These products are not intended to substitute for field-collected data, nor are they intended to be the sole basis for natural resource management decisions.**
- MTNHP does not portray its data as exhaustive or comprehensive inventories of rare species or biological communities. **Field verification of the absence or presence of sensitive species and biological communities will always be an important obligation of users of our data.**
- MTNHP responds equally to all requests for products and services, regardless of the purpose or identity of the requester.
- Because MTNHP constantly updates and revises its databases with new data and information, products will become outdated over time. Interested parties are encouraged to obtain the most current information possible from MTNHP, rather than using older products. We add, review, update, and delete records on a daily basis. Consequently, we strongly advise that you update your MTNHP data sets at a minimum of every three months for most applications of our information.
- MTNHP data require a certain degree of biological expertise for proper analysis, interpretation, and application. Our staff is available to advise you on questions regarding the interpretation or appropriate use of the data that we provide. Contact information for MTNHP staff is posted at: http://mtnhp.org/contact.asp
- The information provided to you by MTNHP may include sensitive data that if publicly released might jeopardize the welfare of threatened, endangered, or sensitive species or biological communities. This information is intended for distribution or use only within your department, agency, or business. Subcontractors may have access to the data during the course of any given project, but should not be given a copy for their use on subsequent, unrelated work.
- MTNHP data are made freely available. Duplication of hard-copy or digital MTNHP products with the intent to sell is prohibited without written consent by MTNHP. Should you be asked by individuals outside your organization for the type of data that we provide, please refer them to MTNHP.
- MTNHP and appropriate staff members should be appropriately acknowledged as an information source in any third-party product involving MTNHP data, reports, papers, publications, or in maps that incorporate MTNHP graphic elements.
- Sources of our data include museum specimens, published and unpublished scientific literature, field surveys by state and federal agencies and private contractors, and reports from knowledgeable individuals. MTNHP actively solicits and encourages additions, corrections and updates, new observations or collections, and comments on any of the data we provide.
- MTNHP staff and contractors do not cross or survey privately-owned lands without express permission from the landowner. However, the program cannot guarantee that information provided to us by others was obtained under adherence to this policy.

Suggested Contacts for State & Federal Natural Resource Agencies

As required by Montana statute (MCA 90-15), the Montana Natural Heritage Program works with state, federal, tribal, nongovernmental organizations, and private partners to ensure that the latest animal and plant distribution and status information is incorporated into our databases so that it can be used to inform a variety of planning processes and management decisions. In addition to the information you receive from us, we encourage you to contact state, federal, and tribal resource management agencies in the area where your project is located. They may have additional data or management guidelines relevant to your efforts. In particular, we encourage you to contact the Montana Department of Fish, Wildlife, and Parks for the latest data and management information regarding hunted and high profile management species and to use the U.S. Fish and Wildlife Service's Information Planning and Conservation (IPAC) website http://ecos.fws.gov/ipac/ regarding U.S. Endangered Species Act listed Threatened, Endangered, or Candidate species.

For your convenience, we have compiled a list of relevant agency contacts and links below:

Montana Fish, Wildlife, and Parks

Fish Species	Zachary Shattuck zshattuck@mt.gov (406) 444-1231 or Lee Nelson leenelson@mt.gov (406) 444-2447
American Bison Black-footed Ferret Black-tailed Prairie Dog Bald Eagle Golden Eagle Common Loon Least Tern Piping Plover Whooping Crane	Lauri Hanauska-Brown LHanauska-Brown@mt.gov (406) 444-5209
Grizzly Bear Greater Sage Grouse Trumpeter Swan Big Game Upland Game Birds Furbearers	John Vore jvore@mt.gov (406) 444-5209
Managed Terrestrial Game and Nongame Animal Data	Adam Messer – MFWP Data Analyst amesser@mt.gov (406) 444-0095
Fisheries Data	Bill Daigle – MFWP Fish Data Manager bdaigle@mt.gov (406) 444-3737
Wildlife and Fisheries Scientific Collector's Permits	http://fwp.mt.gov/doingBusiness/licenses/scientificWildlife/ Merissa Hayes for Wildlife merhayes@mt.gov (406) 444-7321 Beth Giddings for Fisheries begiddings@mt.gov (406) 444-7319
Fish and Wildlife Recommendations for Subdivision Development	Renee Lemon RLemon@mt.gov (406) 444-3738 and see http://fwp.mt.gov/fishAndWildlife/livingWithWildlife/buildingWithWildlife/subdivisionRecommendations/
Regional Contacts  	Region 1 (Kalispell) (406) 752-5501 Region 2 (Missoula) (406) 542-5500 Region 3 (Bozeman) (406) 994-4042 Region 4 (Great Falls) (406) 454-5840 Region 5 (Billings) (406) 247-2940 Region 6 (Glasgow) (406) 228-3700 Region 7 (Miles City) (406) 234-0900

United States Fish and Wildlife Service:
Information Planning and Conservation (IPAC) website: http://ecos.fws.gov/ipac/
Montana Ecological Services Field Office: http://www.fws.gov/montanafieldoffice/ (406) 449-5225

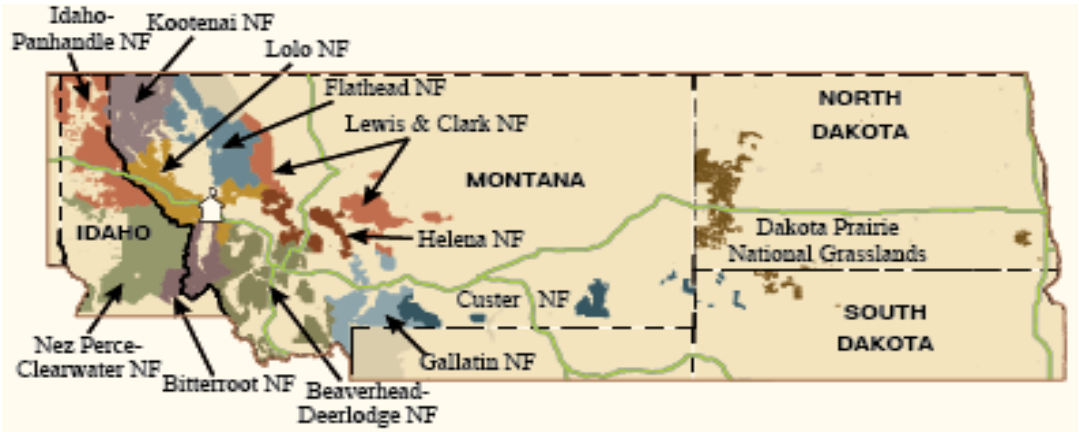
Bureau of Land Management

Montana Field Office Contacts:



Billings	(406) 896-5013
Butte	(406) 533-7600
Dillon	(406) 683-8000
Glasgow	(406) 228-3750
Havre	(406) 262-2820
Lewistown	(406) 538-1900
Malta	(406) 654-5100
Miles City	(406) 233-2800
Missoula	(406) 329-3914

United States Forest Service



Regional Office – Missoula, Montana Contacts

Wildlife Program Leader	Tammy Fletcher	tammyfletcher@fs.fed.us	(406) 329-3588
Wildlife Ecologist	Cara Staab	cstaab@fs.fed.us	(406) 329-3677
Fish Program Leader	Scott Spaulding	scottspaulding@fs.fed.us	(406) 329-3287
Fish Ecologist	Cameron Thomas	cathomas@fs.fed.us	(406) 329-3087
TES Program	Lydia Allen	lrallen@fs.fed.us	(406) 329-3558
Interagency Grizzly Bear Coordinator	Scott Jackson	sjackson03@fs.fed.us	(406) 329-3664
Regional Botanist	Steve Shelly	sshelly@fs.fed.us	(406) 329-3041

Introduction to Species Summary

Within the report area you have requested, separate summaries are provided for: (1) Species Occurrences (SO) for plant and animal Species of Concern, Special Status Species (SSS), Important Animal Habitat (IAH) and some Potential Plant Species of Concern; (2) other observed species without suitable documentation to create Species Occurrence polygons; and (3) other species potentially present based on their range, presence of associated habitats, or predictive distribution model output if available. Each of these summaries provides the following information when present for a species: (1) the number of Species Occurrences and associated delineation criteria for construction of these polygons that have long been used for considerations of documented species in environmental reviews; (2) the number of observations of each species; (3) the geographic range polygons for each species that the report area overlaps; (4) predicted relative habitat suitability classes that are present if a predicted distribution model has been created; (5) the percent of the report area that is mapped as commonly associated or occasionally associated habitat as listed for each species in the Montana Field Guide; and (6) a variety of conservation status ranks and links. Details on each of these information categories are included under relevant section headers below or are defined on our Species Status Codes page. In presenting this information, the Montana Natural Heritage Program (MTNHP) is working towards assisting the user with rapidly determining what species have been documented and what species are potentially present in the report area. We remind users that this information is likely incomplete as surveys to document native and introduced species are lacking in many areas of the state, information on introduced species has only been tracked relatively recently, the MTNHP's staff and resources are restricted by declining budgets, and information is constantly being added and updated in our databases. **Thus, field verification by professional biologists of the absence or presence of species and biological communities will always be an important obligation of users of our data.**

If you are aware of observation datasets that the MTNHP is missing, please report them to the Program Botanist apipp@mt.gov or Senior Zoologist dbachen@mt.gov. If you have observations that you would like to contribute, you can submit animal observations using our online data entry system at http://mtnhp.org/AddObs/, plant and animal observations via Excel spreadsheets posted at http://mtnhp.org/observations.asp , or to the Program Botanist or Senior Zoologist.

Observations

The MTNHP manages information on more than 1.8 million animal and plant observations that have been reported by professional biologists and private citizens from across Montana. The majority of these observations are submitted in digital format from standardized databases associated with research or monitoring efforts and spreadsheets of incidental observations submitted by professional biologists and amateur naturalists. At a minimum, accepted observation records must contain a credible species identification (i.e. appropriate geographic range, date, and habitat and, if species are difficult to identify, a photograph and notes on key identifying features), a date or date range, observer name, locational information (ideally with latitude and longitude in decimal degrees), notes on numbers observed, and species behavior or habitat use (e.g., is the observation likely associated with reproduction). Bird records are also required to have information associated with date-appropriate breeding or overwintering status of the species observed. MTNHP reviews observation records to ensure that they are mapped correctly, occur within date ranges when the species is known to be present or detectable, occur within the known seasonal geographic range of the species, and occur in appropriate habitats. MTNHP also assigns each record a locational uncertainty value in meters to indicate the spatial precision associated with the record's mapped coordinates. Only records with locational uncertainty values of 10,000 meters or less are included in environmental summary reports and number summaries are only provided for records with locational uncertainty values of 1,000 meters or less.

Species Occurrences

The MTNHP evaluates plant and animal observation records for species of higher conservation concern to determine whether they are worthy of inclusion in the Species Occurrence (SO) layer for use in environmental reviews; observations not worthy of inclusion in this layer include long distance dispersal events, migrants observed away from key migratory stopover habitats, and winter observations. An SO is a polygon depicting what is known about a species occupancy from direct observation with a defined level of locational uncertainty and any inference that can be made about adjacent habitat use from the latest peer-reviewed science. If an observation can be associated with a map feature that can be tracked (e.g., a wetland boundary for a wetland associated plant) then this polygon feature is used to represent the SO. Areas that can be inferred as probable occupied habitat based on direct observation of a species location and what is known about the foraging area or home range size of the species may be incorporated into the SO. Species Occurrences generally belong to one of the following categories:

Plant Species Occurrences

A documented location of a specimen collection or observed plant population. In some instances, adjacent, spatially separated clusters are considered subpopulations and are grouped as one occurrence (e.g., the subpopulations occur in ecologically similar habitats, and their spatial proximity likely allows them to interbreed). Tabular information for multiple observations at the same SO location is generally linked to a single polygon. Plant SO's are only created for Species of Concern and Potential Species of Concern.

Animal Species Occurrences

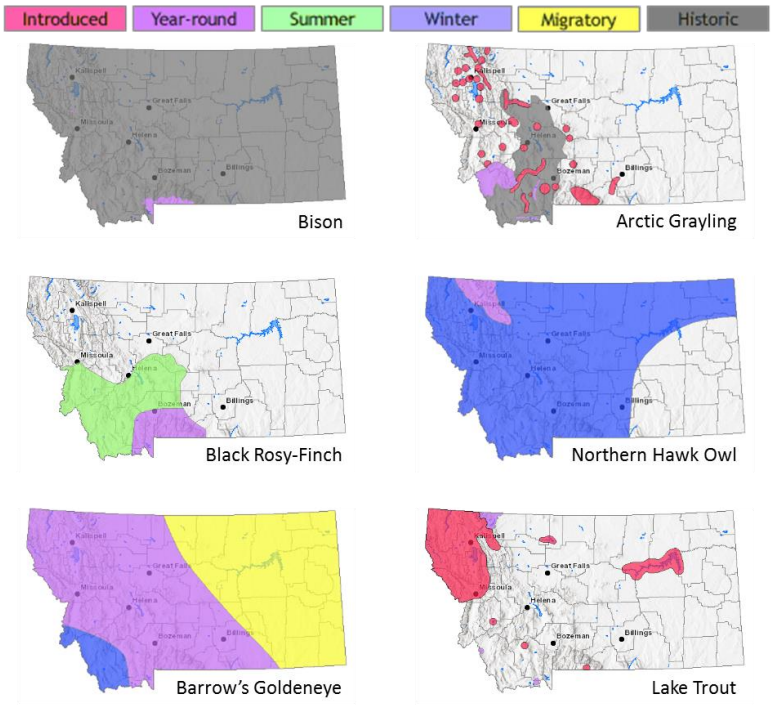
The location of a verified observation or specimen record typically known or assumed to represent a breeding population or a portion of a breeding population. Animal SO's are generally: (1) buffers of terrestrial point observations based on documented species' home range sizes; (2) buffers of stream segments to encompass occupied streams and immediate adjacent riparian habitats; (3) polygonal features encompassing known or likely breeding populations (e.g., a wetland for some amphibians or a forested portion of a mountain range for some wide ranging carnivores); or (4) combinations of the above. Tabular information for multiple observations at the same SO location is generally linked to a single polygon. Species Occurrence polygons may encompass some unsuitable habitat in some instances in order to avoid heavy data processing associated with clipping out habitats that are readily assessed as unsuitable by the data user (e.g., a point buffer of a terrestrial species may overlap into a portion of a lake that is obviously inappropriate habitat for the species). Animal SO's are only created for Species of Concern and Special Status Species (e.g., Bald Eagle).

Other Occurrence Polygons

These include significant biological features not included in the above categories, such as Important Animal Habitats like bird rookeries and bat roosts, and peatlands or other wetland and riparian communities that support diverse plant and animal communities.

Geographic Range Polygons

Geographic range polygons have not yet been defined for most plant species. Native year-round, summer, winter, migratory and historic geographic range polygons as well as polygons for introduced populations have been defined for most animal species for which there are enough observations, surveys, and knowledge of appropriate seasonal habitat use to define them (see examples to left). These native or introduced range polygons bound the extent of known or likely occupied habitats for non-migratory and relative sedentary species and the regular extent of known or likely occupied habitats for migratory and long-distance dispersing species; polygons may include unsuitable intervening habitats. For most species, a single polygon can represent the year-round or seasonal range, but breeding ranges of some colonial nesting water birds and some introduced species are represented more patchily when supported by data. Some ranges are mapped more broadly than actual distributions in order to be visible on statewide maps (e.g., fish).



Predictive Distribution Models

Recent predictive distribution models have not yet been created for most plant species. For animal species for which models have been completed, the environmental summary report includes simple, rule-based, associations with streams for fish and other aquatic species and mathematically complex Maximum Entropy models (Phillips et al. 2006, Ecological Modeling 190:231-259) constructed from a variety of statewide biotic and abiotic layers and presence only data for individual species contributed to Montana Natural Heritage Program databases for most terrestrial species. For the Maximum Entropy models, we reclassified 90 x 90-meter continuous model output into suitability classes (unsuitable, low, moderate, and high) then aggregated that into the one square mile hexagons used in the environmental summary report; this is the finest spatial scale we suggest using this information for management decisions and survey planning. Full model write ups for individual species that discuss model goals, inputs, outputs, and evaluation in much greater detail are posted on the MTNHP's Predicted Suitable Habitat Models page. Evaluations of predictive accuracy and specific limitations are included with the metadata for models of individual species. **Model outputs should not be used in place of on-the-ground surveys for species. Instead model outputs should be used in conjunction with habitat evaluations to determine the need for on-the-ground surveys for species.**

Associated Habitats

Within the boundary of the intersected hexagons, we provide an approximate percentage of the area that is commonly or occasionally associated habitat for vertebrate animal species that regularly breed, overwinter, or migrate through the state; a detailed listed of commonly and occasionally associated habitats is provided in individual species accounts in the Montana Field Guide. We assigned common or occasional use of each of the 82 ecological systems mapped in Montana by: (1) using personal knowledge and reviewing literature that summarize the breeding, overwintering, or migratory habitat requirements of each species; (2) evaluating structural characteristics and distribution of each ecological system relative to the species' range and habitat requirements; (3) examining the observation records for each species in the state-wide point observation database associated with each ecological system; and (4) calculating the percentage of observations

associated with each ecological system relative to the percent of Montana covered by each ecological system to get a measure of observations versus availability of habitat. Species that breed in Montana were only evaluated for breeding habitat use, species that only overwinter in Montana were only evaluated for overwintering habitat use, and species that only migrate through Montana were only evaluated for migratory habitat use. In general, species were listed as associated with an ecological system if structural characteristics of used habitat documented in the literature were present in the ecological system or large numbers of point observations were associated with the ecological system. However, species were not listed as associated with an ecological system if there was no support in the literature for use of structural characteristics in an ecological system, even if point observations were associated with that system. Common versus occasional association with an ecological system was assigned based on the degree to which the structural characteristics of an ecological system matched the preferred structural habitat characteristics for each species as represented in scientific literature. The percentage of observations associated with each ecological system relative to the percent of Montana covered by each ecological system was also used to guide assignment of common versus occasional association.

We suggest that percentages of the reporting area as commonly or occasionally associated habitat be used in conjunction with geographic range polygons and predictive distribution models to generate lists of potential species that may occupy broader landscapes for the purposes of landscape-level planning. Users of this information should be aware that land cover mapping accuracy is particularly problematic when the systems occur as small patches or where the land cover types have been altered over the past decade. Thus, particular caution should be used when using the associations in assessments of smaller areas (e.g., evaluations of public land survey sections).

Introduction to Land Cover Summary

Land Use/Land Cover is one of 15 Montana Spatial Data Infrastructure framework layers considered vital for making statewide maps of Montana and understanding its geography. The layer records all Montana natural vegetation, land cover and land use, classified from satellite and aerial imagery, mapped at a scale of 1:100000, and interpreted with supporting ground-level data. The baseline map is adapted from the Northwest ReGAP (NWGAP) project land cover classification, which used 30m resolution multi-spectral Landsat imagery acquired between 1999 and 2001. Vegetation classes were drawn from the Ecological System Classification developed by NatureServe (Comer et al. 2003). The land cover classes were developed by Anderson et al. (1976). The NWGAP effort encompasses 12 map zones. Montana overlaps seven of these zones. The two NWGAP teams responsible for the initial land cover mapping effort in Montana were Sanborn and NWGAP at the University of Idaho. Both Sanborn and NWGAP employed a similar modeling approach in which Classification and Regression Tree (CART) models were applied to Landsat ETM+ scenes. The Spatial Analysis Lab within the Montana Natural Heritage Program was responsible for developing a seamless Montana land cover map with a consistent statewide legend from these two separate products. Additionally, the Montana land cover layer incorporates several other land cover and land use products (e.g., MSDI Structures and Transportation themes and the Montana Department of Revenue Final Land Unit classification) and reclassifications based on plot-level data and the latest NAIP imagery to improve accuracy and enhance the usability of the theme. Updates are done as partner support and funding allow, or when other MSDI datasets can be incorporated. Recent updates include fire perimeters and agricultural land use (annually), energy developments such as wind, oil and gas installations (2014), roads, structures and other impervious surfaces (various years): and local updates/improvements to specific ecological systems (e.g., central Montana grassland and sagebrush ecosystems). Current and previous versions of the Land Use/Land Cover layer with full metadata are available for download at the Montana State Library's Geographic Information Clearinghouse.

Within the report area you have requested, land cover is summarized by acres of Level 1, Level 2, and Level 3 Ecological Systems.

Literature Cited

Anderson, J.R. E.E. Hardy, J.T. Roach, and R.E. Witmer. 1976. A land use and land cover classification system for use with remote sensor data. U.S. Geological Survey Professional Paper 964.

Comer, P., D. Faber-Langendoen, R. Evans, S. Gawler, C. Josse, G. Kittel, S. Menard, M. Pyne, M. Reid, K. Schulz, K. Snow, and J. Teague. 2003. Ecological systems of the United States: A working classification of U.S. terrestrial systems. NatureServe, Arlington, VA.

Introduction to Wetland and Riparian Summary

Within the report area you have requested, wetland and riparian mapping is summarized by acres of each classification present. Summaries are only provided for modern MTNHP wetland and riparian mapping and not for outdated (NWI Legacy) or incomplete (NWI Scalable) mapping efforts; described here. MTNHP has made all three of these datasets and associated metadata available for separate download on the Montana Wetland and Riparian Framework MSDI download page.

Wetland and Riparian mapping is one of 15 Montana Spatial Data Infrastructure framework layers considered vital for making statewide maps of Montana and understanding its geography. The wetland and riparian framework layer consists of spatial data representing the extent, type, and approximate location of wetlands, riparian areas, and deepwater habitats in Montana.

Wetland and riparian mapping is completed through photointerpretation of 1-m resolution color infrared aerial imagery acquired from 2005 or later. A coding convention using letters and numbers is assigned to each mapped wetland. These letters and numbers describe the broad landscape context of the wetland, its vegetation type, its water regime, and the kind of alterations that may have occurred. Ancillary data layers such as topographic maps, digital elevation models, soils data, and other aerial imagery sources are also used to improve mapping accuracy. Wetland mapping follows the federal Wetland Mapping Standard and classifies wetlands according to the Cowardin classification system of the National Wetlands Inventory (NWI) (Cowardin et al. 1979, FGDC Wetlands Subcommittee 2013). Federal, State, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands differently than the NWI. Similar coding, based on U.S. Fish and Wildlife Service conventions, is applied to riparian areas (U.S. Fish and Wildlife Service 2009). These are mapped areas where vegetation composition and growth is influenced by nearby water bodies, but where soils, plant communities, and hydrology do not display true wetland characteristics. **These data are intended for use in publications at a scale of 1:12,000 or smaller. Mapped wetland and riparian areas do not represent precise boundaries and digital wetland data cannot substitute for an on-site determination of jurisdictional wetlands.**

A detailed overview, with examples, of both wetland and riparian classification systems and associated codes can be found at: http://mtnhp.org/help/MapViewer/WetRip_Classification.asp

Literature Cited

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. U.S. Fish and Wildlife Service, FWS/OBS-79/31. Washington, D.C. 103pp.

Federal Geographic Data Committee. 2013. Classification of wetlands and deepwater habitats of the United States. FGDC-STD-004-2013. Second Edition. Wetlands Subcommittee, Federal Geographic Data Committee and U.S. Fish and Wildlife Service, Washington, D.C.

U.S. Fish and Wildlife Services. 2009. A system for mapping riparian areas in the western United States. Division of Habitat and Resource Conservation, Branch of Resource and Mapping Support, Arlington, Virginia.

Introduction to Land Management Summary

Within the report area you have requested, land management information is summarized by acres of federal, state, and local government lands, tribal reservation boundaries, private conservation lands, and federal, state, local, and private conservation easements. Acreage for "Owned", "Tribal", or "Easement" categories represents non-overlapping areas that may be totaled. However, "Other Boundaries" represents managed areas such as National Forest boundaries containing private inholdings and other mixed ownership which may cause boundaries to overlap (e.g. a wilderness area within a forest). Therefore, acreages may not total in a straight-forward manner.

Because information on land stewardship is critical to effective land management, the Montana Natural Heritage Program (MTNHP) began compiling ownership and management data in 1997. The goal of the Montana Land Management Database is to manage a single, statewide digital data set that incorporates information from both public and private entities. The database assembles information on public lands, private conservation lands, and conservation easements held by state and federal agencies and land trusts and is updated on a regular basis. Since 2011, the Information Management group in the Montana State Library's Digital Library Division has taken an increasingly active role in managing layers of the Montana Land Management Database in partnership with the MTNHP.

Public and private conservation land polygons are attributed with the name of the entity that owns it. The data are derived from the statewide Montana Cadastral Parcel layer. Conservation easement data shows land parcels on which a public agency or qualified land trust has placed a conservation easement in cooperation with the land owner. The dataset contains no information about ownership or status of the mineral estate. For questions about the dataset or to report errors, please contact the Montana Natural Heritage Program at (406) 444-5354 or mtnhp@mt.gov. You can download various components of the Land Management Database and view associated metadata at the Montana State Library's GIS Data List at the following links:

Public Lands
Conservation Easements
Private Conservation Lands
Managed Areas

Map features in the Montana Land Management Database or summaries provided in this report are not intended as a legal depiction of public or private surface land ownership boundaries and should not be used in place of a survey conducted by a licensed land surveyor. Similarly, map features do not imply public access to any lands. The Montana Natural Heritage Program makes no representations or warranties whatsoever with respect to the accuracy or completeness of this data and assumes no responsibility for the suitability of the data for a particular purpose. The Montana Natural Heritage Program will not be liable for any damages incurred as a result of errors displayed here. Consumers of this information should review or consult the primary data and information sources to ascertain the viability of the information for their purposes.

Additional Information Resources

Home Page for Montana Natural Heritage Program (MTNHP)

MTNHP Staff Contact Information

Montana Field Guide

MTNHP Species of Concern Report - Animals and Plants

MTNHP Species Status Codes - Explanation

MTNHP Predicted Suitable Habitat Models (for select Animals and Plants)

MTNHP Request Information page

Montana Cadastral

Montana Code Annotated

Montana Department of Environmental Quality

Montana Fisheries Information System

Montana Fish, Wildlife, and Parks Subdivision Recommendations

Montana GIS Data Layers

Montana GIS Data Bundler

Montana Greater Sage-Grouse Project Submittal Site

Montana Ground Water Information Center

Montana Legislative Environmental Policy Office Publications
(Including Index of Environmental Permits required in Montana and Guide to the Montana Environmental Policy Act)

Laws, Treaties, Regulations, and Permits on Animals and Plants

Montana Spatial Data Infrastructure Layers

Montana State Historic Preservation Office Review and Compliance

Montana Water Information System

Montana Web Map Services

National Environmental Policy Act

U.S. Fish and Wildlife Service Information for Planning and Conservation (Section 7 Consultation)

Web Soil Survey Tool

MONTANA
Natural Heritage Program

A program of the Montana State Library's Natural Resource Information System operated by the University of Montana.

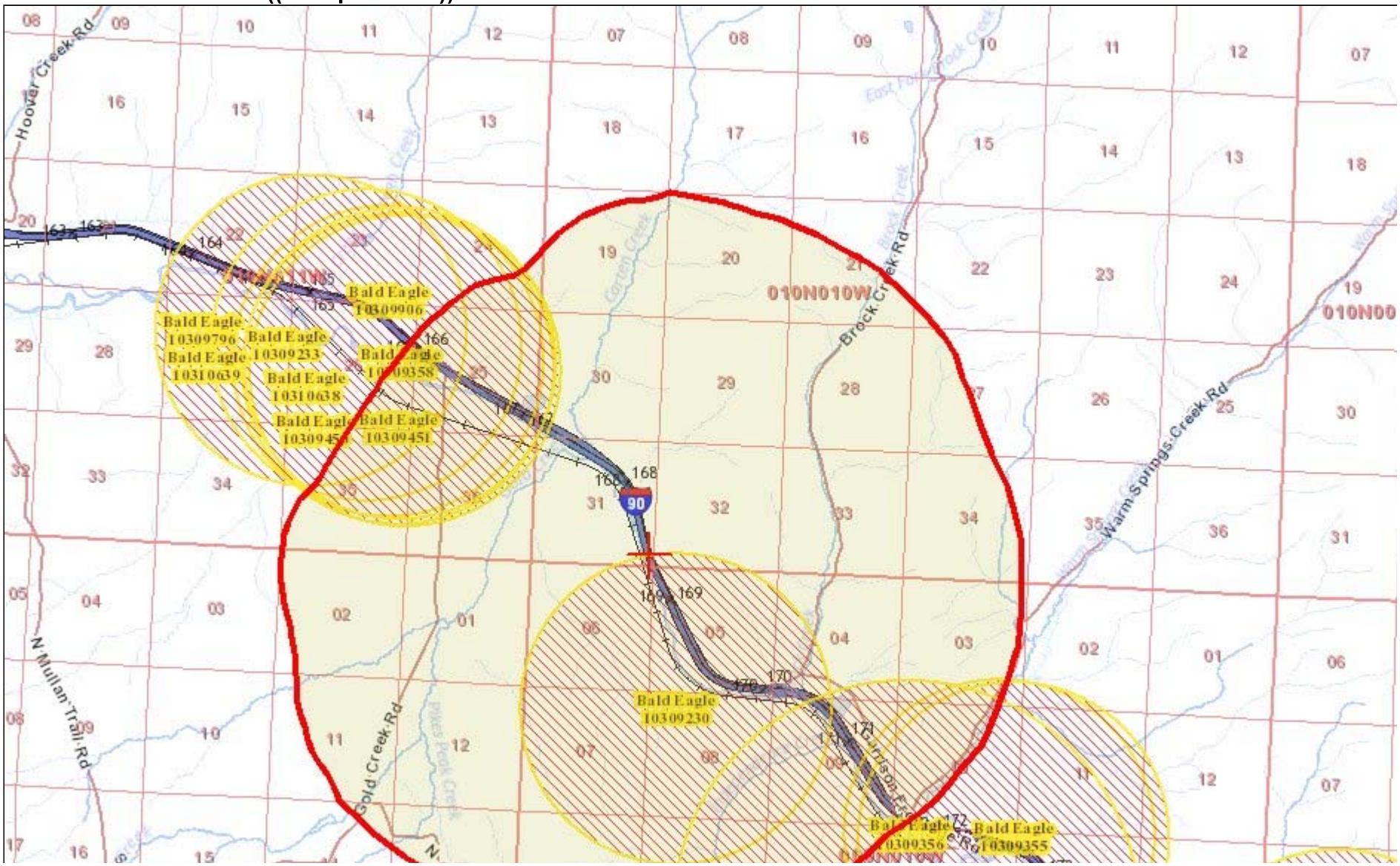
Latitude	Longitude
46.50076	-112.69774
46.63858	-113.04810

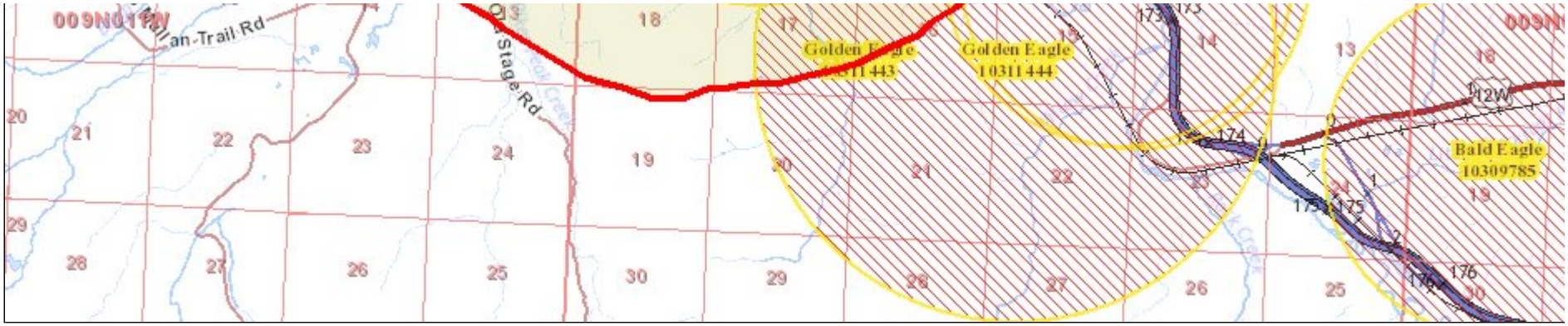


Montana SOC Occurrences Report

Report generated 5/11/2017 4:24:40 PM

SOC Occurrences for ((Multiple Birds))





Birds - Bald Eagle *(Haliaeetus leucocephalus)*

SO Count: 15 **Obs Count**: 99 **Earliest Obs**: 1986 **Recent Obs**: 2016

Special Status Species	Agency Status	Delineation Criteria	Last Updated
Global Rank: G5 **State Rank**: S4	**USFWS**: DM; BGEPA; MBTA; BCC10; BCC11; BCC17 **USFS**: SENSITIVE **BLM**: SENSITIVE **FWP SWAP**: **PIF**: 2	Confirmed nesting area buffered by a minimum distance of 2,000 meters in order to be conservative about encompassing the breeding territory and area commonly used for renesting and otherwise buffered by the locational uncertainty associated with the observation up to a maximum distance of 10,000 meters.	Mar 23, 2017

SO ID: 10309230	**Acres**: 3,105	**Obs Count**: 10	**Earliest Obs**: 2006	**Recent Obs**: 2016
SO ID: 10309233	**Acres**: 3,105	**Obs Count**: 3	**Earliest Obs**: 2000	**Recent Obs**: 2005
SO ID: 10309355	**Acres**: 3,105	**Obs Count**: 1	**Earliest Obs**: 2013	**Recent Obs**: 2013
SO ID: 10309356	**Acres**: 3,105	**Obs Count**: 6	**Earliest Obs**: 2014	**Recent Obs**: 2016
SO ID: 10309358	**Acres**: 3,105	**Obs Count**: 1	**Earliest Obs**: 2016	**Recent Obs**: 2016
SO ID: 10309450	**Acres**: 3,105	**Obs Count**: 3	**Earliest Obs**: 1986	**Recent Obs**: 1989
SO ID: 10309451	**Acres**: 3,105	**Obs Count**: 6	**Earliest Obs**: 1994	**Recent Obs**: 1999
SO ID: 10309785	**Acres**: 3,105	**Obs Count**: 9	**Earliest Obs**: 2005	**Recent Obs**: 2014
SO ID: 10309789	**Acres**: 3,105	**Obs Count**: 6	**Earliest Obs**: 2005	**Recent Obs**: 2010
SO ID: 10309790	**Acres**: 3,105	**Obs Count**: 5	**Earliest Obs**: 2011	**Recent Obs**: 2016
SO ID: 10309796	**Acres**: 3,105	**Obs Count**: 1	**Earliest Obs**: 2016	**Recent Obs**: 2016
SO ID: 10309906	**Acres**: 3,105	**Obs Count**: 5	**Earliest Obs**: 2009	**Recent Obs**: 2012
SO ID: 10310638	**Acres**: 3,105	**Obs Count**: 5	**Earliest Obs**: 2013	**Recent Obs**: 2015
SO ID: 10310639	**Acres**: 3,105	**Obs Count**: 11	**Earliest Obs**: 2006	**Recent Obs**: 2015
SO ID: 10310641	**Acres**: 3,105	**Obs Count**: 27	**Earliest Obs**: 1986	**Recent Obs**: 2014

Birds - Golden Eagle *(Aquila chrysaetos)*

SO Count: 3 **Obs Count**: 6 **Earliest Obs**: 2005 **Recent Obs**: 2015

Species of Concern	Agency Status	Delineation Criteria	Last Updated
Global Rank: G5 **State Rank**: S3	**USFWS**: BGEPA; MBTA; BCC17 **USFS**: **BLM**: SENSITIVE **FWP SWAP**: SGCN3 **PIF**:	Confirmed nesting area buffered by a minimum distance of 3,000 meters in order to be conservative about encompassing the entire breeding territory and area commonly used for renesting and otherwise buffered by the locational uncertainty associated with the observation up to a maximum distance of 10,000 meters.	Mar 24, 2017

SO ID: 10311443	**Acres**: 6,987	**Obs Count**: 4	**Earliest Obs**: 2005	**Recent Obs**: 2009
SO ID: 10311444	**Acres**: 6,987	**Obs Count**: 1	**Earliest Obs**: 2015	**Recent Obs**: 2015

⊞ **SO ID**: 10311459	**Acres**: 6,987	**Obs Count**: 1	**Earliest Obs**: 2009	**Recent Obs**: 2009

Citation for this report:
Montana SOC Occurrences Report
SOC Occurrences for ((Multiple Birds))
Within Lat/Long: (46.50076,-112.69774) to (46.63858,-113.04810)
Natural Heritage Map Viewer. Montana Natural Heritage Program.
Retrieved on May 11, 2017, from http://mtnhp.org/mapviewer/SOReport.aspx

Appendix N: Public and Stakeholder Coordination

Public Involvement Poster

Get Involved!

Gold Creek
Safety Rest Area Study

MDT has initiated a study of the Gold Creek Safety Rest Area.

The study will consider two alternatives: reduction in service and site closure. Reduction in service would include maintaining site ramps and parking areas, removing building facilities, and installing vaulted toilets. Complete closure would include site reclamation following removal of facilities, parking areas, and ramps.

We'll consider corridor needs, costs, and public and stakeholder input to make a decision about the site.

We invite you to learn about the study and provide feedback to the team.

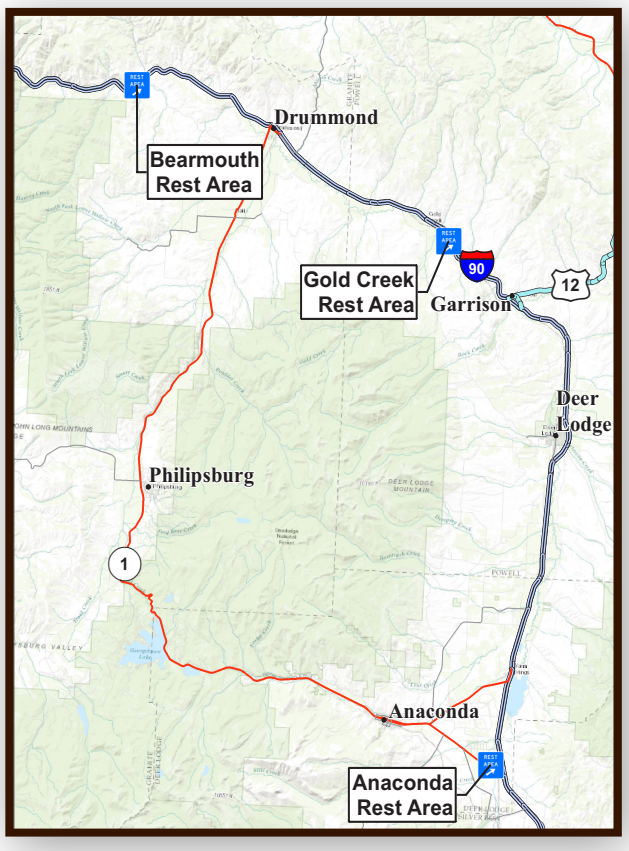
WESTBOUND SITE



EASTBOUND SITE



LOCATION



Find more information on the website:
http://mdt.mt.gov/pubinvolve/goldcreek/

Send your thoughts and comments to:

Sarah Nicolai
DOWL
1300 Cedar Avenue
Helena, MT 59601
snicolai@dowl.com

OR

http://www.mdt.mt.gov/mdt/comment_form.shtml

DOWL

MONTANA MDT DEPARTMENT OF TRANSPORTATION

Team Meeting Minutes

MEETING SUMMARY

PROJECT:	Gold Creek Safety Rest Area Study	DATE:	4/7/2017
PROJECT NUMBER:	4638.11961.01	TIME:	2:30 p.m. – 3:30 p.m.
ORGANIZER:	Chris DeVerniero – MDT Planning	SUBJECT:	Scoping Meeting

ATTENDEES:	ORGANIZATION:
Vicki Crnich	MDT – Planning
Chris DeVerniero	MDT – Planning
Paul Johnson	MDT – Planning
Mike Murolo	MDT – Maintenance
Joe Radonich	MDT – Environmental Services
Jean Riley	MDT – Planning
Bill Dreyer	DOWL
Doug Fischer	DOWL
Nik Griffith	DOWL
Sarah Nicolai	DOWL

MDT and DOWL staff met to discuss the proposed scope of services for this study, address any desired modifications, and confirm preparations for the site visit. DOWL's proposed scope of services served as the meeting agenda.

DOWL Project Team

The group discussed proposed DOWL project staff and the anticipated level of environmental review for the project. Ms. Nicolai noted Emily Peterson would be available to assist if needed (although DOWL had not programmed hours for her involvement in the project). MDT requested review of existing environmental conditions in sufficient detail to support future completion of a categorical exclusion document should MDT pursue an action to reduce service or close the rest area site. DOWL will amend the proposal accordingly to include hours for Ms. Peterson in the site visit, existing conditions review, and reporting.

Scoping Meeting

Mr. DeVerniero asked for clarification on requested study area data. DOWL requested all relevant data including maintenance records and costs. Ms. Riley suggested MDT may be able to provide as-built drawings for the Gold Creek, Anaconda, and Bearmouth Safety Rest Areas as well as truck parking sites similar to what would be considered at Gold Creek. The group agreed relevant GIS layers are available online. Mr. DeVerniero will gather and provide available data to DOWL.

Existing Conditions Analysis

Ms. Nicolai will coordinate with Mr. DeVerniero to identify a date for the site visit. The group discussed the following existing conditions elements.

Network Spacing and Demand
MDT requested DOWL to consider network spacing on I-90, US 12, and MT 1. Ms. Riley noted the importance of considering spacing from Helena. The network analysis should also consider seasonality to address peak summer demand.

Rather than rely on demand calculations published in the 2014 MT Rest Area Plan as outlined in the original proposal, MDT requested that DOWL use current water and door count data at the Anaconda/Bearmouth sites to determine adjacent demand. The group agreed demand calculations are not needed at Gold Creek. DOWL will amend the scope accordingly.

Water Rights & Water/Irrigation Systems
The group confirmed MDT's desire to maintain wells and retain water rights at the eastbound and westbound sites.

Public Wastewater Systems
The group discussed potential benefits and costs associated with continued operation of the tank and drainfields. Mr. Dreyer noted the system could be used to reduce pumping maintenance. Mr. Murolo stated that plugged flush toilets would require greater maintenance compared to periodic pumping of vaulted toilets. The group agreed that the wastewater system would be abandoned under both the reduction of service and closure alternatives.

The group discussed the value of pumping the tanks to enable assessment of existing conditions using a DOWL camera. Mr. Murolo confirmed the tanks would need to be pumped if either alternative is pursued. MDT will arrange for the tanks to be pumped prior to the site visit.

Building Structure
The group discussed the need for possible testing of lead-based paint and asbestos. Since testing would be needed if either of the alternatives is selected, MDT directed DOWL to include asbestos and lead-based paint testing in the scope of services for this study. DOWL will obtain a bid from a subconsultant and modify the proposal accordingly.

Site Amenities
MDT confirmed a desire to consider condition and continued maintenance of site amenities. Ms. Riley asked if the location was within the Clark Fork River floodplain. DOWL will review and report to MDT. The group discussed public access to the Clark Fork from the eastbound site. MDT will review its records to determine previous fencing/gate decisions.

Accessibility
MDT confirmed that Americans with Disabilities Act (ADA) data from the 2007-2008 period is likely the most recent. In addition to this data, DOWL will review accessibility of site elements during the site visit. MDT will provide example as-built drawings for truck parking areas (including Homestake Pass and Bozeman Pass) to assist in accessibility considerations.

Alternatives Identification

MDT requested that DOWL provide itemized cost estimates for individual elements of each alternative. Costs should reflect one-time capital costs as well as ongoing maintenance costs. The group agreed on a 20-year planning horizon for the study (year 2037). MDT will assist DOWL in specifying which costs may be eligible for federal funding (generally capital costs) and which would require state funding (generally maintenance costs).

Reduction in Service
This alternative would provide truck parking and vaulted toilets. MDT desires at least two vaulted toilets for redundancy. MDT will provide a desired vaulted toilet configuration. MDT would like this alternative to consider cleaning water and potentially irrigation water needs. Drinking water will not be provided since MDT does not wish the sites to be classified as a public water source. DOWL will consider continued provision of amenities such as lighting and waste receptacles. Itemized cost estimates will enable MDT to consider customized options for the sites.

Closure
MDT requested costs and descriptions of all required elements including wastewater system removal, pavement removal, ramp and structure demolition, and agency coordination, permitting, and mitigation. The group agreed that DOWL will not conduct agency coordination as part of the study, but will flag any anticipated future coordination needs.

No Action
The group discussed the possibility of including a no-action alternative to serve as a baseline for comparison against action alternatives. MDT clarified its desire to only consider the two action alternatives as part of the study: reduction in service and complete closure of the site. DOWL will document current conditions and maintenance practices in an introductory existing conditions section of the final report.

Report Documentation

The group agreed DOWL will produce a single report for the study. Ms. Riley requested that DOWL submit chapters or sections of the report as they are developed to enable MDT reviews. Mr. DeVerniero asked DOWL to provide a two-page executive summary to the report. Ms. Crnich requested six final reports instead of 12.

Public and Stakeholder Involvement

In addition to the items DOWL scoped, MDT requested that DOWL review Anaconda and Bearmouth surveys and develop posters announcing the draft study for placement at Anaconda, Bearmouth, and other local truck stops. County Commissions should be notified of draft study availability by email.

Team Meetings

The group confirmed the proposed team meetings. District representatives will participate by teleconference. MDT requested that DOWL provide relevant materials in advance of team meetings.

TASK ASSIGNMENTS:	ASSIGNED TO:
◆ Provide all available Gold Creek Safety Rest Area data.	MDT
◆ Provide as-built drawings, public involvement surveys, and accessibility data for Anaconda/Bearmouth Safety Rest Areas and example truck parking sites.	MDT
◆ Confirm date for site visit.	MDT/DOWL
◆ Prepare scoping meeting minutes.	DOWL
◆ Submit revised scope, schedule, and cost estimate (including subconsultant quote for asbestos/lead-based paint testing).	DOWL

MEETING SUMMARY

PROJECT:	Gold Creek Safety Rest Area Study	DATE:	5/3/2017
PROJECT NUMBER:	4638.11961.01	TIME:	10:00 a.m.
ORGANIZER:	Chris DeVerniero – MDT	SUBJECT:	Team Meeting #2
LOCATION:	MDT Rail, Transit and Planning Division – Conference Room C		

ATTENDEES:	ORGANIZATION:
Vicki Crnich	MDT – Planning
Chris DeVerniero	MDT – Planning
Mike Murolo	MDT – Maintenance
Joe Radonich	MDT – Environmental Services
Jean Riley	MDT – Planning
Bill Dreyer	DOWL
Doug Fischer	DOWL
Nik Griffith	DOWL
Sarah Nicolai	DOWL
Emily Peterson	DOWL

Welcome & Introductions
A team meeting was held at MDT on May 3, 2017. Before addressing agenda items, MDT noted a pavement review request had been submitted. Additionally, a pavement preservation project in the Bearmouth area is planned for 2018 and could potentially be tied to future Gold Creek improvements.

Key Findings from Site Visit
DOWL team members provided the following summary of site visit findings.

Water Rights and Water/Irrigation Systems and Wastewater Systems
DOWL examined static water levels in site wells. Groundwater is approximately four to five feet below the ground surface. The system is adequate for continued irrigation use to perpetuate existing water rights, but would need to be chlorinated if MDT intended to continue providing a public water source (PWS). The westbound well is outside the floodplain, however the eastbound well is within the floodplain limits. Continuation as a PWS would require installation of a well casing two feet above the floodplain. MDT requested that DOWL quantify approximate installation/long-term maintenance costs and testing requirements associated with water system upgrades to assist in justifying why site rehabilitation will not be pursued.

DOWL also examined wastewater systems at each site. MDT had arranged for the tanks to be pumped immediately before the site visit. The westbound tank was full at the time of pumping and empty at the time of the site visit. Pumping photographs indicated the presence of solids. The tank is in good condition and gravity feeds to an undersized drainfield. Physical space limitations at the site would complicate installation of an upgraded system, likely requiring a sand mound or off-site design. The eastbound tank was full at the time of pumping and ½ to ¾ full at the time of the site visit. Pumping photographs indicated no solid accumulation due to dilution from groundwater infiltration from an old RV dump no longer in use. Access to the lift

station pump involves confined space requirements. Drainfields at both the eastbound and westbound sites are located outside the floodplains.

Four-inch clay pipe at the sites is in poor condition and would require costly replacement if upgrades were pursued.

Building Structure
The rest area buildings are constructed on four-inch concrete slabs with no observed settling. The buildings appear to be in sound structural condition, apart from observed framework rotting in the interior plumbing chase. In some cases, leaking interior piping has been reinforced with duct tape patching. DOWL observed holes in the exterior siding from woodpeckers or small rodents.

Ramps and Parking Areas
Site ramps and parking areas consist of a relatively thin 2.5-inch pavement section. As-built drawings do not indicate overlay or other structural improvements since paved areas were originally constructed. Condition is generally good to fair, with observed transverse cracking and heaving at parking area perimeters. MDT noted a chip seal treatment was applied eight or nine years ago. Drainage issues were observed at the westbound site where pavement along the north side is in poor condition. MDT maintenance personnel confirmed ponding occurs in this location. Site work would be needed to address grading.

MDT asked DOWL to consider if truck parking should be provided year-round or on a seasonal basis only. Currently, MDT does not offer seasonal truck parking areas. If the sites were to remain open year round, existing raised islands may need to be removed to avoid impeding winter plowing.

Site Amenities
Amenities such as concrete picnic tables and wood/metal benching are generally in sound structural condition. As-built plans for the picnic shelters indicate asbestos felt roof lining. Concrete walkways are spalling in some locations, and signage is in poor condition in some cases (including informational kiosks and historical site markers). Pet areas are located adjacent to wetlands and highway ramps and may need to be relocated if perpetuated in a future option.

Environmental Conditions
High groundwater at the sites feeds scrub-shrub forested wetlands, which likely support migratory birds. Cottonwood and willow saplings were observed on the grounds throughout both sites. Without regular maintenance, the sites would likely fill in as wetlands. Construction equipment should be kept outside of wetland areas. Any fill placed in wetlands would require Clean Water Act Section 404 permitting.

Large cottonwoods are aging and could become hazards. Tree removal may need to be considered in some cases.

The eastbound site provides access to the Clark Fork River via a constructed opening. The gate is included in the original rest area fencing plans. The group discussed if the access may be related to a pipeline crossing the river. DOWL will investigate land and pipeline ownership. MDT will consider if access would be perpetuated at the site should it remain open for truck parking.

During the eastbound site visit, a bald eagle was observed flying to an active nest approximately ¼ mile away on the adjacent ridge. The nest was confirmed with Fish, Wildlife, and Parks.

MDT noted the upper Clark Fork River is classified as a Superfund site. The group discussed the possibility of contaminated materials being deposited at the rest areas via high flow channels during a flood. DOWL will include a discussion of this issue in the existing conditions summary.

Accessibility
Both sites provide one pedestrian ramp from the parking lot to pedestrian access routes. The ramps do not meet accessibility requirements due to excessive landing cross slope, failure to be flush with the parking area surface, and lack of detectable warning device. None of the sheltered picnic areas are compliant due to lack of clear space and wheelchair space at the tables. Benches at both sites fail to meet dimension requirements. Pedestrian access routes are noncompliant due to trip hazards, insufficient clear width, excessive cross slopes, and vertical discontinuities.

Hazardous Materials Testing Update
DOWL has subcontracted with Environmental Solutions to conduct asbestos and lead-based paint testing. Sampling is scheduled to occur on May 8, 2017.

Public Involvement Activities

Website
DOWL has developed content for a study page hosted on MDT's web page. The group briefly reviewed the page online. MDT suggested possibly including links to relevant TranPlanMT documents. DOWL noted TranPlanMT volumes referencing rest areas are currently in draft form under MDT review. These can be linked in the coming months when posted for public review.

Survey Review
DOWL is reviewing results from the Anaconda, Bearmouth, and 2015 Biennial Surveys. DOWL will provide a summary memorandum to MDT by May 5, 2017.

Stakeholder Coordination
The group reviewed and confirmed the list of stakeholders originally outlined in the scope of services. MDT authorized DOWL to make initial contact with stakeholders. DOWL will request MDT assistance if any difficulties are encountered. In addition to stakeholder interviews, MDT requested that DOWL create posters announcing study initiation with a link to the study website. These will be posted at the Anaconda/Bearmouth rest areas and potentially at nearby scale sites and post offices.

Alternatives and Screening Criteria
The group confirmed the two study alternatives and five screening criteria to be included in the study. The alternatives will be compared side by side against each criterion. MDT asked that cost estimates for the two action alternatives indicate 2017 dollars for demolition with inflation only applied to any long-term maintenance costs.

Regarding the social effect on communities, MDT suggested consideration of how often the highway corridor is closed and the relative need for parking during emergency events. DOWL will incorporate rest area spacing in the network evaluation.

MDT requested DOWL include a statement of needs and objectives to support purpose and need development should MDT complete environmental documentation for a future action.

Schedule and Next Steps
The group discussed the following upcoming study milestones.

TASK ASSIGNMENTS:	ASSIGNED TO:	DUE BY:
◆ Anaconda, Bearmouth, and 2015 Biennial Survey Summary	DOWL	5/5/2017
◆ Hazardous Materials Sampling	DOWL and Environmental Solutions	5/8/17
◆ Pavement Review	MDT	5/12/17
◆ Existing Conditions Chapter, Photo Log Appendix, Stakeholder Interview Summary	DOWL	5/26/17

MEETING SUMMARY

PROJECT:	Gold Creek Safety Rest Area Study	DATE:	6/30/2017
PROJECT NUMBER:	4638.11961.01	TIME:	10:00 a.m.
ORGANIZER:	Chris DeVerniero – MDT	SUBJECT:	Team Meeting #3
LOCATION:	MDT Rail, Transit and Planning Division – Conference Room C		

ATTENDEES:	ORGANIZATION:
Chris DeVerniero	MDT – Planning
Paul Johnson	MDT – Planning
Joe Radonich	MDT – Environmental Services
Jean Riley	MDT – Planning
Bill Dreyer (via phone)	DOWL
Doug Fischer (via phone)	DOWL
Nik Griffith	DOWL
Sarah Nicolai	DOWL

Sarah Nicolai began the meeting by providing an overview of the agenda and current study status.

Existing Conditions Summary Status

Ms. Nicolai noted DOWL has completed most edits to the existing conditions summary in response to MDT comments. This section of the report will be finalized upon receipt of 2017 traffic data from MDT. Chris DeVerniero noted traffic data collection for the Anaconda and Bearmouth Safety Rest Areas is ongoing; results are expected by the end of July. DOWL agreed to submit the compiled draft report with placeholders for traffic data. Jean Riley asked if traffic counts would include the 4th of July holiday. Mr. DeVerniero confirmed.

Vicki Crnich previously submitted a comment in the existing conditions summary asking if April 2017 was the first time the septic tanks at each location were pumped after temporary site closure. Joe Radonich was confident it was, and Jean Riley added tanks are typically pumped twice a year. Mr. DeVerniero explained the tanks may have been in use for three or four months leading up to temporary closure, but no further investigation is needed and no additional description is warranted in the report. DOWL will not reflect any changes in response to this comment.

Public Involvement Status

DOWL completed an interview with the Powell County Chamber of Commerce on June 13, 2017. Chamber members believe current stopping opportunities are generally adequate (without the Gold Creek Safety Rest Area in operation), although they support safety rationale for providing a truck parking area.

Paul Johnson noted he received a call from a truck driver supporting a truck parking area at the Gold Creek site. Mr. Johnson will forward relevant information to DOWL via email.

Alternatives and Screening Criteria

Draft Cost Estimates

Ms. Nicolai introduced the cost spreadsheets for each alternative. Doug Fischer and Bill Dreyer noted DOWL estimated quantities from aerial photographs and record drawings provided by MDT. The group discussed the following line item costs flagged for clarification or additional information.

Remove Light Poles
DOWL requested guidance from MDT regarding light pole removal. Mr. Fischer noted additional costs may be associated with removal of light poles due to presence of in-ground conduits. Ms. Riley explained MDT does not routinely remove conduits as it may impair future use of the site. Mr. Johnson asked if the proposed truck parking area could use the current poles. Ms. Riley and Mr. DeVerniero agreed use of existing poles could be assumed; a future project could include improvements such as fixtures equipped with light-emitting diodes (LEDs).

Mr. Johnson suggested presenting multiple costs for optional features. Ms. Nicolai noted DOWL had attempted to simplify cost estimates by defining and applying consistent assumptions, resulting in a single capital and maintenance sum for each alternative. The group agreed this study will attempt to minimize costs and only improve or replace features as needed for safety, minimum function, and compliance with the Americans with Disabilities Act (ADA). MDT may choose to invest in optional upgrades at the time of a future project if desired, but these will not be reflected in the total cost sums.

Remove Building Structure
DOWL attempted to use standard MDT bid prices for this line item, but would appreciate guidance from MDT. Mr. Dreyer explained another study (Roberts Safety Rest Area) is also considering this cost and used $50,000 for lump sum building demolition. Mr. DeVerniero said $90,000 (as currently included in the spreadsheet) is likely a high estimate. Mr. Radonich noted he does not anticipate any costs associated with lead paint abatement. He will discuss demolition costs with MDT staff. Following the meeting, MDT advised by telephone on July 7, 2017, to use a demolition cost of $25,000 for each building structure.

Remove Irrigation System
Mr. Fischer explained the calculations for this line item were similar to the light poles. Sprinkler heads are located above existing grade. DOWL would appreciate guidance from MDT about removal or leaving in place. Mr. Radonich said MDT typically leaves them in place. Ms. Riley agreed, citing future grounds maintenance. Mr. DeVerniero added the heads could remain in place as long as they meet safety criteria. Mr. DeVerniero noted the sprinkler heads would likely be removed with any sidewalk improvements or demolition. The group agreed not to include a cost for sprinkler system removal and include an appropriate note in the comments column. DOWL will also change the improvement line item from “New Irrigation System” to “Water System Line.”

Remove/Abandon Drainfield

Mr. Dreyer explained decommissioning a wastewater system usually involves leaving drainfield pipes in the ground (which dry up when not dosed with effluent) and fully removing or crushing remaining storage tanks. The group agreed with this approach, noting fencing would be erected to secure the site and prevent access under the closure alternative. DOWL offered to create a final record drawing documenting abandoned features. The group agreed.

Remove Sanitary Sewer Piping

Mr. Dreyer asked for guidance regarding removal of sanitary sewer piping. Ms. Riley noted current pipes are small in diameter (estimated at four inches) and would not cause a major issue if they were to collapse. Mr. Johnson said leaving current pipes in place and capping them was a better option as removal could create site issues due to the underground depth. DOWL will include costs to cap and abandon the pipes in place.

Re-permitting Existing System/New Lift Station

Mr. Dreyer noted that re-permitting the existing wastewater systems and constructing a new lift station at the eastbound site could save long-term vaulted toilet pumping costs (which DOWL estimated at approximately $20,000 annually). Mr. DeVerniero agreed, but added previous conversations with MDT maintenance staff suggested this was not a feasible option due to system maintenance concerns. Mr. Dreyer noted the eastbound dosing system is generally in good condition but would require a new lift station. The conventional westbound system shows no obvious signs of failure. Installation of vaulted toilets at both sites would reduce effluent volume but increase concentration due to lack of dilution. To be consistent with the level of service provided at other truck parking areas, the group agreed this study will assume the wastewater system will be decommissioned and MDT will incur associated vaulted toilet pumping costs. DOWL will document all assumptions including annual maintenance costs based on the standard size of a septic pumping truck and assumed tank size.

Maintenance Costs

Following DOWL's initial submittal of the cost spreadsheet, MDT provided updated maintenance caretaker costs for the Anaconda, Bearmouth, and Gold Creek Safety Rest Areas for 2011 to 2016. DOWL calculated an average annual caretaker cost using 2011 to 2015 data (and not 2016 due to the partial closure of the Gold Creek Safety Rest Area). DOWL also applied a 1.5 percent compound annual growth rate to estimate costs over a 20-year planning horizon. Mr. Johnson asked if the truck parking alternative would be a year-round facility. Mr. DeVerniero confirmed other truck parking areas are open year round. Ms. Riley suggested gathering current maintenance costs for the Rock Creek, Lyon's Creek, and Barretts Truck Parking Areas for comparison purposes, as the current costs are too high for either a seasonal or year-round truck parking area. Mr. DeVerniero will investigate current maintenance costs for MDT's active truck parking areas and provide to DOWL. DOWL will eliminate the historical caretaker maintenance line item from the estimates and adjust remaining maintenance costs after receiving MDT guidance.

Ms. Nicolai asked if a 1.5 percent inflation rate was appropriate. Mr. Johnson recommended using 2.0 percent; Mr. DeVerniero agreed.

Other Cost Assumptions

The group discussed the footprint and amenities for the truck parking area alternative. Ms. Nicolai noted the current estimate assumes sidewalks would be improved to meet ADA requirements and perpetuate access to existing site features (such as picnic areas). She clarified the current picnic table/shelter amenities are not ADA compliant. MDT agreed they should be removed and not replaced in kind. Ms. Riley suggested adding a note explaining the features are structurally sound but are not ADA compliant. Since other truck parking areas typically do not provide picnic amenities, these will not be improved or replaced. Accordingly, sidewalks serving these areas should also be removed (instead of upgrading for ADA compliance). DOWL will revise the cost estimates to reflect removal of current picnic area amenities and associated sidewalks. Mr. DeVerniero requested any new vaulted toilets be constructed on the existing building pad. Ms. Nicolai suggested placing them closer to the current sidewalk bordering the parking area. DOWL agreed to investigate the designs of similar truck parking areas and adjust costs as appropriate.

Draft Screening Matrix

Ms. Nicolai presented the draft screening matrix. Mr. Johnson suggested the final recommendation from the study would likely be based on capital construction/demolition costs and long-term maintenance costs. The group agreed to modify the matrix to show capital/maintenance costs and federal/state costs for each alternative instead of symbols. Mr. Johnson will provide a draft matrix to DOWL with federal vs. state dollar values, adding that conversion to a truck parking area would be eligible for federal funding but closure/demolition would require state funding.

Ms. Nicolai noted minor differences between the two alternatives for the Environmental Impacts and Mitigation/Abatement criterion. Ms. Nicolai also explained related costs are included in the Cost criterion; the environmental category reflects the risks associated with mitigation efforts (e.g., finding contaminated soils, wildlife accommodation). DOWL will update the matrix by adding “risk” to the criterion title and adding text to explain differences in risk.

For the Current and Future Corridor Needs criterion, MDT requested the matrix reflect a positive screening outcome for alternative one and a negative outcome for alternative two. MDT suggested changing Current and Future Corridor Needs to Local Impact and changing Effect on Communities, Other State Agencies, MDT Divisions to Public and Stakeholder Impact. Mr. Johnson and Ms. Riley requested new criteria for MDT Plans (such as the Freight Plan and TranPlanMT) and Additional Requirements (such as federal requirements for safety rest area closure).

Schedule and Next Steps

DOWL will prepare a draft of the compiled report, combining previous submissions into a single document for MDT for review. DOWL will also submit a revised existing conditions section in track changes format to reflect responses to previous MDT comments. Placeholders will reflect pending data.

Mr. DeVerniero requested DOWL create a “comment here” button for the Gold Creek Safety Rest Area website and link it to the MDT online comment form.

The next team meeting will occur on August 8, 2017, before the public comment period.

TASK ASSIGNMENTS:	ASSIGNED TO:	DUE BY:
◆ Update cost estimate spreadsheet per MDT guidance	DOWL	7/14/17
◆ Update draft screening matrix	DOWL	7/14/17
◆ Submit compiled draft report	DOWL	7/14/17
◆ Provide traffic data	MDT	End of July
◆ Provide maintenance costs for other truck parking areas/safety rest areas	MDT	To be determined
◆ Forward public comments to DOWL	MDT	To be determined
◆ Provide updated building demolition cost (completed)	MDT	7/7/17
◆ Develop final record drawings	DOWL	Final submittal
◆ Develop a “comment here” button	DOWL	7/7/17

Survey Summary

Anaconda and Bearmouth Rest Area User Surveys

Methodology

The Montana Department of Transportation Rail, Transit and Planning Division conducted user surveys at the Anaconda and Bearmouth Safety Rest Areas soon after their recent construction. Patrons were asked to complete a two-page survey about the newly constructed sites. A total of 103 Bearmouth and 194 Anaconda surveys were collected; however, not all patrons answered every question.

While patrons were asked multiple questions regarding safety rest area features, data discussed in this summary only reflects responses relevant to the proposed reduction in service and closure alternatives for the Gold Creek Safety Rest Area. Results are presented according to the number of patrons answering each question and not the total number of surveys.

Distance Between Rest Areas

Anaconda and Bearmouth Safety Rest Area patrons were asked to rank the distance between rest areas. The Gold Creek Safety Rest Area was open at the time of the Anaconda survey but was closed during the time of the Bearmouth survey and may have influenced patron responses accordingly. This category received a majority of excellent or good ratings in both surveys. Table O1 illustrates the category rating out of 100%.

Table O1: Percentage of Excellent or Good Ratings for Distance between Rest Areas

	Anaconda	Bearmouth
Distance Between Rest Areas	**Percentage of Excellent or Good Responses**	**Percentage of Excellent or Good Responses**
	79.1%	75.6%

Source: Anaconda (2009) and Bearmouth (2015) Rest Area User Survey Reports. Note: Gold Creek Safety Rest Area was open at the time of the Anaconda Survey but closed during the time of the Bearmouth survey.

These ratings are helpful to understand spacing perceptions of patrons who successfully reached and used the Anaconda and Bearmouth facilities. Results suggest that safety rest area users are generally satisfied with current spacing on this segment of Interstate 90, with 76% satisfaction reflected when the Gold Creek Safety Rest Area was closed in 2015.

These ratings do not reflect transportation user perceptions of rest area spacing on other routes in the vicinity, including US 12 between Helena and Garrison.

Vehicle Type

Patrons were asked to identify the type of vehicle they drove to the rest area. The majority of patrons drove passenger cars and trucks, SUVs, or vans. A smaller percentage of patrons drove tractor trailers or other vehicles (including moving trucks and RVs). Table O2 tabulates vehicle type percentages from survey responses at each rest area. The Anaconda and Bearmouth percentages assist in understanding potential demand at the Gold Creek site in terms of vehicle types.

Table O2: Percentage of Vehicle Types Driven by Patrons

	Anaconda	Bearmouth
Vehicle Type	**Percentage of Patrons Traveling in Vehicle Type***	**Percentage of Patrons Traveling in Vehicle Type***
Passenger Car	58%	55%
Truck/SUV/Van	30%	32%
Tractor Trailers	2%	5%
Motorcycle	2%	1%
Other (including moving trucks and RVs)	8%	7%

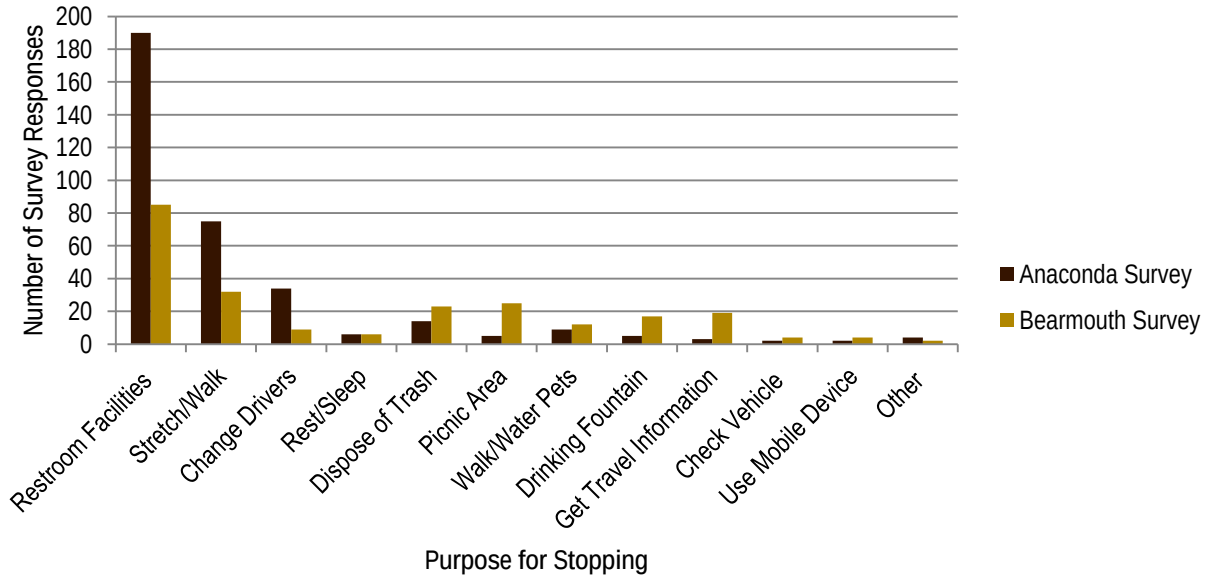
Source: Anaconda (2009) and Bearmouth (2015) Rest Area User Survey Reports.
*The percentage represents answers to the question and not the total number of responses to the survey.

Purpose for Stopping

Patrons were asked their purpose for stopping at the safety rest area on the day of the survey. Figure O1 and Table O3 display the number and/or percentage of responses for each purpose. Patrons were allowed to select more than one purpose. The need for restroom facilities (92-98% of patrons) and to stretch/walk (34-39% of patrons) were the most common purposes for stopping at both safety rest areas. The next most common stopping reasons differed for each site, with Anaconda patrons stopping to change drivers (18%) and Bearmouth patrons stopping to use picnic (27%) and trash (25%) facilities.

With the exception of drinking fountain use and water for pets, the majority of stopping purposes could be satisfied by a truck parking facility with a vaulted toilet at the Gold Creek site. Full closure of the Gold Creek site would fail to meet any of the listed stopping purposes.

Figure O1: Purpose for Stopping at Anaconda and Bearmouth Rest Areas



Source: Anaconda (2009) and Bearmouth (2015) Rest Area User Survey Reports. The number of responses represents answers to the question.

Table O3: Purpose for Stopping at Anaconda and Bearmouth Rest Areas

	Anaconda		Bearmouth	
Purpose for Stopping	**Number of Responses to Question***	**Percentage of Responses to Question***	**Number of Responses to Question***	**Percentage of Responses to Question***
Restroom Facilities	190	97.9%	85	92.3%
Stretch/Walk	75	38.7%	32	34.8%
Change Drivers	34	17.7%	9	9.8%
Rest/Sleep	6	3.1%	6	6.5%
Dispose of Trash	14	7.2%	23	25.0%
Picnic Area	5	2.5%	25	27.1%
Walk/Water Pets	9	4.6%	12	13.0%
Drinking Fountain	5	0.2%	17	18.5%
Get Travel Information	3	0.2%	19	20.7%
Check Vehicle	2	0.1%	4	0.4%
Use Mobile Device	2	0.1%	4	0.4%
Other	4	0.2%	2	0.2%

Source: Anaconda (2009) and Bearmouth (2015) Rest Area User Survey Reports.
*The number and percentage represent answers to the question and not the total number of responses to the survey.

2015 Biennial Survey

Methodology

The MDT Biennial Stakeholder and Public Involvement Survey assesses public and stakeholder[1] perceptions of Montana's transportation system. Results are represented as a ratio of completed interview response rate to the number of respondents surveyed. Information presented in this section represents statewide data and MDT district data relevant to the Gold Creek Safety Rest Area Study for the years published in the 2015 Biennial Survey. Although future decisions about the Gold Creek Safety Rest Area would affect patrons in multiple MDT districts, this summary only includes data from the MDT district where the site is located (District 1).

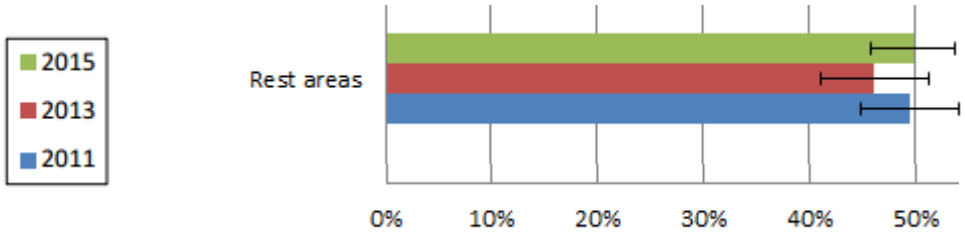
Need for Additional Facilities, Equipment, or Services

Survey respondents were asked about need for additional facilities, equipment, or services associated with components of Montana's transportation system. Figure O2 shows public sentiment regarding rest area needs. From 2011 through 2015, nearly half of surveyed respondents identified rest area needs. Although not specific to the Gold Creek study area,

[1] Stakeholder groups included in the 2015 Biennial Survey include county commissioners; mayors and chief executives of cities and towns; economic development associations, business organizations, and local development corporations and associations; environmental organizations and associations; commercial trucking, freight rail, air freight, and intermodal interests; bicycle and pedestrian interests; passenger transportation interests including local transit, intercity bus, rail, and air; Metropolitan Planning Organizations, urban area planners, and state and federal agencies; and American Indian tribal planners.

these results suggest public support for maintaining some level of service at the Gold Creek site.

Figure O2: Perceived Need for More Facilities, Equipment, or Services



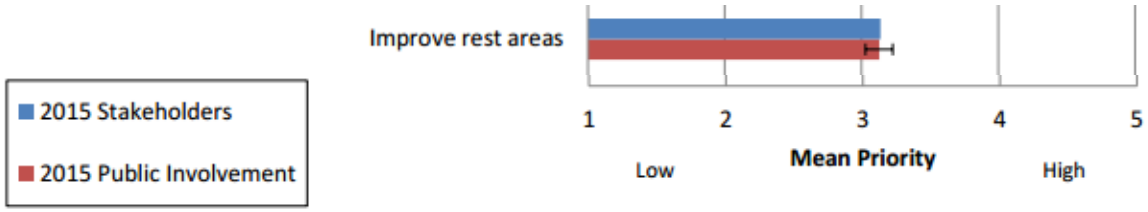
Note: Survey data are ranges. Error bars (⟼) represent the upper and lower bounds of the estimate. Differences are significant when error bars do not overlap.

Source: TranPlan 21 Public Involvement Survey Volume 1, 2015.

Actions to Improve Transportation System

Respondents were asked to rank a selection of actions that would improve Montana's transportation system, including improving rest areas. Figure O3 shows a comparison of stakeholder and public priorities for improving Montana's rest areas in relation to other transportation system improvements. While stakeholders and the public ranked improving rest areas at a similar priority level (just above 3 out of 5, or average priority), the option ranked lower relative to the other improvement options presented in both surveys.[2]

Figure O3: Actions to Improve the Transportation System Ranked by Priority



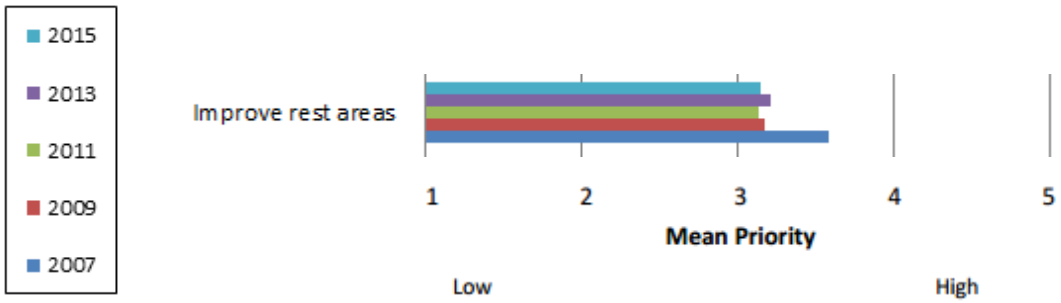
Note: Survey data are ranges. Error bars (⟼) represent the upper and lower bounds of the estimate. Differences are significant when error bars do not overlap.

Source: TranPlan 21 Stakeholder Survey Volume 1, 2015.

Stakeholder priority ranking of the improving rest areas category has decreased since 2007 as seen in Figure O4. Ranking relative to the 16 other options presented to patrons has remained unchanged; the public continues to rank improving rest areas low relative to other improvement options (Figure O5).

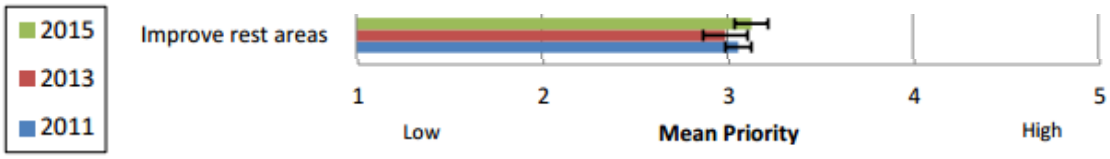
[2] Higher-ranking actions to improve the transportation system addressed the following 14 categories: pavement condition, safety, passenger rail service, roadside vegetation, public information, wildlife accommodations, social media technology, airline service, transit systems, local transit buses, pedestrian facilities, interstate condition, truck parking, and bicycle facilities.

Figure O4: Stakeholder Priority Ranking Trends for Improving Rest Areas



Source: TranPlan 21 Stakeholder Survey Volume 1, 2015.

Figure O5: Public Priority Ranking Trends for Improving Rest Areas



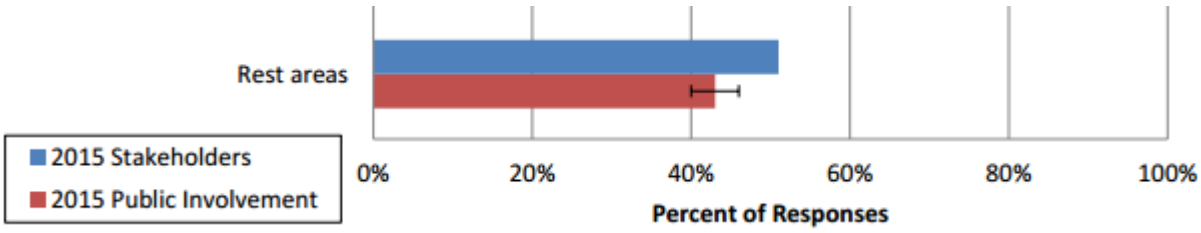
Note: Survey data are ranges. Error bars (⟼) represent the upper and lower bounds of the estimate. Differences are significant when error bars do not overlap.

Source: TranPlan 21 Public Involvement Survey Volume 1, 2015.

Funding Priorities

Respondents were asked what improvements should be deprioritized if funding for Montana's transportation system decreases. A majority of stakeholders recommended decreasing funding for rest areas in relation to other options presented. However, the public prioritized rest areas more than stakeholders and other options presented (Figure O6).

Figure O6: Responses to Decreasing Funding for Rest Areas Relative to Other Transportation Assets

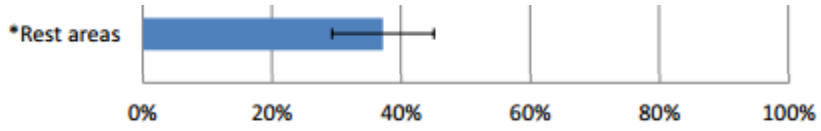


Note: Survey data are ranges. Error bars (⟼) represent the upper and lower bounds of the estimate. Differences are significant when error bars do not overlap.

Source: TranPlan 21 Stakeholder Survey Volume 1, 2015.

When asked which improvements should be cut should funding decline, rest areas ranked third out of seven categories for District 1 respondents (Figure O7).

Figure O7: District 1 Responses to Decreasing Funding for Rest Areas Relative to Other Transportation Assets



Note: Survey data are ranges. Error bars (⊢⊣) represent the upper and lower bounds of the estimate. Differences are significant when error bars do not overlap and are denoted by *.

Source: TranPlan 21 Public Involvement Survey Volume 1, 2015.

Key Findings and Conclusions

Responses from the Anaconda, Bearmouth, and 2015 Biennial surveys provide information about user perceptions of rest area facilities within the study vicinity and statewide. Key findings relating to the Gold Creek study are summarized below.

Anaconda and Bearmouth Surveys

- During a period when the Gold Creek Safety Rest Area was closed, nearly 76% of Bearmouth Safety Rest Area patrons were satisfied with rest area spacing on the Interstate 90 segment within the Gold Creek study area. This supports MDT's consideration of reduction in service at the Gold Creek site.
- Restroom use and stretching/walking were patrons' primary purposes for stopping at the Anaconda and Bearmouth Safety Rest Areas. Assuming similar needs at the Gold Creek site, these purposes could be accommodated by providing a truck parking area.

2015 Biennial Stakeholder and Public Survey

- Half of survey respondents indicated a need for additional facilities, equipment, or services at statewide rest areas.
- Improving rest areas received an average priority ranking, which was lower relative to other improvement options presented in the survey. Rest areas were also ranked third out of seven categories for improvement cuts should funding decline.
- Together, these results suggest public support for maintaining some level of service at the Gold creek site while supporting MDT's consideration of reduction in service.

In conclusion, public and stakeholder survey results support MDT's consideration of reduction in service at the Gold Creek site involving conversion from a full-service safety rest area to a truck parking area with a vaulted toilet. Survey results do not support complete closure of the site.

Stakeholder Interviews

Stakeholder input is an important component of the Gold Creek Safety Rest Area Study. The following stakeholders were identified as having insight on stopping opportunities in the corridor, impacts of the proposed alternatives, and user needs.

Name	Organization	Title
Spook Stang	Motor Carriers of Montana	Executive Vice President
Bill McGladdery	Montana Town Pump / Tourism Advisory Council	Chair
Michael Blakeley	Powell County Chamber of Commerce	President
Ken Verlanic	Anaconda Chamber of Commerce	Acting President
Scott Adler	Granite County Commission	Commissioner
Bart C. Bonney	Granite County Commission	Commissioner
Bill Slaughter	Granite County Commission	Commissioner
Dan Sager	Powell County Commission	District 1 Commissioner
Ralph E. Mannix, Jr.	Powell County Commission	District 2 Commissioner
Doug Crachy	Powell County Commission	District 3 Commissioner
Terry Vermeire	Anaconda-Deer Lodge County Commission	District 1 Commissioner
Steve Gates	Anaconda-Deer Lodge County Commission	District 2 Commissioner
Kevin Hart	Anaconda-Deer Lodge County Commission	District 3 Commissioner
Paul Smith	Anaconda-Deer Lodge County Commission	District 4 Commissioner
Jim Whealon	Anaconda-Deer Lodge County Commission	District 5 Commissioner
Linda Bouck	Granite County Planning Division	Planning Director
Jodi Lechman	Anaconda-Deer Lodge County Planning Division	Planning Secretary
Cindy Carman	Granite County Planning Division	Planning Secretary
Denice Harris	AAA MONTANA	Executive Director
Phillipsburg Chamber	Phillipsburg Chamber of Commerce	

Stakeholders were contacted by email and telephone in May and June 2017 to request interview times. The purpose of the interviews was to explain the study, identify stakeholder concerns, request input on stopping opportunities in the Gold Creek vicinity, and discuss reduction in service and closure options under consideration. The following sections outline key remarks from stakeholder interviews. Remarks are grouped by topic, which varied among interview subjects.

Stakeholders who did not respond to requests for interviews were added to the study mailing list and included in subsequent announcements and participation opportunities for the study.

Motor Carriers of Montana

Mr. Spook Stang offered the following comments during a telephone interview on May 19, 2017.

Parking Area Needs

- Mr. Stang expressed a continued need for more parking areas, especially on Interstate 90.
- He noted a federal rule regarding electronic logging devices (ELD) will be going into effect in December 2017. The rule requires automatic recording of driving time and hours of service, which will create a heightened need for stopping opportunities.
- Mr. Stang discussed other states' approaches to recommend that Montana consider opportunities for shared-use rest areas (like Utah) and avoid closures that lead to overcrowding at remaining parking areas (like New Mexico and Arizona).
- Mr. Stang noted that access to Drummond is difficult for large trucks, and the corridor lacks other stopping opportunities apart from the Bearmouth Safety Rest Area.

Seasonality

- Mr. Stang expressed a desire to see a year-round truck parking area as opposed to a seasonal stopping opportunity.
- He noted the closure of Gold Creek (even temporary or seasonal closing) meant the Rock Creek parking area was almost always at capacity.
- The Rock Creek parking area is nearly always full of trucks; the facilities in that location are in need of maintenance.

Study Alternatives

- A truck parking option at Gold Creek is preferable to the Motor Carriers of Montana (MCM).
- Permanent closure or even temporary seasonal closure could cause hardships for commercial drivers.

Trucking Community Outreach

- Mr. Stang noted the annual MCM convention will be held in September and could provide an opportunity for MDT to conduct additional outreach regarding rest areas/parking opportunities.

Granite County Commissioners

Commissioners Scott Adler, Bart C. Bonney, and Bill Slaughter offered the following comments during a telephone interview on May 23, 2017. Additional interview attendees included Mr. Mike Kahoe, Administrative Assistant, and Mr. Blaine Bradshaw, Granite County Attorney.

Parking Area Needs

- Commissioner Adler was aware of the water and wastewater issues currently facing the existing Gold Creek Safety Rest Area. While recognizing these challenges, he believes there is a continued need for restroom facilities in this location given that facilities in Drummond close at 9:00 p.m.
- Commissioner Bonney added that a site with truck parking, similar to the site between Drummond and Missoula, is needed.
- The Commissioners mentioned travelers making trips from Anaconda and Deer Lodge need an opportunity to pull off the road.
- The Commissioners noted high traffic volumes on Highway 12 should justify a stopping opportunity at Gold Creek since no other opportunities are located from Helena to Garrison.

Safety

- Commissioner Slaughter specifically discussed serious injuries and fatalities related to drowsy driving.
- Maintaining a stopping opportunity in the current Gold Creek location would assist in preventing incidents in the area.
- If designated stopping opportunities are not provided, trucks will stop on the side of the road or on exit/entrance ramps, causing safety issues and conflicts with adjacent landowners.

Designated Stopping Opportunities

- A closed weigh station west of Drummond is being used as a truck parking site and is not being maintained adequately.
- The lack of designated stopping opportunities in the corridor results in drivers disposing of trash and body waste at the shuttered weigh station. Without proper maintenance, it is becoming an issue for residents.
- The Commissioners believe that drivers will behave appropriately if they are given designated opportunities to dispose of trash and relieve themselves.

Investment

- The Commissioners stated MDT's previous financial investment in the Gold Creek Safety Rest Area should not be wasted by closing the site.
- Funding should be directly allocated to infrastructure improvements as opposed to DOT staffing.
- Maintaining a stopping opportunity in this location would address truck driver and passenger traveler needs along I-90.

Study Alternatives

- The Commissioners expressed support for a truck parking area with a vaulted toilet. They strongly rejected the closure alternative.

Powell County Chamber of Commerce

Chamber of Commerce President/Treasurer Michael Blakeley and Vice President Julie Schroder offered the following comments during a telephone interview on June 13, 2017.

Stopping Opportunities

- Chamber members stated they believe stopping opportunities in the area are currently adequate (without the Gold Creek Safety Rest Area in service). Because the Chamber is focused on increasing visitor dollars spent in the area, members clarified they would rather travelers stop in Deer Lodge than at safety rest areas or parking areas. They expressed agreement with safety rationale for providing stopping opportunities, but would like drivers to proceed 17 miles (eastbound) to stop in Deer Lodge.

Truck Parking and Safety Issues

- Members stated they generally do not observe trucks or other vehicles pulled over to the side of the highway. They noted vehicles do seem to pull over near Rocker and the Racetrack exit (westbound). The Interstate 90 corridor near Garrison is also underserved in terms of stopping opportunities.
- Chamber members expressed concern about safety issues associated with vehicles exiting the eastbound Gold Creek site. They noted visitors unfamiliar with interstate flow in the area may have difficultly entering into the horizontal curve and the bridge just east of the site.

Alternatives

- Chamber members stated that the Anaconda and Bearmouth Safety Rest Areas provide adequate stopping opportunities, and another safety rest area at Gold Creek would be "overkill."
- Members said they understood the need for increased truck parking to address safety issues and expressed support for providing a truck parking area at the Gold Creek site if

it is needed from that standpoint. However, they would prefer to bring drivers and dollars into their community to benefit local businesses.

- Members commented that the eastbound Gold Creek site is beautiful and scenic, while the westbound site is less appealing.

Other Questions / Future Involvement

- Chamber members asked to view usage/stopping information and cost data considered for the study; they look forward to reviewing draft documents during the public review period.
- The Chamber will discuss the study at their next meeting in July 2017 and consider providing input via a written letter to MDT regarding the study alternatives.

Written Comments

Comment 1

Office of
The Board of County Commissioners
Granite County

Post Office Box 925, Philipsburg, Montana 59858-0925
Telephone 406-859-7022 Assistant 406-859-7023 Fax 406-859-3817 Web Site www.co.granite.mt.us

Barton C. Bonney, Chairperson
P O Box 701
Philipsburg MT 59858

Scott C. Adler, Commissioner
750 Frontage Road West
Drummond MT 59832

Bill Slaughter, Commissioner
P O Box 96
Hall MT 59837

May 30, 2017

ATTN: Nikolas Griffith and Sarah Nicolai
DOWL
1300 Cedar Street
Helena MT 59601

RE: Gold Creek Safety Rest Area Study

Dear Nikolas Griffith and Sarah Nicolai:

As discussed during the recent stakeholder interview, we are strenuously against the complete closure of the Gold Creek Safety Rest Areas. We feel strongly that the more opportunities for motorists and truckers to pull off the highway to rest, even with minimum facilities available, contribute greatly to improved highway safety.

We feel that the Gold Creek Safety Rest Areas, both eastbound and westbound, are critical because of their location near the intersection of Interstate 90 and Montana Highway 12, which is a main access to Helena, the capitol city. Any reduction in safe stopping opportunities in this corridor would be a great disservice to the traveling public.

While safety rest areas with vaulted toilets are not ideal, they are most certainly the better alternative than a complete closure. Ideally, we would like to see these rest areas renovated like those at Bearmouth and Anaconda, facilities of which the Montana Department of Transportation can be justifiably proud. Since reconstruction is not an option in this study, we strongly support the maintenance of site ramps and parking areas at both rest areas at Gold Creek.

MDT's Vision Zero initiative of "zero deaths/zero serious injuries on Montana roadways" is strongly supported by providing a safe opportunity for the traveling public to get off the highway and take a break from driving.

Comment 1

We appreciate the opportunity to comment on this study, both through the stakeholder interview and with this letter.

Sincerely yours,

BOARD OF COUNTY COMMISSIONERS
OF GRANITE COUNTY

Barton C. Bonney, Chairperson

Scott C. Adler, Commissioner

Bill Slaughter, Commissioner

BOC/mk

Griffith, Nikolas

From: Crnich, Vicki <vcrnich@mt.gov>
Sent: Tuesday, August 22, 2017 3:37 PM
To: Nicolai, Sarah
Subject: FW: Comment on a Project or Study Submitted

Follow Up Flag: Follow up
Flag Status: Flagged

Hey! At the bottom of the e.mail chain is a comment that MDT received re. Gold Creek.

-----Original Message-----
From: Johnson, Paul
Sent: Tuesday, August 22, 2017 2:27 PM
To: Crnich, Vicki <vcrnich@mt.gov>
Subject: FW: Comment on a Project or Study Submitted

Yes please.

-----Original Message-----
From: Crnich, Vicki
Sent: Thursday, August 17, 2017 8:22 AM
To: Johnson, Paul <paujohnson@mt.gov>
Subject: FW: Comment on a Project or Study Submitted

In case you didn't see this. Do you want me to forward to Sarah?

-----Original Message-----
From: Strizich, Carol
Sent: Thursday, August 17, 2017 7:32 AM
To: Crnich, Vicki <vcrnich@mt.gov>
Subject: FW: Comment on a Project or Study Submitted

-----Original Message-----
From: www@mdt.mt.gov [mailto:www@mdt.mt.gov]
Sent: Thursday, August 17, 2017 7:29 AM
To: MDT Comments - Project <mdtcommentproject@mt.gov>
Subject: Comment on a Project or Study Submitted

A question, comment or request has been submitted via the "Contact Us" web page.

Reason for Submission: Comment on a Project or Study
Submitted: 08/17/2017 07:28:30
Project/Study Commenting On: Other Project or Activity
Name: Jim Holland
Email Address: hollandbigsky@q.com

Comment or Question:
I am hoping that this is not too late, but as a person who travels to Missoula on regular basis from Townsend, having the rest area at Gold Creek as you come onto to I90 from US12 and 50 miles of no public services it is a welcomed stop. When I have used it there always was traffic sufficient to support its use.

I also travel with school teams and it was often used to break up our trips and provide needed services for our youth. I hope you will reconsider keeping it open with full restrooms. Thank you

Reference Number = prjcomment_571044921875

Griffith, Nikolas

From: Crnich, Vicki <vcrnich@mt.gov>
Sent: Monday, August 28, 2017 12:47 PM
To: Nicolai, Sarah
Cc: Johnson, Paul
Subject: FW: Comment on a Project or Study Submitted

Follow Up Flag: Flag for follow up
Flag Status: Flagged

Another comment on the Gold Creek Rest area study for you.

-----Original Message-----
From: Strizich, Carol
Sent: Monday, August 28, 2017 12:34 PM
To: Crnich, Vicki <vcrnich@mt.gov>
Subject: FW: Comment on a Project or Study Submitted

-----Original Message-----
From: www@mdt.mt.gov [mailto:www@mdt.mt.gov]
Sent: Monday, August 28, 2017 12:02 PM
To: MDT Comments - Project <mdtcommentproject@mt.gov>
Subject: Comment on a Project or Study Submitted

A question, comment or request has been submitted via the "Contact Us" web page.

Reason for Submission: Comment on a Project or Study
Submitted: 08/28/2017 12:01:31
Project/Study Commenting On:Other Project or Activity
Name: Dayna Gilman
Email Address: daynagis@gmail.com
Other Details: Gold Creek Rest Areas off 1-90

Comment or Question:
My husband and I are submitting our comments to the Rest Area Plan for Gold Creek Eastbound and Westbound. We live at Exit 170 -Phosphate/Brock Creek. Our property is directly south of the exit, as well as railroad. Our area community has daily experiences with this exit and the numerous amount of traffic that actually use this exit as a place to go to the bathroom and I don't just mean pee. We are 100 percent for the "reduction in use. please please! I am going to send pictures of what we deal with everyday. We have signs posted and nobody reads. Our area is bushy so this is a haven for potty stops the only problem is that this is our DRIVEWAY! This problem has increased 99 percent since the closing of the rest area and the increase in traffic. We have put in gates and locks because people think this looks like a good place to take an excursion.
Our dogs keep or wake us up at night with the continual traffic coming in over the bridge and railroad. I don't expect that you will get very many comments on this plan. We are the only ones on the South and one home on the north side directly in view of the exit. I really appreciate this opportunity and hope small voices can make a difference.

Reference Number = prjcomment_284271240234375

Griffith, Nikolas

From: Johnson, Paul <paujohnson@mt.gov>
Sent: Wednesday, August 30, 2017 10:08 AM
To: daynagis@gmail.com
Cc: Nicolai, Sarah; Crnich, Vicki; Stack, Shane; Felix, Steve; Nesset, Jan
Subject: Gold Creek Rest Area Comments

Good Morning Dayna,

Thank you for taking the time to provide comments for MDT's assessment of the Gold Creek Rest Area facilities. Rest assured, public comments will be taken into consideration during the evaluation process. At this time, MDT is wrapping up the technical portion of the review and will be advertising for additional public comments in the upcoming weeks. Once the formal comment period has ended, MDT's Rest Area Advisory Committee will be advancing a recommendation to Administrative Staff for consideration. Administrative staff will then make a final recommendation to the Transportation Commission (most likely in the early part of 2018).

Once again, thank you for your input on this effort. If you have any additional questions or comments, please feel free to contact me at any time.

Thanks …

Paul Johnson
MDT – Project Analysis
(406) 444-7259

-----Original Message-----
From: www@mdt.mt.gov [mailto:www@mdt.mt.gov]
Sent: Monday, August 28, 2017 12:02 PM
To: MDT Comments - Project <mdtcommentproject@mt.gov>
Subject: Comment on a Project or Study Submitted

A question, comment or request has been submitted via the "Contact Us" web page.

Reason for Submission: Comment on a Project or Study
Submitted: 08/28/2017 12:01:31
Project/Study Commenting On:Other Project or Activity
Name: Dayna Gilman
Email Address: daynagis@gmail.com
Other Details: Gold Creek Rest Areas off 1-90

Comment or Question:
My husband and I are submitting our comments to the Rest Area Plan for Gold Creek Eastbound and Westbound. We live at Exit
170 -Phosphate/Brock Creek. Our property is directly south of the exit, as well as railroad. Our area community has daily experiences with this exit and the numerous amount of traffic that actually use this exit as a place to go to the bathroom and
I don't just mean pee. We are 100 percent for the "reduction
in use. please please! I am going to send pictures of what we

deal with everyday. We have signs posted and nobody reads. Our area is bushy so this is a haven for potty stops the only problem is that this is our DRIVEWAY! This problem has increased 99 percent since the closing of the rest area and the increase in traffic. We have put in gates and locks because people think this looks like a good place to take an excursion.
Our dogs keep or wake us up at night with the continual traffic coming in over the bridge and railroad. I don't expect that you will get very many comments on this plan. We are the only ones on the South and one home on the north side directly in view of the exit. I really appreciate this opportunity and hope small voices can make a difference.

Reference Number = prjcomment_284271240234375

Charlie and Dayna Gilman

468 Phosphate Road, Garrison, MT 59731
(406) 490-1305
daynagis@gmail.com

August 30, 2017

Sarah Nicolai
DOWL
1300 Cedar Avenue
Helena, MT 59601

RE: Gold Creek Rest Areas

Dear Sarah,

I am writing this letter as a follow-up to my comments submitted online and try to give any proposals on the Gold Creek rest areas closures a more vivid look of what is dealt with all the time at Exit 170 (which is about one mile east of the eastbound entrance to the rest area.

These treasures (pictures enclosed) are just within the last 2 weeks. We have had vehicles drive right down into the front of our house, obviously looking for a more secluded area. We have lived there a long time and the traffic on I-90 has massively increased. Maintaining the Gold Creek rest areas with the vaulted toilet and parking would help decrease the continued use of the exit 170 as a bathroom area. Stop by anytime for chat.

Thank you for the opportunity to comment.

Dayna Gilman

Warm regards,
Charlie and Dayna Gilman









Mrs Dayna Gilman
468 Phosphate Rd
Garrison, MT 59731

BILLINGS MT 591

31 AUG 2017 PM 1 T



RECEIVED
SEP 06 2017
DOWL
HELENA

Sarah Nicolai
DOWL
1300 Cedar Ave
Helena MT 59601

59601$0900

Griffith, Nikolas

From: Nicolai, Sarah
Sent: Thursday, September 14, 2017 1:01 PM
To: Johnson, Paul
Cc: Griffith, Nikolas
Subject: RE: Ask MDT A Question Submitted

Thanks Paul!

Sarah W. Nicolai, P.E.
Transportation Planning Manager

DOWL
406.324.7412 | direct
406.439.1772 | cell

-----Original Message-----
From: Johnson, Paul [mailto:paujohnson@mt.gov]
Sent: Thursday, September 14, 2017 10:29 AM
To: Nicolai, Sarah
Subject: FW: Ask MDT A Question Submitted

FYI

-----Original Message-----
From: McLeod, Kraig
Sent: Tuesday, September 05, 2017 11:03 AM
To: Johnson, Paul <paujohnson@mt.gov>
Subject: FW: Ask MDT A Question Submitted

-----Original Message-----
From: Swartz, Jon
Sent: Tuesday, September 05, 2017 10:59 AM
To: Weber Marosok, Lauren <lmarosok@mt.gov>; Toavs, Ed <etoavs@mt.gov>; McLeod, Kraig <krmcleod@mt.gov>
Cc: Zanto, Lynn <lzanto@mt.gov>
Subject: RE: Ask MDT A Question Submitted

Thanks Lauren. I am guessing they stopped at the Bearmouth rest area. This rest area was just recently rconstructed and will continue to be open. The Gold Creek rest area which is closed is the one that is being evaluated.

Jon Swartz
MDT Maintenance Administrator
Office: 406.444.6158
Cell: 406.431.6158

-----Original Message-----
From: Weber Marosok, Lauren
Sent: Tuesday, September 05, 2017 9:59 AM
To: Toavs, Ed <etoavs@mt.gov>; Swartz, Jon <joswartz@mt.gov>; McLeod, Kraig <krmcleod@mt.gov>
Cc: Zanto, Lynn <lzanto@mt.gov>
Subject: FW: Ask MDT A Question Submitted

-----Original Message-----
From: www@mdt.mt.gov [mailto:www@mdt.mt.gov]
Sent: Monday, September 04, 2017 12:48 PM
To: MDT Comments - Ask MDT <mdtcommentaskmdt@mt.gov>
Subject: Ask MDT A Question Submitted

A question, comment or request has been submitted via the "Contact Us" web page.

Reason for Submission:	Ask MDT A Question
Submitted:	09/04/2017 12:47:44
Name:	Deborah Eisinger
Email Address:	deb@theeisingers.com
Other Details:	Between Helena and Missoula

Comment or Question:
The Clinton rest area is being evaluated. As we came from Helena, the previous rest area was closed. When we pulled into Clinton I noted the nicely designed building. There were about 7 women waiting when I entered and 5 when I left.

We travel
often and so do our friends. Just last week we talked about what great rest areas South Dakota has. We do notice.

Hygiene for
people and the roadside are important. I hope you keep this rest stop open.

Reference Number = askmdt_700927734375

Griffith, Nikolas

From: Nicolai, Sarah
Sent: Thursday, September 14, 2017 1:00 PM
To: Carl Hamming
Cc: Johnson, Paul; Griffith, Nikolas
Subject: RE: Gold Creek Safety Rest Area Study

Thanks for your email, Carl. MDT has just completed its internal review of the draft report, and we will be initiating public review on September 25th. We will include your comments below in the study record and make sure to send you a link to the draft report once it is published on the MDT website. We will also update the study schedule online to indicate our revised timeframe for study review and completion.

Thank you.

Sarah

Sarah W. Nicolai, P.E.
Transportation Planning Manager

DOWL
406.324.7412 | direct
406.439.1772 | cell

From: Carl Hamming [mailto:chamming@powellcountymt.gov]
Sent: Thursday, September 14, 2017 9:18 AM
To: Nicolai, Sarah
Subject: Gold Creek Safety Rest Area Study

Hi Sarah,

I just noticed the public comment period and was curious how things are going? I'd prefer the first alternative in which services are reduced, but the rest stops remain functional. FWP is currently going through the permitting process to put in an official FAS site at Gold Creek and the plans include a vault toilet. I think maintaining vault toilets at the rest stops on I-90 will reduce pressure at the FAS and keep people moving on the interstate.

If possible, I'm also interested in seeing a copy of the draft study report when it is released.

Many Thanks,

Carl Hamming
Powell County Planner
409 Missouri Ave. – Suite 101
Deer Lodge, MT 59722
Phone: 406.846.9729

Griffith, Nikolas

From: Spook <spook@mttrucking.org>
Sent: Monday, September 25, 2017 2:19 PM
To: Griffith, Nikolas
Subject: RE: Draft Gold Creek Study Available for Review!

Nick,
We are OK with reduced service, but it appears the fate of this rest are was determined by the building of the new one anyway.

Spook

Barry "Spook" Stang
Executive Vice President
Motor Carriers of Montana
501 N Sanders #201
Helena, MT 59601
Phone 406-442-6600
Fax 406-443-4281
Cell 406-581-1298
spook@mttrucking.org
www.mttrucking.org

TRUCKING Moves America Forward

From: Griffith, Nikolas [mailto:ngriffith@dowl.com]
Sent: Monday, September 25, 2017 2:09 PM
To: Griffith, Nikolas
Cc: Nicolai, Sarah; paujohnson@mt.gov
Subject: Draft Gold Creek Study Available for Review!

Stakeholder,

The Montana Department of Transportation is requesting public review and comment on the draft Gold Creek Safety Rest Area Study. It is available for review on the MDT website at: http://www.mdt.mt.gov/pubinvolve/goldcreek.

The study considered two alternatives: reduction in service and site closure. Reduction in service would include maintaining site ramps and parking areas, removing building facilities, and installing vaulted toilets. Complete closure would include site reclamation following removal of facilities, parking areas, and ramps.

Based on existing site constraints, spacing relative to adjacent stopping opportunities, capital and maintenance costs, and input from members of the public and stakeholders, the study recommends reduction in service.

We encourage you to review the draft study and submit comments by **October 25, 2017**.

Written comments may be submitted through the online comment form (http://www.mdt.mt.gov/mdt/comment_form.shtml), to the address below, or in reply to this email.

Sarah Nicolai
DOWL
1300 Cedar Street
Helena, MT 59601

Thank you for your participation in this planning effort. Please forward this information to any additional interested parties.

Sincerely,

Nik B. Griffith
Public Involvement Specialist

DOWL
406.442.0370 | office
406.324.7417 | direct
1300 Cedar Street
Helena, Montana 59601

who we are | what we do
www.dowl.com

Griffith, Nikolas

From: Dennis Cox <montanatude@icloud.com>
Sent: Tuesday, September 26, 2017 10:26 AM
To: Nicolai, Sarah
Subject: Gold Creek Rest Area

Follow Up Flag: Flag for follow up
Flag Status: Flagged

Driving by the other day, I was mildly disappointed to see this rest area still closed and left to rot. As we passed, there was a big rig parked just outside the area. This is not unusual, I can attest, as this section was part of my commute for years, and myself and others would park off the interstate near to the fence to rest. I mentioned to a friend how this would make a great coffee stop where local nonprofit orgs could do some fund raising.
As a member of the Philipsburg Chamber of Commerce, I'd be happy to run this idea by the nonprofit groups in our area.
I am supportive of the plan to keep this rest area open.
Thank you,
Dennis Cox

Sent from my iPhone

Griffith, Nikolas

From: Crnich, Vicki <vcrnich@mt.gov>
Sent: Wednesday, September 27, 2017 8:28 AM
To: Nicolai, Sarah; Johnson, Paul
Subject: FW: Comment on a Project or Study Submitted

FYI

-----Original Message-----
From: Strizich, Carol
Sent: Wednesday, September 27, 2017 6:17 AM
To: Crnich, Vicki <vcrnich@mt.gov>
Subject: FW: Comment on a Project or Study Submitted

-----Original Message-----
From: www@mdt.mt.gov [mailto:www@mdt.mt.gov]
Sent: Tuesday, September 26, 2017 4:51 PM
To: MDT Comments - Project <mdtcommentproject@mt.gov>
Subject: Comment on a Project or Study Submitted

A question, comment or request has been submitted via the "Contact Us" web page.

Reason for Submission: Comment on a Project or Study
Submitted: 09/26/2017 16:51:20
Project/Study Commenting On: Other Project or Activity
Name: Michael Hammer
Email Address: mhammer@mt.gov

Comment or Question:
I think that the Gold Creek rest area should be reutilized or "reduction in service". It's in a good location and would be well utilized by the public.

Reference Number = prjcomment_66845703125

Griffith, Nikolas

From: Crnich, Vicki <vcrnich@mt.gov>
Sent: Wednesday, September 27, 2017 8:29 AM
To: Nicolai, Sarah; Johnson, Paul
Subject: FW: Comment on a Project or Study Submitted

Another FYI

-----Original Message-----
From: Strizich, Carol
Sent: Wednesday, September 27, 2017 6:17 AM
To: Crnich, Vicki <vcrnich@mt.gov>
Subject: FW: Comment on a Project or Study Submitted

From: www@mdt.mt.gov [www@mdt.mt.gov]
Sent: Tuesday, September 26, 2017 8:18 AM
To: MDT Comments - Project
Subject: Comment on a Project or Study Submitted

A question, comment or request has been submitted via the "Contact Us" web page.

Reason for Submission: Comment on a Project or Study
Submitted: 09/26/2017 08:18:56
Project/Study Commenting On: Other Project or Activity
Name: Dan Sager
Email Address: dsager@powellcountymt.gov
Other Details: I90 Gold Creek Rest areas

Comment or Question:
I am not in favor of closure of rest areas near Gold Creek. The east bound could be used as a fishing access I would think much cheaper than the proposed site at Gold Creek. Thanks Dan Sager Powell County Commissioner

Reference Number = prjcomment_744110107421875

Griffith, Nikolas

From: Liz Gupton <lizgupton@blackfoot.net>
Sent: Wednesday, September 27, 2017 8:20 PM
To: Nicolai, Sarah
Subject: Gold Creek rest area

Thank you for the opportunity to comment on the two alternatives presented in the Gold Creek Safety Rest Area Study. My husband and I take several (4-10) road trips a year and we almost always stop at this rest area. It is a good place to stretch and make a pit stop. I strongly encourage MDT to continue services at this rest area, and a reduction in services is preferable to closing.

Liz and George Gupton
P.O.B. 401
Alberton, MT 59820

Griffith, Nikolas

From: Crnich, Vicki <vcrnich@mt.gov>
Sent: Thursday, September 28, 2017 10:57 AM
To: Johnson, Paul; Nicolai, Sarah
Subject: FW: Comment on a Project or Study Submitted

Comment!

-----Original Message-----
From: Strizich, Carol
Sent: Thursday, September 28, 2017 10:43 AM
To: Crnich, Vicki <vcrnich@mt.gov>
Subject: FW: Comment on a Project or Study Submitted

-----Original Message-----
From: www@mdt.mt.gov [mailto:www@mdt.mt.gov]
Sent: Thursday, September 28, 2017 9:58 AM
To: MDT Comments - Project <mdtcommentproject@mt.gov>
Subject: Comment on a Project or Study Submitted

A question, comment or request has been submitted via the "Contact Us" web page.

Reason for Submission: Comment on a Project or Study
Submitted: 09/28/2017 09:58:22
Project/Study Commenting On:Other Project or Activity
Name: Briana Wipf
Email Address: brianawipf@yahoo.com
Other Details: Gold creek

Comment or Question:
I am commenting on the Gold Creek rest area. If you are putting in dog-friendly facilities, a dog drinking fountain close to the ground with a little bowl would be great. This comment really goes for any rest area. Thanks.

Reference Number = prjcomment_529296875

Griffith, Nikolas

From: Crnich, Vicki <vcrnich@mt.gov>
Sent: Wednesday, October 04, 2017 4:42 PM
To: Nicolai, Sarah
Cc: Johnson, Paul
Subject: FW: Comment on a Project or Study Submitted

-----Original Message-----
From: Strizich, Carol
Sent: Wednesday, October 04, 2017 4:40 PM
To: Crnich, Vicki <vcrnich@mt.gov>
Subject: FW: Comment on a Project or Study Submitted

-----Original Message-----
From: www@mdt.mt.gov [mailto:www@mdt.mt.gov]
Sent: Wednesday, October 04, 2017 4:11 PM
To: MDT Comments - Project <mdtcommentproject@mt.gov>
Subject: Comment on a Project or Study Submitted

A question, comment or request has been submitted via the "Contact Us" web page.

Reason for Submission: Comment on a Project or Study
Submitted: 10/04/2017 16:11:16
Project/Study Commenting On:Other Project or Activity
Name: Robert Harmon
Email Address: goiu61@live.com

Comment or Question:
I would like to see a new updated Rest Area at Gold Creek.
Thank
you,
Robert Harmon

Reference Number = prjcomment_837249755859375

Griffith, Nikolas

From: Nesset, Jan <jnesset@mt.gov>
Sent: Thursday, October 05, 2017 8:27 AM
To: Nicolai, Sarah; Johnson, Paul
Subject: FW: Ask MDT A Question Submitted

-----Original Message-----
From: www@mdt.mt.gov [mailto:www@mdt.mt.gov]
Sent: Thursday, October 05, 2017 8:26 AM
To: MDT Comments - Ask MDT <mdtcommentaskmdt@mt.gov>
Subject: Ask MDT A Question Submitted

A question, comment or request has been submitted via the "Contact Us" web page.

Reason for Submission: Ask MDT A Question
Submitted: 10/05/2017 08:26:06
Name: Todd fickler
Email Address: tfickler@montana.com

Comment or Question:
Reclaim the gold creek rest area. There is plenty of truck parking in a 30 to 40 mile radius. Why would you want to maintain even the asphalt at this location.

Reference Number = askmdt_286865234375

Griffith, Nikolas

To: Nicolai, Sarah
Subject: RE: Comment on a Project or Study Submitted

-----Original Message-----
From: www@mdt.mt.gov [mailto:www@mdt.mt.gov]
Sent: Wednesday, October 11, 2017 11:25 AM
To: MDT Comments - Project <mdtcommentproject@mt.gov>
Subject: Comment on a Project or Study Submitted

A question, comment or request has been submitted via the "Contact Us" web page.

Reason for Submission: Comment on a Project or Study
Submitted: 10/11/2017 11:24:51
Project/Study Commenting On: Other Project or Activity
Name: Dori
Email Address: garfiegirl@email.com
Other Details: Gold Creek Rest Areas

Comment or Question:
Taking into consideration the location of other rest areas in the vicinity of the Gold Creek rest areas, the cost for upgrades to water systems as well as age of drainfields and costs to pump relative to volume of customers, I believe the correct call would be to close these rest areas permanently.

Thank you for
the opportunity to review the detailed report and comment on this issue.

Reference Number = prjcomment_478118896484375

Griffith, Nikolas

To: Nicolai, Sarah
Subject: RE: Gold Creek

From: Randall Knowles <knowlesmontana@juno.com>
Date: October 11, 2017 at 11:51:32 AM MDT
To: "Nicolai, Sarah" <snicolai@dowl.com>
Subject: Gold Creek
Reply-To: "knowlesmontana@juno.com" <knowlesmontana@juno.com>

Gold Creek – Tourism is the 3rd largest Economic Sector in Montana; Agriculture is number 4 and falling fast. Why was the Gold Creek rest stop EVER closed? HUGE sign, "where gold was first discovered in Montana," but no place to stop! Though the historic claim is questionable, if not the first, Gold Creek lies very close to the first Gold Discovery. Tourists come to Montana to become embraced by Montana's history [the history of the west] – "Stopping" areas, especially those accessed by Freeway, are critical. How do we reverse a negative experience? When an opportunity to embrace Montana's history is promoted and then denied, what will the tourist do when they encounter the "next" historic opportunity? Montana needs tourists to slow down and spend an extra day or two. If DOT does not want to put in vault toilets then install a sign that says how far it is to the next public potty. This is NOT about resting or toileting. This is about Tourism. MT.gov needs to work as a team, creating an unforgettable tourism experience that creates an inebriation that cannot be ignored and calls the tourist back to Montana. DOT is either part of the team that is promoting economic development in Montana or a bureaucratic chain restraining economic growth.

Montana needs to take a lesson from Disney. Every time Montana puts up a sign that says _____ Mountains, or some other feature, there needs to be a Stopping Area. At the stopping area there needs to be a yellow paint out line where you place your feet to take a photo. When your feet are placed within the yellow paint outline you are now looking at the correct Mountain range and ready to take your photo. There is such a sign between Threeforks and Manhattan but there are two Mountain ranges and no Stopping area; which range is the Tobacco Roots? Sometimes the feature is across the highway from the sign, the outline for the feet would help to clarify what is being advertised.

Montana also needs to be known as the best friend of Truckers, in the WEST! One way to garner this reputation is to provide LOTS of parking areas, especially areas that can be used during storms. Montana imports more goods via truck than we export. Truckers need back hauls to be enticed to haul to Montana OR Montana can offer superior hospitality so the truckers do not mind running empty until they can get to a load.

Conclusion: KEEP a LARGE parking area open at Gold Creek and SELL Montana's History!

PS Montana's communities should not have to beg, "for years," to get signs or to get permission to install a sign promoting Montana's history … but we do!

"When health is absent, wisdom cannot reveal itself, art cannot manifest, strength cannot fight, wealth becomes useless, and intelligence cannot be applied." Herophilus

NEW Email - Reply to: Knowlesmontana@Juno.com - Randall Gene Knowles,
3017 Ninth Avenue South, Great Falls, MT 59405 voice, cell, & text 406-799-1547

Griffith, Nikolas

To: Nicolai, Sarah
Subject: RE: Comment on a Project or Study Submitted

-----Original Message-----
From: www@mdt.mt.gov [mailto:www@mdt.mt.gov]
Sent: Wednesday, October 11, 2017 2:52 PM
To: MDT Comments - Project <mdtcommentproject@mt.gov>
Subject: Comment on a Project or Study Submitted

A question, comment or request has been submitted via the "Contact Us" web page.

Reason for Submission: Comment on a Project or Study
Submitted: 10/11/2017 14:52:02
Project/Study Commenting On:Other Project or Activity
Name: Lucinda Putnam
Email Address: lputnam@mt.gov
Other Details: Gold Creek Rest Area

Comment or Question:
Gold Creek should be closed and all facilities removed rather than making it into a truck parking area with vaults. We have a new very nice Bearmouth rest area facility on I 90 and also a truck parking at Rock Creek. The truck parking at Rock Creek and Alberton are very costly to maintain year round. The vaults need to be pumped during the winter which is a problem due to freezing weather. Missoula Division currently contracts these facilities out to a vendor that does a good job but when there is already a facility at Rock Creek and Bearmouth and again on I
90 approximately 62 miles east it is not cost effective to add another expense to the rest area budgets. The traveling public is not very kind to the current truck parking areas.

Reference Number = prjcomment_985565185546875

Comment 17

Sarah Nicolai
DOWL
1300 Cedar Avenue
Helena, Montana 59601

RECEIVED
OCT 23 2017
DOWL
HELENA

GARRISON MERCANTILE

140 Garrison Junction Road
Garrison, Montana 59731
(406) 846-3505

October 16, 2017

Sarah Nicolai
DOWL
1300 Cedar Avenue
Helena, Montana 59601

Re: Gold Creek Rest Area

I am writing this letter to comment on the state's plan to either remo
at the Gold Creek rest areas.

As manager of the convenience store located at the junction of 1
Montana, for 35 years, I have a great deal of experience in the "bat
rises for travelers through this area. The traffic through the store q
summer months but even then the biggest thing on everyone's mind
this store is "Where's the restroom"; they then proceed to complain
being closed. Many of them merely need the rest room or a place t
only needing the rest room and not a convenience store put a lot of
room and that is probably the greatest expense we have operating
areas you have in place are a great attraction for travelers, for just a
restroom. By tearing these areas down you will be placing a lo
system plus inconveniencing a lot of travelers.

Please accept this letter as a request to keep the rest areas open, if
reduced service area. Thank you for your consideration in this matt

Sincerely yours,

GARRISON MERCANTILE & P.O., INC.

Judith M. Wood, Secretary

jw

GARRISON MERCANTILE
140 Garrison Junction Rd
Garrison, Montana 59731

Nicolai, Sarah

From: Gene Redd <mgeneredd@yahoo.com>
Sent: Monday, October 16, 2017 5:06 PM
To: Nicolai, Sarah
Subject: Gold Creek safety rest area

We really like these rest area and think they should remain OPEN!
Sent from Yahoo Mail on Android

Griffith, Nikolas

From: Nesset, Jan <jnesset@mt.gov>
Sent: Wednesday, October 18, 2017 1:04 PM
To: Nicolai, Sarah; Johnson, Paul
Subject: FW: Comment on a Project or Study Submitted

-----Original Message-----
From: www@mdt.mt.gov [mailto:www@mdt.mt.gov]
Sent: Wednesday, October 18, 2017 12:19 PM
To: MDT Comments - Project <mdtcommentproject@mt.gov>
Subject: Comment on a Project or Study Submitted

A question, comment or request has been submitted via the "Contact Us" web page.

Reason for Submission: Comment on a Project or Study
Submitted: 10/18/2017 12:19:18
Project/Study Commenting On: Other Project or Activity
Name: Mark Holloway
Email Address: mh@arholloway.com
Other Details: Gold Creek Safety Rest Area Study

Comment or Question:
Gold Creek Safety Rest Area Study
I favor complete closure
however the loss of heavy truck parking needs to be addressed possibly by adding truck parking spaces to Bearmouth. Truck drivers are required by law to stop and rest and it is imperative that they have a safe place to do so.

Reference Number = prjcomment_56964111328125

Griffith, Nikolas

From: Nesset, Jan <jnesset@mt.gov>
Sent: Monday, October 23, 2017 5:45 AM
To: Nicolai, Sarah; Johnson, Paul
Subject: FW: Comment on a Project or Study Submitted

Follow Up Flag: Flag for follow up
Flag Status: Flagged

-----Original Message-----
From: www@mdt.mt.gov [mailto:www@mdt.mt.gov]
Sent: Sunday, October 22, 2017 8:58 AM
To: MDT Comments - Project <mdtcommentproject@mt.gov>
Subject: Comment on a Project or Study Submitted

A question, comment or request has been submitted via the "Contact Us" web page.

Reason for Submission: Comment on a Project or Study
Submitted: 10/22/2017 08:57:31
Project/Study Commenting On:Other Project or Activity
Name: Frosty Lyons
Email Address: frostylyons@yahoo.com
Other Details: Gold Creek Rest area.

Comment or Question:
As a truck driver it is important for me to have as many places as possible to park at night. Please keep parking open. Thank you.

Reference Number = prjcomment_724456787109375

Petition to Save Rest Area

Comment 21

NAME	GOLD CREEK ADDRESS
Ryan L. Ayers	140 Garrison MT.
Judy Woods	Garrison, MT.
Teresa Y. Pomeroy	140 Garrison MT
James Clark	657 Eden Lane, 59731
Doug Carroll	114 Garrison Jen. Rd.
Christina Schillo	3514 Gold Creek Rd Gold Creek MT 59733
Gayle Aston	1102 6th Ave, Helena, MT
Steven M Wood	630 Westwood Rd Garrison
Steve Owens	904 Fifth St Deer Lodge 59722
Steve Harris	3868 Edelweiss St. E. Helena MT 59635
Mandy McGimpsey	1842 Ernest Ave. Msla, MT 59801
Beverly Guest	Po Box 1432 Helena, MT 59624
Melvin Patterson	P.O. Box 1042 Thompson Fell SMT
Terri Campbell	2026 Missoula Av Helena MT 59601
Laura Hayman	130 US Hwy 12 W Garrison, MT 59731
Jimmy Hayman	130 US Hwy 12 W Garrison MT 59731
Joan Shaffer	1100 Worden Missoula MT
Dulae Belanger	301 S. 8th St Hamilton
James Evans	918 4th St. Deer Lodge
Debby Jorkey	918 4th Street D.L. MT.
Shannon Knuchel	7790 Parkwood, MSLA MT 59808
Amy Purcell	731 Brock Creek Rd. Garrison MT. 59731
Lindsay Aas	23 Old Harmon Rd Helena MT
Edward A Paredes	7518 E Bridgport Ave Spokane Va
Trace Paredes	Same as above Washington
Brit Butte	2424 Little Valley Ranch Rd Avon, MT

one days signatures

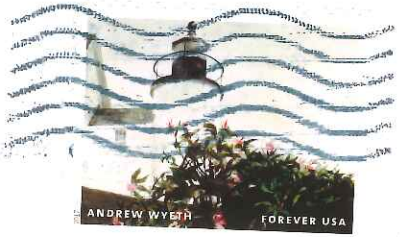
Comment 21

	Clancy MT
	Garrison, MT, 1424 Sawmill Rd.
	ST. Ignatius MT.
	St. Ignatius MT
	Deer Lodge MT
	Garrison, MT
	Drummond MT
Deborah Irvin	Missoula, MT
	Missoula Mt.
	Missoula MT.
	Garrison MT
	Missoula, MT
	Helena MT
	Deer Lodge MT
	Garrison, MT
	Garrison MT
	Deer Lodge, MT

GARRISON MERCANTILE
140 Garrison Junction Rd
Garrison, Montana 59731

BILLINGS MT 591

31 OCT 2017 PM 11



Sarah Nicolai
MDT - DOWL
1300 Cedar
Helena, MT
59601

RECEIVED
NOV 2 2017
DOWL
HELENA

59601$0903



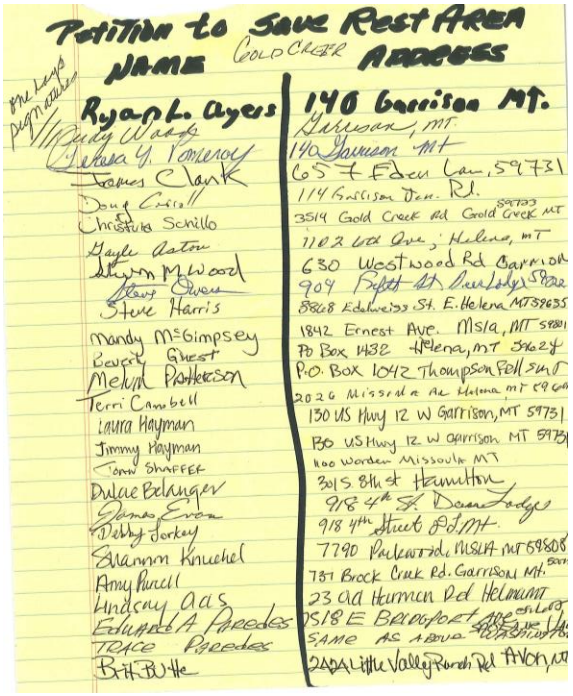
Gold Creek Safety Rest Area Study Public Comments				
Comment Number	**Date**	**Name**	**Comment**	**MDT Response**
1	5/30/2017	Scott C. Alder Bill Slaughter (Granite County Commissioners)	 Office of The Board of County Commissioners Granite County Post Office Box 925, Philipsburg, Montana 59858-0925 Telephone 406-859-7022 Assistant 406-859-7023 Fax 406-859-3817 Web Site www.co.granite.mt.us Barton C. Bonney, Chairperson P O Box 703 Philipsburg MT 59858 Scott C. Adler, Commissioner 750 Frontage Road West Drummond MT 59832 Bill Slaughter, Commissioner P O Box 50 Hall MT 59837 May 30, 2017 ATTN: Nikolas Griffith and Sarah Nicolai DOWL 1300 Cedar Street Helena MT 59601 RE: Gold Creek Safety Rest Area Study Dear Nikolas Griffith and Sarah Nicolai: As discussed during the recent stakeholder interview, we are strenuously against the complete closure of the Gold Creek Safety Rest Areas. We feel strongly that the more opportunities for motorists and truckers to pull off the highway to rest, even with minimum facilities available, contribute greatly to improved highway safety. We feel that the Gold Creek Safety Rest Areas, both eastbound and westbound, are critical because of their location near the intersection of Interstate 90 and Montana Highway 12, which is a main access to Helena, the capitol city. Any reduction in safe stopping opportunities in this corridor would be a great disservice to the traveling public. While safety rest areas with vaulted toilets are not ideal, they are most certainly the better alternative than a complete closure. Ideally, we would like to see these rest areas renovated like those at Bearmouth and Anaconda, facilities of which the Montana Department of Transportation can be justifiably proud. Since reconstruction is not an option in this study, we strongly support the maintenance of site ramps and parking areas at both rest areas at Gold Creek. MDT's Vision Zero initiative of "zero deaths/zero serious injuries on Montana roadways" is strongly supported by providing a safe opportunity for the traveling public to get off the highway and take a break from driving. We appreciate the opportunity to comment on this study, both through the stakeholder interview and with this letter. Sincerely yours, BOARD OF COUNTY COMMISSIONERS OF GRANITE COUNTY Barton C. Bonney, Chairperson Scott C. Adler, Commissioner Bill Slaughter, Commissioner	Thank you for your comment. MDT appreciates feedback from local communities affected by future decisions at the Gold Creek Safety Rest Area. Due to its close spacing to adjacent safety rest areas, MDT is not considering rehabilitation of the Gold Creek Safety Rest Area. This study recommends reduction in service as opposed to complete closure at these sites. As you note, reduction in service will maintain vaulable truck parking in the corridor and provide a safe stopping opportunity for travelers in support of Vision Zero.
2	8/17/2017	Jim Holland	I am hoping that this is not too late, but as a person who travels to Missoula on regular basis from Townsend, having the rest area at Gold Creek as you come onto to I90 from US12 and 50 miles of no public services it is a welcomed stop. When I have used it there always was traffic sufficient to support its use. I also travel with school teams and it was often used to break up our trips and provide needed services for our youth. I hope you will reconsider keeping it open with full restrooms. Thank you	Thank you for your comment. Due to its close spacing to adjacent safety rest areas, MDT is not considering rehabilitation of the Gold Creek Safety Rest Area. This study recommends reduction in service as opposed to complete closure at these sites. The reduction in service alternative will provide vaulted toilets following removal of the building facilities.

Gold Creek Safety Rest Area Study Public Comments				
Comment Number	**Date**	**Name**	**Comment**	**MDT Response**
3	8/28/2017	Dayna Gilman	My husband and I are submitting our comments to the Rest Area Plan for Gold Creek Eastbound and Westbound. We live at Exit 170 -Phosphate/Brock Creek. Our property is directly south of the exit, as well as railroad. Our area community has daily experiences with this exit and the numerous amount of traffic that actually use this exit as a place to go to the bathroom and I don't just mean pee. We are 100 percent for the "reduction in use. please please! I am going to send pictures of what we deal with everyday. We have signs posted and nobody reads. Our area is bushy so this is a haven for potty stops the only problem is that this is our DRIVEWAY! This problem has increased 99 percent since the closing of the rest area and the increase in traffic. We have put in gates and locks because people think this looks like a good place to take an excursion. Our dogs keep or wake us up at night with the continual traffic coming in over the bridge and railroad. I don't expect that you will get very many comments on this plan. We are the only ones on the South and one home on the north side directly in view of the exit. I really appreciate this opportunity and hope small voices can make a difference.	Thank you for your comment. This study recommends reduction in service as opposed to full closure.
3, continued	8/30/2017	Dayna Gilman	Charlie and Dayna Gilman 468 Phosphate Road, Garrison, MT 59731 (406) 490-1305 daynagis@gmail.com August 30, 2017 Sarah Nicolai DOWL 1300 Cedar Avenue Helena, MT 59601 RE: Gold Creek Rest Areas Dear Sarah, I am writing this letter as a follow-up to my comments submitted online and try to give any proposals on the Gold Creek rest areas closures a more vivid look of what is dealt with all the time at Exit 170 (which is about one mile east of the eastbound entrance to the rest area. These treasures (pictures enclosed) are just within the last 2 weeks. We have had vehicles drive right down into the front of our house, obviously looking for a more secluded area. We have lived there a long time and the traffic on I-90 has massively increased. Maintaining the Gold Creek rest areas with the vaulted toilet and parking would help decrease the continued use of the exit 170 as a bathroom area. Stop by anytime for chat. Thank you for the opportunity to comment. Dayna Gilman Warm regards, Charlie and Dayna Gilman	Thank you for your comment. This study recommends reduction in service as opposed to full closure.

Gold Creek Safety Rest Area Study Public Comments				
Comment Number	**Date**	**Name**	**Comment**	**MDT Response**
4	9/4/2017	Deborah Eisinger	The Clinton rest area is being evaluated. As we came from Helena, the previous rest area was closed. When we pulled into Clinton I noted the nicely designed building. There were about 7 women waiting when I entered and 5 when I left. We travel often and so do our friends. Just last week we talked about what great rest areas South Dakota has. We do notice. Hygiene for people and the roadside are important. I hope you keep this rest stop open.	Thank you for your comment. This study recommends reduction in service as opposed to full closure.
5	9/14/2017	Carl Hamming	Hi Sarah, I just noticed the public comment period and was curious how things are going? I'd prefer the first alternative in which services are reduced, but the rest stops remain functional. FWP is currently going through the permitting process to put in an official FAS site at Gold Creek and the plans include a vault toilet. I think maintaining vault toilets at the rest stops on I-90 will reduce pressure at the FAS and keep people moving on the interstate. If possible, I'm also interested in seeing a copy of the draft study report when it is released. Many Thanks, Carl Hamming	Thank you for your comment. This study recommends reduction in service as opposed to full closure.
6	9/25/2017	Spook Stang, MCM	Nick, We are OK with reduced service, but it appears the fate of this rest are was determined by the building of the new one anyway. Spook	Thank you for your comment. This study recommends reduction in service as opposed to full closure.
7	9/26/2017	Dennis Cox	Driving by the other day, I was mildly disappointed to see this rest area still closed and left to rot. As we passed, there was a big rig parked just outside the area. This is not unusual, I can attest, as this section was part of my commute for years, and myself and others would park off the interstate near to the fence to rest. I mentioned to a friend how this would make a great coffee stop where local nonprofit orgs could do some fund raising. As a member of the Philipsburg Chamber of Commerce, I'd be happy to run this idea by the nonprofit groups in our area. I am supportive of the plan to keep this rest area open. Thank you, Dennis Cox	Thank you for your comment. This study recommends reduction in service as opposed to full closure. MDT recognizes the need to maintain truck parking in this corridor.
8	9/26/2017	Michael Hammer	I think that the Gold Creek rest area should be reutilized or "reduction in service". It's in a good location and would be well utilized by the public.	Thank you for your comment. This study recommends reduction in service as opposed to full closure.
9	9/26/2017	Dan Sager	I am not in favor of closure of rest areas near Gold Creek. The east bound could be used as a fishing access I would think much cheaper than the proposed site at Gold Creek. Thanks Dan Sager Powell County Commissioner	Thank you for your comment. This study recommends reduction in service as opposed to full closure.
10	9/27/2017	Liz and George Gupton	Thank you for the opportunity to comment on the two alternatives presented in the Gold Creek Safety Rest Area Study. My husband and I take several (4-10) road trips a year and we almost always stop at this rest area. It is a good place to stretch and make a pit stop. I strongly encourage MDT to continue services at this rest area, and a reduction in services is preferable to closing.	Thank you for your comment. This study recommends reduction in service as opposed to full closure.
11	9/28/2017	Briana Wipf	I am commenting on the Gold Creek rest area. If you are putting in dog-friendly facilities, a dog drinking fountain close to the ground with a little bowl would be great. This comment really goes for any rest area. Thanks.	Thank you for your comment. Due to its close spacing to adjacent safety rest areas, MDT is not considering rehabilitation of the Gold Creek Safety Rest Area. The recommended reduction in service alternative would eliminate the public water and wastewater systems at each site.

Gold Creek Safety Rest Area Study Public Comments				
Comment Number	**Date**	**Name**	**Comment**	**MDT Response**
12	10/4/2017	Robert Harmon	I would like to see a new updated Rest Area at Gold Creek. Thank you, Robert Harmon	Thank you for your comment. Due to its close spacing to adjacent safety rest areas, MDT is not considering rehabilitation of the Gold Creek Safety Rest Area.
13	10/5/2017	Todd Fickler	Reclaim the gold creek rest area. There is plenty of truck parking in a 30 to 40 mile radius. Why would you want to maintain even the asphalt at this location.	Thank you for your comment. Based on coordination with stakeholders and usage observations, MDT has determined that this site provides valuable truck parking within the corridor. This study recommends reduction in service as opposed to full closure.
14	10/11/2017	Dori	Taking into consideration the location of other rest areas in the vicinity of the Gold Creek rest areas, the cost for upgrades to water systems as well as age of drainfields and costs to pump relative to volume of customers, I believe the correct call would be to close these rest areas permanently. Thank you for the opportunity to review the detailed report and comment on this issue.	Thank you for your comment. This study recommends reduction in service as opposed to full closure. Under the reduction in service alternative, MDT would provide vaulted toilets as opposed to public water and wastewater systems.
15	10/11/2017	Randall Knowles	Gold Creek – Tourism is the 3rd largest Economic Sector in Montana; Agriculture is number 4 and falling fast. Why was the Gold Creek rest stop EVER closed? HUGE sign, “where gold was first discovered in Montana,” but no place to stop! Though the historic claim is questionable, if not the first, Gold Creek lies very close to the first Gold Discovery. Tourists come to Montana to become embraced by Montana’s history [the history of the west] – “Stopping” areas, especially those accessed by Freeway, are critical. How do we reverse a negative experience? When an opportunity to embrace Montana’s history is promoted and then denied, what will the tourist do when they encounter the “next” historic opportunity? Montana needs tourists to slow down and spend an extra day or two. If DOT does not want to put in vault toilets then install a sign that says how far it is to the next public potty. This is NOT about resting or toileting. This is about Tourism. MT.gov needs to work as a team, creating an unforgettable tourism experience that creates an inebriation that cannot be ignored and calls the tourist back to Montana. DOT is either part of the team that is promoting economic development in Montana or a bureaucratic chain restraining economic growth. Montana needs to take a lesson from Disney. Every time Montana puts up a sign that says _____ Mountains, or some other feature, there needs to be a Stopping Area. At the stopping area there needs to be a yellow paint out line where you place your feet to take a photo. When your feet are placed within the yellow paint outline you are now looking at the correct Mountain range and ready to take your photo. There is such a sign between Threeforks and Manhattam but there are two Mountain ranges and no Stoppig area; which range is the Tobacco Roots? Sometimes the feature is across the highway from the sign, the outline for the feet would help to clarify what is being advertised. Montana also needs to be known as the best friend of Truckers, in the WEST! One way to garner this reputation is to provide LOTS of parking areas, especially areas that can be used during storms. Montana imports more goods via truck than we export. Truckers need back hauls to be enticed to haul to Montana OR Montana can offer superior hospitality so the truckers do not mind running empty until they can get to a load. Conclusion: KEEP a LARGE parking area open at Gold Creek and SELL Montana’s History! PS Montana’s communities should not have to beg, “for years,” to get signs or to get permission to install a sign promoting Montana’s history … but we do! "When health is absent, wisdom cannot reveal itself, art cannot manifest, strength cannot fight, wealth becomes useless, and intelligence cannot be applied." Herophilus	Thank you for your comment. MDT strives to provide safety rest areas every hour of travel to enhance safety on public roadways by providing opportunities for travelers to stop and rest. MDT also recognizes the need to provide adequate parking to accommodate truck needs. This study recommends reduction in service as opposed to full closure.

Gold Creek Safety Rest Area Study Public Comments				
Comment Number	**Date**	**Name**	**Comment**	**MDT Response**
16	10/11/2017	Lucinda Putnam	Gold Creek should be closed and all facilities removed rather than making it into a truck parking area with vaults. We have a new very nice Bearmouth rest area facility on I 90 and also a truck parking at Rock Creek. The truck parking at Rock Creek and Alberton are very costly to maintain year round. The vaults need to be pumped during the winter which is a problem due to freezing weather. Missoula Division currently contracts these facilities out to a vendor that does a good job but when there is already a facility at Rock Creek and Bearmouth and again on I 90 approximately 62 miles east it is not cost effective to add another expense to the rest area budgets. The traveling public is not very kind to the current truck parking areas.	Thank you for your comment. Based on coordination with stakeholders and usage observations, MDT has determined that this site provides valuable truck parking within the corridor. This study recommends reduction in service as opposed to full closure.
17	10/16/2017	Judith Wood Garrison Mercantile	October 16, 2017 Sarah Nicolai DOWL 1300 Cedar Avenue Helena, Montana 59601 Re: Gold Creek Rest Area I am writing this letter to comment on the state's plan to either remove or reduce service at the Gold Creek rest areas. As manager of the convenience store located at the junction of 12 & 90 in Garrison, Montana, for 35 years, I have a great deal of experience in the "bathroom" problem that rises for travelers through this area. The traffic through the store quadruples during the summer months but even then the biggest thing on everyone's mind when they come into this store is "Where's the restroom"; they then proceed to complain about the rest areas being closed. Many of them merely need the rest room or a place to rest. The travelers only needing the rest room and not a convenience store put a lot of use on out little rest room and that is probably the greatest expense we have operating the store. The rest areas you have in place are a great attraction for travelers, for just a rest or the use of the restroom. By tearing these areas down you will be placing a lot of pressure on our system plus inconveniencing a lot of travelers. Please accept this letter as a request to keep the rest areas open, if not as they are but a reduced service area. Thank you for your consideration in this matter. Sincerely yours, GARRISON MERCANTILE & P.O., INC. Judith M. Wood, Secretary jw	Thank you for your comment. This study recommends reduction in service as opposed to full closure.
18	10/16/2017	Gene Redd	We really like these rest area and think they should remain OPEN!	Thank you for your comment. This study recommends reduction in service as opposed to full closure.
19	10/18/2017	Mark Holloway	I favor complete closure however the loss of heavy truck parking needs to be addressed possibly by adding truck parking spaces to Bearmouth. Truck drivers are required by law to stop and rest and it is imperative that they have a safe place to do so.	Thank you for your comment. Based on coordination with stakeholders and usage observations, MDT has determined that this site provides valuable truck parking within the corridor. This study recommends reduction in service as opposed to full closure.
20	10/22/2017	Frosty Lyons	As a truck driver it is important for me to have as many places as possible to park at night. Please keep parking open. Thank you.	Thank you for your comment. Based on coordination with stakeholders and usage observations, MDT has determined that this site provides valuable truck parking within the corridor. This study recommends reduction in service as opposed to full closure.

Gold Creek Safety Rest Area Study Public Comments				
Comment Number	**Date**	**Name**	**Comment**	**MDT Response**
21	11/2/2017	Garrison Area Petition		Thank you for your comment. This study recommends reduction in service as opposed to full closure.

Appendix O: Cost Estimates

GOLD CREEK SAFETY REST AREA

ALTERNATIVE 1 - REDUCTION OF SERVICE (TRUCK PARKING)

Item Description	Unit	WB QUANTITY	EB QUANTITY	TOTAL QUANTITY	Unit Price	2017 Est. Cost	Annual Maintenance Cost	2037 Cumulative Maintenance Cost	Comments
DEMOLITION ITEMS									
REMOVE BITUMINOUS PAVEMENT	SQ YD	60.0	80.0	140	$ 8.00	$ 1,120.00	$ -	$ -	Assume 1' saw cut around median island curb removal for clean pavement edge for repaving. Remove island to provide easier snow plowing maintenance activities.
REMOVE CONCRETE CURB & GUTTER	LF	500.0	670.0	1170	$ 10.00	$ 11,700.00	$ -	$ -	Remove raised median islands for snow plowing.
REMOVE PRE-CAST CURB/PIN-DOWN CURB (w/rebar)	LF	-	-	0	$ 3.00	$ -	$ -	$ -	No cost; unless decided to remove and replace deteriorated pin-down curb.
REMOVE CONCRETE SIDEWALK/PATH	SQ YD	270.0	210.0	480					Assume removal of sidewalk "loops" leading to and adjacent to picnic shelters.
REMOVE CONCRETE PICNIC TABLE PADS	SQ YD	40.0	40.0	80					Assume total removal of picnic pads not served by access routes.
REMOVE CONCRETE SHELTER FLOOR SLABS	SQ YD	140.0	140.0	280					Assume total removal of picnic shelters served by access routes.
REMOVE CONCRETE (TOTAL)	SQ YD	450.0	390.0	840.0	$ 12.00	$ 10,080.00	$ -	$ -	
REMOVE LANDSCAPING ROCK	CU YD	40.0	90.0	130	$ 20.00	$ 2,600.00	$ -	$ -	Assume 3" deep - rock from raised median island.
REMOVE LIGHT POLES	EACH	-	-	0	$ 500.00	$ -	$ -	$ -	No cost; assume light poles remain and power is reconnected after rest area building demolition.
REMOVE ELECTRICAL SYSTEM/CONDUIT	L.SUM	0.5	0.5	1	$ -	$ -	$ -	$ -	No cost.
REMOVE BUILDING STRUCTURE	EACH	1.0	1.0	2	$ 25,000.00	$ 50,000.00	$ -	$ -	Total removal, including everything inside structure (electrical, plumbing). Lump sum cost provided by MDT.
LEAD PAINT ABATEMENT	EACH	1.0	1.0	2	$ -	$ -			Per MDT, no abatement cost for demolition.
REMOVE PICNIC SHELTER STRUCTURE	EACH	2.0	2.0	4	$ 2,000.00	$ 8,000.00	$ -	$ -	Total removal - Include 4 picnic tables per structure.
REMOVE EXHIBIT CASE (KIOSK)	EACH	1.0	1.0	2	$ 500.00	$ 1,000.00	$ -	$ -	Total removal.
REMOVE HISTORICAL SIGNS	L.SUM	1.0	1.0	2	$ 500.00	$ 1,000.00	$ -	$ -	Total removal - includes all historical signs.
REMOVE BENCHES AND WASTE RECEPTACLES	L.SUM	1.0	1.0	2	$ 500.00	$ 1,000.00	$ -	$ -	Total removal - includes all benches and waste receptacles.
REMOVE ROAD SIGNING/REPLACE ROAD SIGNING	L.SUM	0.5	0.5	1	$ 4,000.00	$ 4,000.00	$ -	$ -	Replace all advanced "Rest Area" interstate signing with new signing to reference "Truck Parking" facility.
REMOVE IRRIGATION SYSTEM	L.SUM	-	-	0	$ -	$ -	$ -	$ -	Underground irrigation lines to remain in place. Sprinkler heads may be removed as needed for safety concurrent with sidewalk removal or under contingency category. No cost.
REMOVE/ABANDON SEPTIC TANK	EACH	1.0	1.0	2	$ 4,000.00	$ 8,000.00	$ -	$ -	Pump septic tanks, crush, and fill in place.
REMOVE/ABANDON LIFT STATION	EACH	1.0	-	1	$ 4,500.00	$ 4,500.00	$ -	$ -	Remove pump apparatus, crush, and fill in place.
REMOVE/ABANDON DRAINFIELD	EACH	1.0	1.0	2	$ -	$ -	$ -	$ -	Underground drainfield to remain in place. No cost.
REMOVE SANITARY SEWER PIPING	L.SUM	0.5	0.5	1	$ -	$ -	$ -	$ -	Excavate connection points, cut pipe, and cap. Underground piping to remain in place. No cost.
REMOVE/ABANDON WELL	EACH	-	-	0	$ 3,000.00	$ -	$ -	$ -	No cost.
				DEMOLITION ITEMS	**SUBTOTAL**	**$ 103,000.00**	**$ -**	**$ -**	

GOLD CREEK SAFETY REST AREA

ALTERNATIVE 1 - REDUCTION OF SERVICE (TRUCK PARKING)

Item Description	Unit	WB QUANTITY	EB QUANTITY	TOTAL QUANTITY	Unit Price	2017 Est. Cost	Annual Maintenance Cost	2037 Cumulative Maintenance Cost	Comments
IMPROVEMENT ITEMS									
GENERAL ITEMS									
GENERAL GRADING, EARTHWORK, ETC.	ACRE	1.0	1.0	2	$ 5,000.00	$ 10,000.00	$ -	$ -	Assumes area of overall site reclamation footprint.
RECLAIM/RESEEDING	ACRE	1.0	1.0	2	$ 1,500.00	$ 3,000.00	$ -	$ -	Reclaim building area and other site demolition areas.
TREE REMOVAL/TRIMMING	EACH SITE	1.0	1.0	2	$ 7,500.00	$ 15,000.00	$ -	$ -	Removal or trimming of overly mature/large trees that may be a hazard for patron use (assume $1,500 per tree at 5 trees each site).
UPGRADE SIDEWALK - CONCRETE 4 INCH	SQ YD	90.0	90.0	180	$ 70.00	$ 12,600.00	$ -	$ -	Assume 30% of remaining sidewalk area to be upgraded based on % of "non-compliant" measurements from existing conditions report (approx. 30% for EB and WB).
BITUMINOUS PAVEMENT	TON	150.0	280.0	430	$ 100.00	$ 43,000.00	$ -	$ -	New pavement to replace removed area of raised median islands ~ assume 4" asphalt over 10" crushed agg course.
CRUSHED AGGREGATE BASE	CY	170.0	340.0	510	$ 60.00	$ 30,600.00	$ -	$ -	New pavement to replace removed area of raised median islands ~ assume 4" asphalt over 10" crushed agg course.
PAVEMENT REHABILITATION (CHIP SEAL)	SQ YD	11,900.0	12,800.0	24700	$ 3.00	$ 74,100.00	$ -	$ -	Assume chip seal of all ramp/parking pavement areas for rehab option at $3/SY per MDT information. Ramp limits assumed to stop at painted nose where mainline edge line and ramp edge line converge.
STRIPING	LF	6,800.0	7,100.0	13900	$ 1.50	$ 20,850.00	$ -	$ -	Restripe all parking stalls and parking and ramp edge lines - 4" stripes.
NEW WASTE RECEPTACLES	L.SUM	2.0	2.0	4	$ 200.00	$ 800.00			Replace waste receptacles at each site.
WASTEWATER SYSTEM									
NEW VAULTED TOILET STRUCTURE	EACH	1.0	1.0	2	$ 50,000.00	$ 100,000.00	$ -	$ -	Assumes single structure with 2 separate toilet stalls per structure. Vaulted Toilets Information: $34,000 for single building with two rooms. $13,500 for single building with one room. Doesn't include crane setting or foundations. Assumes $50,000 each site.
NEW TANKS (ASSUME 2,500 GALLONS)	EACH	1.0	1.0	2	$ 5,000.00	$ 10,000.00	$ -	$ -	Tanks for new VT.
PERMITTING COST OF NEW SYSTEM (VAULTED TOILETS)	EACH	1.0	1.0	2	$ 8,000.00	$ 16,000.00	$ -	$ -	
(OPTIONAL) Re-Permitting of Existing System	EACH	1.0	1.0	2	$ 12,000.00	$ 24,000.00	$ -	$ -	THIS ITEM NOT INCLUDED IN TOTAL COST SHOWN BELOW: In the future, MDT could consider using existing WW system instead of installing vaulted toilet tanks. Option reduces frequent VT tank pumping costs. Would require repermitting new WW system for higher concentration with lower flows.
(OPTIONAL) New Lift Station (Eastbound Site)	EACH	-	1.0	1	$ 9,000.00	$ 9,000.00	$ -	$ -	THIS ITEM NOT INCLUDED IN TOTAL COST SHOWN BELOW: This option includes using existing WW system - no VT tanks.
WATER SYSTEM									
PERPETUATE WELL/WATER SYSTEM	EACH	1.0	1.0	2	$ 4,500.00	$ 9,000.00	$ -	$ -	Improvements/upgrades to perpetuate well/water system.
				IMPROVEMENT ITEMS	**SUBTOTAL**	**$ 344,950.00**	**$ -**	**$ -**	
					DEMOLITION / CAPITAL IMPROVEMENT SUBTOTAL	**$ 447,950.00**	**$ -**	**$ -**	
				CONTINGENCY	**20%**	**$ 89,590.00**	**$ -**	**$ -**	Included to account for unidentified items
					SUBTOTAL	**$ 537,540.00**	**$ -**	**$ -**	

GOLD CREEK SAFETY REST AREA

ALTERNATIVE 1 - REDUCTION OF SERVICE (TRUCK PARKING)

Item Description	Unit	WB QUANTITY	EB QUANTITY	TOTAL QUANTITY	Unit Price	2017 Est. Cost	Annual Maintenance Cost	2037 Cumulative Maintenance Cost	Comments
MAINTENANCE ITEMS									
MAINTENANCE ITEMS									
ANNUAL MAINTENANCE COSTS	ANNUAL			1	$ 20,000.00	$ -	$ 20,000.00	$ 495,666.34	Unit price based on average labor, equipment, materials, and contracted maintenance costs for Rock Creek Truck Parking Area from 2011 to 2016. Assume this cost includes any/all vaulted toilet pumping costs.
WELL/IRRIGATION MAINTENANCE (ANNUAL)	EACH SITE	1.0	1.0	2	$ 500.00	$ -	$ 1,000.00	$ 24,783.32	Blowing out irrigation lines every fall and routine maintenance.
				MAINTENANCE ITEMS	**SUBTOTAL**	**$ -**	**$ 21,000.00**	**$ 520,449.66**	2037 total assumes 2.0% compound annual increase in maintenance cost.
					TOTAL	**$ 537,540.00**	**$ 21,000.00**	**$ 520,449.66**	

Notes: Quantities calculated from review of aerial photography and MDT as-built drawings. Unit pricing derived from MDT bid tabs and information provided by MDT communication.

Not included in total cost (shown for information only) = XXXX

GOLD CREEK SAFETY REST AREA

ALTERNATIVE 2 - CLOSURE

Item Description	Unit	WB QUANTITY	EB QUANTITY	TOTAL QUANTITY	Unit Price	2017 Est. Cost	Annual Maintenance Cost	2037 Cumulative Maintenance Cost	Comments
DEMOLITION ITEMS									
REMOVE BITUMINOUS PAVEMENT	SQ YD	12,000.0	13,000.0	25000	$ 8.00	$ 200,000.00	$ -	$ -	Total removal - sawcut at 10' beyond mainline edge stripe to provide standard paved shoulder width.
REMOVE CONCRETE CURB & GUTTER	LF	860.0	1,040.0	1900	$ 10.00	$ 19,000.00	$ -	$ -	Total removal.
REMOVE PRE-CAST CURB/PIN-DOWN CURB (w/rebar)	LF	1,000.0	330.0	1330	$ 3.00	$ 3,990.00	$ -	$ -	Total removal.
REMOVE CONCRETE SIDEWALK/PATH	SQ YD	570.0	500.0	1070					
REMOVE CONCRETE PICNIC TABLE PADS	SQ YD	40.0	40.0	80					
REMOVE CONCRETE SHELTER FLOOR SLABS	SQ YD	140.0	140.0	280					
REMOVE CONCRETE (TOTAL)	SQ YD	750.0	680.0	1430	$ 12.00	$ 17,160.00	$ -	$ -	Total removal.
REMOVE LANDSCAPING ROCK	CU YD	60.0	100.0	160	$ 20.00	$ 3,200.00	$ -	$ -	Total removal - assume 3" deep.
REMOVE LIGHT POLES	EACH	7.0	9.0	16	$ 500.00	$ 8,000.00	$ -	$ -	Total removal.
REMOVE ELECTRICAL SYSTEM/CONDUIT	L.SUM	0.5	0.5	1	$ -	$ -	$ -	$ -	Underground conduit to remain in place. No cost.
REMOVE BUILDING STRUCTURE	EACH	1.0	1.0	2	$ 25,000.00	$ 50,000.00	$ -	$ -	Total removal, including everything inside structure (electrical, plumbing). Lump sum cost provided by MDT.
LEAD PAINT ABATEMENT	EACH	1.0	1.0	2	$ -	$ -	$ -	$ -	Per MDT, no abatement cost for demolition.
REMOVE PICNIC SHELTER STRUCTURE	EACH	2.0	2.0	4	$ 2,000.00	$ 8,000.00	$ -	$ -	Total removal - Include 4 picnic tables per structure.
REMOVE EXHIBIT CASE (KIOSK)	EACH	1.0	1.0	2	$ 500.00	$ 1,000.00	$ -	$ -	Total removal.
REMOVE HISTORICAL SIGNS	L.SUM	1.0	1.0	2	$ 500.00	$ 1,000.00	$ -	$ -	Total removal - includes all historical signs.
REMOVE BENCHES AND WASTE RECEPTACLES	L.SUM	1.0	1.0	2	$ 500.00	$ 1,000.00	$ -	$ -	Total removal - includes all benches and waste receptacles.
REMOVE ROAD SIGNING/REPLACE ROAD SIGNING	L.SUM	0.5	0.5	1	$ 1,500.00	$ 1,500.00	$ -	$ -	Remove all road signing and any advance signing along interstate in reference to "Rest Area."
REMOVE IRRIGATION SYSTEM	L.SUM	-	-	0	$ -	$ -	$ -	$ -	Underground irrigation lines to remain in place. Sprinkler heads may be removed as needed for safety concurrent with sidewalk removal or under contingency category. No cost.
REMOVE/ABANDON SEPTIC TANK	EACH	1.0	1.0	2	$ 4,000.00	$ 8,000.00	$ -	$ -	Pump septic tanks, crush, and fill in place.
REMOVE/ABANDON LIFT STATION	EACH	-	1.0	1	$ 4,500.00	$ 4,500.00	$ -	$ -	Remove pump apparatus, crush, and fill in place.
REMOVE/ABANDON DRAINFIELD	EACH	1.0	1.0	2	$ -	$ -	$ -	$ -	Underground drainfield to remain in place. No cost.
REMOVE SANITARY SEWER PIPING	L.SUM	0.5	0.5	1	$ -	$ -	$ -	$ -	Excavate connection points, cut pipe, and cap. Underground piping to remain in place. No cost.
REMOVE/ABANDON WELL	EACH	1.0	1.0	2	$ 3,000.00	$ 6,000.00	$ -	$ -	Cap and abandon well.
				DEMOLITION ITEMS	**SUBTOTAL**	**$ 332,350.00**	**$ -**	**$ -**	

GOLD CREEK SAFETY REST AREA

ALTERNATIVE 2 - CLOSURE

Item Description	Unit	WB QUANTITY	EB QUANTITY	TOTAL QUANTITY	Unit Price	2017 Est. Cost	Annual Maintenance Cost	2037 Cumulative Maintenance Cost	Comments
IMPROVEMENT ITEMS									
GENERAL ITEMS									
GENERAL GRADING, EARTHWORK, ETC.	ACRE	6.0	7.0	13	$ 5,000.00	$ 65,000.00	$ -	$ -	Assumes area of overall site reclamation footprint.
RECLAIM/RESEEDING	ACRE	6.0	7.0	13	$ 1,000.00	$ 13,000.00	$ -	$ -	Reclaim entire site footprint and perimeter disturbance.
TREE REMOVAL/TRIMMING	EACH SITE	-	-	0	$ -	$ -	$ -	$ -	No cost.
UPGRADE SIDEWALK - CONCRETE 4 INCH	SQ YD	-	-	0	$ 70.00	$ -	$ -	$ -	No cost.
BITUMINOUS PAVEMENT	TON	100.0	90.0	190	$ 100.00	$ 19,000.00	$ -	$ -	Assume sawcut along mainline to provide standard 10' outside shoulder; replace vertical sawcut edge with new pavement wedge @ 6:1 in-slopes.
CRUSHED AGGREGATE BASE	CY	660.0	590.0	1250	$ 60.00	$ 75,000.00	$ -	$ -	Assume sawcut along mainline to provide standard 10' outside shoulder; replace vertical sawcut edge with new pavement wedge @ 6:1 in-slopes.
PAVEMENT REHABILITATION (CHIP SEAL)	SQ YD	-	-	0	$ 3.00	$ -	$ -	$ -	No cost.
STRIPING	LF	1,100.0	900.0	2000	$ 2.00	$ 4,000.00	$ -	$ -	Restripe interstate outside lane line where ramp connection is removed to provide continuous edge line stripe.
NEW WASTE RECEPTACLES	L.SUM	-	-	0	$ 200.00	$ -			No cost.
WASTEWATER SYSTEM									
NEW VAULTED TOILET STRUCTURE	EACH	-	-	0	$ -	$ -	$ -	$ -	No cost.
NEW TANKS (ASSUME 2,500 GALLONS)	EACH	-	-	0	$ -	$ -	$ -	$ -	No cost.
PERMITTING COST OF NEW SYSTEM (VAULTED TOILETS)	EACH	-	-	0	$ -	$ -	$ -	$ -	No cost.
(OPTIONAL) Re-Permitting of Existing System	EACH	-	-	0	$ -	$ -	$ -	$ -	No cost.
(OPTIONAL) New Lift Station (Eastbound Site)	EACH	-	-	0	$ -	$ -	$ -	$ -	No cost.
WATER SYSTEM									
PERPETUATE WELL/WATER SYSTEM	EACH	-	-	0	$ -	$ -	$ -	$ -	No cost if remove/abandon well
				IMPROVEMENT ITEMS	**SUBTOTAL**	**$ 176,000.00**	**$ -**	**$ -**	
					DEMOLITION / CAPITAL IMPROVEMENT SUBTOTAL	**$ 508,350.00**	**$ -**	**$ -**	
					CONTINGENCY 20%	**$ 101,670.00**	**$ -**	**$ -**	Included to account for unidentified items
					SUBTOTAL	**$ 610,020.00**	**$ -**	**$ -**	

GOLD CREEK SAFETY REST AREA

ALTERNATIVE 2 - CLOSURE

Item Description	Unit	WB QUANTITY	EB QUANTITY	TOTAL QUANTITY	Unit Price	2017 Est. Cost	Annual Maintenance Cost	2037 Cumulative Maintenance Cost	Comments
MAINTENANCE ITEMS									
MAINTENANCE ITEMS									
ANNUAL MAINTENANCE COSTS	ANNUAL	-	-	0	$ -	$ -	$ -	$ -	No cost.
WELL/IRRIGATION MAINTENANCE (ANNUAL)	EACH SITE	-	-	0	$ -	$ -	$ -	$ -	No cost if remove/abandon well.
					MAINTENANCE ITEMS SUBTOTAL	**$ -**	**$ -**	**$ -**	
					TOTAL	**$ 610,020.00**	**$ -**	**$ -**	

Notes: Quantities calculated from review of aerial photography and MDT as-built drawings. Unit pricing derived from MDT bid tabs and information provided by MDT communication.

Not included in total cost (shown for information only) = XXXX

Appendix P: FHWA Non-regulatory Supplement

Federal Aid Policy Guide - Non-regulatory Supplement

Transmittal 6: Vending Machines in Interstate Rest Areas and Abandonment of Interstate Rest Areas

FEDERAL-AID POLICY GUIDE
October 5, 1992, Transmittal 6

NS 23 CFR 752

Non-regulatory Supplement

This Supplement Includes Information on Vending Machines In Interstate Rest Areas And Abandonment Of Interstate Rest Areas

1. **VENDING MACHINES IN SAFETY REST AREAS CONSTRUCTED OR LOCATED ON THE INTERSTATE HIGHWAY SYSTEM (23 CFR 752)**. Section 111 of the Surface Transportation Assistance Act (STAA) of 1982 grants the States the authority to permit the placement of vending machines in safety rest areas constructed or located on rights-of-way of the National System of Interstate and Defense Highways.
   a. The State highway agency need not operate the vending machines directly. It may enter into contracts with vendors for the installation, operation, and maintenance of such vending machines. All States, including those which are participating in the 1978 vending machine demonstration project, must give priority to vending machines operated through the State licensing agency designated pursuant to the Randolph-Sheppard Act (RSA). All contracts shall be in writing and shall ensure retention by the State highway agency of full responsibility for and control over all activities within the rest area.
   b. The only application the RSA has to Section 111 is to establish the licensing agency in each State that is to be given priority. With the exception of rest areas on Federal lands, none of the RSA requirements apply to vending machines in Interstate rest areas.
   c. The RSA, however, does apply to vending facilities on Federal property. Although most rest areas are on State owned property, the possibility exists that in certain instances a rest area could be on Federal property. In any instance where the State has acquired less than fee title for a section of Interstate highway located on Federal land, there is a possibility that a rest area located within that section could be considered as being on Federal property. If a State should plan to place vending machines on such property, the FHWA will have to decide whether United States retains sufficient interest in the land for it to be classed as "Federal property." If a State contemplates placing vending machines in such rest areas, the request with appropriate documentation on the land acquisition is to be submitted to Washington Headquarters for determining if the land involved is Federal property for the purposes of RSA application.
   d. Where a rest area is on Federal property both the RSA and Section 111 apply. Further, the more restrictive provisions of both laws must be applied. For example, since Section 111 does not contain any requirements regarding the disposition of

income from vending machines but the RSA does, the RSA applies. Thus, the requirements of 20 U.S.C. 107d-3(c) that such income be applied for the benefit of blind licensees must be met. As another example, the RSA allows a blind person to operate a stand; however, Section 111 expressly limits operations to vending machines. Because Section 111 is more restrictive it controls and only machines are allowed in rest areas.

e. Documentation demonstrating a positive initiative to involve the designated Randolph-Sheppard Act State agency will be required before the State highway agency proposes alternate organizations or corporations to operate the vending machines. However, if the designated Randolph-Sheppard Act agency waives its rights in writing, the State highway agency is free to negotiate agreements described in paragraph 1a of this supplement with any organization or corporation.
f. The ineligibility of Federal assistance for installation, operation, and maintenance of the vending machines includes any modification in existing rest area facilities or the construction of new facilities. This exclusion from Federal-aid participation would also extend to power supplies, water sources and any other ancillary items necessary for the installation, operation, and maintenance of the vending machines.
g. The nondiscrimination provisions of 23 CFR 752.8(c)6 apply to the installation, operation, and maintenance of vending machines.

2. **DEFINITION (23 CFR 752)**. A vending machine is a coin or currency operated machine capable of automatically dispensing an article or product.
   a. By limiting installations to vending machines, it is expressly intended to preclude a vendor from establishing a stand or shop for the purpose of selling the article or product and also to exclude any form of personal salesmanship.
   b. Items which may be dispensed are limited to such food, drink, and other articles as the State highway agency determines to be appropriate and desirable. Title 23 U.S.C. 111 continues to prohibit automotive service stations on the rights-of-way of the Interstate System. Based on this prohibition, the dispensing, by any means, of petroleum products or motor vehicle replacement parts is banned.

3. **ABANDONMENT OF INTERSTATE SAFETY REST AREA FACILITIES (23** CFR 752)
   a. A State may abandon an Interstate rest area or rest areas provided there is a well-documented evaluation demonstrating that the rest areas to remain are adequate in both number and size to satisfy the need of the traveling public. Ability to provide for the needs of the public without any overcrowding along with a showing that the distances between the remaining rest areas are reasonable would be essential in this report. In that regard, a spacing of an hour's driving time or less is considered to be reasonable unless an extenuating circumstance can be established. This spacing is consistent with the recommendation contained in Implementation Package FHWA-IP-81-1 "Safety Rest Area Planning, Location, and Design." A 504 Regulation (49 CFR, Part 27) submission which has been reviewed and approved by Washington Headquarters could constitute the needed documentation provided the submission clearly established those rest areas to be abandoned. If the submission did not include the rest areas to be abandoned a separate evaluation is needed.
   b. The abandonment of a rest area or rest areas near State lines could adversely affect rest areas in adjoining States. Because of the need for coordination at State lines, any proposed abandonment not part of a 504 Regulation approval, should be reviewed by the appropriate regional office or offices.

c. Because the utilization of rest areas for alternative activities is an unusual circumstance which has the potential for creating policy questions, such requests should be forwarded for Headquarter's review and approval.
d. The 504 Regulation is specific regarding the need to make provisions for the handicapped at such locations as rest areas. Recognizing the possibility that in some instances the driver or a rider in a truck may have need for these facilities, exceptions which would permit rest areas for trucks without handicapped provisions should not be granted.
e. The question of whether or not parking areas in rest areas which lack other facilities should continue to be available for use is an operational consideration and thus a State decision. The decision should be made on an individual basis depending on the circumstances. Retention could be a safety benefit. On the other hand if activities in these sites are or become nuisances, closure may be the only acceptable solution.
f. The land of an abandoned rest area need not be made to conform with adjacent areas. However, the area should be dressed up, seeded, and maintained to the extent necessary to be compatible with the adjacent areas. Further, because of the requirements of OMB Circular A-102, Attachment N, Section 3, Real Property, division office and State personnel should jointly review every abandonment on a case-by-case basis. If it is agreed there is a reasonable expectation that the site will be used for highway purposes at some time in the future, no further action is required. If, however, it is determined the site will never be used for such purposes disposal of the excess property to comply with A-102 will be necessary.
g. A State may be permitted to retain the land on which an abandoned rest area is situated. However, any contemplated use other than as a rest area is to be submitted for Washington Headquarter's review and approval. Further, any use of an abandoned rest area should not be of a permanent nature so that it could revert to rest area usage if a future need should develop. Any proposed use other than as a rest area should consider safety and access control.
h. The maintaining or closing of a rest area without facilities is an operational decision to be made by the State with FHWA concurrence. The abandoned, but not disposal of, rest areas should be properly maintained and any activities occurring at the closed rest area, whether lawfully or by trespassers, should not be detrimental to the operation of the Interstate System.
i. The cost of abandonment is not eligible for Federal-aid funding.
j. Federal funding credit is required when the State disposes of any improvement for value. Credit is not required for improvements which are used for other transportation purposes. Credit is also not required when it is more economical to abandon or waste the improvements. Any disposal of the right-of-way should be at fair market value with an appropriate credit to Federal funds. If an abandoned site was to subsequently revert to a rest area, the extent of Federal fund eligibility in restoration costs would have to be considered on a case-by-case basis. Among the factors to be considered would be need, life of facility when abandoned, impact of interim use on restoration costs, and any conditions or agreements associated with abandonment.

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DEPARTMENT OF TRANSPORTATION

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