Environmental Assessment and "Nationwide" Section 4(f) Evaluation

Marysville Road Improvement Project
TCSP 25(43) CN 4983
Lewis and Clark County, Montana

July 2006

Prepared for: Montana Department of Transportation

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Environmental Assessment
and
Programmatic Section 4(f) Evaluation
for
Marysville Road Improvement Project
TCSP 25(43)
Control Number 4983

This document is prepared in conformance with the Montana Environmental Policy Act (MEPA) requirements and contains the information required for an Environmental Assessment under the provisions of ARM 18.2.237(2) and 18.2.239. It is also prepared in conformance with the National Environmental Policy Act (NEPA) requirements for an Environmental Assessment under 23 CFR 771.119.

Submitted Pursuant to 42 USC 4332(2)(c), 49 USC 303
and Sections 2-3-104 and 75-1-201 MCA
by the
US Department of Transportation
Federal Highway Administration
and the
Montana Department of Transportation

Cooperating Agencies:

Montana Department of Environmental Quality
Montana Department of Fish, Wildlife and Parks
US Army Corps of Engineers
US Fish and Wildlife Service
US Forest Service

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7-10-06

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Comments must be received by August 18, 2006.

Marysville Road Improvement Project

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List of Acronyms and Abbreviations

ABA	Acid Base Accounting
ADT	Average Daily Traffic
AMRB	Abandoned Mines Reclamation Bureau
BD	Belmont Drive
BMPs	Best Management Practices
BLM	United States Bureau of Land Management
CDM	Camp Dresser & McKee, Inc.
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CO	Carbon Monoxide
CWA	Clean Water Act
dBA	Decibels
DEQ	Montana Department of Environmental Quality
EA	Environmental Assessment
EIS	Environmental Impact Statement
ESA	Endangered Species Act
F	Fahrenheit
ft	Feet
FHWA	Federal Highway Administration
HAER	Historic American Engineering Record
ISA	Initial Site Assessment
km	Kilometer
kph	Kilometers per hour
LOS	Level of Service
LWCF	Land and Water Conservation Fund
LUST	Leaking Underground Storage Tank
m	Meter
mm	Millimeter
MCL	Maximum Contaminant Level
MDFWP	Montana Department of Fish, Wildlife and Parks
MDNRC	Montana Department of Natural Resources and Conservation
MDT	Montana Department of Transportation
mph	miles per hour
MTNHP	Montana Natural Heritage Program
NAC	Noise Abatement Criteria
NEPA	National Environmental Policy Act
NHS	National Highway System
NPS	National Park Service
NRCS	Natural Resources Conservation Service

NRHP	National Register of Historic Places
O&M	Operations and Maintenance
PSI	Preliminary Site Investigation
ROW	Right-of-Way
RP	Reference Post
SE&A	Stahly Engineering and Associates
SHPO	State Historic Preservation Office
SLM	Sound Level Meter
SSL	Soil Screening Level
SWPPP	Storm Water Pollution Prevention Plan
TCLP	Toxicity Characteristic Leaching Procedure
TMDL	Total Maximum Daily Load
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	Underground Storage Tank
WR	Waste Rock

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Section 1
Purpose and Need

1.1 Study Area Description

The proposed Marysville Road improvement project is located in Lewis and Clark County Montana, approximately 15 miles northwest of the city of Helena. Marysville Road (County Road L2590) is a rural, gravel road that extends from the eastern terminus at Lincoln Road (S-279) near Silver City, through the town of Marysville to the western terminus at Ottawa Gulch. **Figures 1-1 and 2-1** show the project location and study area.

The proposed roadway improvement project is approximately 10.9 kilometers (km) (6.82 miles) in length. The project's eastern terminus is at the intersection of Lincoln Road (S-279) and Marysville Road at Reference Post (RP) 0.0. The project extends westerly to the junction of Marysville Road and Belmont Drive (County Road L2550) at RP 6.15 then continues westerly on Belmont Drive from RP 0.0 to the intersection with Ottawa Gulch Road at approximately RP 0.71. The RP designations for Belmont Drive are differentiated from Marysville Road using the suffix "BD." For example, the approximate project western terminus is designated as "RP 0.71 BD." The western terminus of the project will be located on Belmont Drive a short distance west of the intersection with Ottawa Gulch Road. It should be noted that RP 6.15 is equal to RP 0.0 BD. The study area corridor encompasses 20 meters (m) (65.5 feet (ft) from the centerline on either side of the centerline of the existing road for a width of 40 m (131 ft) for the length of the proposed improvements.

The route is not on the State Secondary System and was not designed to county or other standards, but originated in the 1890s to access the Marysville mining district and was built over time to its present conditions. The road is currently owned and maintained by Lewis and Clark County. The Marysville Road serves the townsite of Marysville, the Great Divide Ski Area (accessed via Belmont Drive) and US Forest Service (USFS) property. Approximately 92 residents live year-round at Marysville, and approximately 10 additional cabins are located in the vicinity of the townsite for recreational/seasonal use. The primary land uses in the project area are residential, agricultural, and recreational.

The topography surrounding the road is generally rugged, mountainous, and mostly forested. The majority of the alignment (from the eastern termini to the town of Marysville) is bordered by steep rock slopes to the north and steep slopes to south. Above the town of Marysville, the road climbs more rapidly in elevation to the west, bordered by several residential properties. This section also contains several sharp horizontal and vertical curves.

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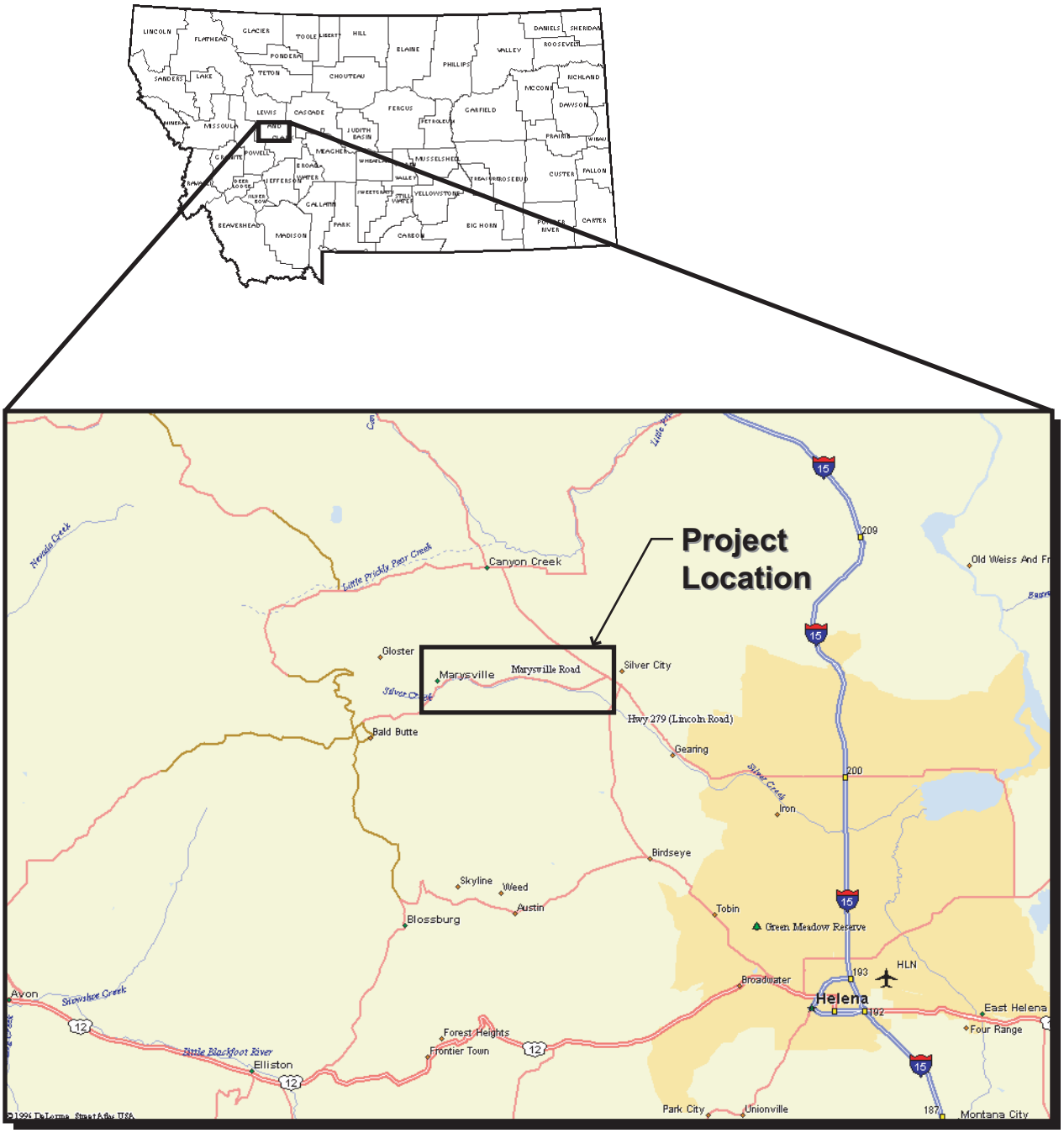
Figure 1-1
Project Location

Not To Scale



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1.2 Purpose

The primary purpose of the project is to improve safety by increasing horizontal curve radii, reducing vertical curve grades, road widening, guardrail installation, and improving the road surface.

1.3 Project Needs

1.3.1 Project Safety/Crash History

Accident data for a six-year period, January 1, 1997 through December 31, 2002, were obtained from MDT and analyzed in the *Traffic Review Report* (SE&A, February 2004). The data were for RP 0.0 BD to RP 0.70 BD on Belmont Drive, RP 0.00 to RP 6.15 on Marysville Road, and for the intersection with Lincoln Road. Accident rates are not computed by MDT for off-system roadways (including Marysville Road) since the traffic volumes are typically low and it becomes questionable whether the computed rates are statistically meaningful. Accident rates were not computed for Marysville Road because comparisons with secondary state routes would be rough and inconclusive. According to the MDT accident data, there were 35 Property Damage Only Accidents, 16 Injury Accidents and one Fatal Accident. All accidents appeared to be single vehicle accidents. There are two accident cluster locations where a combined total of 52 percent of the accidents occurred over the 6-year period.

(1) Approximate RP 0.4 BD to RP 0.7 BD where 15 eastbound accidents occurred and 1 westbound accident, representing 38% of the accidents.

(2) Approximate RP 5.9 to PR 6.0 where six eastbound accidents occurred, representing 14% of the accidents.

Horizontal curves, which do not meet current minimum design criteria, exist at both of these locations, and are accompanied by existing grades ranging between 8 and 11 percent. Improvements to the horizontal and vertical alignments could serve to increase safety of the road.

The Lewis and Clark County Report, 2000 *Traffic Safety Improvement Study* (Lewis and Clark County, Montana, December 2000), provided accident history and recommendations as follows:

> "It was determined that about 80 percent of the collisions on this roadway occurred between M.P. 6.6 and 7.0 (i.e., RP 0.45 BD and RP 0.85 BD) (Jan. 1996 to Jan. 1999), however, between the time period of January 1, 1999 and July 1, 2000 a shift in reported accidents occurred with about 42 percent of them occurring between M.P. 2.0 to M.P. 5.6 (i.e., RP 2.0 to RP 5.6). The majority of accidents are single vehicle, run-off road collisions. About 90 percent of the collisions over the last 10 years occurred within the last five (5) years. Also, the last 18 months accounted for 44 percent of the accidents in the last 4.5 years."

> "Last years '1999 Traffic Study Improvement Study' recommended guardrail be installed on the upper section of this roadway, however, as a result of the increase in collision on the lower portion of this route we believe justification exists to also install guardrail from M.P. 2.7 to M.P. 6.1 (i.e., RP 2.7 to RP 6.1) on the south side of the roadway. Also, improvements in the area about 0.5 of a mile southwest of Marysville (i.e., RP 0.45 BD to RP 0.6 BD) on a horizontal curve appear justified."

1.3.2 Roadway Deficiencies

Marysville Road is a county road and is not on the State System. Marysville Road is classified as a rural minor collector. Design criteria are discussed in detail in Section 1.5. Marysville Road had evolved from a wagon trail to the present road over time and does not meet current MDT criteria for rural collectors. The sections below describe the features of the road that do not meet design criteria and are therefore considered project needs. The alternatives developed for the project, described in Section 2, seek to meet these needs for the purpose of improved safety. The following sections discuss areas where the safety of the road could be enhanced by meeting current design criteria.

1.3.2.1 Side Slopes

Steep slopes ranging from 1:1 to 3:1 (horizontal to vertical) are located to the south for much of the existing Marysville Road alignment. Silver Creek runs parallel to the road on the south side. In some locations it is only a few feet from the road. The steep fill side slopes do not meet the design criteria of 4:1 or flatter and contribute to the accident severity on Marysville Road, as described in Section 1.3.

1.3.2.2 Unsatisfactory Horizontal Curves

There are several locations within the project corridor where the curvature of the roadway (horizontal alignment) does not meet MDT design criteria described in Section 1.5. Stopping sight distance is not adequate to meet design criteria.

1.3.2.3 Unsatisfactory Vertical Curves

Vertical curves exist along the existing roadway and do not meet current MDT design criteria described in Section 1.5. These curves are either sags or crests that do not meet the desirable stopping sight distance.

1.3.2.4 Unsatisfactory Road and Shoulder Width

The Marysville Road widths vary from 5.4 m (18 ft) to 9.1 m (30 ft). MDT design criteria calls for an 8.4 m (28 ft) road width. In the upper (western) reaches of the road, road widths are currently too narrow to accommodate guardrail installation.

The existing Marysville Road consists of two lanes with minimal or non-existent shoulders in most locations. Occasional "pullouts" for vehicle parking are present

along the roadside east of the town of Marysville. The design criteria for this type of road is two 0.6 m (2 ft) shoulders. Current shoulder widths do not allow adequate space for the installation of guardrail.

1.3.2.5 Roadway Blockage by Recreational Vehicles

The intersection of Ottawa Gulch Road and Belmont Drive is heavily used in the winter months by snowmobiling enthusiasts as an area for loading and unloading snowmobiles and for day use vehicle and trailer parking. Public comment indicates this situation is perceived to be hazardous to both the snowmobile enthusiasts and motorists passing through.

1.3.2.6 Unsatisfactory Road Surface

The current road surface often becomes rutted, which contributes to the safety issues on Marysville Road.

1.4 Project Objectives

The objectives of the project are as follows:

- Widen roadway.
- Improve horizontal stopping and sight distance.
- Install guardrail or flatten slopes along south side of road.
- Improve roadway surface and base to minimize rutting.
- Reduce roadway blockage due to parked recreational vehicles.

1.5 Project Goals

Marysville Road is a county road and is not on the State Secondary System; however it is classified as a rural minor collector. Lewis and Clark County does not have design standards. The Montana Transportation Commission has adopted the MDT Geometric Design Criteria. These criteria provide requirements for the National Highway System (NHS) and the surface transportation program (i.e. highways and other designated roadways that are not NHS routes). The Geometric Design Criteria for a Rural Collector Road (Non NHS – Secondary) which is outlined in **Table 1-1** was developed from those approved Design Standards. Proposed alignments, vertical and horizontal, would meet or exceed the design criteria in Table 1-1 where practicable.

Table 1-1
Geometric Design Criteria for Rural Collector Roads (Non-NHS-Secondary)

Design Elements	***Design Criteria for Mountainous Terrain***
Design speed	70 kilometers per hour (kph) (45 miles per hour (mph)
Roadway Elements	
Roadway Width	8.4 m (28 ft)
Shoulder Width	Two 0.6 m (2 ft) Shoulders
Travel Lane Width	Two 3.6 m (12 ft) Lanes
Alignment Elements	
Horizontal Curvature	175 m (574 ft) (minimum radii)
Vertical Curvature (K value):	
Crest:	36 (desirable) 25 (minimum)
Sag	27 (desirable) 22 (minimum)
Stopping Sight Distance	120 m (393 ft) (desirable) 100 m (328 ft) (minimum)
Passing Sight Distance	490 m (1608 ft)
Maximum Grade	10%
Minimum Vertical Clearance	5.05 m (16.57 ft)

Source: *Montana Road Design Manual*, MDT, November 2000, Figure 12-5.

Section 2
Alternatives Considered

2.1 Development of Alternatives

Alternatives were developed in order to address the Purpose and Need as described in Section 1. Development of the alternatives was conducted in collaboration with the community and general public. A public scoping meeting was held in March of 2003 with Cooperating Agencies and the general public to solicit comments and input early in the design process. The public involvement process is described in Section 4. The alternatives development process included the following:

1. Identify the Purpose and Need (documented in Section 1).
2. Brainstorm and conceptualize ideas to address the needs.
3. Refine ideas into alternatives.
4. Evaluate and compare alternatives with regard to impacts to the environment and the ability to meet Purpose and Need.
5. Eliminate alternatives from further consideration based on evaluation.
6. Identify a Preferred Alternative.

2.1.1 Design Options Considered

The character of the project corridor varies along its length. To adequately consider the needs of the entire project, the road was divided into segments according to the geographic or reconstruction needs of the corridor section. The location of each of the two segments is shown in **Figure 2-1**. Alternatives were developed separately for each segment. An Alignment Analysis, which describes and evaluates the Alternatives developed for each segment, is available upon request from MDT . All of the initial alternatives largely follow the existing alignment. Alignment deviations were considered only in locations in which serious alignment deficiency corrections were needed, such as areas with substandard horizontal curves. A brief description of each of the corridor segments and the design options considered for each are provided below.

2.1.1.1 Segment 1: Intersection with Ottawa Gulch Road (RP 0.71 BD) to RP 5.84

This segment of Marysville Road begins at its intersection with Ottawa Gulch Road at approximately RP 0.71 BD and ends at approximately RP 5.84, just east of the Marysville town limits and the large rock outcrop across from the Drumlummon millsite.

In addition to the No-Build Alternative, design options that met the minimum design criteria for the 70 kph (45 mph) design speed (Table 1-1) were considered. The 70 kph (45 mph) design

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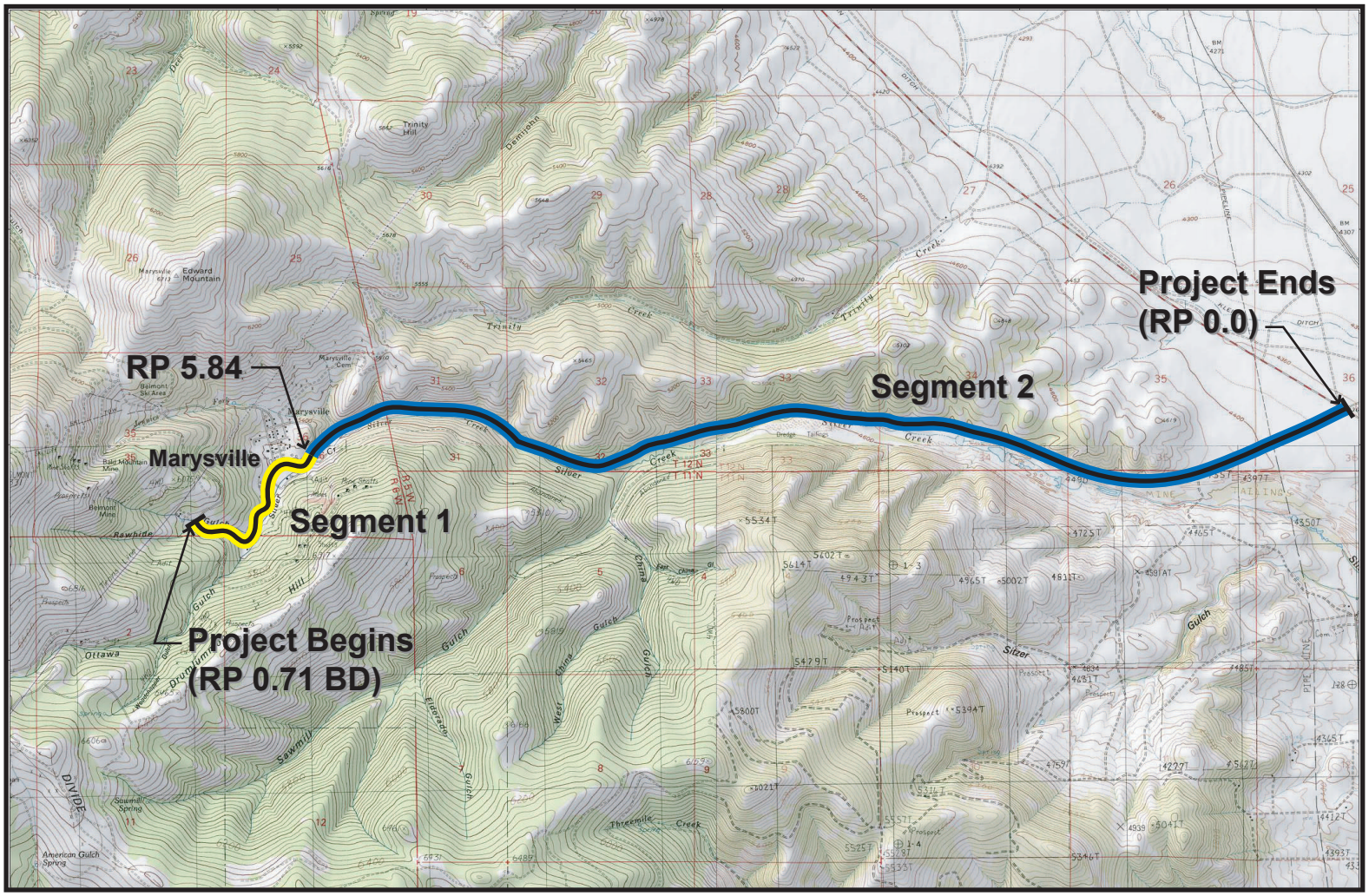
Figure 2-1
Location of Project Segments



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speed alternative was eliminated because it resulted in an unacceptable impact to property owners, the environmental and cultural resources. Therefore, approval was obtained from MDT and Lewis and Clark County for development of alternatives for Segment 1 using an alternative set of design criteria for a 50 kph (31.1 mph) speed limit. The approved design criteria are included in **Table 2-1**.

Table 2-1
Geometric Design Criteria from Ottawa Gulch (RP 0.71BD) to RP 5.84 (Segment 1)

Design Elements	*Design Criteria*
Design speed	50 kph (31.1 mph)
Alignment Elements	
Horizontal Curvature	80 m (262 ft) (minimum radii)
Minimum Vertical Curvature (K value):	
Crest:	9 (29.5)
Sag	13 (42.6)
Stopping Sight Distance	65 m (213 ft) (minimum)
Passing Sight Distance	350 m (1148 ft)
Maximum Grade	11%
Minimum Vertical Clearance	5.05 m (16.57 ft)

Source: Letter from MDT to SE&A dated August 11, 2004 with attachments

Several alternatives were considered and evaluated that meet the 50 kph (31.1 mph) design standards. Alternative C, which follows the existing alignment with the exception of a shift of the centerline of the road alignment to avoid the existing rock outcrop at the Drumlummon millsite east of the Marysville city limits, does not require extensive ROW or resident relocation, requires less extensive rock blasting/ripping and earthwork than the other alternatives considered, and has fewer environmental impacts. Therefore, this design option was forwarded to the Preferred Alternative.

2.1.1.2 Segment 2: RP 5.84 to the Intersection with Lincoln Road (RP 0.0)

This segment starts just east of the Drumlummon millsite (approximately RP 5.84) and terminates at Lincoln Road (RP 0.0). The No-Build and Preferred Alternative were considered in the environmental process for Segment 2.

2.2 Alternatives Advanced

As discussed above, the Alignment Analysis yielded the alignment that was carried forward for a full detailed study, along with the No-Build alternative. The existing alignment was the only reasonable alternative for Segment 2 and was therefore carried forward as the only build alternative. The No-Build and Preferred Alternatives are described below.

2.2.1 No-Build Alternative

The No-Build alternative involves no major work to improve or correct the deficiencies on Marysville Road. No construction activity would occur with this alternative. Routine maintenance work and continued upkeep by Lewis and Clark

County would be performed with this alternative. This alternative does not improve safety or correct geometric deficiencies with the road.

2.2.2 Preferred Alternative

The preferred alternative was developed to meet the purpose and need described in Section 1. The preferred alternative involves the reconstruction of Marysville Road to MDT design standards (50 kph standards for Segment 1 and 70 kph standards for Segment 2) for the primary purpose of improved safety.

The elements of the preferred alternative include:

- Improved alignment, increasing horizontal curve radii and reducing vertical curve grades;
- Road and shoulder widening;
- Slope flattening;
- Guardrail installation;
- Resurfacing;

The preferred alternative will also include replacement of a concrete culvert with a concrete or steel pipe at RP 5.93 and the relocation of about 60 m (197 ft) of Silver Creek to the south at the replaced culvert and replacement of all existing culverts and installation of a number of new culverts to adequately convey drainage along and across the Marysville Road.

A typical section for the preferred alternative is shown in **Figure 2-2**. The preferred alternative is shown in **Figure 2-3a-h.**

2.3 Comparison of Ability to Meet Purpose and Need

A summary of the elements of each alternative carried forward for detailed study are presented in **Table 2-2**.

The Preferred Alternative best meets the purpose and need of the project. The Preferred Alternative is based on the design options forwarded for further consideration from the alternatives development process for each road segment.

2.4 Comparison of the Alternatives Impacts to the Affected Environment

The Preferred Alternative meets the Purpose and Need of the project with the least amount of environmental impact and therefore, mitigation required. **Table 2-2** summarizes the means by which the Preferred Alternative meets the project needs described in Section 1. A comparison of the impacts of the No-Build and implementation of the Preferred Alternative is provided in **Table 2-3**.

Figure 2-2
Typical Section

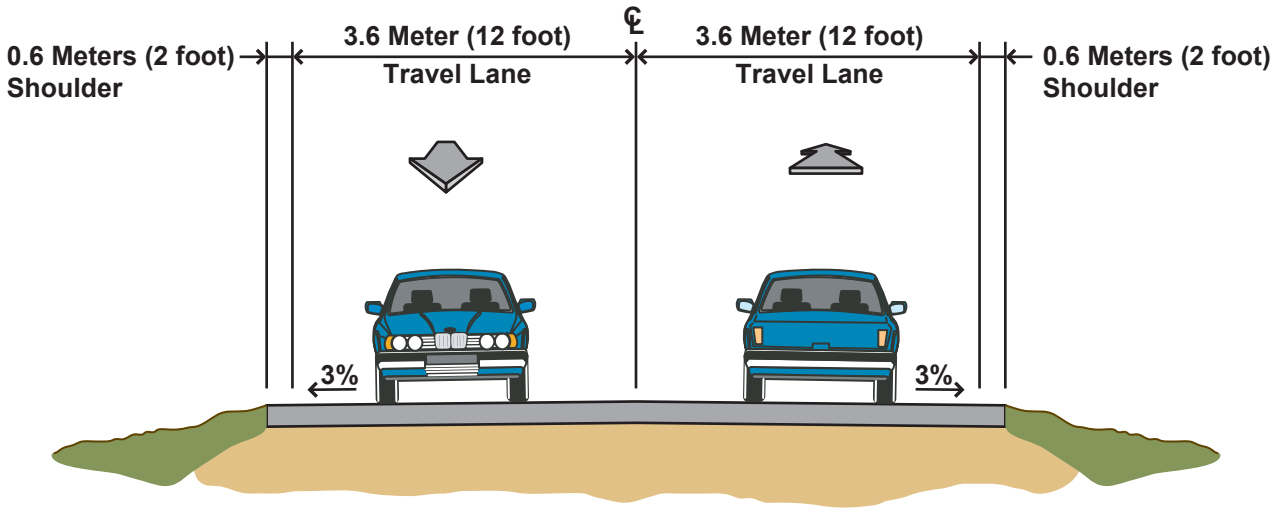

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Figure 2-3a
Preferred Alternative RP 0.71 BD to RP 5.9

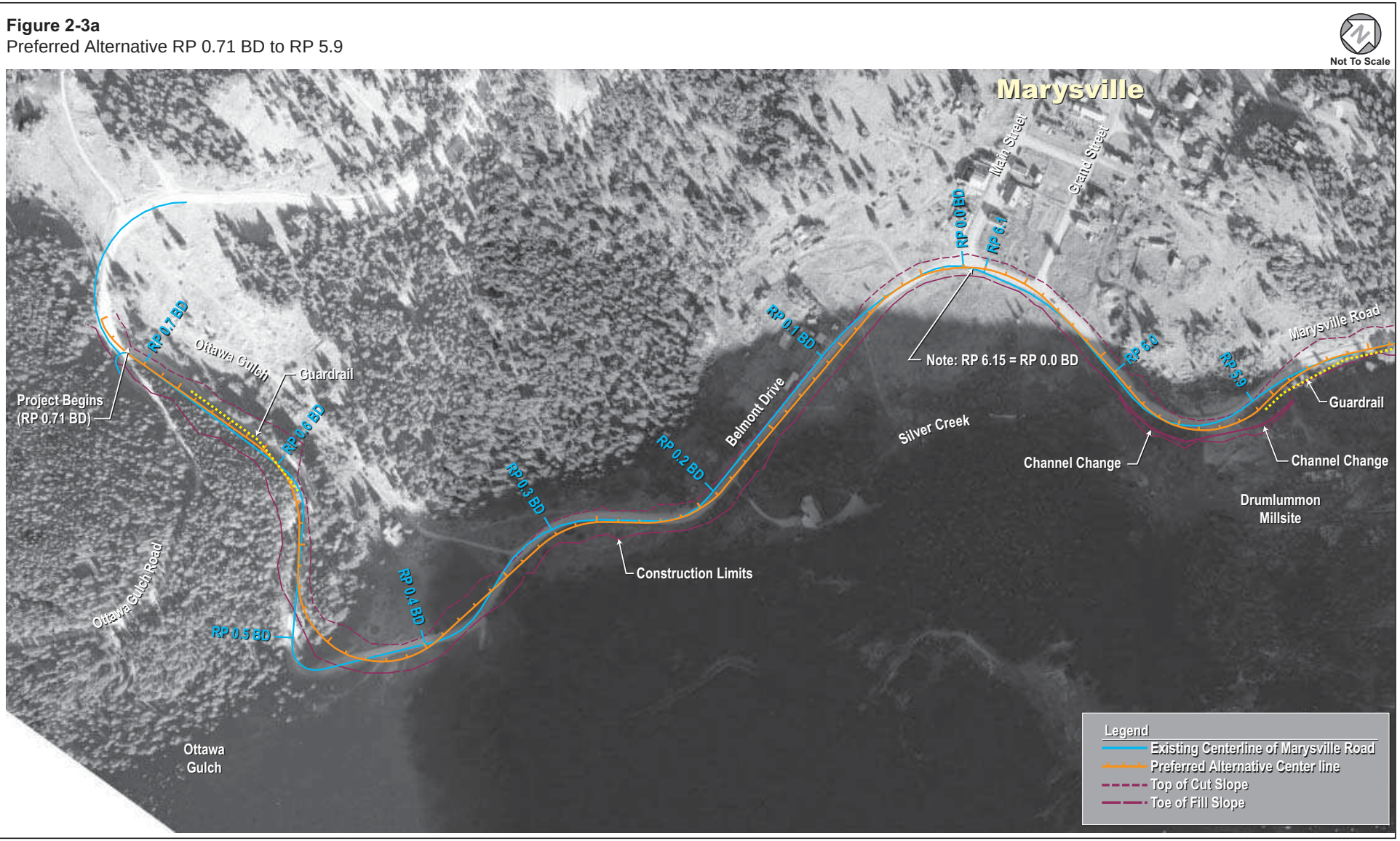

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Figure 2-3b
Preferred Alternative RP 5.9 to RP 5.0

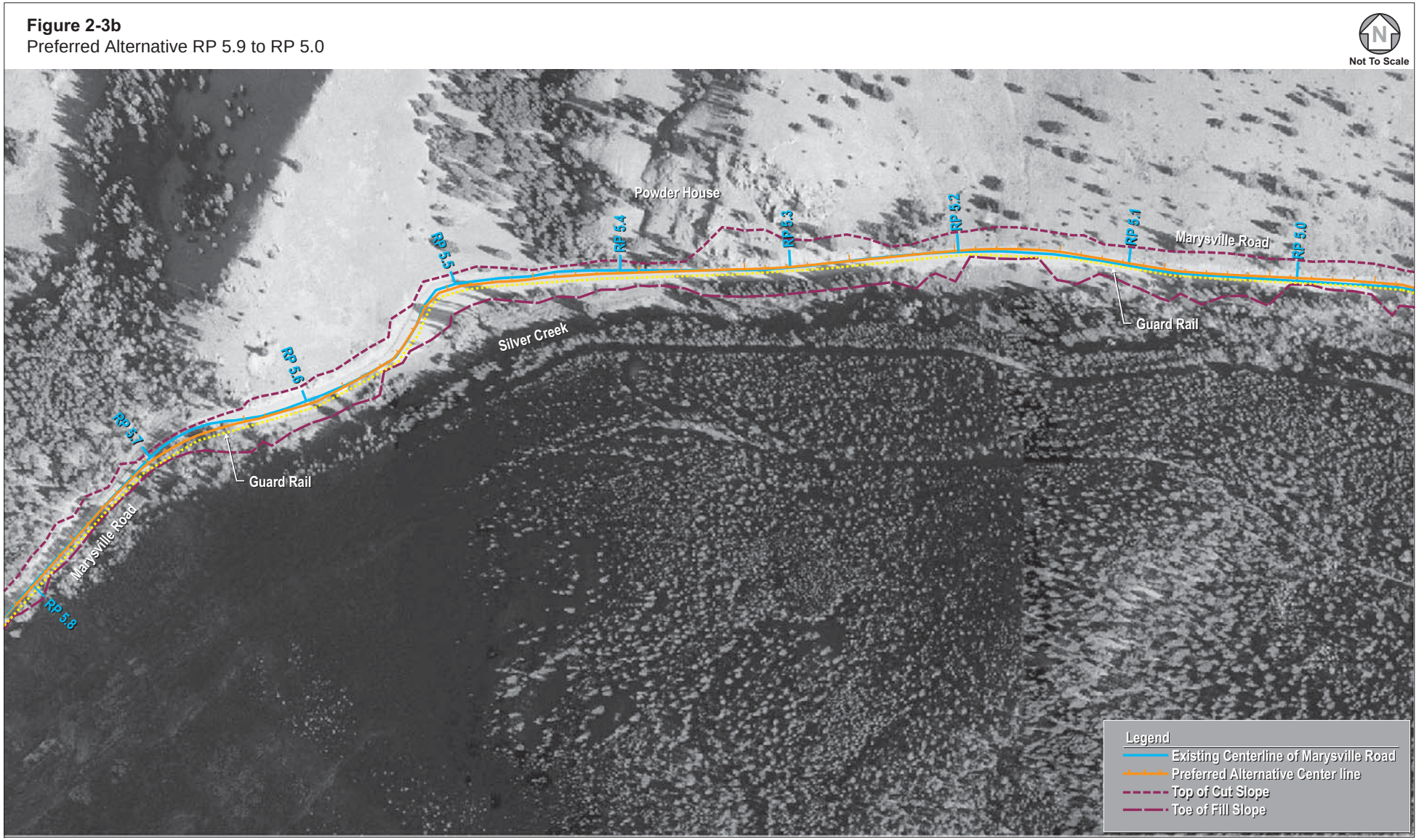

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Figure 2-3c
Preferred Alternative RP 5.0 to RP 4.0

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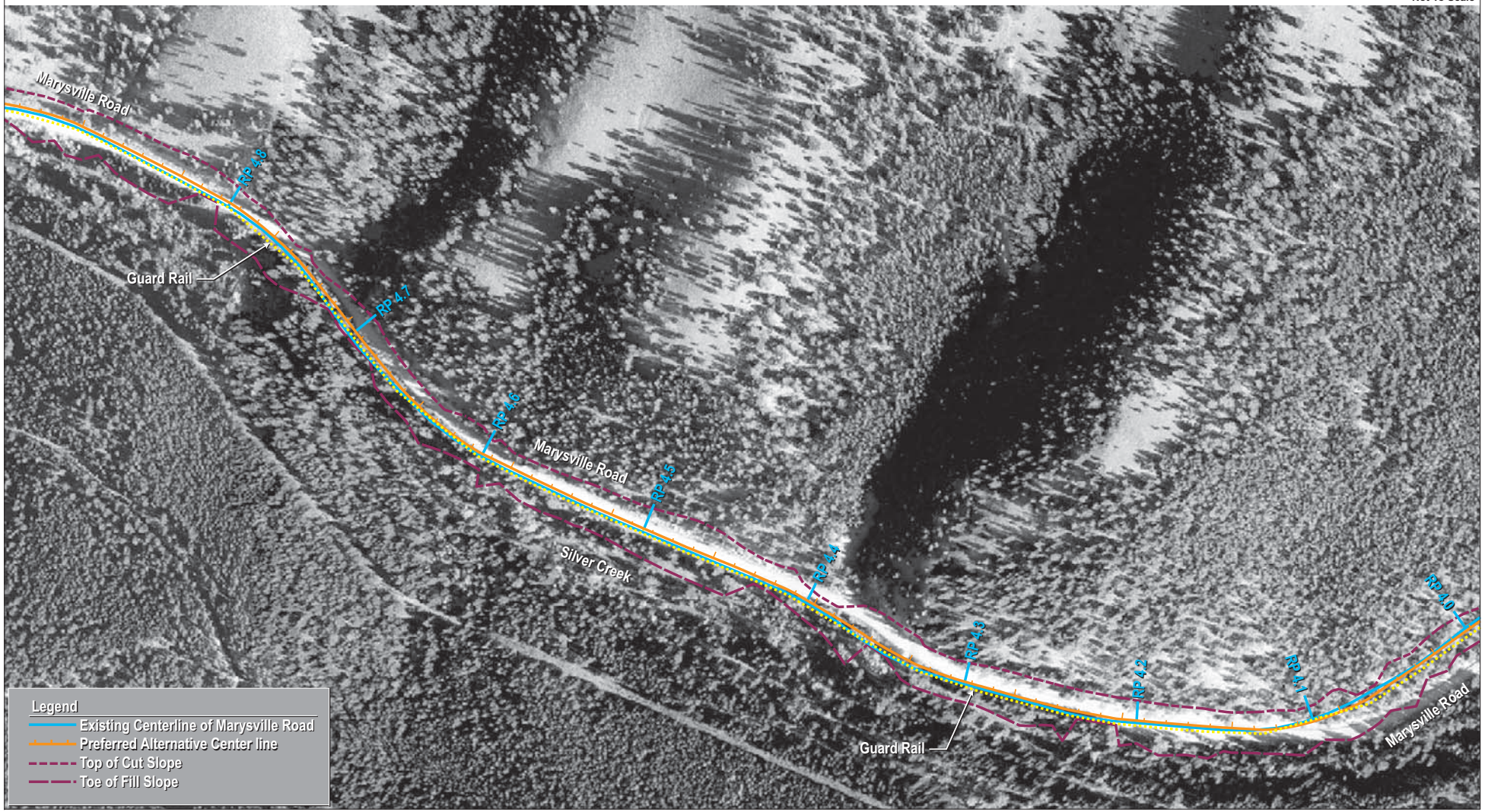

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Figure 2-3d
Preferred Alternative RP 4.0 to RP 3.2

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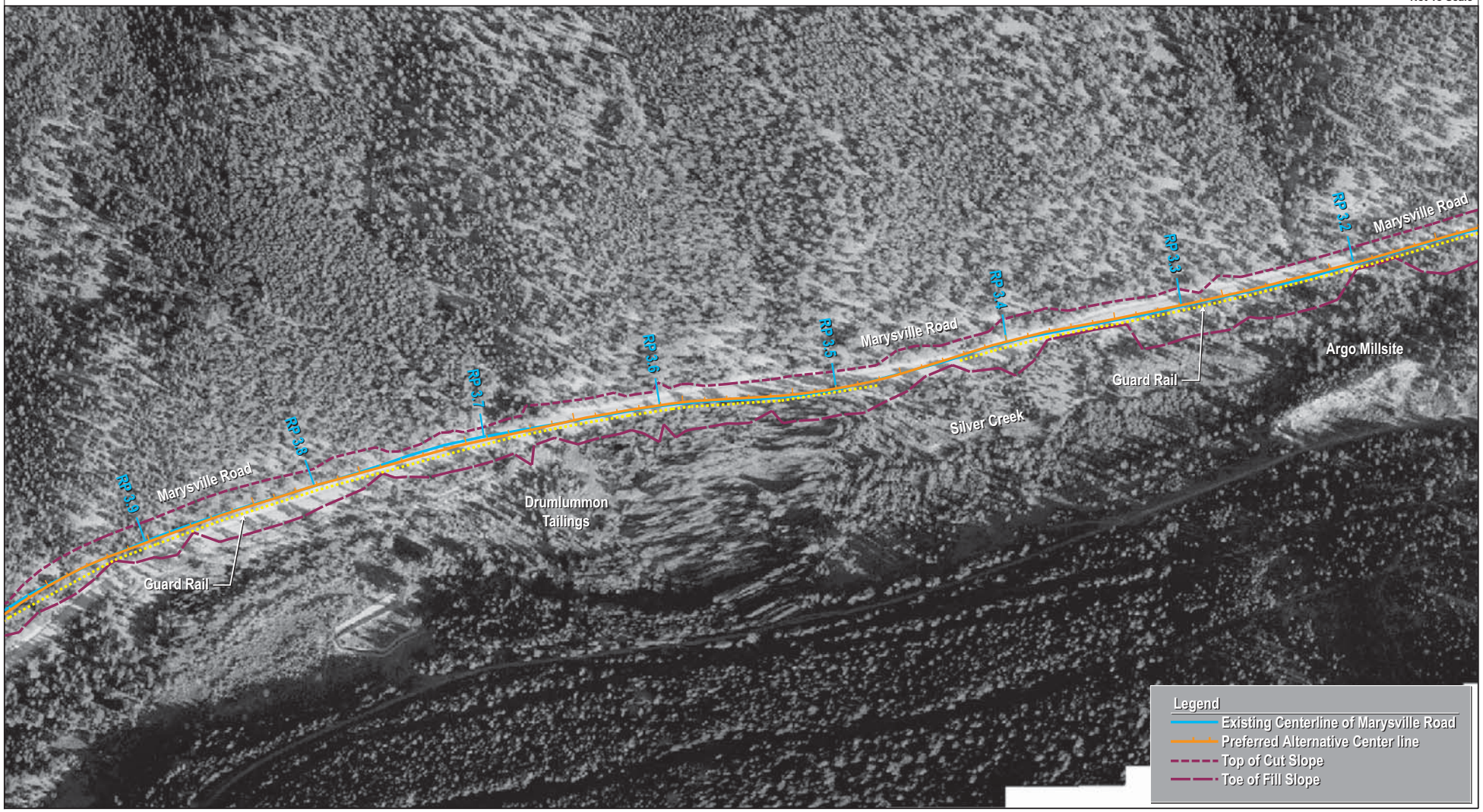

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Figure 2-3e
Preferred Alternative RP 3.2 to RP 2.3

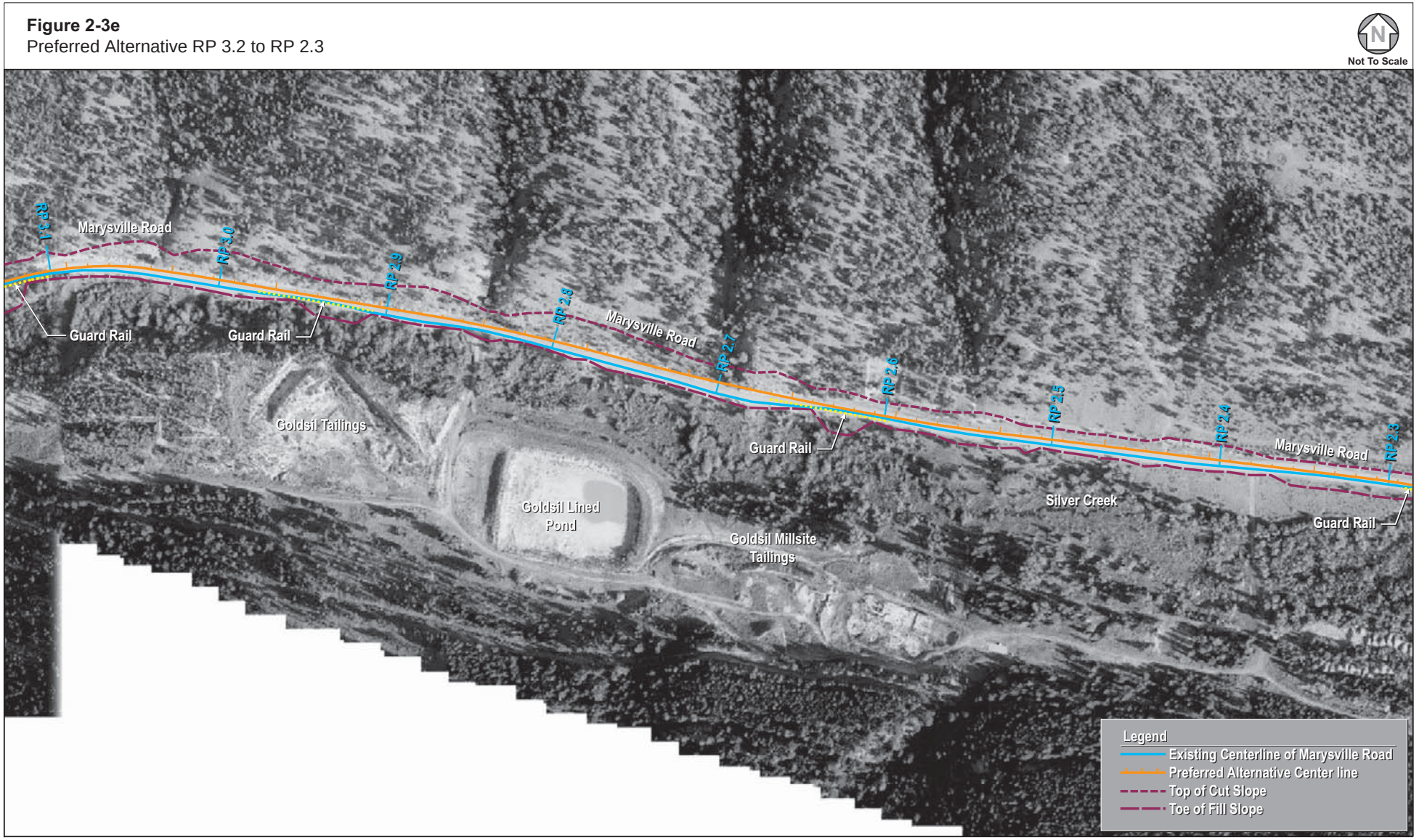

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Figure 2-3f
Preferred Alternative RP 2.3 to RP 1.5

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Figure 2-3g
Preferred Alternative RP 1.5 to RP 0.7

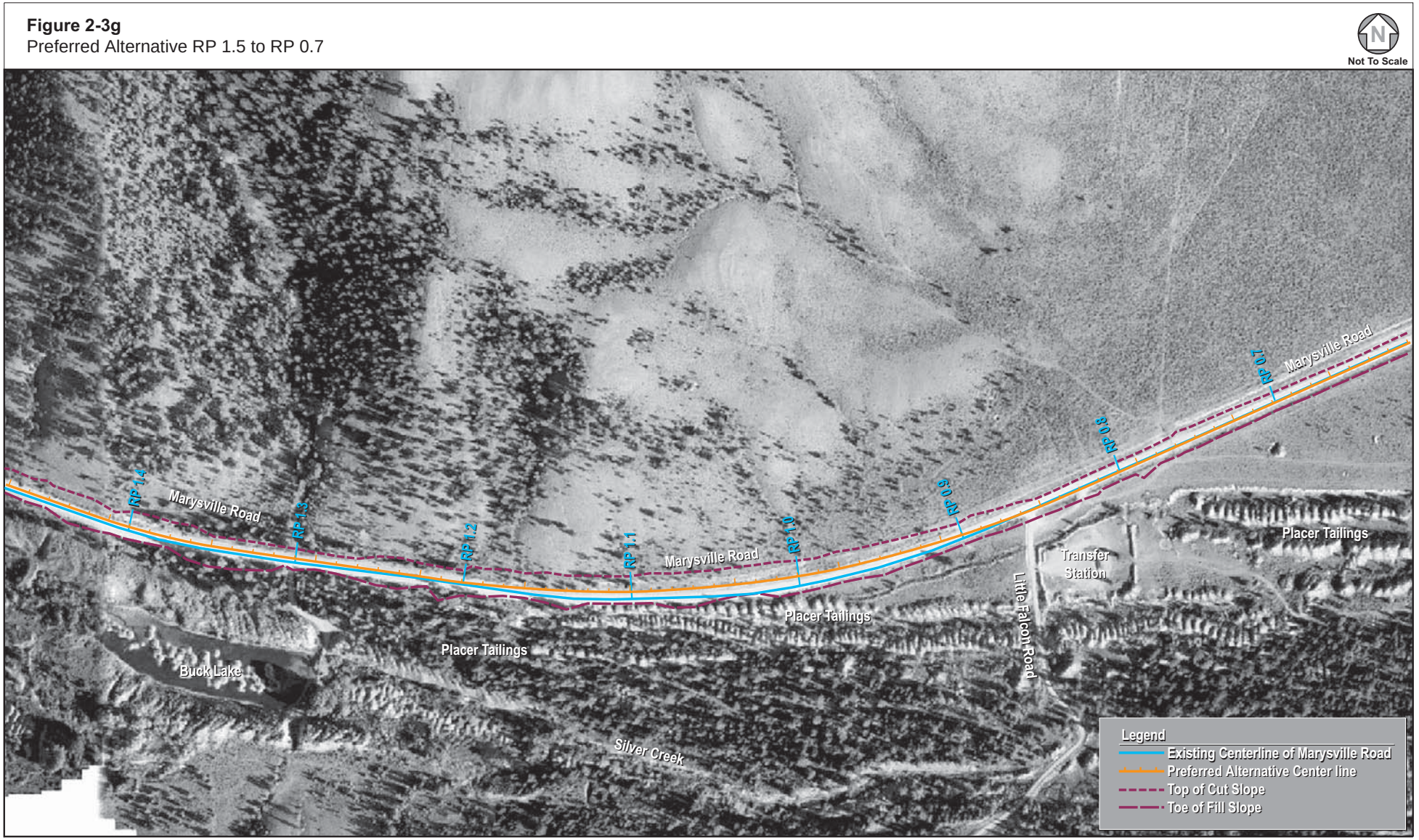

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Figure 2-3h
Preferred Alternative RP 0.7 to RP 0.0

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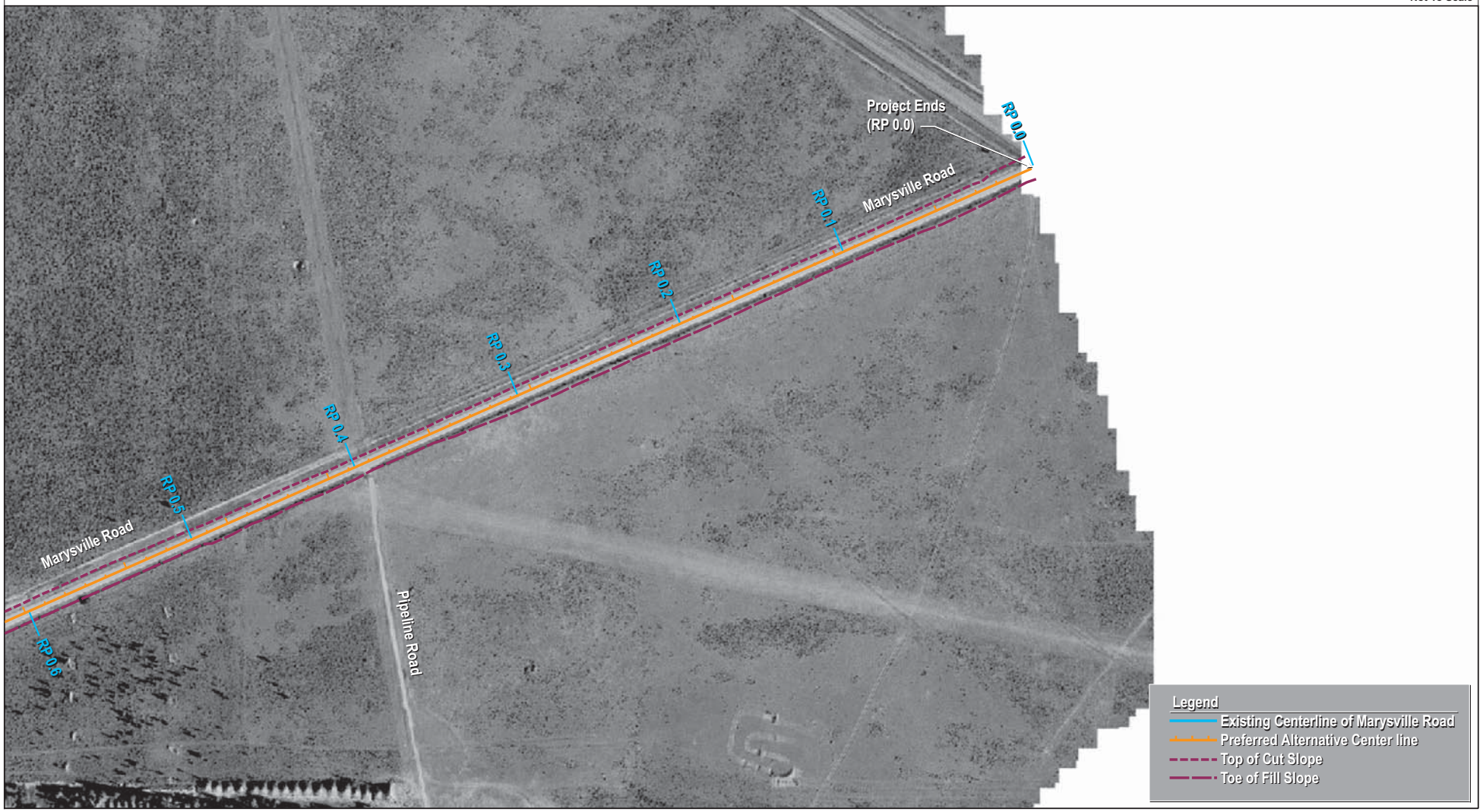

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Table 2-2
Summary of Alternatives' Ability to Meet Needs

Project Needs	No-Build	Preferred Alternative
Steep Side Slopes	Steep side slopes would remain to the south of much of the existing alignment.	**Where appropriate, slopes would be flattened and/or guardrail would be installed.**
Unsatisfactory Horizontal Curves	Several locations within the project corridor where the horizontal curves do not meet MDT design standards would remain.	**Improvement of unsatisfactory horizontal curves.**
Unsatisfactory Vertical Curves	Vertical curves, sags and crests, which do not meet MDT design standards, would remain along the roadway.	**Improvement of unsatisfactory vertical curves.**
Unsatisfactory Road Width	Substandard road widths, 5.4 m to 9.1 m, would remain.	**Widen road width and provide shoulders (the final design is likely to include two 3.6-m [12-ft] travel lanes).**
Unsatisfactory Shoulder Width	Shoulder widths would remain minimal to non-existent.	**Widen and/or provide shoulders (the final design is likely to include two 0.6-m [2-ft] shoulders).**
Roadway Blockage by Recreational Vehicles	Parking would remain a problem.	**A roadside parking area is being considered.**
Unsatisfactory Road Surface	The road surface would remain unsatisfactory and would continue to contribute to safety issues.	**Improved gravel or asphalt surface.**

Bolded Alternative is Preferred Alternative

Table 2-3
Comparison of Potential Impacts

Criteria/Resource	*No-Build*	*Preferred Alternative*
Safety	Accident rates would likely increase due to increasing traffic volume, narrow road width, substandard curves, and poor road surface.	**Road improvements would improve safety features, which would be expected to decrease accident rates.**
Land Use	No impact on current land use, zoning, future land use planning, or current growth trends and development patterns in the study area.	**No impact on current land use, zoning, or future land use planning in the study area. No change expected to current growth trends and development patterns.**
Prime and Unique Farmland	No impacts.	**Approximately 5.23 hectares (12.9 acres) of statewide and local important farmlands would be impacted.**
Social	No impacts.	**No adverse impacts.**
Environmental Justice	No impacts.	**No adverse impacts.**
Economic	Worsening roadway conditions could deter tourists from patronizing local businesses.	**No adverse impacts.**

Table 2-3
Comparison of Potential Impacts

Criteria/Resource	*No-Build*	*Preferred Alternative*
Non-Motorized Travel	No impacts.	**Would not have special features for pedestrian use (i.e., sidewalks). Widening of the road and shoulders and the enhanced visibility provided by the improvements would enhance travel conditions for non-motorized travel.**
Right-of-Way	No impacts.	**Approximately 3.1 hectares (7.7 acres) would be required.**
Parks and Recreation	Access would continue to be a problem.	**Road improvements would improve safety features, which could improve safety of access to the recreation areas.**
Land and Water Conservation Fund (LWCF) Sites	No impact.	**No impact.**
Air Quality	Vehicle emissions would increase over time due to increased traffic volume.	**Vehicle emissions would increase with (or without) the Preferred Alternative due to increased traffic. However, with the roadway alignment improvements, vehicle emissions could be lower than with the No-Build Alternative.**
Noise	No impacts.	**A significant noise impact is not expected.**
Water Resources	Possible increases in sediment load to Silver Creek with increasing traffic volumes.	**Potential for erosion and sedimentation into Silver Creek could increase with (or without) the Preferred Alternative due to increased traffic. Potential increased runoff volumes equal in proportion to the increase in impervious surface area, if paving is implemented. Paving could also decrease sedimentation, if implemented.**
Wetlands	No impacts.	**Approximately 0.32 hectares (0.8 acres) would be impacted.**
Fish, Wildlife, and Vegetation	Possible increased impairment of wildlife movement and increased wildlife mortality due to increased traffic volumes.	**Relocation of culvert. Relocation of approximately 60 m of Silver Creek. Increased potential for noxious weed establishment. Increased potential for erosion and sedimentation into Silver Creek. Potential for impaired wildlife movement. Potential for increased wildlife mortality.**
Threatened and Endangered (T&E) Species	No impacts.	**No effect, or may affect but would not be likely to adversely affect any T&E species, depending on the species.**
Floodplains	No impacts.	**No impacts.**
Cultural Resources	No impacts.	**Impact to water diversion system.**
Hazardous Materials	No impacts.	**No impacts.**
Visual Resources	No impacts.	**Potential visual impacts from tree clearing.**
Construction Impacts	Existing maintenance activities.	**Potential for short-term, noise, erosion, sedimentation, travel delays, and visual impacts associated with construction activities.**
Secondary and Cumulative Impacts	No impacts.	**No significant secondary or cumulative impacts.**
Constructability	None.	**No major issues, alternative approximately follows existing alignment.**
Operation and Maintenance	O&M expected to increase due to aging road surface.	**O&M expected to decrease due to road widening, improved alignment and surfacing.**

Bolded Alternative is Preferred Alternative

Environmental impacts that could result from implementation of the Preferred Alternative are described in Section 3. Section 3 also describes the proposed mitigation measures for these impacts. The potential impacts and proposed mitigation measures are summarized in **Table 2-4**.

Table 2-4
Summary of Projected Impacts and Mitigation Measures for the Preferred Alternative[1]

Type of Impact	*Projected Impact*	*Proposed Mitigation Measures*
ROW	Acquisition of privately owned and public/government owned land would need to be acquired for ROW. Approximately 3.1 hectares (7.7 acres) would be required.	ROW acquisition would be conducted in accordance with applicable laws, including the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (PL 91-646), the Uniform Relocations Act Amendments of 1987 (PL 100-117), and 23 USC 317 for appropriations of public lands for highway ROW use.
Water Resources	Relocation of culvert and 60 m of Silver Creek	Use of MDT guidance described in the Erosion and Sediment Control Best Management Practices Field Manual. As appropriate, other features could be incorporated including placement of a 10-ft (3.2-m) wide vegetated 2:1 slope between the road shoulder and the new Silver Creek channel to minimize the sediment load into the creek. MDT will adhere to applicable permit requirements.
	Increased potential for erosion and sedimentation into Silver Creek.	Adherence to MDT's Erosion and Sediment Control Best Management Practices Field Manual.
Fish, Wildlife, and Vegetation	Ground disturbance may cause the movement of noxious weeds from disturbed areas into adjacent undisturbed areas.	Clearing and grubbing will be restricted to the minimum area necessary. To reduce the spread and establishment of noxious weeds and to re-establish permanent vegetation, disturbed areas within MDT ROW and easements will be seeded with desirable plant species as soon as practicable after construction, as recommended by the MDT botanist. Work is to be conducted in accordance with the County Noxious Weed Management Act, Title 7, Chapter 22, Part 21 MCA and the Lewis and Clark County Weed Management Program.
Wetlands	Wetland Losses	Mitigate unavoidable wetland losses in a manner agreed upon by the US Army Corps of Engineers (USACE).
Cultural Resources	Impact to water diversion system (Silver Creek culvert)	Conduct Historic American Engineering Record (HAER) recordation of the culvert. Reconstruct the rubblestone retaining wall adjacent to the restored Silver Creek stream channel as close to its original location as possible.

1. Note: Only resources which have potential for adverse impacts are listed

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Section 3
Affected Environment, Impacts and Mitigation Measures

3.1 Land Use

3.1.1 Affected Environment

The study area is located in southwestern Montana, approximately 15 miles northwest of the city of Helena. Silver Creek runs parallel to and south of Marysville Road for the majority of the project length. The elevation of Mount Belmont, the highest point at the headwaters of the Silver Creek drainage basin, is 7,331 ft above sea level. The western boundary of the drainage basin is formed by the Continental Divide. Helena has an average high temperature of 69.2 degrees Fahrenheit (F) (20.7 Degrees Celsius) in July and an average low of 19.6 degrees F (-6.9 Degrees Celsius) in January. The annual precipitation in Lewis and Clark County averages 11.6 inches of rain and 47.5 inches of snow.

The Marysville Road is located in Townships 11 and 12 North, Ranges 5 and 6 West, of Lewis and Clark County. The Marysville Road is located between latitude North 46 40′ and North 46 50′ and longitudes West 112 00′ and West 112 21′. The road abuts public (BLM and USFS) and private land. The Marysville Road serves the townsite of Marysville, the Great Divide Ski Area (accessed via Belmont Drive) and USFS property. Approximately 92 residents live year-round at Marysville. Approximately 10 additional cabins are located in the vicinity of the townsite for recreational/seasonal use. The primary land uses in the project area are residential, agricultural, and recreational.

The study area is located within the Marysville/Canyon Creek Planning Area (**Figure 3-1**). The majority of land use in the region is composed of forest and grasslands, some of which are grazed, and crop land in the northeastern part of the region. The majority of the study area is coniferous forest with patches of open grasslands. A riparian zone lies on the south side of the study area. The terrain is mountainous. Residential and commercial developments are concentrated at either end of the study area in the communities of Silver City and Marysville. The existing land use is shown in **Figure 3-2**.

3.1.1.1 Capacity Analysis

The Marysville Road is predominantly used by residents of Marysville and recreationalists accessing Great Divide Ski Area and BLM/USFS lands. Roadway use is described by several measures. One measure is the Average Daily Traffic (ADT) or the number of vehicles anticipated to travel on the roadway in one day. Level of Service (LOS) is a qualitative measure that describes the convenience of a facility in terms of such factors as speed, travel time, travel delay, and freedom to maneuver. This measure ranges from LOS A, which describes free-flow or uninterrupted travel conditions, to LOS F, which represents heavily congested flow with travel demand

exceeding capacity. The general characteristics of the LOS categories are described in **Figure 3-3**.

The MDT provided ADT for the Marysville Road based on traffic counts taken during a 20-year period from the years 1983 to 2002. The annual growth rate is expected to be 2.5 percent. The year 2002 ADT is 240.

An LOS analysis was conducted for the study area (*Traffic Review Report,* Stahly Engineering and Associates (SE&A), February 2004)). The Marysville Road currently operates at LOS A, which is considered acceptable. The roadway is anticipated to continue to operate at an acceptable LOS over the 20 year design life. For the Preferred Alternative, the design year (2026) projected LOS is LOS C for the AM Peak and LOS A for the PM peak.

Future travel forecasts along the Marysville Road were developed for the year 2026 in order to assess the ability of potential improvements to meet the travel demand over an approximate 20-year planning horizon (20 years past the originally proposed letting date of 2006).

The 2002 MDT estimate of 240 vehicles per day was used to develop traffic projections in the *Preliminary Traffic Engineering Report* (SE&A, July 2003). An average annual growth rate of 2.5 percent was applied to the 2002 ADT for a 20 year design horizon. The 2026 projected ADT is 439 vehicles per day.

The Marysville Road serves mainly residential and recreational travelers. The road is the sole year-round access to the Marysville town historic district and the Great Divide Ski Area. Several residences are located in the town, with a few others east and west of town. Additional cabins used seasonally for recreational use are also located west of town. There are very few commercial businesses located in the town of Marysville (restaurant, post office). Recreational use includes hiking, fishing, camping, hunting, skiing, and snowmobiling. Marysville Road provides access to the Continental Divide and BLM and USFS public lands.

3.1.2 Zoning

There are no current zoning requirements along the corridor. No zoning is shown in the Marysville/Canyon Creek Planning Area because this area is outside of any specific zoning district.

3.1.3 Land Use Plans

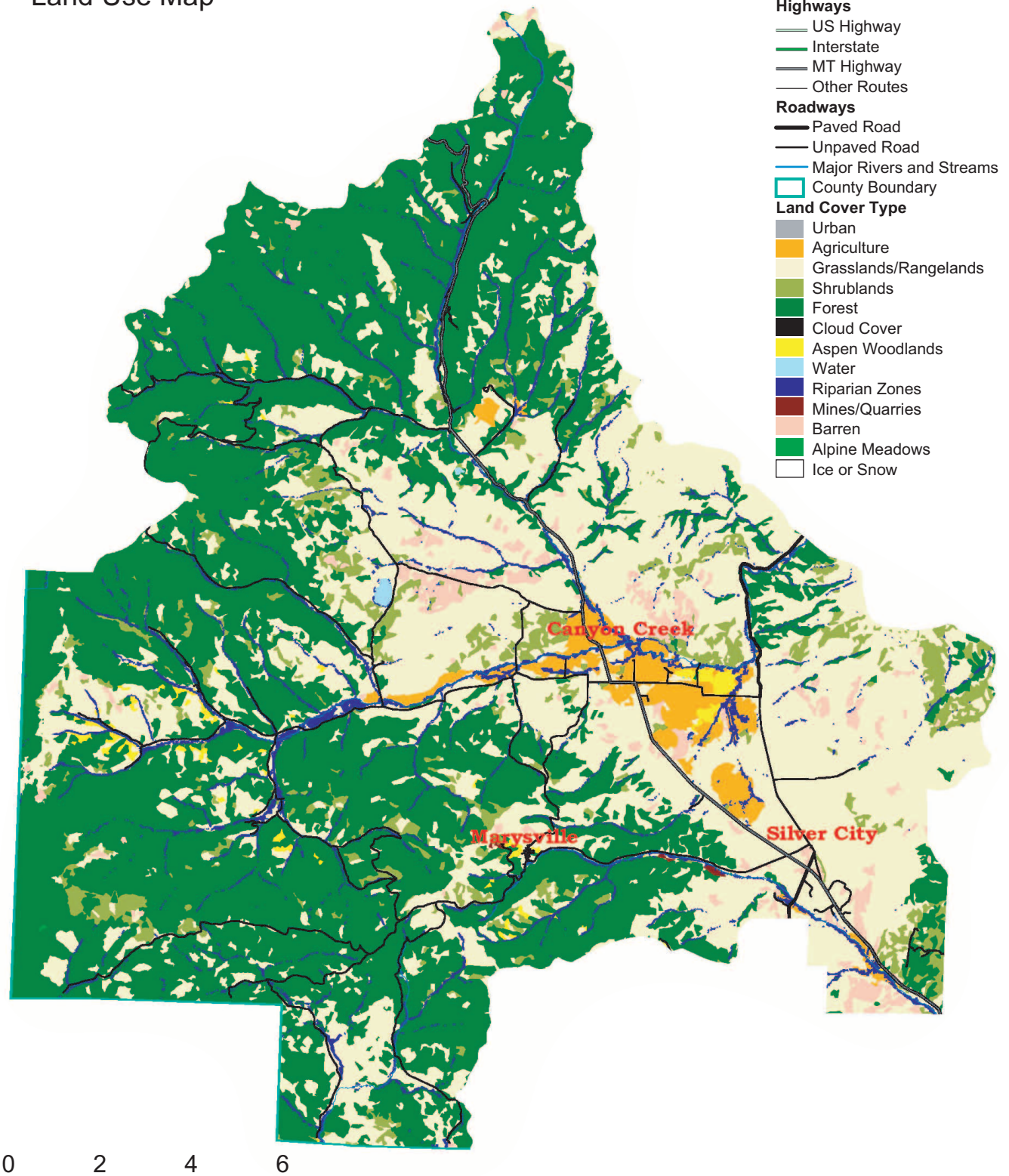
Land use plans for Lewis and Clark County are detailed in the County Growth Policy, finalized in February 2004 and available on the county web site. Through a series of stakeholder interviews, public workshops, and input from the Lewis and Clark County Citizens Advisory Group, short-term (5-year) priorities have been identified for the Marysville/Canyon Creek Planning Area. These priorities are to continue and increase focus on providing basic services, maintaining agricultural lands, and reducing conflicts between residential and agricultural land use.

Figure 3-1
Lewis & Clark County Planning Areas

Not To Scale

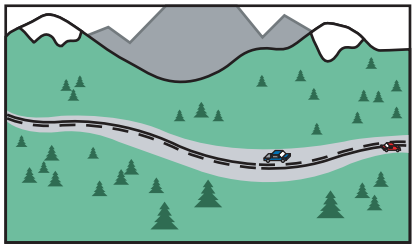
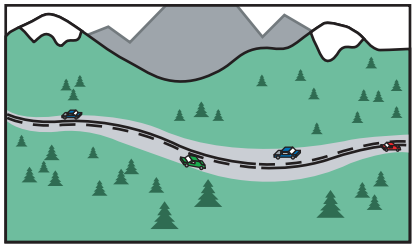
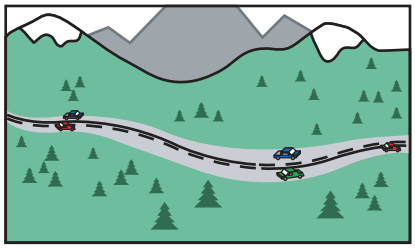
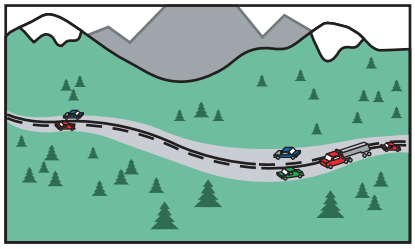
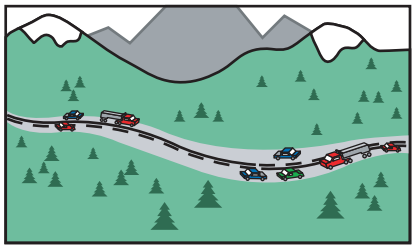
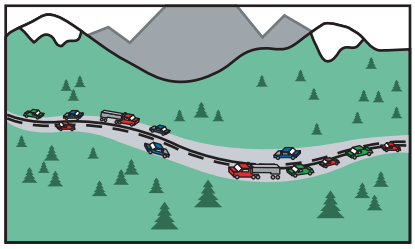
Data source: Lewis & Clark County Geographic Information Services

Figure 3-2
Marysville/Canyon Creek Planning Area
Land Use Map



Data source: Monta Gap Analysis data filename: g:\natural\vegetation\landcov2
Lewis & Clark County Comprehensive Plan

Figure 3-3
Levels of Service (LOS)

LOS	Operating Characteristics	
A	◆ Free flow, low traffic density ◆ Passing demand well below passing capacity ◆ Almost no platoons of 3 or more vehicles observed ◆ Drivers delayed less than 30% of the time by slow moving vehicles	
B	◆ Passing demand meets passing capacity at lower boundary of LOS B ◆ Minimum delay, stable traffic flow ◆ Drivers delayed up to 45% of the time by slow moving vehicles	
C	◆ Movement somewhat restricted by increased traffic volume ◆ Unrestricted passing demand exceeds passing capacity ◆ Noticeable increase in platoon formation, size and frequency ◆ Drivers delayed up to 60% of the time by slow moving vehicles	
D	◆ Movement more restricted due to increased volume ◆ Turning vehicles cause major shockwaves in the traffic stream ◆ Passing demand high while passing capacity approaches zero ◆ Platoon sizes of 5 to 10 vehicles common ◆ Drivers delayed up to 75% of the time by slow moving vehicles	
E	◆ Passing virtually impossible ◆ Platoon becomes intense ◆ Drivers delayed greater than 75% of the time by slow moving vehicles	
F	◆ Heavily congested flow ◆ Traffic demand exceeds capacity ◆ No passing opportunities ◆ Long platoons	

3.1.3.1 Providing Basic Services

Basic services include maintenance and improvement of the existing transportation services, providing adequate fire protection, and providing adequate police protection. Priorities include:

- Increased maintenance on County roads in the planning area.
- Mitigation of the effect automobile created dust has on hay quality.
- Cleaning of road culverts in the fall.
- Maintaining Stemple Pass as an unpaved road.
- Completion of improvements to Marysville Road.
- Ensure that the Marysville/Canyon Creek area has adequate fire and police protection.
- Expand the Canyon Creek Fire District to include areas adjacent to main thoroughfares.

3.1.3.2 Maintaining Agricultural Lands and Reducing Conflict between Residential and Agricultural Land Use

Reducing conflict between residential and agricultural land can be viewed as a facet of maintenance and preservation of agricultural lands. Additionally, preserving or creating natural buffers between different land use areas was deemed important. Specific items listed in the Growth Plan are as follows:

- Encourage natural buffer zones or setbacks from drainage ways.
- Encourage new residential land uses to provide buffers between themselves and conflicting agricultural uses.
- Explore the advantages of cluster development to protect the quality of life in the community.
- Consider appointing an Agricultural Representative to the Planning Board.
- Encourage adherence to the Wildland-Residential Interface Guidelines.
- See that industrial development does not interfere with agricultural uses.
- Require new development within the Canyon Creek/Marysville planning area to meet minimum design guidelines and criteria.
- Develop on existing lots or parcels.

- Establish minimum design standards and criteria for new development within the planning area.
- Implement a strategy for controlling the spread and eradication of noxious weeds in the area.
- Preserve water and air quality.
- Preserve the natural visual integrity of the planning area.
- Encourage wildlife conservation and habitat protection; preserve natural vegetation.

3.1.4 Land Use Impacts

3.1.4.1 No-Action Alternative

This alternative would not impact current land use, zoning, future land use planning or current growth trends and development patterns in the study area.

3.1.4.2 Preferred Alternative

The Preferred Alternative would be consistent with current land use in the Marysville/Canyon Creek Planning Area and with some of the goals identified in the Lewis and Clark County Growth Plan. The improvements would not have a negative long-term impact to land use along Marysville Road and would not change the rural and recreational lifestyle or the natural and scenic landscapes. The Preferred Alternative would allow improved access by public safety officials.

3.1.5 Mitigation

No mitigation for land use impacts would be required for the Preferred Alternative.

3.2 Prime and Unique Farmland

3.2.1 Affected Area

The area along Marysville Road is predominantly occupied by evergreen forests with scattered pockets of open land.

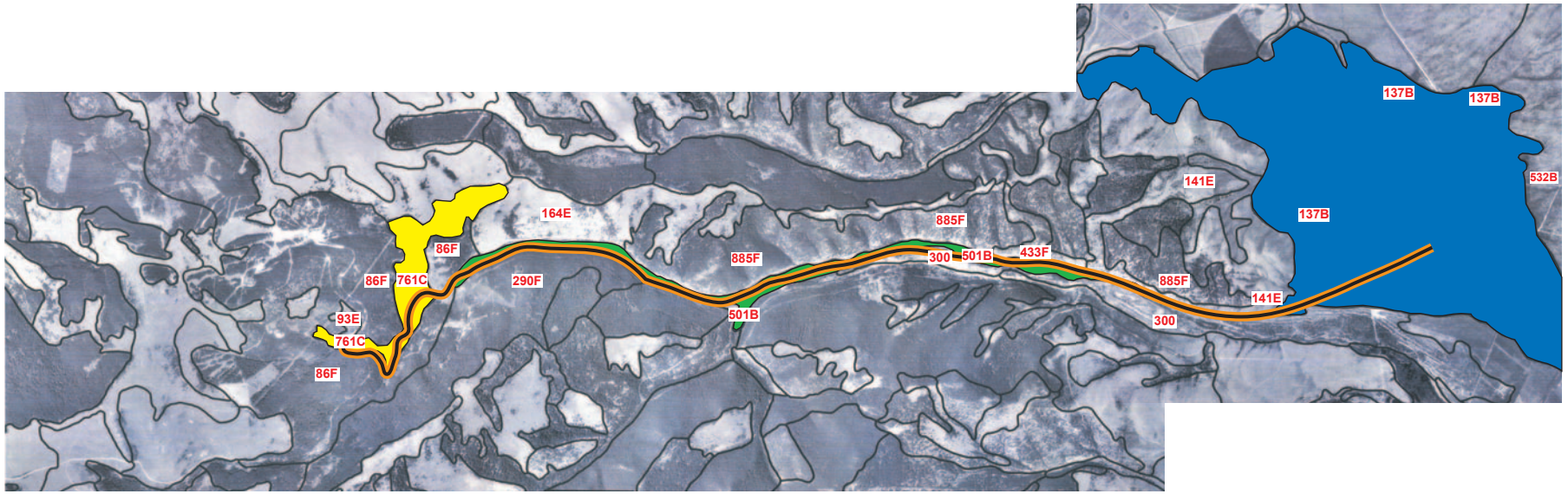
3.2.1.1 Prime Farmland

According to the US Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS), no soils designated as "prime farmland, " "prime farmland, where irrigated," and "farmland of statewide importance" are located within the study area. Three soil types within the study area are designated as "farmlands of local importance" based on soils information from the NRCS (See **Figure 3-4**).

Figure 3-4
Prime and Unique Farmland

0.8 0 0.8 1.6
Miles

N



Map Symbol	Farmland of Local Importance	
137B	Musselshell-Crago Complex, 2 to 8 Percent Slopes	
501B	Fluvaquents and Fluvaquentic Haplustolls Soils, 0 to 4 Percent Slopes	
761C	Baxendale-Castner Complex, 4 to 15 Percent Slopes	

Data source: Lewis & Clark County Geographic Information Services

3.2.2 Farmland Impacts

Direct impacts to "prime farmland," "farmland of statewide importance," or "farmland of local importance" could occur whenever the surface area is covered with gravel, paved with an impervious material, covered by fill, or removed by excavation to accommodate the installation of the roadway. Also, the purchase of ROW can inhibit the use of the area for agricultural purposes, although, it may be physically untouched.

3.2.2.1 No-Action Alternative

The No-Action Alternative would result in no impacts to the "farmlands of local importance" that are located along Marysville Road.

3.2.2.2 Preferred Alternative

Soil maps and a corresponding list of which soil types are designated "prime farmland," "farmland of statewide importance," and "farmland of local importance" for Lewis and Clark County were obtained from the NRCS to determine impacts. The area of soils of statewide and local importance impacted as a result of the Preferred Alternative would be 5.23 hectares (12.9 acres). A Farmland Conversion Impact Rating Form (#AD-1006) was completed (included in **Appendix A**) in accordance with the Farmland Protection Policy Act (FPPA 7 USC 4201, et seq.). The Total Points for the proposed project's Site Assessment Criteria are 109, which is less than 160. Therefore, under the provisions of 7 CFR 658.4 (c), no additional consideration for protection would be necessary.

3.2.3 Mitigation

No mitigation would be required for impacts to farmlands.

3.3 Social

3.3.1 Affected Environment

Data were collected from Lewis and Clark County on population, demographics, race and ethnicity, housing, schools, emergency services, and public utilities.

3.3.1.1 Schools

The Marysville/Canyon Creek Planning Area is located within District #4, Trinity Elementary School District. The school building is located on Duffy Lane, approximately one-half mile east of Lincoln Road in Canyon Creek. Enrollment at the school varies from year to year, but averages a dozen students. Parents who live more than three miles from the school, and who are not provided transportation by their own district, can choose to enroll their children in the adjacent school district, if space is available. Many parents in the school district have elected to enroll the children in School District #1 in Helena.

The receiving district receives a tuition payment from District #4. Placement of the tuition students is at the receiving district's discretion. Usually District #4 students

are placed in Broadwater or Hawthorne Elementary Schools. High school students from the Marysville/Canyon Creek Planning Area attend Capital High School in Helena.

3.3.1.2 Utilities

Electrical power is currently provided to the Marysville/Canyon Creek Planning Area by Northwestern Energy (previously Montana Power). Qwest provides telephone service in the eastern portion of the planning area. In the Canyon Creek area, telephone service is provided by the Lincoln Telephone Company.

Implementation of the Preferred Alternative would likely require the relocation of three to four power poles in the vicinity of the area where Silver Creek would be relocated. A buried telephone line at the shoulder of the existing road extends the full length of the project limits and would require relocation the full project length.

3.3.1.3 Public Health

St. Peters Hospital in Helena is the closest medical facility to the study area. The facility is located approximately 25 miles southeast of Marysville.

3.3.1.4 Public Safety

Law enforcement within the Marysville/Canyon Creek Planning Area is a cooperative effort of three agencies: the Lewis and Clark County Sheriff's Department, which has primary responsibility; the Montana Highway Patrol, which is responsible for law enforcement on Lincoln Road; and Montana Department of Fish, Wildlife and Parks (MDFWP) game wardens, whose primary responsibility is to enforce fish and game regulations and to assist other law enforcement officials as needed. Response times by the Lewis and Clark Sheriff's Department vary from moderate to long, due to the distance of the area from Helena, variable weather conditions, substandard roads and lack of posted addresses.

The Canyon Creek Volunteer Fire Department provides both structural and wildland fire protection for approximately 80 square miles of the planning area. The district's equipment is housed on private property approximately 1.5 miles northeast of the Canyon Creek Store on the west side of Lincoln Road. Structural fire protection within Marysville is provided by the Marysville Volunteer Fire Department. The Canyon Creek and Marysville Volunteer Fire Departments are funded by a tax assessed on all properties within the respective districts. Additional monies are generated by fundraisers and private donations.

At the present time both the Canyon Creek and Marysville fire districts are considering expanding their boundaries. In the Canyon Creek fire district, possible areas of annexation include Stemple Pass Road to the Continental Divide and the Flesher Acres area. The Marysville fire district is considering annexation of the Great Divide Ski area and along the Marysville Road east to the boundary with the Canyon Creek Fire District. The Canyon Creek Fire District is also considering the possibility

of locating an additional station in the southeastern portion of the district in the Birdseye Road/Silver City area.

3.3.1.5 Population

Approximately 53 percent of the population of Lewis and Clark County live in Helena. If the Helena Valley is included with Helena, only about 15 percent of the population of Lewis and Clark County live outside of Helena and the Helena Valley. The estimated year round population of Marysville is approximately 92. An overview of the population trends in Lewis and Clark County is provided in **Table 3-1**.

Table 3-1
Population Trends: Montana and Lewis and Clark County

Population	% increase from 1990 to 2000	% increase from 2000 to 2010 (est.)	1990	1995	2000	2010 (est)
L&C County	17.3%	13.6%	47,495	52,785	55,716	63,316
Montana	12.9%	8.8%	799,065	870,281	902,195	981,270

As shown in Table 3-1, Lewis and Clark County has experienced increased population growth. County growth is expected to continue at a rate higher than for the State of Montana. The population of Lewis and Clark County, which includes Helena and the Helena Valley, is projected to increase by 13.6 percent from the year 2000 to 2010. The state's population growth during this same time period is projected to be 8.8 percent.

An overview of the 2000 population characteristics is provided in **Table 3-2**.

Table 3-2
Population Characteristics

Analysis Area	Total Persons	Persons per Household	% Caucasian	% Native American	% Hispanic or Latino	% Other
Lewis and Clark County	55,762	2.38	95.2%	2.0%	1.5%	1.3%
Montana	902,195	2.45	90.6%	6.2%	2.0%	1.2%

As shown on Table 3-2, the population is predominantly Caucasian. The percentage of minorities is less within Lewis and Clark County than within the State of Montana.

3.3.2 Social Impacts

3.3.2.1 No Action Alternative

The No-Action Alternative would not impact populations or demographics in the study area.

3.3.2.2 Preferred Alternative

The Preferred Alternative would not substantially affect population growth trends within the study area. As described in Section 2.1, the Preferred Alternative was developed in a collaborative process with the community; and reflects, complements, and serves the values of the community. Any substantial increase in community services would be in response to projected growth in permanent population and

employment demands. Improved safety and access may bring more tourists into the area, resulting in a slightly increased demand on community services; however, the permanent population determines the level of social services available, as they are more likely than tourists to use local community services and facilities. It is also important to note that growth in the permanent population and employment is directly related to growth in tourism and tourist related service demands. The improvements proposed for the Preferred Alternative could eventually help lead to an increased population. However, it is impossible to predict how much the increase might be, or when, or where, because of the variables associated with population growth prediction. Growth may also be driven by factors other than road improvements, such as the cost of gasoline, general economic conditions, interest rates, and quality of schools. During construction, the Preferred Alternative may have minor, short-term impacts to access. Local travel for the permanent population, tourists, and service vehicles may be temporarily delayed during construction periods. The Preferred Alternative would have positive long-term impacts to the study area. Reduced travel times associated with improvements to accessibility and mobility, including more timely responses for emergency service vehicles, are examples of the positive impacts.

3.3.3 Mitigation

Implementation of the Preferred Alternative would have positive social impacts in the study area. Therefore, no mitigation would be required.

3.3.4 Environmental Justice & Title VI

Title VI of the US Civil Rights Act and Executive Order 12898 require federal agencies to incorporate Environmental Justice considerations into the National Environmental Policy Act (NEPA) planning process. The purpose of this order is to ensure that low-income households, minority households, and minority businesses do not suffer a disproportionate share of adverse environmental impacts resulting from federal actions. For transportation projects, this means that no particular minority may be disproportionately isolated, displaced, or otherwise adversely impacted.

3.3.4.1 Minority Populations

According to the 2000 Census data, Lewis and Clark County has less than 5 percent minority populations.

3.3.4.2 Low-Income Populations

There is no specific income information for the study area. According to the US Census Bureau's 2000 Current Population Survey, 10.9 percent of people of all ages in Lewis and Clark County in 1999 were estimated to live in poverty. For children under 18 years old, the poverty rate was estimated at 16 percent. Ten years earlier, in 1989, the poverty rate for people of all ages in Lewis and Clark County was 10.7 percent and 15.1 percent for children younger than 18.

No low-income or minority communities have been identified in the study area; therefore, no environmental justice impacts would occur. As such, no mitigation measures for either the No-Action Alternative or the preferred Alternative are necessary.

3.4 Economic

Once a thriving gold camp, Marysville currently has approximately 92 residents and some mining still going on in the area. A local ski resort, Great Divide Snowsports, provides jobs and brings tourists to the area.

According to the 2004 Lewis and Clark Growth Plan, unemployment in Lewis and Clark County has consistently remained lower than the State of Montana as a whole. The unemployment rate in Lewis and Clark County as of the 2000 census was 4.3 percent. Between 1990 and 2000 the total civilian labor force rose by 11.4 percent in Lewis and Clark County, from 25,554 to 28,464; during the same period, the number of employed individuals in the County increased by 11.7 percent, growing from 24,404 to 27,251. According to the US Census, labor force participation in Lewis and Clark County is among the highest in Montana. In 2000, 70 percent of the county population was part of the labor force, including 74 percent of the males and 63 percent of the females.

The County's economy is predominantly based on government employment and the services industry. Local, state, and federal government agencies employed 8,382 persons; the services category included 7,612 employees; and the retail sector had 5,009 employees. The employment data from the 2000 Census broke out the major employment categories as shown in **Table 3-3**.

Table 3-3
Lewis and Clark County Major Employment Categories

Industry	*Percent Employed*
Services	40 percent
Government	23 percent
Trade	20 percent
Communications and construction	9 percent
Mining and manufacturing	4 percent
Agriculture and agricultural services	3 percent

According to the Montana Department of Labor and Industry, the per capita income in 2000 for Lewis and Clark County was $25,153. The per capita income for the State of Montana was $22,518 that same year. The Lewis and Clark County Growth Plan states the highest-paying employment category was state and federal government jobs, which averaged $40,594 a year. An important reason for this high figure was the influence of high-paying federal government jobs, which averaged $68,462 in 2000. After government jobs, the second highest-paying category in 2000 were those in the transportation and utilities sector ($36,559), followed by construction ($33,571) and wholesale trade ($32,034). The lowest paying job categories in 2000 were in the

agriculture and agricultural services, specifically farming ($3,164), forestry ($10,238), and mining ($11,839). In general, high-paying jobs have been eclipsed by growth in lower-paying jobs during the last decade.

3.4.1 Economic Impacts

3.4.1.1 No-Action Alternative

The No-Action Alternative would not result in major impacts to existing economic conditions within the study area. However, since the No-Action Alternative would not solve existing or future traffic safety problems on Marysville Road, worsening conditions could deter tourists from patronizing local businesses.

3.4.1.2 Preferred Alternative

The Preferred Alternative would result in short-term benefit to the local area economy by supplying residents of the Marysville area with job opportunities related to the construction of the roadway improvements. Construction would also affect expenditure patterns by local residents and tourists. Local travel for residents, tourists and service vehicles would be periodically interrupted during construction along with other general traffic throughout the project construction period. The Preferred Alternative would provide safer access to the area by tourists; but, because overall capacity is not increased, no increase in tourism is expected to occur as a result of this project. The Preferred Alternative was developed in collaboration with the community and is consistent with community goals identified during public coordination efforts.

3.4.2 Mitigation

No mitigation for economic impacts would be required.

3.5 Non-Motorized Travel (Pedestrian & Bicycle)

3.5.1 Affected Environment

Marysville Road is a graveled road and is not designed to provide a safe or functional travel course for pedestrians or bicyclists.

3.5.2 Non-Motorized Travel Impacts

3.5.2.1 No-Action Alternative

The No-Action Alternative would not affect the poor conditions for non-motorized travel that occur on Marysville Road.

3.5.2.2 Preferred Alternative

The Preferred Alternative would not have any special features for pedestrian use (i.e. sidewalks), however widening of the road and shoulders, and the enhanced visibility provided by the improvements would enhance travel conditions for pedestrians, cyclists, and equestrians. The Preferred Alternative would be designed with an improved gravel or paved surface, which would be more conducive to non-motorized use than the existing condition.

3.5.3 Mitigation

No mitigation measures are proposed for pedestrians, bicyclists, and equestrians.

3.6 Right-of-Way & Relocation

3.6.1 Affected Environment

The existing County owned ROW or easement along Marysville Road is approximately 18 m (60 ft) wide. Privately owned and public/government owned land exists on both sides of the existing ROW.

3.6.2 Right-of-Way Impacts

3.6.2.1 No-Action Alternative

No new ROW or easements would be required with the No-Action Alternative.

3.6.2.2 Preferred Alternative

The County owns ROW, which would be fully utilized in the construction of the Preferred Alternative. Additional ROW would be necessary throughout the project in many areas. Approximately 3.1 hectares (7.7 acres) of new ROW would need to be acquired. In addition to undeveloped parcels of property needed for the expansion of the ROW, some agricultural, residential and public properties would be affected. No residences or other buildings would be removed. All driveway approaches would be reconstructed and new approach culverts installed.

3.6.3 Mitigation

Acquisition of land, and improvements, for highway construction are governed by state and federal laws and regulations that are designed to protect both the landowners and the taxpaying public. Landowners affected are entitled to receive just compensation for any land or improvements acquired and for any depreciation in value of the remaining land due to the effects of highway construction. Acquisition would be accomplished in accordance with applicable laws; specifically, Title 60, Chapter 4 and Title 70, Chapter 30, Mont. Code Ann.; and Title 42, USC, Chapter 61, "Uniform Relocation Assistance and Real Property Acquisition Policies For Federal and Federally Assisted Programs."

3.7 Parks & Recreation

3.7.1 Affected Environment

The study area includes no Local, State, or National Parks. There is access to both BLM and USFS lands and the Great Divide ski area from Marysville Road. The USFS and BLM lands provide a wide array of recreational opportunities, including hiking, camping, fishing, snowmobiling, and cross country skiing. Several trailheads are accessed from Marysville Road.

3.7.2 Parks & Recreation Impacts

3.7.2.1 No-Action Alternative

The No-Action Alternative would have no direct effect on recreational resources in the study area.

3.7.2.2 Preferred Alternative

The Preferred Alternative would have a positive impact to the recreational areas (see Section 3.7.1 for types of recreation in the area) by improving the safety of access to the recreation areas.

3.7.3 Mitigation

No mitigation measures are proposed or required.

3.8 Section 6(f) Lands Evaluation

Section 6(f) of the Land and Water Conservation Fund (LWCF) (16 USC 460) assures that an area funded with LWCF assistance will be maintained in public recreation use unless the National Park Service (NPS) approves substitution of property of reasonably equivalent usefulness and location and of at least equal fair market value. No LWCF properties have been identified within the vicinity of the project. Therefore, there would be no impacts and Section 6(f) is not applicable to the project.

3.9 Air Quality

3.9.1 Affected Environment

The Marysville Road is located in an "unclassifiable"/attainment area of Montana air quality under 40 CFR 81.327, as amended. The classification exempts the area from the conformity requirements set forth in the 1990 Clean Air Act Amendments.

3.9.2 Air Quality Impacts

Combustion emissions including carbon monoxide (CO) would increase with increased traffic volumes for both the No Action and the Preferred Alternative. However, CO emissions could be greater with the No Action Alternative because the Preferred Alternative would improve roadway alignment and therefore vehicle operation over the long-term. Dust would be decreased with the Preferred Alternative, due to road surface improvements.

3.9.3 Mitigation

No mitigation for air impacts would be required.

3.10 Noise

A preliminary traffic noise analysis was conducted for the Marysville Road Improvement Project. The objectives of this preliminary noise analysis were to:

- Measure existing noise levels within the project area and present the noise monitoring methodology and results, and

- Determine whether a detailed noise modeling analysis is required for this project.

Noise monitoring was performed at four locations, shown in **Figure 3-5**. The analysis was performed in accordance with the guidance provided in the *Traffic Noise Analysis and Abatement: Policy and Procedure Manual,* MDT, June 2001. Methodology, results of the noise analysis, and preliminary noise screening analysis can be found in the document entitled *TCSP 25(43) Marysville Road Reconstruction CN 4983, Lewis & Clark County, Montana, Preliminary Noise Analysis* (CDM, June 2003).

3.10.1 Noise Impacts

A detailed noise modeling analysis is not recommended for the Marysville Road Improvement Project based on the results of the noise monitoring program and preliminary noise screening analysis. In addition, it is anticipated that the Preferred Alternative would not cause a significant noise impact for adjacent residences.

3.10.2 Mitigation

No mitigation would be required as the Preferred Alternative does not cause a significant noise impact.

3.11 Water Resources/Quality

3.11.1 Affected Environment

3.11.1.1 Water Resources

Water resources within the project area include Silver Creek and associated tributaries within the basin (**Figure 3-6**). Silver Creek is part of the Upper Missouri subbasin (U. S. Geologic Society (USGS) cataloging unit 10030101) of the Upper Missouri basin. Silver Creek flows south of Marysville Road and is formed by the confluence of streams flowing from Rawhide and Ottawa Gulches near the town of Marysville. From Marysville, Silver Creek flows eastward approximately 16 miles, crossing the northern portion of the Helena Valley before it enters Lake Helena. Due to irrigation diversions and other withdrawals, Silver Creek is intermittent in its lower reaches. Silver Creek is perennial within the project area.

Jennies Fork, which drains the area north of Marysville, enters Silver Creek from the north immediately downstream of Marysville. Other major tributaries to Silver Creek downstream from Marysville include Sawmill Gulch, Sitzer Gulch, and Threemile Creek, all entering from the south.

3.11.1.2 Water Quality

Surface Water

EPA Clean Water Act regulations require all states prepare a 303(d) list every two years. The 303(d) list identifies impaired and threatened lakes, rivers and streams

Figure 3-5
Noise Monitoring Locations

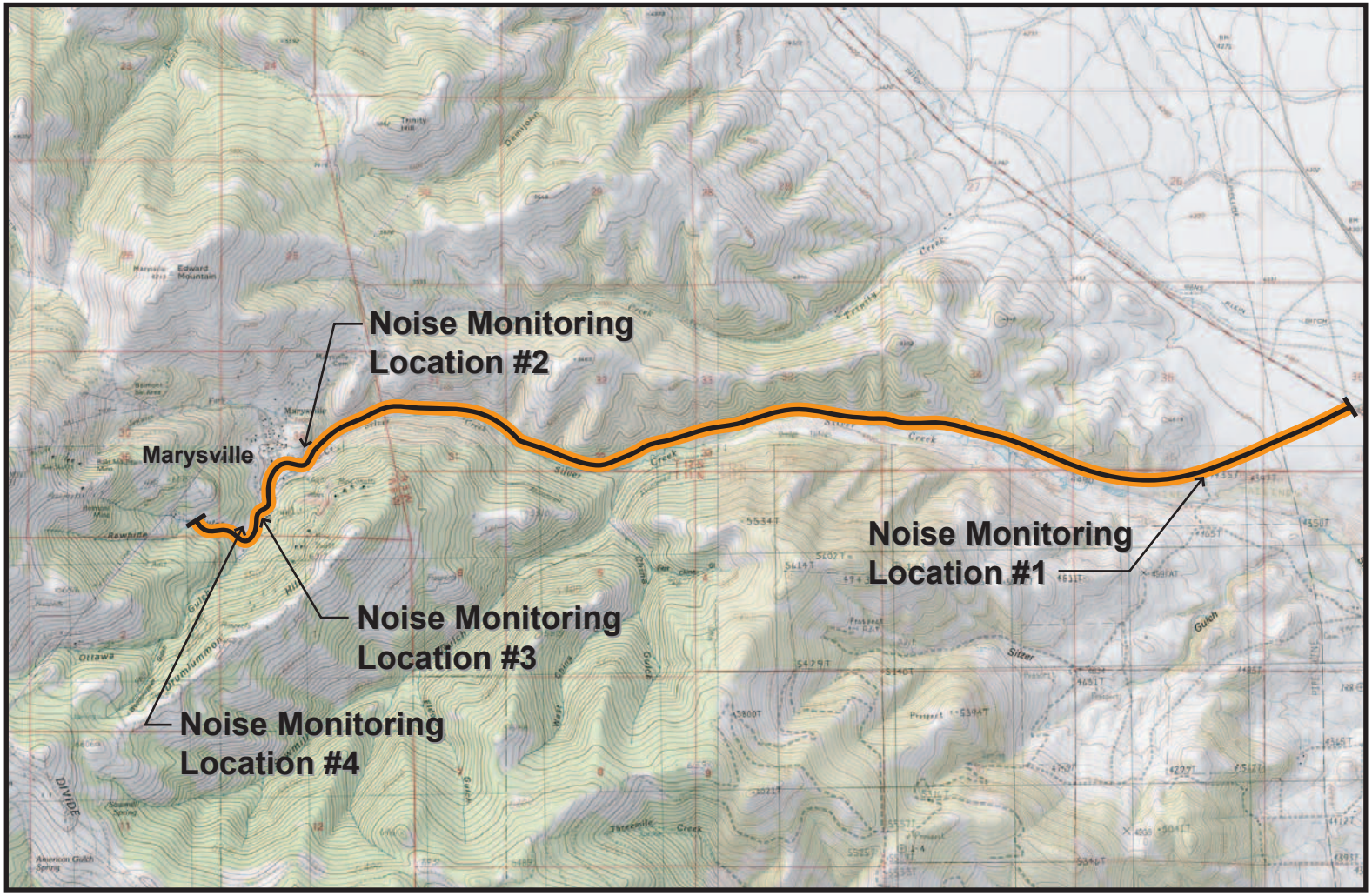
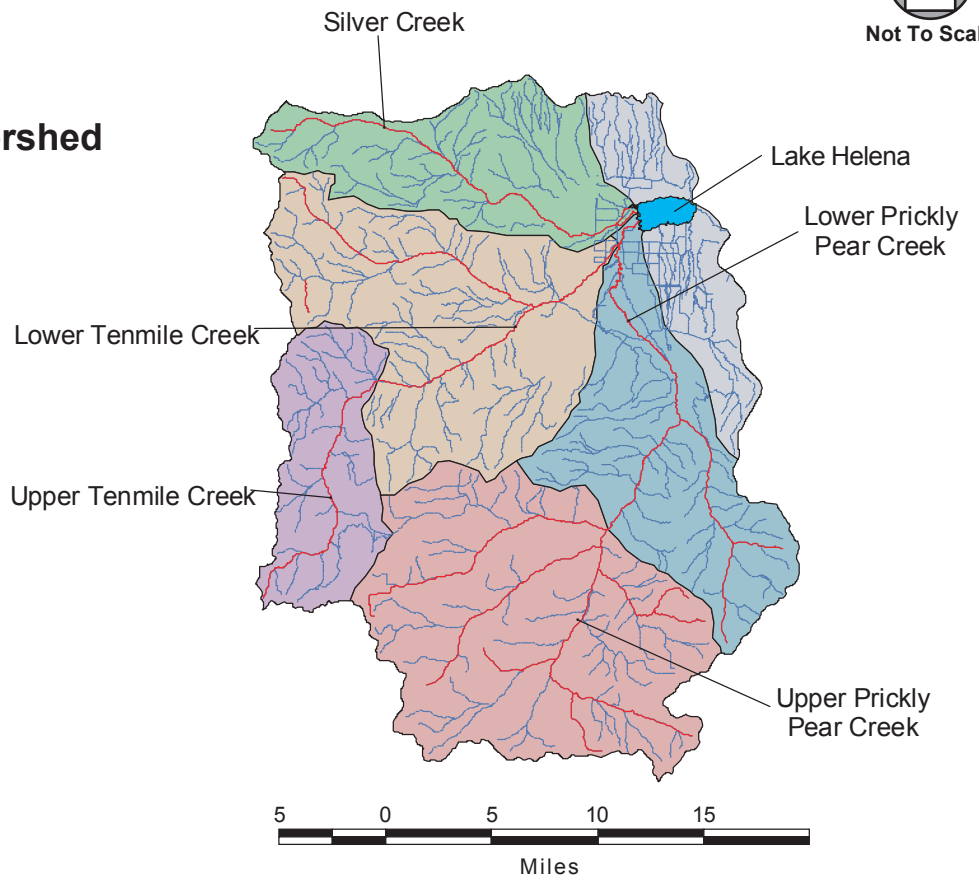
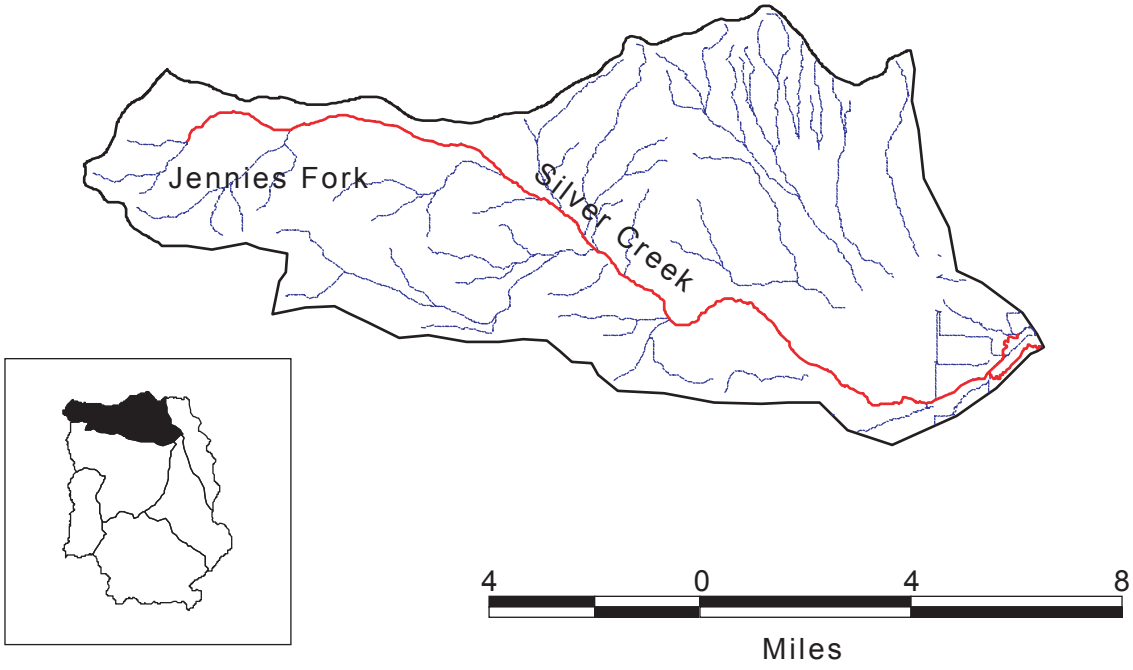


Figure 3-6
Water Resources

Lake Helena Watershed



Silver Creek Watershed



throughout the state. According to the Montana Department of Environmental Quality (DEQ) year 2002 303(d) list, Silver Creek is one of 40 surface waters within the Upper Missouri subbasin that is classified as impaired. Silver Creek is listed as impaired with respect to priority organics, metals, flow alteration and other habitat alterations. The sources of the impairment are listed as agriculture, crop related sources, resource extraction, subsurface mining, dredge mining and mill tailings.

Silver Creek is a subbasin of the Lake Helena watershed. In 1997, as required by court order, DEQ and USEPA began assembling a plan for development of Total Maximum Daily Load (TMDL) for the Lake Helena Watershed. Data were collected during the summers of 2003 and 2004. Volume 1 of the Watershed Restoration Plan including the Watershed Characterization and Water Quality Impairment Review was published in 2004. This volume recommends the development of TMDLs for sediment and lead for Jennies Fork, a tributary to Silver Creek, and for arsenic for Silver Creek. The report also recommends the delisting of Silver Creek for priority pollutant organics, based on the results of recent sampling. A draft version of the second volume of the Watershed Restoration Plan, including source assessment, allocation strategy, the TMDLs and the Restoration Plan was published in 2005. Public comments have been received on this document, and it will be finalized in 2006.

Surface water quality data compiled by DEQ (*Phase 1 Reconnaissance Site Characterization Report for the Silver Creek Drainage*, Olympus, 2003) indicated that aluminum (exceeding aquatic standards) and manganese and iron (exceeding secondary Maximum Contaminant Levels (MCLs) were the most common parameters which were out of compliance. Arsenic, cadmium, copper, lead, mercury, zinc, cyanide and total dissolved solids standards were exceeded only occasionally.

Recent surface water data collected by CDM (*Preliminary Site Investigation Report*, CDM, 2004) for an adit discharge at the waste rock pile (WR4) south of the rock outcrop are consistent with the DEQ data. All parameters were below the relevant standards with the exception of arsenic, which was equivalent to the human health standard of 0.018 mg/L, but well below aquatic standards.

Cleanup of the mining related sources which have lead to the impaired classification of Silver Creek has been completed through the remediation design, however, the remediation work, which has been funded through the Abandoned Mines Reclamation Bureau (AMRB), may not take place any time soon due to proposed funding cutbacks.

Groundwater

Groundwater data from both the shallow alluvial aquifer and the deeper bedrock aquifer (collected in 1996 within four wells in the Marysville area) showed that the water quality met all federal MCL values for all parameters. The results of sampling and analysis of thirteen groundwater monitoring sites (wells, adit discharges and springs) conducted by GoldSil Mining and Milling Inc. as part of their operating

permit, showed that the groundwater exhibited low levels of dissolved metals, with only iron and manganese exceeding secondary MCLs.

3.11.1.3 Wild and Scenic Rivers

Silver Creek and its tributaries are not currently in or proposed for inclusion in the National System of Wild and Scenic Rivers.

3.11.2 Water Resources & Water Quality Impacts

3.11.2.1 No-Action Alternative

The no action alternative would have no short-term impact on water quality and would not result in an increase in surface runoff since the road surface area would not change. However, long-term impacts are possible due to a potential increase in traffic volume in the future which may increase sediment load to Silver Creek.

3.11.2.2 Preferred Alternative

The Preferred Alternative would affect Silver Creek due to road widening. Road widening would result in an increase in surface area and a proportional increase in surface runoff in the long term. As the road is currently gravel, paving would decrease the sediment load contributing in the surface water runoff, however, the volume of runoff would likely increase due to the impervious road covering, if implemented. Paving the road surface, if implemented, would result in the need for sanding materials to be used during winter maintenance activities, which could have a minor impact to the sediment load to Silver Creek, but probably less than the existing gravel surface.

An additional impact to Silver Creek may be increased sedimentation from unstable cut and fill slopes.

3.11.3 Mitigation

As part of the Preferred Alternative, the culverted portion of Silver Creek and the areas immediately upstream and downstream of the culvert at the Drumlummon millsite would be rerouted through a new culvert. The new culvert would be located approximately 23 ft (7 m) southeast of the existing culvert. The culvert replacement and Silver Creek realignment would have minimal impact on water quality. The new culvert and stream channel would be designed with a buffer zone between the road and stream in order to minimize the affects of winter maintenance activities on the stream. The existing culvert is approximately 0-16 ft (0-5 m) from the road edge.

In the area where Silver Creek is to be relocated (south of the rock outcrop at the Drumlummon millsite), a vegetated slope would be placed between the road shoulder and the new Silver Creek channel to minimize the sediment load into the creek. Additionally, the new culvert and stream channel would be designed with a buffer zone between the road and stream in order to minimize the affects of winter maintenance activities on the stream.

Sedimentation resulting from erosion of unstable slopes could cause additional impacts. These impacts would be expected to be reduced with the reestablishment of vegetation.

3.12 Wetlands

3.12.1 Affected Environment

A field survey to delineate wetland areas and assess functions and values was carried out on June 9-16, 2003. Wetland determinations were based on procedures outlined by the USACE 1987 Corps of Engineers *Wetlands Delineation Manual* (Environmental Laboratory, 1987). Wetland functions were evaluated using the MDT Montana Wetland Assessment Method (Berglund 1999). The wetland classification system followed Cowardin et al. (1979). Indicator status was derived using the Northwest Region 9, from the *National List of Vascular Plant Species that Occur in Wetlands: 1988 National Summary* (Reed, 1988).

Wetland evaluations were conducted to address wetland resources mandated by the following:

- Executive Order 11990 - *Protection of Wetlands*,
- Sections 401 and 404 of the Federal Clean Water Act (CWA),
- USACE Regulatory Guidance Letter No. 02-2-Guidance on Compensatory Mitigation Projects for Aquatic Resource Impacts Under Section 404 and Section 10 of the Clean Water Act,
- Montana Water Quality Act, and
- FHWA regulation 23 CFR 777 - Mitigation of Impacts to Wetlands and Natural Habitat.

Wetland evaluations were completed using methodology described in "*The Interagency Operating Procedure for the Conservation of Wetland Resources Associated with Transportation Construction Projects in the State of Montana*" (IAWG, 1996). The procedure was developed between MDT and various state and Federal resource agencies to foster better communication and protection of wetland resources in the state. The procedure provides a measure of sequencing to avoid and minimize wetland impacts and mitigate unavoidable impacts by Federally sponsored transportation projects.

The wetlands were assessed for 12 wetland function and values and assigned one of four MDT Category ratings (I to IV) (Berglund LLC, 1999) in order to quantify and qualify project impacts. Approximately 3 hectares (7.4 acres) of wetlands were found within 30.5 m (100 ft) of the existing centerline. Delineated wetlands are listed in Table 3-4 and shown in Figure 3-7.

Hydrogeomorphic classification was Riverine (Smith et al., 1995). Systems encountered included Palustrine and Riverine. The Riverine system was further divided into the Upper and Lower Perennial Subsystems. The Lower Perennial Subsystem – characterized by shallow gradient, fine substrate, and oxygen deficit - appears likely the result of mining and milling activity.

The predominant wetland types in the upper reaches are Palustrine emergent fringe and shrub-scrub wetlands. Palustrine emergent marsh wetlands were found in the upper reaches of the project associated with the headwaters of Silver Creek (wetlands 1L, 2L,3R, 4L&R, 5L&R, 6R,7R, 8RL&R, 9L and 10R), as well as a couple isolated areas downstream from Marysville (wetlands 12L and 15R). Riverine emergent fringe wetlands along an open water channel with an unconsolidated bottom were found in the lower elevations of the project corridor. These wetlands also had adjacent shrub-scrub and forested wetland classes.

Table 3-4
Summary of Wetland Classifications, Functional Ratings, Assessed and Impacted Areas

Wetland[(1)] #	***Classification[(2)]***	***Functional Rating[(3)]***	***Assessment Area[(3)] (Hectare)***
1-L	Palustrine: EM (65%) SS (35%)	III	0.10
2-L	Palustrine: EM (20%) SS (50%) FO (30%)	III	1.00
3-L	Palustrine: EM (100%)	IV	0.01
4-L & 4-R	Palustrine: SS (50%) EM (25%) Riverine/UP:UB (25%)	III	1.00
5-L & 5-R	Palustrine: SS (60%) EM (20%) Riverine/UP: UB (20%)	II	0.50
6-R	Palustrine: SS (60%) EM (20%) Riverine/UP: UB (20%)	II	0.50
7-R&L	Palustrine: EM (80%) SS (20%)	III	0.50
8-R & 8-L	Palustrine: EM (80%) SS (20%)	III	0.50
9-L	Palustrine: EM (100%)	IV	0.01
10-R	Palustrine: EM (40%) SS (40%) Riverine/UP: UB (20%)	II	0.60
11-R	Palustrine: FO (50%) Riverine/LP: UB (50%)	II	2.00
12-L	Palustrine: FO (100%)	III	0.10
13-L & 13-R	Riverine/LP: EM (20%) UB (15%) Palustrine: SS (45%) FO (20%)	III	0.20
14-R	Palustrine: SS (40%) Riverine/LP: UB (40%) EM (20%)	II	2.00
15-R	Palustrine: EM (60%)SS (40%)	III	0.50
16-R	Palustrine: SS (40%) FO (20%) Riverine/UP: UB (40%)	II	12.00
17-R	Palustrine: SS (55%) Riverine/LP: EM (15%) UB (30%)	III	4.00
18-R	Palustrine: SS (20%) Riverine/LP: EM (60%) UB (20%)	III	11.00
Total			

(1) Systems: Palustrine; Riverine.

(2) Subsystems: UP = Upper perennial; LP = Lower perennial.

Classes: EM = Emergent marsh; SS = Shrub-scrub; FO = Forested wetland; UB = Unconsolidated bottom.

(3) Source: MDT Assessment Method (Berglund 1999).

The emergent wetland class is characterized by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. Vegetation is present most of the growing season and is dominated by perennial plants (Cowardin et al., 1979). The hydrologic sources are primarily spring and groundwater in the upper reaches of the project (Palustrine System) and streamflow in the lower project areas (Riverine System). Dominant plant species found in the emergent wetlands of both systems include sedges (*Carex* spp.), rushes (*Juncus* spp.), bluegrasses (*Poa* spp.) and other hydrophytic grass species. The wetland class is common within the project corridor.

The scrub-shrub class is a common within the project corridor. The scrub-shrub wetland class is dominated by woody vegetation less than 20 ft in height and 4 inches in diameter at breast height. Vegetation includes both shrubs and trees and may represent a successional stage leading to forested wetland. The scrub-shrub wetland type has saturated, seasonally or temporarily flooded hydrologic regimes (Cowardin et al. 1979), but subirrigation is the dominant hydrologic input for the shrub-scrub class over most of the project. Willow (*Salix spp.)* and alder (*Alnus* spp.) are the dominant wetland shrub species along the project corridor.

The forested wetland class is characterized by woody vegetation over 20 ft in height and has a saturated or seasonally flooded hydrologic regime (Cowardin, 1979). Dominant hydrologic sources are subirrigation. Within the project corridor wetland areas, dominant tree species are quaking aspen (*Populus tremuloides*) and Douglas-fir (*Pseudotsuga menziesii*).

The unconsolidated bottom is frequently associated with wetlands and has permanently flooded hydrologic regimes located in the active channels (Cowardin et al., 1979). This class is usually devoid of vegetation and is composed of sand, gravel and cobble in the upper reaches of the project. Below Marysville, fine substrate material is common as a result of the mining and milling operations.

3.12.2 Wetlands Impacts

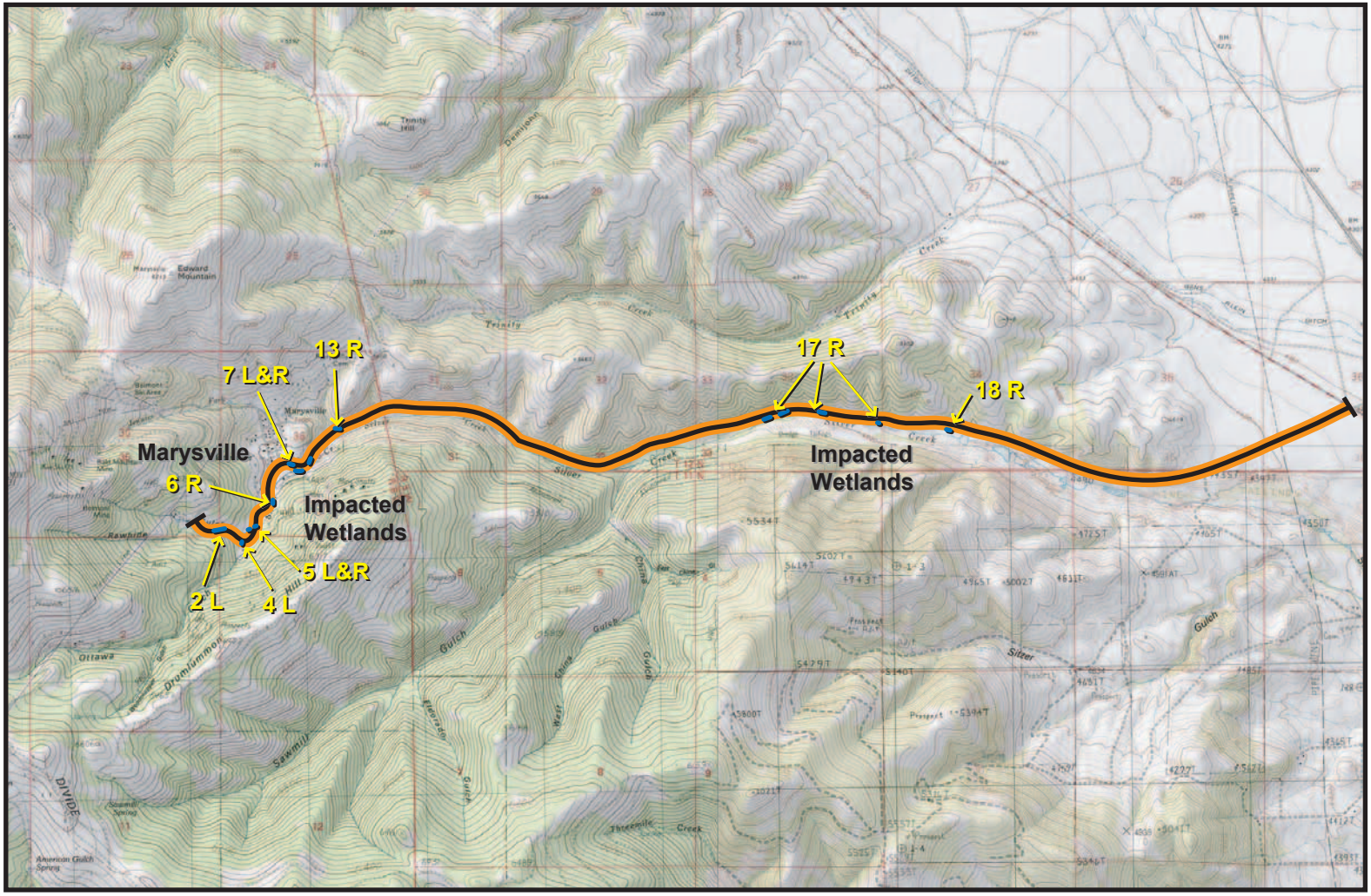
3.12.2.1 No-Action Alternative

The No-Action Alternative would result in no impacts to wetlands.

3.12.2.2 Preferred Alternative

A total of approximately 0.32 hectares (0.79 acres) of wetland would be permanently impacted under preliminary alignment and grade. The projected impacted wetland areas are shown on **Figure 3-7**. **Table 3-5** indicates the impacted areas. Individual impacts are expected to range from approximately 0.01 to 0.13 hectares (0.02 to 0.32 acres). A total of approximately 0.02 hectares (0.05 acres) of category II and 0.30 hectares (0.75 acres) of category III wetlands would be impacted under the preliminary alignment. Table 3-5 indicates impacts by habitat type. Shrub-scrub habitat would receive the most impact, approximately 0.15 hectares (0.38 acres), followed by emergent marsh with approximately 0.08 hectares (0.2 acres), unconsolidated bottom with approximately 0.07 hectares (0.18 acres) and forested with approximately 0.04 hectares (0.10 acres).

Figure 3-7
Wetland Impact



In September 2005, a supplemental geotechnical investigation for the Plan In Hand was conducted by Pioneer Technical Services, Inc. to investigate the slope stability of cut slopes along the existing alignment. Results of the geotechnical analysis showed that the Preferred Alternative could remain along the existing alignment resulting in no changes to the area of impacted wetlands estimated during the original wetlands study in 2003.

Table 3-5
Approximate Potential Impacts of Wetland Classes[(1)]
Due to Preferred Alternative

Wetland #	Total Impacted Area (hectares)	Class							
		Emergent Marsh		Shrub-Scrub		Forested		Unconsolidated Bottom	
		%	hectares	%	hectares	%	hectares	%	hectares
2L	0.0745	20	0.0149	50	0.0373	30	0.0223		
4 L & R	0.0234			50	0.0117			50	0.0117
5 L & R	0.0145	20	0.0029	40	0.0058	20	0.0029	20	0.0029
6R	0.0050	20	0.0010	60	0.0030			20	0.0010
7L&R	0.0346	80	0.0277	20	0.0069				
13L&R	0.0174	20	0.0035	60	0.0104	20	0.0035		
17R	0.1376	15	0.0206	55	0.0757			30	0.0413
18R	0.0159	60	0.0095	20	0.0032			20	0.0032
Total	0.3229	23	0.0801	45	0.1540	11	0.0287	21	0.0601

(1) Cowardin et al. 1979.

3.12.3 Mitigation

Compliance with Section 404 of the CWA and Executive Order 11990 requires practicable design measures to reduce activities in wetlands. Mitigation of wetland impacts includes avoidance and minimization of impacts, and where these are not an option, physical mitigation (i.e., restoration, replacement). The Preferred Alternative would be designed to avoid and minimize impacts to wetlands, where practicable, by following existing road alignment and/or cutting slopes, wherever practicable. Slopes behind guardrails could be steepened or retaining walls constructed, as well. However, complete avoidance of wetland impacts may not be practicable based on the need to upgrade the roadway geometrics as well as the proximity of some wetlands to the existing roadway.

Final impacted wetland acreage would be determined based on final road plans. Required mitigation would be determined and plans developed in consultation with the USACE. On-site mitigation is preferred. In the event that mitigation sites within or adjacent to the project corridor are not available, other mitigation avenues will be evaluated, including mitigation through monetary compensation to the Montana Wetland Legacy program, a program dedicated to constructing wetlands in the region.

Implementing conservation measures during roadway design and construction will minimize wetland losses where unavoidable. Avoidance and minimization of wetland impacts including impacts from siltation may be accomplished through the following mitigation measures:

- Steepen fill slopes, to a maximum of 1.5:1, adjacent to or within wetland areas wherever practicable.
- Minimize disturbances to wetland vegetation along the creek.
- Mitigate unavoidable wetland losses at a location or in a manner agreed upon with the USACE.
- Adhere to MDT's Erosion and Sediment Control Best Management Practices Field Manual.
- Comply with all state and federal permits.

3.13 Fish, Wildlife and Vegetation

Section 3.13 summarizes information on the biological resources of the project area and the potential for these resources to be affected by project actions. The *Biological Resources Report* (SE&A and CDM, 2004) provides a detailed presentation of these biological resources. The Biological Resource Report is available for public review at the Lewis & Clark Library.

Information regarding the natural resources in the vicinity of the project was obtained from the following federal agencies: USFWS, NRCS, BLM, and USFS. State agencies consulted included the DEQ, Montana Natural Heritage Program (MTNHP) and MDFWP. Agency coordination letters are included in **Appendix B**. Several on-site meetings have taken place between the agencies to discuss proposed project actions and to receive input.

3.13.1 Wildlife

According to MDFWP (2003a), the project area is part of a wildlife corridor along the Continental Divide. The corridor allows for the movement of animals and the flow of genetic material through the Northern Rockies. Protecting the function of the Continental Divide wildlife corridor is essential for preventing species isolation and habitat fragmentation.

Animals occurring in or using the project area include a wide variety of birds and terrestrial mammals, reptiles, and amphibians. Aquatic or water-dependent animals include birds, mammals, reptiles, amphibians, and fish. Terrestrial and aquatic invertebrates also occur within the project area. However, the evaluation of potential impacts to animals from project actions is focused on vertebrates.

3.13.1.1 Terrestrial Resources

3.13.1.1.1 Affected Environment

The terrestrial habitats of the project area support a variety of large mammals, including whitetail deer (*Odocoileus virginianus*), mule deer (*Odocoileus hemionus*), moose (*Alces alces*) and elk (*Cervus canadensis*). MDFWP personnel have observed large numbers of elk and deer near the road, especially in the lower elevation open

areas to the east (Joslin, 2003). Drainages east of Marysville that contain an abundance of cover provide conditions suitable for big game crossing. These areas are considered most important for assessing impacts related to wildlife crossings.

Several mammal species of concern to the state are also known to occur within or near the project area (Joslin 2003). These species include the grizzly bear (*Ursus arctos horribilis*), Gray wolf (*Canis lupus*), Canada lynx (*Felis lynx*), wolverine (*Gulo gulo luscus*) and fisher (*Martes pennanti*). Status and rank of these species are listed in the *Biological Resources Report* (SE&A and CDM, 2004). The grizzly bear, gray wolf and lynx are threatened or endangered species and are further discussed in Sections 3.14.

The wolverine is a far ranging species and has been recorded in the project area. The fisher, although rare in Montana, has been reported near Roundtop Mountain above the Great Divide Ski Area (MDFWP, 2003). Much of the analysis of the Canada lynx is applicable to the wolverine and fisher due to their similar habitat requirements and behavioral characteristics.

The results of a search conducted for all bird species observed in or near the project area (Lenard et al., 2003) indicated that 258 bird species have been recorded. This includes nineteen species listed as species of concern. The state and federal status of these species, along winter residency status, is presented in the *Biological Resources Report* (SE&A and CDM, 2004). The bald eagle (Haliaeetus leucocephalus), a federally listed threatened species, is further discussed in Section 3.14, Threatened and Endangered Species.

Several species of amphibians and reptiles may be present within the project area. The most likely of these to occur within the project area are western toad (*Bufo boreas* boreas), Colulmbia spotted frog (*Rana luteiventris*), western painted turtle (*Chrysemys picta bellii*), rubber boa (*Charina bottae*), western yellow-bellied racer (*Coluber constrictor mormon*), bullsnake (*Pituophis cantenifer sayi*), prairie rattlesnake (*Crotalus viridis viridis*), red-sided garter snake (*Thamnophis sirtalis parietalis*) and wandering garter snake (*Thamnophis elegans vagrans*).

No amphibian species listed as species of concern are known to occur within the project area, but portions of the riparian habitat along Silver Creek appear suitable for reproduction of some species such as boreal toad and the northern leopard frog (*Rana pipiens*). The northern leopard frog has become extinct in nearly all of western Montana, and populations throughout much of western North America are now reduced or gone (Reichel and Flath, 1995). This species is unexpected in the area given the few known populations in the western portion of the state.

3.13.1.1.2 Terrestrial Resources Impacts

3.13.1.1.2.1 **No-Action Alternative**

This alternative would have no impact on mammals, birds, reptiles, or amphibians known or likely to occur within the project area.

3.13.1.1.2.2 **Preferred Alternative**

Potential project-related impacts include disruption of wildlife movement during construction activities. Most wildlife species would be expected to avoid the increased human contact and noise associated with project construction and road improvement activities. Such impacts would be temporary and not have adverse population level effects. Wildlife disturbances from the construction activities would be considered minor and temporary, due to abundant similar habitats in the area. Construction could result in direct mortality of those species with limited mobility (mice, voles, shrews) and those species occupying dens or nests within the construction limits, at the time of construction.

Critical big game habitat would not be affected by this project. Thermal and security cover would be minimally impacted, if at all.

Big game movement across the road occurs year round, and no significant impacts to movements are anticipated. During construction, game migration would occur after hours. Following construction, minor impacts would occur at stretches of guardrail and steep slopes, with young, old or sick animals. Generally, game would be expected to move over, under, or around guardrail sections. However, steep slopes in contribution with guardrail may limit visibility of animals and motorists, impeding the ability of both to anticipate and avoid collisions. Due to the small ADT and high permeability of the corridor, the impact is expected to be minor.

Mammal species could be indirectly affected by increased wildlife/human interactions in the Continental Divide wildlife corridor (MDFWP, 2003a), which could change wildlife movement patterns through the corridor (assuming the project results in an increased human presence). Increased wildlife/human interactions could occur as a result of either increased recreational use or construction activities. The Marysville Road Project could contribute to either condition.

Any increase in recreation use as an indirect result of the Marysville project or in combination with other projects is not expected to be of a magnitude to result in adverse affects to wildlife. The Continental Divide wildlife corridor is substantially large enough to absorb minor changes in levels of human use without measurable impacts to wildlife. Additionally, distance between projects minimizes impacts. Adverse effects to mammal species as result of multiple construction activities are considered unlikely due to the localized, temporary, and seasonal nature of the construction projects, staggered construction scheduling, project work downtimes, and availability of alternative suitable habitats. There is expected to remain sufficient available time windows for use of project area habitat and a sufficient quantity of alternative undisturbed suitable habitat so as to make adverse effects unlikely.

Possible increased traffic speeds and volumes, due to improved roadway conditions, have the potential to increase the number of road-kills; however, this is considered unlikely as well. Existing (approximately 260 ADT) and projected (Year 2026 – 430 ADT) traffic volumes are low, providing ample roadway permeability for wildlife crossing. Also, most wildlife crossing is expected to take place after dark, when traffic

should be reduced. Increased speed without high traffic volume is not expected to pose a substantial barrier. Peak traffic volumes are low, of short duration and provide permeability for wildlife crossing. Ample non-peak traffic hours are available for crossing. No significant change to roadway permeability is expected as a result of the project, and it is unlikely that the project would result in adverse effects to mammal species by way of increasing road-kills or impeding wildlife crossings.

Based on anticipated construction limits of the Preferred Alternative, approximately 0.32 ha (0.79 acre) of wetland habitat would be directly impacted by the proposed action. As a result, there would be some loss of bird nesting, roosting and foraging habitats proximal to existing roadway. Some temporary displacement of bird species from habitats close to the road would occur during construction. However, abundant similar habitats exist close by and no adverse impacts to bird species as a result of construction are anticipated.

The reduction in wetland habitat could also affect breeding sites for amphibians and reduce the amount of suitable habitat for amphibians and water-dependent reptiles (e.g., garter snakes and painted turtles). Some temporary displacement of amphibian and reptile species occupying habitats close to the highway would occur during construction; however, abundant similar habitats exist along the project corridor. No adverse impacts are expected to any amphibian or reptile species populations. Forested environments adjacent to roadway could be minimally impacted from cut slopes.

3.13.1.1.3 Mitigation

For protection of mammals

Mitigation efforts to reduce impacts to mammal species include minimizing vegetation removal, increasing sight distance and allowing migration across the roadway at established migration routes. Specific mitigation measures include:

- Restrict clearing, grubbing and vegetation removal operations to the minimum area necessary to accommodate the planned reconstruction activities and improvements and any necessary utility relocation. Disturbed areas within MDT ROW and easements will be seeded with desirable plant species as soon as practicable after construction, as recommended by the MDT botanist.

- Limit guardrail to the amount required for road safety to allow for passage points.

- Install "Wildlife Crossing" warning signs, per MDT policy.

For protection of birds

Most birds are seasonal residents and are likely to adjust feeding and nesting areas relative to construction and post-construction environments. The Migratory Bird Treaty Act provides for protection of birds. If impacts to migratory birds are anticipated, a special provision will be included in the Contract Bid package to ensure their protection. Mitigation efforts include reestablishment of favorable vegetation

communities while at the same time deterring occupation near the roadway. Specific measures include the following:

- Restrict clearing, grubbing and vegetation removal operations to the minimum area necessary to accommodate the planned reconstruction activities and improvements and any necessary utility relocation. Disturbed areas within MDT ROW and easements will be seeded with desirable plant species as soon as practicable after construction, as recommended by the MDT botanist.

- Raptor-proof rural overhead power lines that need to be modified or relocated in accordance with MDT policy.

3.13.2 Aquatic Resources

3.13.2.1 Affected Environment

Aquatic habitats within the project area include Silver Creek and the associated riparian area and small isolated wetlands. Approximately 3 hectares (7.8 acres) of wetlands have been recently described (BBR, SE&A, 2003) within 30.5 m (100 ft) of the existing roadway centerline. Silver Creek is a perennial flowing major aquatic resource within the project area. The headwaters occur near the town of Marysville at the confluence of Ottawa Gulch and Rawhide Gulch. Springs are common near the headwaters, and Jennies Fork enters Silver Creek just east of Marysville. Several tributaries enter Silver Creek from the south, outside the project limits. Silver Creek has been adversely affected by mining activities. These activities have resulted in elevated metal concentrations in surface water and sediments (DEQ 1996). Silver Creek is listed on Montana's 303(d) list of impaired surface waters. The causes of impairment are flow alteration, habitat alteration, priority organics and metals (DEQ 1996).

The only fish species known to occur in Silver Creek are the native Westslope cutthroat trout, mottled sculpin (*Cottus bairdi*), and the introduced brook trout (*Salvelinus fontinalis*) (Skaar 2003).

In 2000, the USFWS determined that the westslope cutthroat trout was not likely to become a threatened or endangered species and listing of the species under the Endangered Species Act (ESA) was not warranted (USFWS 2000a). The global rank is G4T3 and the state rank is S3. The G4T3 ranking suggests that throughout its range, the westslope cutthroat may be uncommon but apparently secure; however, the species could be rare in individual locations. The important life history information for this species can be found in the *Biological Resources Report* (SE&A and CDM, 2004).

It is unknown if the Silver Creek cutthroat populations are pure strains or hybrids with Yellowstone cutthroat trout (*Oncorhynchus clarki bouvieri*). Project-related impacts to trout remain the same, regardless of whether the population is pure-strain westslope cutthroat or consists of hybrids (Skarr 2003).

3.13.2.2 Aquatic Resources Impacts

3.13.2.2.1 No-Action Alternative

The No-Action Alternative would result in no impacts to aquatic species.

3.13.2.2.2 Preferred Alternative

Project-related impacts are expected to be minimal and/or short-term to aquatic species within the project area. The transport of sediments to Silver Creek has the greatest potential from culvert replacement along the main stem, west of Marysville, and at Jennies Fork, east of Marysville. Additional temporary impacts would occur as a result of approximately 150 m (495 ft) of channel realignment.

On-site observations indicate that downstream fish passage is unimpeded. Upstream passage may be difficult due to the long length and steep slope of the existing culvert. Although the genetic makeup of cutthroat trout populations in Silver Creek is currently unknown, MDFWP biologists believe fish movement throughout the creek is currently unimpeded (Skaar 2003). Culvert replacement within the main stem of Silver Creek could have an impact on resident fish communities through improved fish passage between the upper and lower reaches of Silver Creek. Improved passage would allow larger fish to reach the upper areas of the creek and increase the genetic pool.

The Marysville Road reconstruction project has the potential for long-term generation of tons of sediments. The elevation of this road may involve considerable winter maintenance (sand/salt, etc.). Sedimentation resulting from erosion of unstable slopes, as well as from sanding operations, may cause additional impacts. These impacts could be expected to be reduced with the reestablishment of vegetation. Revegetation of the steep cut and fill slopes associated with mountainous topography may be difficult to revegetate. The "Montana Department of Transportation Design Considerations for Permanent Erosion Control Features To Reduce Sediment Transport" would be references in the design. Permanent sediment control basins and other structures where feasible may be considered in an effort to prevent sediment and/or salt from entering Silver Creek.

Indirect or cumulative impacts on aquatic biota and habitats include those resulting from remediation activities in and along the creek. DEQ is planning to remove materials (e.g., metals-contaminated tailings and waste rock) from areas that have been determined to be impacting Silver Creek and adjacent riparian areas. These actions could result in localized and temporary impacts to aquatic and riparian habitats, but measurable impacts are not expected.

3.13.2.3 Mitigation

Specific mitigation measures include the following:

- Follow MDT guidance laid out in the Erosion and Sediment Control Best Management Practices Manuals.

- Coordinate with EPA and DEQ reclamation/cleanup efforts within the project impact area.

- Minimize instream work as required by permit provisions, including timing restrictions to complete work in low-flow periods.

- Comply with all necessary state and federal stream and storm water permits.

- Include stream restoration, bank stabilization and revegetation with stream relocation work.

3.13.3 Vegetation

3.13.3.1 Affected Environment

On June 30 and July 1, 2003, a survey was conducted along the Marysville Road between Highway 287 and Ottawa Gulch Road to document the types of plant communities, record the primary plant species, and to search for threatened or endangered species and species of special concern.

Six major plant communities types were observed within the area surveyed: big sagebrush; open pine forest; mixed conifer and deciduous forest; Douglas fir forest; riparian habitat; and developed residential property. These areas are described in the *Biological Resources Report* (SE&A and CDM, 2004).

The 2003 upland vegetation survey indicated that there are no plant species of special concern, or threatened or endangered plant species, within 18 m (60 ft) of the centerline of the Marysville Road. No species from the Helena National Forest or the MTNHP lists were found during the survey of the project area.

3.13.3.2 Vegetation Impacts

3.13.3.2.1 No-Action Alternative

There would be no impacts to vegetation as a result of this alternative.

3.13.3.2.2 Preferred Alternative

Development of clear zones for the Preferred Alternative will result in a limited loss of roadside vegetation, including both native and introduced species. This loss will be most identifiable during the construction period when new alignment elements and widening for extended shoulders is underway. Because of the adequate precipitation in this area and timely revegetation efforts, the loss of this plant cover will be short-lived. Since construction related activities will provide an opportunity for the growth of weedy species, revegetation activities will need to be accomplished immediately following construction. The movement of noxious weeds from disturbed areas into adjacent undisturbed areas could also occur.

3.13.3.2.3 Mitigation

The following measures could mitigate any negative impacts of the Preferred Alternative.

- Revegetation of all disturbed soil areas outside of the roadway prism and within the right-of-way limits and in areas of construction easements will occur in a timely manner in order to establish desirable plant species and reduce the possibility of infestation by noxious weeds.

- Complying with the requirements of the Lewis and Clark County weed management program.

- Clearing and grubbing will be restricted to the minimum area necessary to accommodate the planned construction activities and improvements.

3.14 Threatened and Endangered Species

3.14.1 Affected Environment

Threatened and endangered species include those species listed or proposed for listing, by the USFWS, as threatened or endangered. Under Section 7 of the ESA as amended, activities conducted, sponsored or funded by a federal agency including the FHWA must be reviewed for their effects on listed or proposed listing of species as threatened or endangered. Four species are identified: bald eagle (*Haliaeetus leucocephalus*), grizzly bear (*Ursus arctos horribilis*), Gray wolf (*Canis lupus*) and lynx (*Felis lynx*). Relevant information on these species is summarized below and provided in detail in the *Biological Resources Report* (SE&A and CDM, 2004). USFWS has issued a project effect determination of "no effect" for the bald eagle and "may affect, not likely to affect" for the grizzly bear, Gray wolf and lynx. (See Appendix B for USFWS Concurrence Letter.)

3.14.1.1 Bald Eagle (*Haliaeetus leucocephalus*)

The bald eagle is listed as threatened by the USFWS, designated threatened by the USFS, special status by the BLM, protected by MDFWP, and classified as S3B, S3N (breeding and non-breeding occurrences are found locally in a restricted range) by the State of Montana (MTNHP 2003). The bald eagle is legally protected under federal legislation including the Lacey Act, Migratory Bird Treaty Act, Bald Eagle Protection Act, and ESA. In addition, the bald eagle is protected in Montana under the Nongame and Endangered Species Conservation Act of 1973 (MBEWG 1991).

3.14.1.2 Grizzly Bear (*Ursus arctos horribilis*)

In 1975, the USFWS listed the grizzly bear as a threatened species in the lower 48 states under the ESA (Federal Register V.40, No. 145, Part IV-3173-4). The grizzly bear is listed as threatened by the USFWS and classified as S3 by the State of Montana - vulnerable because of rarity, or found in a restricted range even though it may be abundant in some locations (MTNHP 2003). The species is legally protected under the ESA.

Grizzly bears have been observed in the project area (Joslin 2003; Costin 2003). They are year-round residents of the general area and have potential to be affected by project actions. Because of their large home ranges, grizzly bears are unlikely to

remain in or very near the project area for the entire year. However, they may remain in or near the project area for extended periods of time depending on availability of suitable habitat, food and hibernation locations.

3.14.1.3 Gray Wolf (*Canis lupus*)

The gray wolf is classified as endangered under the ESA. The population within the project area is not considered part of either of the two experimental populations listed in the Northern Rockies (USFWS 2003). Wolves have a State Rank of S3 – vulnerable because of rarity, or found in a restricted range even though it may be abundant at some of its locations.

Wolves are known year-round residents of the general area (Joslin 2003; Costin 2003), but require large remote areas and minimum human contact. Individuals are prone to long-distance movements and are unlikely to remain in the project area for the entire year. However, they may remain in the area for an extended period of time, depending on availability of suitable habitat and prey. Wolves use lower elevations more consistently in winter, especially where deer and elk winter.

3.14.1.4 Lynx (*Felis lynx*)

In March 2000, the USFWS (2000b) listed the Canada lynx in the contiguous United States as threatened under the ESA. The lynx has a State Rank of S3 – vulnerable because of rarity, or found in a restricted range even though it may be abundant at some of its locations. The species and its critical habitat are legally protected under the ESA.

3.14.2 Threatened and Endangered Species Impacts

3.14.2.1 No-Action Alternative

The No-Action Alternative would not have any affect on threatened or endangered species.

3.14.2.2 Preferred Alternative

The following are possible impacts on each of the threatened and endangered species as a result of implementation of the Preferred Alternative. **Table 3-6** summarizes the findings related to these species.

Bald Eagle

Bald eagles are not expected to nest or congregate in the Marysville area. Nesting may occur in the vicinity. Water quality impacts such as increases in turbidity and suspended sediment are likely to result from culvert replacements. Increased turbidity and suspended sediment could potentially result in reduced stream productivity, which could result in reduced foraging opportunities for bald eagles. However, these construction-related water quality impacts will likely be reduced to negligible levels through implementation and maintenance of BMPs and permit conditions of the Stream Protection Act and Section 404 permits required for this project. In addition, nearby alternative suitable foraging habitat is readily available

for use should bald eagles pass near the construction area, nests or nesting activity would not be affected. The removal of roadside carcasses is proposed to minimize bald eagle attraction to the area during construction.

Table 3-6
Threatened and Endangered Species Summary

Species	*Status*	*Primary Occurrence in the Project Area*	*Primary Habitat Affected*	*Determination of Effect*
Bald Eagle	Threatened	Limited habitat in project area and nearby alternative suitable habitat is readily available. Not expected to nest or congregate. May occur during migration.	None	No effect
Grizzly Bear	Threatened	Year-round residents of project area. May remain in or near the project area for extended periods of time if suitable habitat, food and hibernation location available.	None	May affect, not likely to adversely affect
Gray Wolf	Endangered	Year-round residents of the project area. May remain in the area for an extended period of time, depending on availability of suitable habitat and prey. Tend to use lower elevations in winter.	None	May affect, not likely to adversely affect
Canadian Lynx	Threatened	Residents of western Montana. Avoid open space.	None	May affect, not likely to adversely affect

Grizzly Bear

Grizzly bears would likely avoid potential human contact and noise associated with construction project activities. Impacts would be expected to be temporary and should not result in adverse direct impacts to individual bears or cause population-level effects. There is the possibility of an increased number of road-killed deer due to increased vehicle traffic and/or speed; however grizzly bear predation on road-killed deer is uncommon and provisions would be made to remove roadside game carcasses. Increased traffic or traffic speed could also increase the potential for grizzly bears to be directly injured; however this potential would also be very low due to the expectation of grizzly bears to avoid the road, and the expectation that substantial roadway permeability would remain based on the low projected traffic volumes.

Grizzly bears could be impacted by increased wildlife/human interactions in the Continental Divide wildlife corridor, resulting from a potential increase in recreational use. The Marysville roadway improvements may provide conditions that contribute to increased recreational use. However, it is unlikely that any increase under the existing road conditions would be different from the proposed roadway conditions. Substantial increases in recreational uses would more likely be attributed to forest management decisions concerning public access. Additionally, limited and congested trailhead parking may provide a sufficient deterrence to use that offsets any encouragement from roadway improvements (Effinger 2003). Increased

recreational use, as a result of the project or in combination with other projects, is not expected to result in any significant indirect or cumulative impacts to grizzly bears. The Continental Divide wildlife corridor is considered substantially large enough to absorb any minor changes in human use without measurable impacts to wildlife.

This project, combined with mine waste removal along Silver Creek and in the Upper Tenmile Creek/Rimini area, has potential to result in indirect and cumulative impacts to grizzly bears. Increased numbers of humans in or near the roadless areas of the Continental Divide could affect wildlife movement patterns, foraging behavior, and possibly reproduction if hibernation/wintering areas are within the impacted locales. However, due to the localized, temporary, and seasonal nature of these construction projects, available use of project area habitats during construction downtimes, and availability of nearby alternative suitable wildlife habitats, the Marysville project may affect, but is unlikely to adversely affect grizzly bears either individually or cumulatively.

Gray Wolf

There is potential for project actions to affect wolf activities, due to the presence of deer and elk wintering in and near the project area; however, construction activities are unlikely to result in adverse impacts due to temporal and seasonal schedules (primary summer months), adjacent suitable habitats (including prey and crossing areas), and construction downtime windows.

There is potential for the project to provide conditions for increased vehicle traffic. Increased traffic volumes have potential to cause direct wolf-vehicle collisions; however, this is considered unlikely given the low population density of gray wolves, substantial roadway permeability conditions (based on low-projected traffic volumes), and considerable availability of time-windows for wolves to cross the roadway. Traffic speeds and volumes are expected to remain well below the threshold for being a substantial barrier to wildlife movement.

Gray wolves could be affected by increased recreational use of the Continental Divide wildlife corridor, resulting from a potential increase in recreational use. The Marysville roadway improvements could provide conditions that contribute an increase in recreational use. However, although roadway improvements could provide more safe and favorable conditions to using the area, it would be difficult to attribute a substantial increase in recreational use to the proposed roadway improvements. It is unlikely that any increase under the existing road conditions would be different from the proposed roadway conditions. Substantial increases in recreational uses would more likely be attributed to forest management decisions concerning public access. Additionally, limited and congested trailhead parking may provide a sufficient deterrence to use that offsets any encouragement from roadway improvements (Effinger 2003).

Wolf movement patterns, foraging behavior, and reproduction could be impacted by increases in human/wolf interactions. Impacts from increased human activity could

occur cumulatively in connection with projects in the Upper Tenmile Creek/Rimini areas; however, potential increase in recreation as a result of the project or in combination with others is not expected to result in any significant indirect or cumulative impacts to gray wolves above the existing conditions. The Continental Divide wildlife corridor is substantially large enough to absorb the potential minor changes in human use associated with the projects without measurable impacts to wildlife.

In addition, adverse effects (either individually or cumulatively) to gray wolves as result of multiple construction activities are also considered unlikely, due to localized, temporary, and seasonal nature of these projects, available use of project area habitat during construction downtimes, and availability of nearby alternative habitats. This project may affect, but is unlikely to adversely affect gray wolf.

Lynx

An increase in recreation use as a result of the project or in combination with other projects is not expected to be of a magnitude to result in any significant indirect or cumulative impacts to lynx. Lynx are unlikely to remain near the open spaces associated with the Marysville Road, and the Continental Divide wildlife corridor is substantially large enough to absorb potential minor changes in human use without measurable impacts to wildlife.

Lynx are likely to avoid human contact and noise associated with project activities. Open characteristics of the road would not be greatly increased from what current conditions; therefore, project activities are not predicted to increase avoidance. Any potential increase in the number of road-killed animals should not affect lynx since they avoid open spaces and because substantial roadway permeability would continue based on relatively low projected traffic volumes. (See discussion under Section 4.1.2 Mammal Species.)

Lynx could be indirectly impacted by increased wildlife/human interactions in the Continental Divide wildlife corridor (MDFWP 2003a); however, Ruediger and others (2000) suggest that lynx are tolerant of human recreational activities including snowmobiling and skiing. Their findings are supported by Squires (2003), who found that snowmobile use in the Seeley Lake area does not appear to impact lynx.

Increased wildlife/human interactions could occur as a result of either increased recreational use or multiple construction activities. The Marysville roadway improvements could provide conditions that contribute to either. However, although roadway improvements could provide more safe and favorable conditions to using the area, it would be difficult to attribute a substantial increase in recreational use to the proposed roadway improvements. It is unlikely that any increase under the existing road conditions would be different from the proposed roadway conditions. Substantial increases in recreational uses would more likely be attributed to forest management decisions concerning public access. Additionally, limited and congested

trailhead parking may provide a sufficient deterrence to use that offsets any encouragement from roadway improvements (Effinger 2003).

Additionally, adverse effects to the lynx as a result of multiple construction activities are also considered unlikely due to the localized, temporary and seasonal nature of these construction projects, the available use of project area habitat during construction downtimes, and the availability of nearby alternative suitable wildlife habitats. This project may affect, but is unlikely to adversely affect lynx.

3.14.3 Mitigation

Grizzly Bear Mitigation
The following measures could mitigate the project effects on Grizzly bears:

- Keep the construction work area free of substances that would attract bears (food, scented items, garbage) through proper cleaning, storage and disposal of these materials.

- Remove and dispose of game carcasses found in the vicinity of the project during project construction.

Gray Wolf Mitigation
The following measures could mitigate the project effects on gray wolves:

- Promptly remove and dispose of game carcasses found in the vicinity of the project during project construction.

Lynx Mitigation
The following measures could mitigate the project effects on lynx:

- Restrict clearing, grubbing and vegetation removal operations to the minimum area necessary to accommodate the planned construction activities and improvements and any necessary utility relocation.

3.15 Floodplains

There are no delineated floodplains in the project area. Due to the vertical distance from the road to the stream in most locations, the lack of history of flooding in the project area, and the fact that the project will have only minor longitudinal encroachments along a stream, it is reasonable to assume that the No Action Alternative and the Preferred Alternative would not affect delineated floodplains.

3.16 Cultural Resources

3.16.1 Affected Environment

A cultural resource investigation was conducted by Western Cultural, Inc. beginning in May of 2003, which included a field assessment and historic research. The purpose of the survey was to obtain information specific to each property identified and to

develop prehistoric and historic overviews of the area. The field assessment included pedestrian transects, remote sensing investigations, and limited testing programs. Consultation was conducted with the Montana State Historic Preservation Office (SHPO), the MDT, the Lewis and Clark County Historic Preservation Office, with local residents, and the Confederated Salish & Kootenai Tribal Historic Preservation Office.

Of the 24 historic and prehistoric resource recorded in the project area as a result of the survey and documented in the Cultural Resources Report (Western Cultural, 2003), the Montana SHPO concurred on January 27, 2004, that fourteen resources contribute to the Marysville Historic Mining District (24LC1083). Only three sites were determined to be individually eligible: the Historic District (24LC1083), 24LS1827, and 24LC1915, for inclusion in the National Register of Historic Places (NRHP). Two are eligible for individual listing, and the other twelve are contributing elements within the proposed Marysville Historic Mining District (24LC1083). The resources are listed in **Table 3-7** and are shown on **Figure 3-8**.

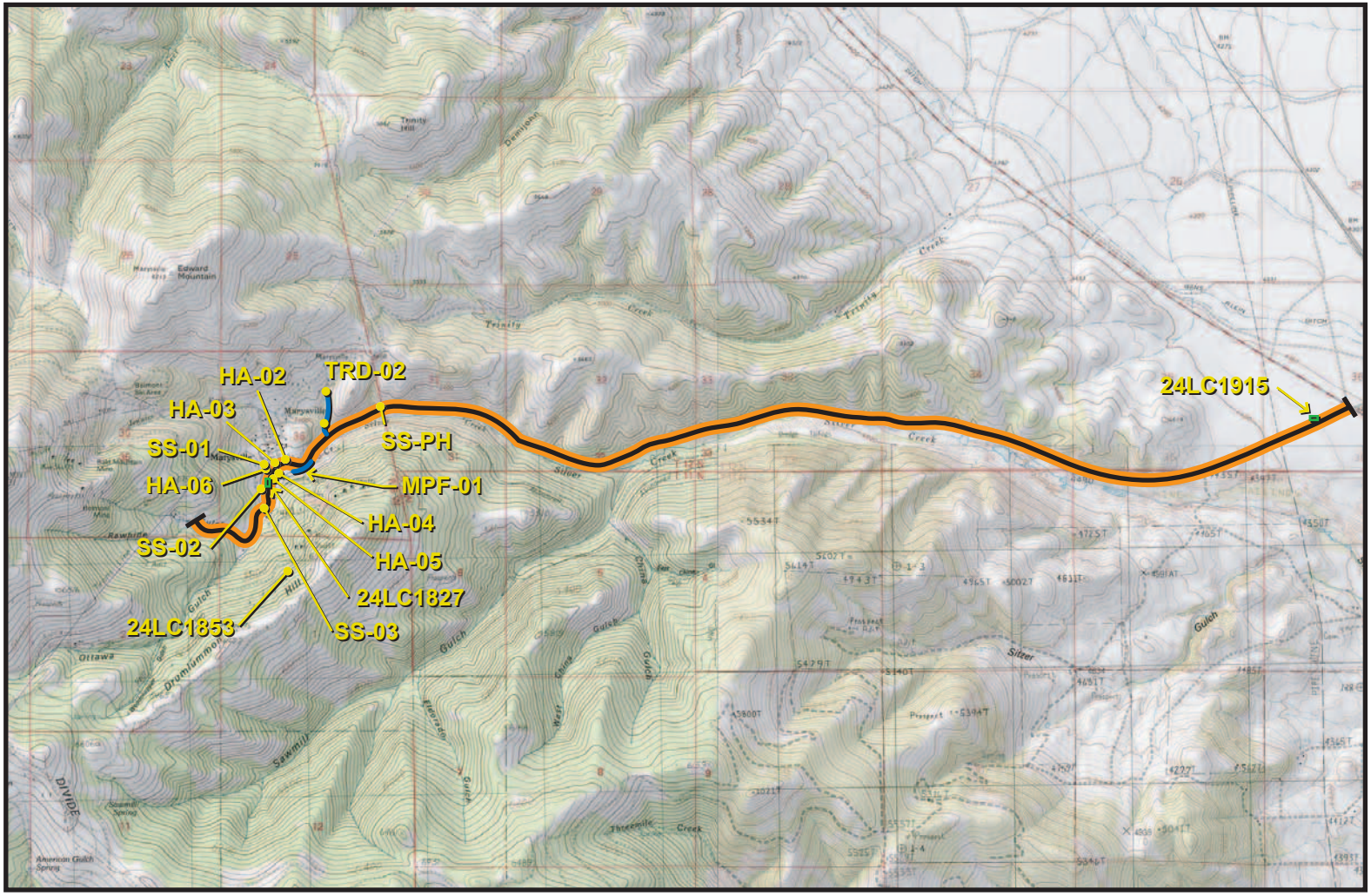
A copy of the letter indicating SHPO's concurrence with the findings of the Cultural Resources Report (Western Cultural, 2003) and the NRHP eligibility determinations can be found in **Appendix B.**

Table 3-7
Cultural Resources

Number	*Name/Description*	*NRHP Eligibility Status*
24LC1083	Marysville Historic District	Eligible
TRD-02	Road	Contributing
SS-PH	Powder House	Contributing
HA-02	Historical archaeological #2, Chinese laundry	Contributing
HA-03	Historical archaeological #3, saloons/grocery store site	Contributing
HA-04	Historical archaeological #4, Montana Mining Company Doctor's Office site	Contributing
HA-05	Historical archaeological #5, residential foundations	Contributing
HA-06	Historical archaeological #6, print shop remains	Contributing
SS-01	Dry Goods Store	Contributing
SS-02	Garage	Contributing
SS-03	Barn	Contributing
MPF-01	Water diversion system	Contributing
24LC1853	Drumlummon Mine and Mill Site	Contributing
24LC1915	Lithic scatter	Eligible
24LC1827	Lithic scatter, White House Park	Eligible

The Marysville Historic District, 24LC1083 is the first eligible resource. It is an area that contains several resources associated with the history of Marysville, united by plan and generally by physical development. These include resources such as exploration, extraction, refinement, and transportation, associated with mining, but also include resources associated with the residential and commercial development of the town. The Marysville Historic Landscape is a contributing resource. It possesses

Figure 3-8
Cultural Resources



a considerable concentration of areas of land use, vegetation, buildings, structures, roads, waterways, and natural features that represent the historical development of the mining camp. The boundaries are defined from the viewshed but are wholly located within the proposed historic district.

Other contributing resources to the historic mining district include a mine access road remnant (TDR-02), a stone and mortar mining associated powder house used for storing explosives (SS-PH), and a mining associated water dispersion system with culverts and hand-stacked stone retaining walls (MPF-01). The historic road (TDR-02) is covered by MDT's existing historic roads and bridges Programmatic Agreement with the FHWA, SHPO, and the Advisory Council on Historic Preservation. The Programmatic Agreement was enacted in lieu of regular procedures for compliance with Section 106 of the National Historic Preservation Act (16 USC 470f) as applied only to historic roads and bridges in Montana. Section 106 has been complied with pursuant to this Programmatic Agreement. Resources contributing to the residential and commercial development of the town include a large stone dry goods store (SS-01), a wood trussed stone-walled garage (SS-02), and a board and batten barn (SS-03). Historical archaeological resources, HA-02 through HA-06, are considered contributing elements to the historic district. They include a representative cross section of commercial activity from HA-02 (Chinese Laundry), HA-03 (saloon/grocery store) and HA-06 (print shop), White House Park (24LC1827), the Doctor's Office (HA-04), and, mining company housing (HA-05). The Drumlummon Mine and Millsite (24LC1853), which was previously recorded during an archaeological survey in 2002 was also determined to be contributing to the historic district

The second eligible resource, White House Park (24LC1827) historically functioned as a storage yard for the Montana Mining Company and as a baseball park for the community of Marysville. A pedestrian and magnetometer survey of the area revealed the presence of an extensive archaeological site with both prehistoric and historic components. Because of the site's potential to yield important information about the area's prehistory and the operation of the mining company, it was determined eligible for the NRHP.

The third eligible resource is a lithic scatter located near the junction of Marysville Road and Montana Secondary 279 (24LC1915). Because of the site's potential to yield information about the area's prehistoric inhabitants, it was determined eligible for the NRHP.

3.16.2 Cultural Resource Impacts

3.16.2.1 No-Action Alternative

The No-Action Alternative would not result in any impacts to existing cultural resources within the project study area.

3.16.2.2 Preferred Alternative

Implementation of the Preferred Alternative would result in the existing roadway alignment remaining largely intact and unchanged within the Marysville Historic District (24LC1083). There would be no impact to White House Park (24LC1827), or the lithic scatter (24LC1915) near the junction of Marysville Road and Highway 279.

There would be an impact to the water diversion system (MPF-01). In order to avoid impacts to the culturally significant rocky knoll across the road and to HA-02, HA-05, and potential archaeological sites associated with Marysville's red light district and the western terminus of the old Northern Pacific Railroad trestle that served Marysville and the mine. The Preferred Alternative alignment would shift to the southeast over the site of the water diversion system to avoid impacts to other archaeological and historic sites. The shift would have "No Adverse Effect" to the system. The realignment of the road would also allow the perpetuation of the rocky knoll, which has historically served as a gateway to the mining camp.

Relocating the roadway and impacting the Water Diversion System had less impact of historically and culturally important properties in Marysville and contributes to their preservation. The relocation of Silver Creek, moreover, would also result in the restoration of the historic stream channel and would not impact the Drumlummon Mine and Mills site (24LC1853).

Federally funded actions affecting historic sites that are on, or considered as eligible for the NRHP also must comply with Section 4(f) of the US Transportation Act of 1966, as amended (49 USC 303). Section 4(f) compliance is discussed in Appendix C.

3.16.3 Determinations of Effect

MDT submitted a Determination of Effect to SHPO in October, 2004 indicating that the proposed Marysville Road Improvement Project would have **No Effect** to the archaeological site at White House Park (24LC1827) and **No Effect** to the lithic scatter (24LC1915) near the junction of Marysville Road and Highway 279. MDT further determined that the proposed project would have **No Adverse Effect** to the Marysville Historic District (24LC1083). The FHWA, Montana SHPO, Lewis and Clark County and MDT developed a Memorandum of Agreement that outlines the mitigation measures described in Section 3.16.4. A copy of the Memorandum of Agreement is included in **Appendix B**.

3.16.4 Mitigation

In accordance with the Memorandum of Agreement, in order to mitigate the impacts to the Water Diversion System (MPF-01), the MDT will conduct Historic American Engineering Record (HAER) recordation of the feature. The MDT also intends to reconstruct the rubblestone retaining wall adjacent to the restored Silver Creek stream channel as close to its original location as possible. Additionally, the Memorandum of Agreement includes testing by MDT in the proposed construction zone in the vicinity of the Chinese Laundry (HA-02) to determine if there are any artifacts or features that

may be impacted by the construction. MDT will install interpretive markers at the Powder House (SS-PH) and in Marysville, describing the history of the feature and the community.

3.17 Hazardous Materials

An Initial Site Assessment (ISA) was conducted to evaluate the potential for encountering hazardous materials and/or waste within the Marysville Road project area. DEQ's Information Services Section was contacted for assistance in identifying any hazardous waste sites in the vicinity of Marysville Road, which may impact reconstruction design and/or construction. The following DEQ databases were queried:

- State Superfund Comprehensive Environmental Cleanup and Responsibility Act (CECRA)
- Federal National Priority List (Federal Superfund)
- Abandoned mine sites
- UST (Underground Storage Tank)
- LUST (Leaking Underground Storage Tank)

3.17.1 Affected Environment

A listing of all state and federal Superfund and abandoned mine sites, along with the regulatory program status, are listed in **Table 3-8**, while the locations are shown on **Figure 3-9**.

The majority of these sites are in the investigation stage. One UST is listed in the database. This UST is located at the Marysville House restaurant on Main Street in Marysville. There were no LUSTs identified by database search in the project area.

In order to assess the affected areas resulting from the mining and milling activities in the vicinity, the following investigations were performed, which are described in detail in the *Preliminary Site Investigation* (PSI) report (CDM, 2003):

- Collect soil samples on the slope above the current road (in non-mining impacted areas) to determine background metals and arsenic concentrations;
- Collect soil samples from borings located along the anticipated centerline of the road alignment;
- Sample waste rock and tailings (via test pits) that could potentially be along the alignment; and
- Collect soil samples within the proposed channel relocation of Silver Creek south of the rock outcrop area.

Figure 3-9
Hazardous Waste

0 6000
FEET

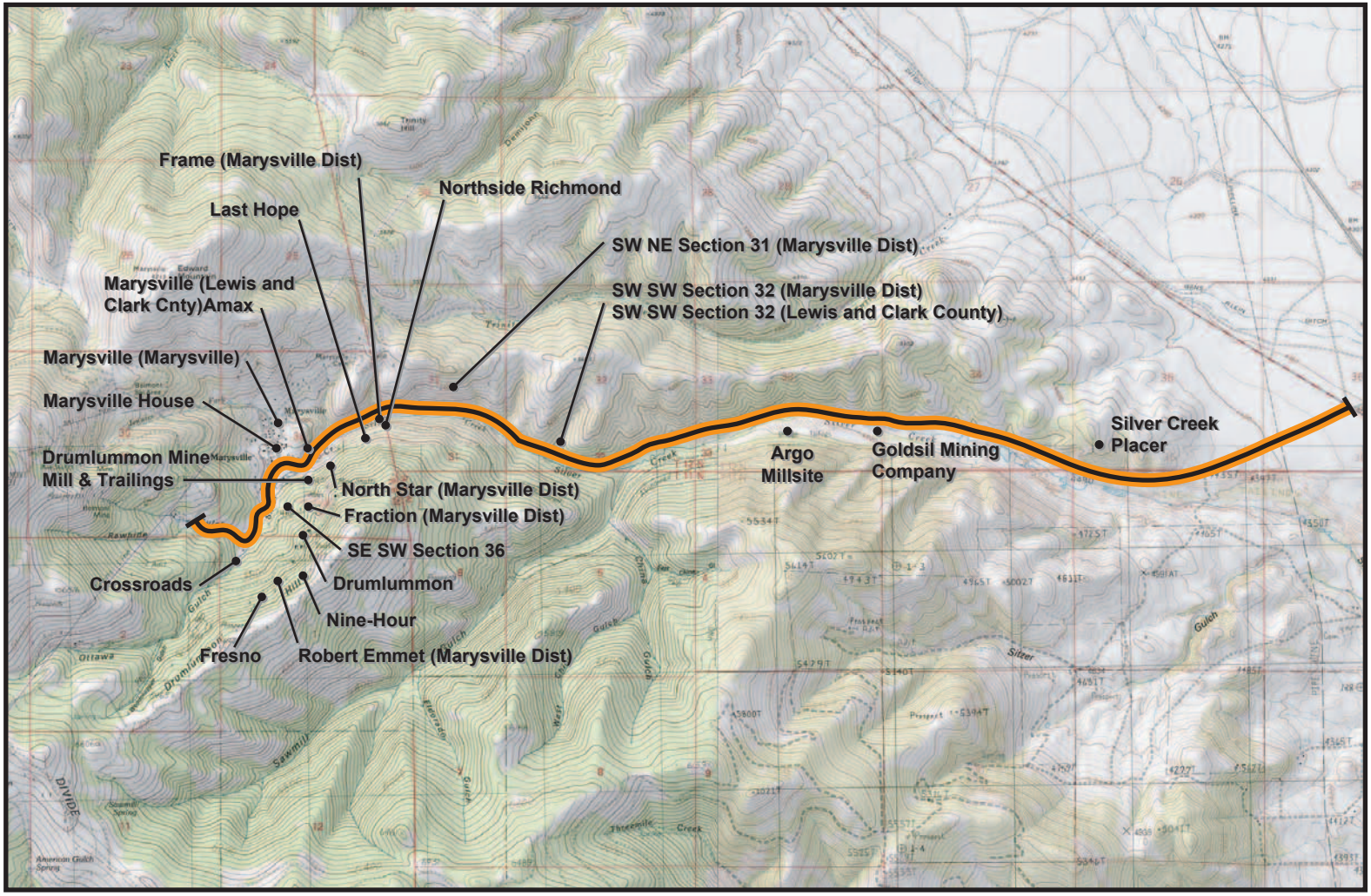


Table 3-8
Marysville Road Superfund and Abandoned Mine Sites

Site Name	Regulatory Program
Goldsil Mining Company	CECRA, CERCLA, Abandoned Mine Site
Drumlummon Mine/Mille and Tailings	Abandoned Mine Site
Crossroads	Abandoned Mine Site
Drumlummon	Abandoned Mine Site
North Star (Marysville Dist)	Abandoned Mine Site
Northside	Abandoned Mine Site
Marysville (Marysville)	Abandoned Mine Site
SW NE Section 31 (Marysville Dist)	Abandoned Mine Site
Frame (Marysville Dist)	Abandoned Mine Site
SE SW Section 36	Abandoned Mine Site
Fraction (Marysville Dist)	Abandoned Mine Site
Robert Emmet (Marysville Dist)	Abandoned Mine Site
Nine-Hour	Abandoned Mine Site
Fresno	Abandoned Mine Site
SW Section 32 (Marysville Dist)	Abandoned Mine Site
Silver Creek Placer	Abandoned Mine Site
Argo Millsite	Abandoned Mine Site
Last Hope	Abandoned Mine Site
Amax	Abandoned Mine Site
Richmond	Abandoned Mine Site
SW Section 32 (L&C Co)	Abandoned Mine Site
Marysville (L&C Co)	Abandoned Mine Site

The results of the background sampling showed that the main parameter of interest was arsenic, as no site-specific risk-based goals are available (for ingestion). The rationale was that if roadbed samples were consistent with background non-mine waste levels, a risk assessment would not be necessary to obtain an ingestion value for material consistent with the background soils. Arsenic levels for the background soils ranged from 6.6 to 56.9 mg/kg.

Roadbed sampling showed parameter levels (barium, chromium, nickel, and silver) to be below the DEQ Silver Creek cleanup goals and USEPA Soil Screening Levels (SSLs). Arsenic concentrations were below the USEPA particulate inhalation standard, but were above the conservative USEPA arsenic ingestion value in all samples. The arsenic levels for the roadbed samples are within the range of values for area background soils. In addition, the roadbed would be covered by the road surface, such that the ingestion pathway would be significantly reduced or eliminated.

The centerline boring samples were below all relevant standards (barium, chromium, nickel, and silver) with the exception of arsenic, which was above the conservative "generic" USEPA ingestion standard in all samples. The arsenic results were all

within the range of the background samples. As the roadbed would be covered, the ingestion pathway would be reduced or eliminated.

The Toxicity Characteristic Leaching Procedure (TCLP) results for the centerline boring samples were below the relevant standards for all samples analyzed.

The test pit samples were below DEQ's Silver Creek cleanup goals for all parameters (antimony, cadmium, copper, cyanide, lead, mercury, silver, and zinc). Mercury was detected in two of four samples in TP-2, but was well below the DEQ standard. Arsenic values were above the generic USEPA criteria for arsenic, but were consistent with area background soils.

The TCLP results for the test pit samples were below the relevant standards for all samples analyzed.

The Acid-Base Accounting (ABA) results indicate that the waste rock piles have neutralization capacity, meaning that they are unlikely to generate acidic waters.

As part of the Silver Creek channel relocation, nine test pit samples were collected along the location of the proposed channel and analyzed for metals and cyanide. In addition, two of the soil samples in the vicinity of the new culvert location were analyzed for TCLP metals to determine if the soils excavated during construction could be disposed of as non-hazardous waste. The results of the testing showed that all metals concentrations in soils were below the DEQ Silver Creek cleanup goals. In addition, all TCLP results were below the MCLs, indicating that the soil removed during installation of the culvert can be treated as non-hazardous material.

3.17.2 Hazardous Waste Impacts

3.17.2.1 No-Action Alternative

The No-Action Alternative would have no effect on hazardous materials.

3.17.2.2 Preferred Alternative

Although mining and milling wastes are present in the vicinity of the Marysville Road, the environmental testing has shown that reconstruction of the road would not impact hazardous wastes.

3.17.3 Mitigation

As no impacts to hazardous materials would take place during the reconstruction, no mitigation efforts have been proposed.

3.18 Visual Resources

3.18.1 Affected Environment

The project area is characterized by rugged, mountainous, and mostly forested terrain west of the town of Marysville and transitions to flat, open farmland and grazing land toward the project terminus at Lincoln Road. Lands adjacent to the road are primarily

steep cut slopes and riparian zone of Silver Creek to the south and steep rock slopes to the north. The area is rural in character and mountain views vistas are available in several areas throughout most of the existing roadway. Background landscapes are partially restricted by vegetation and sight distance is limited in many areas due to the current horizontal alignment, and consequently views of the foreground, mid-ground and background vary throughout the project. Manmade features along the road include the Marysville Road itself, cross streets, the town of Marysville, residences and historic mining buildings and structures. The roadway is viewed by residents of the town of Marysville and recreational users of the project area.

3.18.2 Visual Resource Impacts

3.18.2.1 No-Action Alternative

The No-Action Alternative would result in no impact to the existing visual character of Marysville Road.

3.18.2.2 Preferred Alternative

The Preferred Alternative, including alignment shifts, does not deviate substantially enough from the existing route to be considered an aesthetic impact and would not change background views. The improvements would, however, cause a minor change in the foreground landscape. Overall, the impression would be one of a wider two-lane road with flatter horizontal curves and reduced vertical curves. An additional visual impact would be the removal of trees from the slopes on both sides of the road. A permanent visual change in the road would be the shifting of the road at RP 5.93 at the Drumlummon millsite and rock outcrop, just east of the town of Marysville. Here, the road would be shifted south, the existing culvert replaced, and Silver Creek upstream and downstream of the culvert realigned. The improved road would be safer, easier and more comfortable to drive, which would increase the opportunity for drivers to view the landscape from the road.

Implementation of the Preferred Alternative would result in short-term impacts to the visual character of Marysville Road during the construction period. Visual changes would include: surface disturbances, temporary sign installation, material storage, construction equipment, traffic congestion associated with construction, and dust and debris from construction activities.

3.18.3 Mitigation

Impacts to the visual character of the Marysville Road are considered negligible, and therefore mitigation for long-term visual impact would not be required.

3.19 Construction

Road construction activities associated with the Preferred Alternative would cause temporary inconveniences to the traveling public and to local residents. These inconveniences may include traffic delays, and noise and dust created by construction equipment. These impacts could be expected to occur at various times throughout the two-year construction period.

3.19.1 Construction Impacts

3.19.1.1 No-Action Alternative

The only construction impacts associated with this alternative would be related to the completion of maintenance activities on the existing road.

3.19.1.2 Preferred Alternative

Construction related impacts associated with the Preferred Alternative may include:

- **Air Quality** - Contractors will be expected to operate in compliance with air quality standards established by Federal, State, and local agencies. Through the use of BMPs, fugitive dust emissions can be effectively controlled.

- **Noise and Vibration** - Construction noise and vibration would present the potential for short-term impacts to those receptors located along the corridor. The primary source of construction noise is expected to be diesel-powered equipment such as trucks and earth moving equipment.

- **Water Quality** - Storm water runoff from areas of exposed soils may cause erosion, sedimentation and transport of spilled fuels or other hazardous materials into adjacent waterways. Without mitigation measures sedimentation may occur when eroded soils collect in areas below the construction site. Short-term impacts might include an increase in sediment loading to Silver Creek during construction activities. Removal of vegetation during construction could lead to increased rates of erosion during heavy rain or snow events.

- **Traffic Control** - Marysville Road would remain open throughout the construction period. The roadway may be reduced to one-lane of traffic with flagging during some construction activities. Delays are expected to create short-term impacts on traffic. Access to all intersecting roads and residences along the road would be maintained throughout construction.

- **Visual** - Short-term construction-related visual impacts are likely to occur as a result of this project. These impacts include the presence of construction equipment, stockpiles of earth materials, temporary barriers, guardrail and signs.

3.19.2 Construction Mitigation

Measures for mitigation of construction impacts include:

- Require the use of appropriate dust suppression measures to minimize dust impact associated with the construction activities, per MDT policy.

- Follow MDT guidance laid out in the Erosion and Sediment Control Best Management Practices Manuals.

- Comply with all state and federal construction permit requirements.

- Minimize instream work as required by permit provisions, including timing restrictions to complete work in low-flow periods.

- Develop construction staging and traffic control plans that minimize the disruption to traffic and access.

- Provide adequate public notice and maintain coordination with area residents to keep the public informed of the construction progress and to warn of closures and detours.

3.20 Permits Required

The No Action Alternative would not require any permits. However, the Preferred Alternative would require the permits in **Table 3-9** to be obtained prior to construction.

Table 3-9
Required Permits

Permit	*Permitting Agency*	*Description*
Stream Protection Act (124SPA)	MT Department of Fish, Wildlife and Parks	Required for any project that may affect the natural existing shape and form of any stream bank.
Section 318 Authorization	MT Department of Environmental Quality	Required for construction activities that may cause unavoidable short-term violations of state surface water quality standards for turbidity, total dissolved solids, or temperature.
Federal Clean Water Act (Section 404 Permit)	US Army Corps of Engineers	Required for projects in which fill is placed within Waters of the US.
Storm Water Discharge General Permit (NPDES/MPDES Permit)	MT Department of Environmental Quality	Required for construction projects that disturb greater than 1 acre total. A Storm Water Pollution Prevention Plan would be required for the project.

3.21 Secondary & Cumulative Impacts

Secondary effects are those that are caused by an action and are later in time or farther removed in distance but are still reasonably foreseeable. Secondary impacts are generally induced by the initial action and comprise a variety of effects such as changes in land use, water quality, economic conditions, or population density. Cumulative effects are those effects that result from the incremental consequences of an action when added to other past and reasonably foreseeable future action regardless of what agency (federal, state or other) undertakes them.

Known or reasonable foreseeable projects proposed by Federal agencies, State of Montana agencies, or others in the general vicinity of the Marysville Road projects were reviewed to help assess the potential for cumulative effects. These projects are described below.

3.21.1 Projects Planned by MDT

The MDT Planning Department was consulted to determine projects that are planned or under construction within the vicinity of the project area to help assess the cumulative impacts of this project. MDT currently has six planned projects in the Lincoln Road/Silver City/Canyon Creek/Marysville area, not including the Marysville Road Improvement Project. These projects are identified below:

Silver City Northwest (Control Number 5144) – This project would seal and cover Highway 279 northwest of Silver City. This project is not on the tentative construction plan and has no established ready date.

Marysville Road Guardrail Installation (Control Numbers 4699 and 5860) – As part of the Hazard Elimination Safety Program, thess projects would install guardrail in the accident cluster sites along Marysville Road. These projects are expected to be let in August 2006.

Highway 279 Slope Flattening (Control Number 4706) – this project would flatten the slope at Milepost 5.1 on Highway 279 and install signs. This project has a let date of June, 2006..

Canyon Creek Northwest – This project would install and overlay seal and cover on Highway 279 northwest of Canyon Creek. This project is not on the tentative construction plan and has no established ready date.

Railroad Crossing South of Silver City (Control Number 4906) – This project would reconstruct the railroad crossing on Highway 279 south of Silver City. This project currently has no established let date.

3.21.2 Other Projects

Known or reasonably foreseeable projects proposed by Federal agencies, State of Montana agencies, or others adjacent to the Continental Divide and in the general vicinity of the Marysville Road project were reviewed to help assess the potential for cumulative impacts.

Silver Creek Reclamation Project - In 2002, the DEQ Mine Waste Cleanup Bureau completed site investigations of the Silver Creek Drainage. Remedial design for cleanup of the mining related wastes is complete. DEQ planned to initiate reclamation activities in the drainage during the summer of 2004, however, funding cutbacks have delayed construction indefinitely.

Upper Ten Mile Creek/Rimini Reclamation - USEPA is remediating mine waste contamination at the Upper Tenmile Creek Mining Area Superfund Site (unrelated to the Marysville Road Project). Contaminated residential yard soils and mine wastes from abandoned mines will be excavated and disposed in a regional mine waste repository on site. A new water system and road will be constructed in the

community of Rimini. The remediation began in 2003 and is expected to take approximately 10 years.

Rimini Forest Highway - Proposed to parallel the Continental Divide wildlife movement corridor for 8 miles and would occur within 2 miles of the Divide. The project would begin at US 12 and extend southward. FHWA is presently completing an EA for the project. The proposed work would be very similar to the Marysville project from the standpoint that it follows an existing alignment and is not expected to result in significant amount of increased traffic.

Montana Army National Guard/Helena National Forest Biathlon Project – this project is being considered near McDonald Pass, west of Helena. The course would be adjacent to the existing cross-country ski area and US Highway 12. The project is currently in the Internal Draft EA stage. Use of the course would be primarily during the winter. However, some alternatives being considered include increased summer use.

Great Divide Ski Area Expansion – Great Divide Ski Area recently (1999 – 2001) expanded their operation to include an additional 800 acres of federal and private lands. The expansion may increase traffic during the winter months.

3.21.3 Impacts

3.21.3.1 No Action Alternative

This alternative would not have secondary or cumulative effects in the study area.

3.21.3.2 Preferred Alternative

Construction of the Marysville Road Improvement Project is planned for 2007 depending upon funding. The projects described above (Section 3.21.2) are not contiguous with the Marysville work and the planning, design and construction would likely not occur at the same time. Of the five projects listed, one is complete (the Great Divide Ski Area); one is presently occurring but has a terminal date (Upper Ten Mile Creek Reclamation Project); one has funding issues (Silver Creek Reclamation Project) and two are in the proposal stage (Rimini Forest Highway and Biathlon Project). MDT would continue to coordinate future projects with the public and appropriate agencies in order to review any potential cumulative impacts and identify any mitigation required f or adverse impacts.

Cumulative impacts brought on by the Silver Creek Reclamation Project could only be hypothesized at this point due to scheduling of that project. The project could result in increased activity for a short duration, if and when it was to be carried out. Improved habitat would be expected to become a possible outcome of the project.

Impacts caused by the Upper Tenmile/Rimini Reclamation Project are presently occurring and expected to be terminated by 2016. Other than reclaimed depository sites, no additional development is expected. Reclamation of the disturbed sites would be expected as well.

The proposed Rimini Forest Highway project is very similar to the Marysville Road project, in that it would follow the existing alignment and is not expected to significantly increase traffic nor development in the area. It is presently in the planning stage and dependent upon funding.

Habitat in and around the Biathlon Course has had a history of public use and development (i.e. US Highway 12, MDT maintenance station, Frontier Town, microwave stations and access roads). Cumulative impacts are anticipated to be minimal from this project.

Due to recent development at Great Divide Ski area, any minor or secondary effects from this project and the Marysville Road project may have a cumulative impact. The ski area is seasonally operated and the additional chairlifts recently opened access areas where wildlife would not be expected to be during the winter months, due to limited feeding opportunities.

Increased growth and development in the vicinity of the ski hill may result in an increase in impacts due to higher traffic volumes. These impacts may be such things as more noise or air pollution and increase human related activity. An increase in recreational use may be an indirect result of the project and other adjacent projects along the Divide. However, it is anticipated that the Continental Divide wildlife corridor is substantially large enough to absorb minor changes due to these activities without measurable impacts to wildlife. These areas would include the Nevada Mountain area east of the project, the Little Blackfoot Roadless Area southwest of McDonald Pass; and the Scapegoat Wilderness north of Highway 200. Additionally, there are large private, undeveloped holdings surrounding the project, such as the Grady and Sieben Ranches.

Growth in the region is likely to occur regardless of the implementation of the Preferred Alternative. No capacity improvements are planned to the Marysville Road, thus negating the possibility of accommodating or generating greater amounts of traffic.

3.21.4 Mitigation

Mitigation for the direct impacts of the project are listed within the various resource sections of this document. Implementation of the Preferred Alternative would not result in significant incremental cumulative impacts, therefore, no mitigation measures have been identified for secondary or cumulative impacts.

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Section 4
Comments & Coordination

4.1 Public & Agency Involvement Activities

Public involvement activities have occurred throughout all stages of the project. The public involvement coordination effort included meetings with various stakeholders such as citizens, property owners, businesses and local officials. Meetings have been facilitated through written communications, small group meetings, and a public open-house. The public involvement process has been an important part of the project from the beginning and will continue to be an integral part of the Preferred Alternative.

4.2 Agency Coordination

4.2.1 Agencies Consulted

Agency coordination continues to be ongoing. Marysville Road is under Lewis and Clark County jurisdiction and therefore extensive coordination has occurred with the County Department of Public Works, as well as the County Commissioners and other departments. Several other agencies, including DEQ, USEPA and MDFWP have performed studies within the Silver Creek drainage area. In order to share information and avoid duplication of effort, there has been extensive coordination among these agencies and the MDT. The following agencies have also been involved in the project coordination:

- Bureau of Land Management
- Lewis and Clark County Public Works Department
- Montana Department of Environmental Quality
- Montana Department of Fish, Wildlife and Parks
- Montana State Historic Preservation Office
- Natural Heritage Program, Montana State Library
- US Army Corps of Engineers
- US Department of Agriculture – Natural Resources Conservation Service
- US Fish & Wildlife Service
- US Forest Service
- US Environmental Protection Agency

4.2.2 Cooperating Agencies

Letters requesting those agencies with jurisdiction or special expertise were asked to be Cooperating Agencies for the project in April 2003. Cooperating agencies are active in the Environmental Assessment review process. These agencies help to determine the issues that need to be addressed in the environmental documentation process and how to mitigate impacts to environmental resources as a result of the project. The following agencies were asked to be Cooperating Agencies:

- Bureau of Land Management

- Montana Department of Environmental Quality
- Montana Department of Fish, Wildlife and Parks
- Montana Department of Natural Resources and Conservation
- US Army Corps of Engineers
- US Fish & Wildlife Service
- US Forest Service
- US Environmental Protection Agency

To date, correspondence has been received from all agencies with the exception of BLM, MDNRC, and USEPA. Copies of agency correspondence are included in Appendix C.

4.3 Mailing List

The project team maintains a Marysville Road project mailing list. As of September 2004, the list included 117 names. The mailing list has been compiled through involvement at public meetings, Users Group meetings, concerned citizens who have written letters to project representatives, and those who have had phone contacts with the project staff.

4.4 User's Group Meetings

User's Group meetings have been held since project conception. Representatives from the Project Team (SE&A and CDM), MDT, citizens of the Marysville community and representatives from cooperating agencies have participated in the Users Group Meetings. Minutes from each meeting have been forwarded to the Lewis and Clark Public Library for viewing by the public. Twenty-eight User's Group Meetings have been held on the following dates:

- September 9, 2002
- November 13, 2002
- January 16, 2003
- February 13, 2003
- March 20, 2003
- April 24, 2003
- May 29, 2003
- June 24, 2003
- August 21, 2003
- September 25, 2003
- October 23, 2003
- December 4, 2003
- January 19, 2004
- March 25, 2004
- June 10, 2004
- August 12, 2004
- September 23, 2004

- November 4, 2004
- December 9, 2004
- January 27, 2005
- March 10, 2005
- April 21, 2005
- May 19, 2005
- June 23, 2005
- August 18, 2005
- September 22, 2005
- October 20, 2005
- November 17, 2005
- December 15, 2005
- January 26, 2006
- February 23, 2006
- March 23, 2006
- April 20, 2006
- May 18, 2006
- June 15, 2006

4.5 Newsletters

To this point in the project, two newsletters have been created and mailed to those on the mailing list. The newsletters were sent in March 2003 and June 2004. The contents of each newsletter were:

- **March 2003:** Announced the public scoping meeting which was held on March 27, 2003. This newsletter presented information about the project limits, roadway deficiencies, and project schedule.

- **June 2004:** This newsletter presented an updated schedule and provided preliminary design and environmental assessment findings.

4.6 Additional Community Mailings

The following mailings were sent out in addition to the newsletters:

- **March 13, 2003:** letter announcing the public meeting on March 27, 2003.

- **September 16, 2004:** postcard regarding the geotechnical drilling schedule in late September 2004.

4.7 Public Meetings

One open-house public meeting was held on March 27, 2003 at the Trinity School in Canyon Creek. The meeting was held at the scoping phase of the project and the purpose was to provide information to the public and to get their feedback on the Project.

4.8 Remaining Public Involvement

A Notice of Availability of the EA and the planned date for the Pubic Meeting will be announced in the Helena Independent Record newspaper at least 14 days in advance of the Meeting. The EA will be made available for public viewing at several locations in the project area, which will be listed in the advertisement. The availability of the EA and an invitation to the public to attend the public hearing will also be included in a newsletter which will be available for distribution to the public at locations throughout and near the project, and mailed to those on the project mailing list.

At the Public Meeting, the general public will be given the opportunity to provide official comment on the project. Written comments, to be included as an official part of the record, will be accepted for 30 days following the Notice of Availability. After receipt of all public and agency comments, a final decision document for the project will be developed.

Appendix A
Farmland Conversion Impact Rating Form

U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I *(To be completed by Federal Agency)*	Date Of Land Evaluation Request: October 1, 2004
Name Of Project: Marysville Road Improvement Project	Federal Agency Involved: Federal Highway Administration
Proposed Land Use: Secondary Road Right of Way	County And State: Lewis & Clark County, Montana
PART II *(To be completed by SCS)*	Date Request Received By SCS: 10/5/2004

Does the site contain prime, unique, statewide or local important farmland? *(If no, the FPPA does not apply – do not complete additional parts of this form).*	Yes ☒	No ☐	Acres Irrigated: 35,900	Average Farm Size: 1638
Major Crop(s): Alfalfa Hay, Grass Hay, Wheat, Barley & Pasture	Farmable Land In Govt. Jurisdiction: Acres: 599657 % 46		Amount Of Farmland As Defined in FPPA: Acres: 286,911 % 23	
Name Of Land Evaluation System Used: LESA	Name Of Local Site Assessment System: Lewis&Clark Co. PI		Date Land Evaluation Returned By SCS: 10/5/2004	

PART III *(To be completed by Federal Agency)*	Alternative Site Rating: Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly	12.9			
B. Total Acres To Be Converted Indirectly	0			
C. Total Acres In Site	108.4			
PART IV *(To be completed by SCS)* Land Evaluation Information				
A. Total Acres Prime And Unique Farmland	0			
B. Total Acres Statewide And Local Important Farmland	4.8			
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted	0.0000167			
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value	38%			
PART V *(To be completed by SCS)* Land Evaluation Criterion Relative Value Of Farmland To Be Converted *(Scale of 0 to 100 Points)*	59			

PART VI *(To be completed by Federal Agency)* Site Assessment Criteria *(These criteria are explained in 7 CFR 658.5(b))*	Maximum Points				
1. Area In Nonurban Use	15	15			
2. Perimeter In Nonurban Use	10	10			
3. Percent Of Site Being Farmed	20	10			
4. Protection Provided By State And Local Government	20	0			
5. Distance From Urban Builtup Area	0	0			
6. Distance To Urban Support Services	0	0			
7. Size Of Present Farm Unit Compared To Average	10	10			
8. Creation Of Nonfarmable Farmland	25	0			
9. Availability Of Farm Support Services	5	5			
10. On-Farm Investments	20	0			
11. Effects Of Conversion On Farm Support Services	25	0			
12. Compatibility With Existing Agricultural Use	10	0			
TOTAL SITE ASSESSMENT POINTS	160	50			
PART VII *(To be completed by Federal Agency)*					
Relative Value Of Farmland *(From Part V)*	100				
Total Site Assessment *(From Part VI above or a local site assessment)*	160	50			
TOTAL POINTS *(Total of above 2 lines)*	260				

Site Selected:	Date Of Selection	Was A Local Site Assessment Used? Yes ☐ No ☒

Reason For Selection:

STEPS IN THE PROCESSING THE FARMLAND AND CONVERSION IMPACT RATING FORM

Step 1 – Federal agencies involved in proposed projects that may convert farmland, as defined in the Farmland Protection Policy Act (FPPA) to nonagricultural uses, will initially complete Parts I and III of the form.

Step 2 – Originator will send copies A, B and C together with maps indicating locations of site(s), to the Soil Conservation Service (SCS) local field office and retain copy D for their files. (Note: SCS has a field office in most counties in the U.S. The field office is usually located in the county seat. A list of field office locations are available from the SCS State Conservationist in each state).

Step 3 – SCS will, within 45 calendar days after receipt of form, make a determination as to whether the site(s) of the proposed project contains prime, unique, statewide or local important farmland.

Step 4 – In cases where farmland covered by the FPPA will be converted by the proposed project, SCS field offices will complete Parts II, IV and V of the form.

Step 5 – SCS will return copy A and B of the form to the Federal agency involved in the project. (Copy C will be retained for SCS records).

Step 6 – The Federal agency involved in the proposed project will complete Parts VI and VII of the form.

Step 7 – The Federal agency involved in the proposed project will make a determination as to whether the proposed conversion is consistent with the FPPA and the agency's internal policies.

INSTRUCTIONS FOR COMPLETING THE FARMLAND CONVERSION IMPACT RATING FORM

Part I: In completing the "County And State" questions list all the local governments that are responsible for local land controls where site(s) are to be evaluated.

Part III: In completing item B (Total Acres To Be Converted Indirectly), include the following:

1. Acres not being directly converted but that would no longer be capable of being farmed after the conversion, because the conversion would restrict access to them.

2. Acres planned to receive services from an infrastructure project as indicated in the project justification (e.g. highways, utilities) that will cause a direct conversion.

Part VI: Do not complete Part VI if a local site assessment is used.

Assign the maximum points for each site assessment criterion as shown in §658.5(b) of CFR. In cases of corridor-type projects such as transportation, powerline and flood control, criteria #5 and #6 will not apply and will be weighed zero, however, criterion #8 will be weighed a maximum of 25 points, and criterion #11 a maximum of 25 points.

Individual Federal agencies at the national level, may assign relative weights among the 12 site assessment criteria other than those shown in the FPPA rule. In all cases where other weights are assigned, relative adjustments must be made to maintain the maximum total weight points at 160.

In rating alternative sites, Federal agencies shall consider each of the criteria and assign points within the limits established in the FPPA rule. Sites most suitable for protection under these criteria will receive the highest total scores, and sites least suitable, the lowest scores.

Part VII: In computing the "Total Site Assessment Points", where a State or local site assessment is used and the total maximum number of points is other than 160, adjust the site assessment points to a base of 160. Example: if the Site Assessment maximum is 200 points; and alternative Site "A" is rated 180 points:

$$\frac{\text{Total points assigned Site A}}{\text{Maximum points possible}} = \frac{180}{200} \times 160 = 144 \text{ points for Site "A."}$$

Appendix B
Cooperating Agency Correspondence

MONTANA
Natural Heritage
Program

P.O. Box 201800 • 1515 East Sixth Avenue • Helena, MT 59620-1800 • fax 406.444.0581 • tel 406.444.3009 • http://nris.state.mt.us

November 22, 2002

Tony Gendusa
Camp Dresser & McKee Inc.
20200 Wambli Lane
Huson, MT 59846

Dear Tony,

I am writing in response to your request for information on plant and animal species of special concern in the vicinity of the Marysville Road from Lincoln Road to the town of Marysville. We checked our databases for information in this general area and have enclosed 1 species of concern report and one map.

Please keep in mind the following when using and interpreting the enclosed information and maps:

(1) These materials are the result of a search of our database for species of concern that occur in an area defined by the requested road segment with an additional one-mile buffer surrounding the requested area. This is done to provide you with a more inclusive set of records and to capture records that may be immediately adjacent to the requested area.

(2) In the report, the term "precision" reflects the quality of the location information. S (second) precision is used when the location of the collection/observation is known within a three-second radius (approximately 10 acres); M (minute) precision is used when the location of the collection /observation is known within a one minute radius (approximately 1.5 miles); and G (general) precision is used when the location of the record/collection is known within a 5 mile radius or to a place name only. Some species locations outside the selection area have imprecisely-known locations and may actually occur within the selection area.

(3) Location information for animals represents occupied breeding habitat; location information for plants represents known occurrences of plant species, and, like animals, has an implied range that may not be fully conveyed by the mapped data. Most locations are depicted as points, but some, especially those that cover large area, are depicted as polygons on the map. The approximate boundaries of these polygons are color-coded to help differentiate vertebrate classes and plants.

(4) This report may include sensitive data, and is not intended for general distribution, publication or for use outside of your agency. In particular, public release of specific location information may jeopardize the welfare of threatened, endangered, or sensitive species or communities.

(5) The accompanying map(s) display management status, which may differ from ownership. Also, this report may include data from privately owned lands, and approval by the landowner is advisable if specific location information is considered for distribution. Features shown on this map do not imply public access to any lands.

(6) Additional biological data for the search area(s) may be available from other sources. We suggest you contact the U.S. Fish and Wildlife Service for any additional information on threatened and endangered species (406-449-5225). Also, significant gaps exist in the Heritage Program's fisheries data, and we suggest you contact the Montana Rivers Information System for information related to your area of interest (406-444-3345).

(7) The results of a data search by the Montana Natural Heritage Program reflect the current status of our data collection efforts. These results are not intended as a final statement on sensitive species within a given area, or as a substitute for on-site surveys, which may be required for environmental assessments.

I hope the enclosed information is helpful to you. Please feel free to contact me at (406)-444-3290 or via my e-mail address, below, should you have any questions or require additional information.

Sincerely,

Martin P. Miller, Data Assistant
Montana Natural Heritage Program
(martinm@state.mt.us)

Montana Natural Heritage Program
Species of Concern
Marysville Road

Scientific Name: FELIS LYNX

Common Name: LYNX

Global Rank: G5

State Rank: S3

Forest Service Status:

USFWS Endangered Species Act: (PS:LT)

BLM Status:

Occurrence Type:

Species occurrence data:

POTENTIAL HABITAT. THIS OCCURRENCE RECORD CONSISTS OF LARGE CONTIGUOUS AREAS THAT WERE GENERALIZED FROM SPECIFIC HABITATS IDENTIFIED BY THE WILDLIFE SPATIAL ANALYSIS LAB AT THE UNIVERSITY OF MONTANA AS BEING POTENTIAL LYNX HABITAT.

Last observation: 1999

Size (acres):

General site description:

DENSE, MATURE OR OLD-GROWTH LODGEPOLE PINE, DOUGLAS-FIR, ENGELMANN SPRUCE AND SUBALPINE FIR FORESTS. WELL-DEVELOPED UNDERSTORY IMPORTANT.

Land owner/manager:

Comments:

ALL HABITAT POLYGONS IN THE STATE ARE INCLUDED IN THIS OCCURRENCE RECORD. SOURCE DATA INCLUDES CAVEAT THAT SUITABLE HABITAT MAY BE OVERESTIMATED. SPRUCE-FIR FORESTS ABOVE 3500 FEET ELEVATION ARE PREFERRED HABITAT. LYNX NUMBERS CYCLE WITH NUMBERS OF SNOWSHOE HARE AND MAY BE VERY LOW FOR SEVERAL YEARS EVEN IN PREFERRED HABITAT. FOR THE ABOVE REASONS AND THE PRELIMINARY NATURE OF THE HABITAT MAPPING, THIS OCCURRENCE IS NOT DISPLAYED ON STANDARD MAPS OF ELEMENT OCCURRENCES.

Information source:

HART, M. M., W. A. WILLIAMS, P. C. THORNTON, K. P. MCLAUGHLIN, C. M. TOBALSKE, B. A. MAXELL, D. P. HENDRICKS, C. R. PETERSON, AND R. L. REDMOND. 1998. MONTANA ATLAS OF TERRESTRIAL VERTEBRATES. UNPUBLISHED REPORT. MONTANA COOPERATIVE WILDLIFE RESEARCH UNIT, THE UNIVERSITY OF MONTANA, MISSOULA. VII + 1302 PP.

Survey site name: STATEWIDE

County: BEAVERHEAD; CARBON; CASCADE; DEER LODGE; FLATHEAD; GALLATIN; GLACIER; GRANITE; JEFFERSON; JUDITH BASIN; LAKE; LEWIS AND CLARK; LINCOLN; MADISON; MEAGHER; MINERAL; MISSOULA; PARK; PONDERA; POWELL; RAVALLI; SANDERS; SILVER BOW; STILLWATER; SWEET GRASS; TETO

USGS quadrangle: (EXTENDS OVER MULTIPLE QUADS)

Precision: G

Elevation (ft):

Location:

INCLUDES MUCH OF WESTERN & SOUTH CENTRAL MONTANA

Township\Range:

Section:

TRS comments:

Certain codes and abbreviations are used in element occurrence reports. Although many of these are very straightforward, the following explanations should answer most questions.

Global Rank and State Rank

Taxa are evaluated and ranked by MTNHP on the basis of their global (range-wide) status, and their state-wide status according to a standardized procedure.

For each level of distribution, global and state, species are assigned a numeric rank ranging from 1 (critically imperiled) to 5 (demonstrably secure). For example, Clustered lady's-slipper (*Cypripedium fasciculatum*) is ranked G4 S2. That is, globally the species is apparently secure, while in Montana it is imperiled because of rarity, or because of other factors making it demonstrably vulnerable to extirpation.

Rank Definition

1 Critically imperiled because of extreme rarity, or because of some factor of its biology making it especially vulnerable to extirpation.

2 Imperiled because of rarity, or because of other factors demonstrably making it very vulnerable to extinction throughout its range.

3 Vulnerable because of rarity, or found in a restricted range even though it may be abundant at some of its locations.

4 Apparently secure, though it may be quite rare in parts of its range, especially at the periphery.

5 Demonstrably secure, though it may be quite rare in parts of its range, especially at the periphery.

U Possibly in peril but status uncertain; more information needed.

H Historical, known only from records over 50 years ago; may be rediscovered.

X Believed to be extinct; historical records only.

Other Global and State Rank codes:

T Rank for a subspecies or variety; appended to the global rank for the full species, e.g., G4T3.

Q Taxonomic questions or problems involved; more information needed.

? Inexact or uncertain.

Z Ranking not applicable.

A Accidental in the state. Includes species (usually birds or butterflies) recorded very infrequently, hundreds or thousands of miles outside their usual range.

B A state rank modifier indicating breeding status for a migratory species. Example: S1B, SZN = breeding occurrences for the species are ranked S1 (critically imperiled) in the state; non-breeding occurrences are not ranked in the state.

A modifier to SX or SH: the species has been reintroduced but the population is not yet established.

U. S. Fish And Wildlife Service Endangered Species Act Status

Abbreviations indicate the categories defined in the U.S. Fish and Wildlife Service Notice of Review and indicate the status of a taxon under the federal Endangered Species Act of 1973 (16 U.S.C.A. §1531-1543 (Supp. 1996)).

Note: the categories C2, 3B and 3C are no longer maintained by the U.S. Fish and Wildlife Service (61 FR 7596, Feb. 28, 1996).

Current categories are:

LE listed endangered

LT listed threatened

PE proposed endangered

PT proposed threatened

C candidate: Substantial information exists in U.S. Fish and Wildlife files on biological vulnerability to support

proposals to list as threatened or endangered.

NL not listed or no designation (see below)

XN non-essential experimental population

A species can have more than one federal designation if the species' status varies within its range. In these instances, the Montana designation is listed first. Example: LELT = species is listed as endangered in Montana; elsewhere in its range it is listed as threatened.

U.S. Forest Service Status

The status of species on Forest Service lands as defined by the U.S. Forest Service manual (2670.22). These taxa are listed as such by the Regional Forester (Northern Region) on National Forests in Montana. Species are listed as:

T/E/P listed as Threatened (LT) or Endangered (LE) under the Endangered Species Act or proposed for listing (P), and known or suspected to occur on national forests.

S sensitive species, subspecies or variety, for which the Regional Forester has determined there is a concern for population viability rangewide or in the region.

Bureau of Land Management Status

The status of species on Bureau of Land Management land is defined by the BLM 6840 manual and designated by the Montana State Office of the BLM in 1996:

S sensitive species: proven to be imperiled in at least part of its range and documented to occur on BLM lands.

W watch species: either known to be imperiled and suspected to occur on BLM lands, suspected to be imperiled and documented on BLM lands, or needing further study for other reasons.

Other terms that may be used in this report

USGS quadrangle – Name of the 7.5-minute USGS topographic map(s) where the population is located.

Township, range, section, TRS comments - legal description of the centroid of the population and, if known, additional townships or sections. TRS locators may be based on unsurveyed townships; in such cases, the locators are derived from U. S. Forest Service visitor maps or from BLM surface management status maps. This is done for convenience in describing species locations; the information does not necessarily indicate legal boundaries.

Precision – the level of location accuracy of the record.

S = accuracy of location is within an area of approximately 10 acres

M = accuracy of location is within a radius of approximately 1.5 miles

G = location is a place-name only, or within a radius of approximately 5 square miles.

Last observation: date the element was last observed extant at the site (not necessarily the date the site was last visited).

Land Owner/manager – the ownership or management of the land on which the element occurs. Areas are generally listed from smallest to largest. In most instances, this information is derived from U.S. Forest Service visitor maps or from BLM surface management status maps.

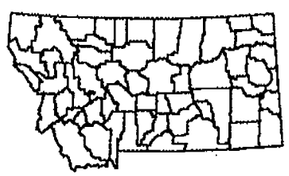
Please remember that this report is a summary of information. Additional data are available on most sites and species

If you have questions or need further assistance, please contact us either by phone at (406/444-0914), e-mail (mtnhp@nris.state.mt.us) or at the mailing address shown on the first page.

Montana Species of Concern
Marysville Road

Animal
- Bird
- Mammal
- Search Area

Land Status
- BLM
- BOR (BuRec)
- CoE & other DoD
- NPS
- USFS
- Other USDA
- USFWS
- BIA Trust
- Tribal
- State Trust
- DFWP
- University & Institutions
- County & City
- Plum Creek
- Private Conservation
- Other private
- Water



Species locations depicted outside the search area have imprecisely known locations and may actually occur within the search area.

Not all legend items may occur on map.

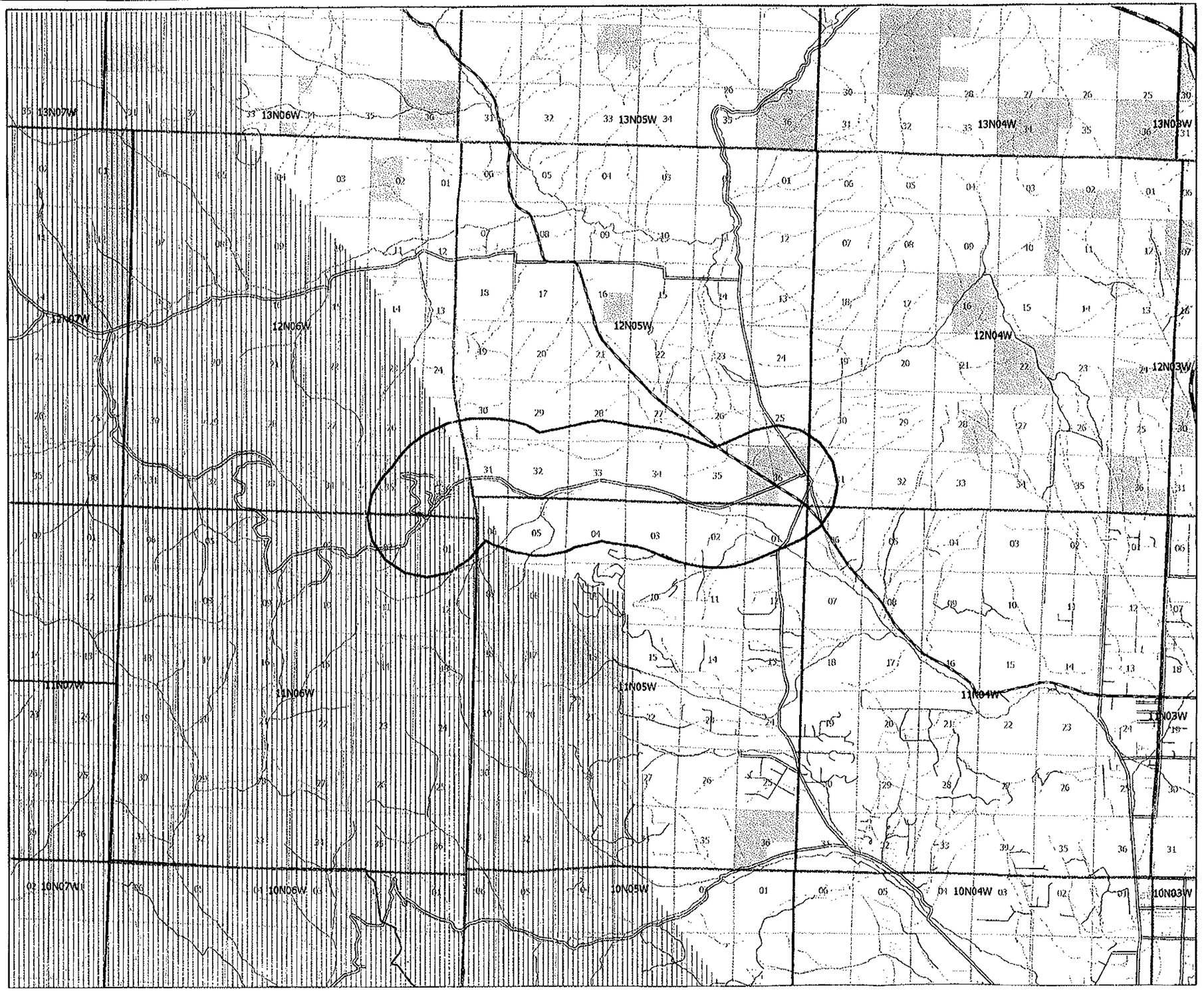
Features shown on this map do not imply public access to any lands.

This map displays management status, which may differ from ownership.

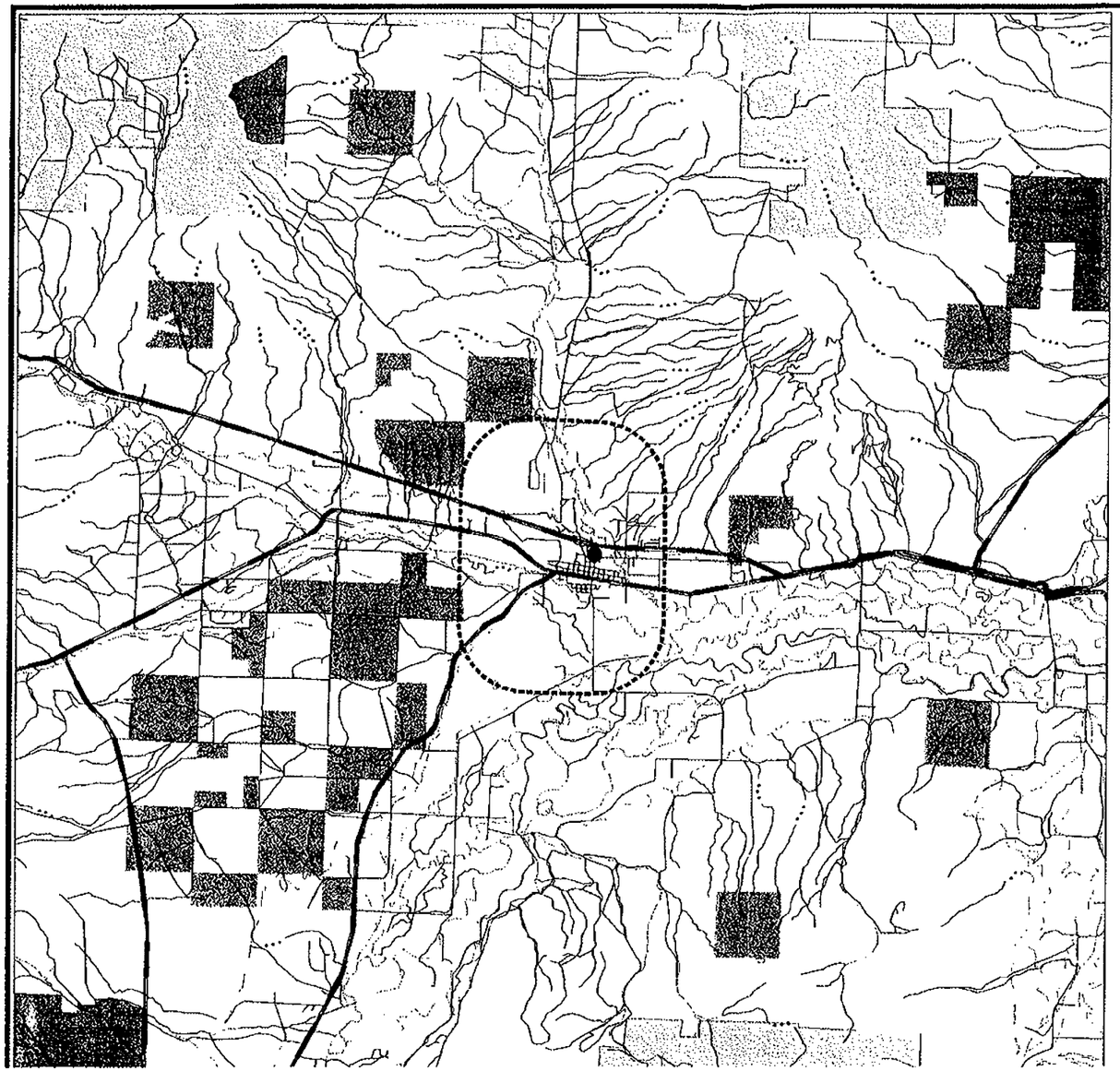
Refer to accompanying documentation for full explanation of map features.

MONTANA Natural Heritage Program

Natural Resource Information System
Montana State Library
PO Box 201800
Helena, MT 59620-1800
(406) 444-3009 mtnhp@state.mt.us



November 22 2002
03prvl0189



Montana Species of Special Concern
T01NR04W Sec. 4 & T02NR04W Sec. 33
MDT Control Number 3877

Species Data

Point Locations

- Animal
- Plant
- Community
- Other

Managed Areas

- Tribal Lands
- BLM special areas
- Other BLM Lands
- National Park Service
- US Fish & Wildlife Service
- National Forests
- Wilderness areas
- Research Natural Areas
- State Trust Lands
- MT Fish, Wildlife & Parks
- Private preserves & conservation easements

- Search Area

- Species locations depicted outside the search area have imprecisely-known locations and may actually occur within the search area.
- Not all legend items may occur on map.
- This map displays management status, which may differ from ownership.
- Features shown on this map do not imply public access to any lands.
- Refer to accompanying documentation for full explanation of map features.

Scale of Miles 0 2 4 6 8

Request nhp4141

MONTANA Natural Heritage Program
Natural Resource Information System
Montana State Library
PO Box 201800
Helena, MT 59620-1800
(406) 444-3009

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Butte Field Office
106 North Parkmont
Butte, Montana 59701
Telephone: 406-533-7600
http://www.mt.blm.gov/bdo/

In Reply To:

2800 (070)

May 2, 2003

Tony Gendusa, Ph.D.
CDM
20200 Wambli Lane
Huson, MT 59846

Dear Dr. Gendusa:

In reference to your letter of April 10, 2003 regarding the Marysville Road Reconstruction Project, the Bureau of Land Management (BLM) Butte Field Office agrees to be a Cooperating Agency. In that capacity, as stated in your letter, the BLM will receive periodic updates of the study progress and requests for participation in Inter-Agency coordination meetings. Montana Department of Transportation (MDT) will also provide a copy of the draft Environmental Assessment (EA) for BLM review.

Preliminary issues or concerns regarding BLM lands along the project route relate to cultural and wildlife values and timber removal from widening or realigning the road. Also, BLM Lands along the route are not within any significant National BLM designation or Land and Water Conservation Fund (LWCF) acquisition.

Thank you for requesting our involvement and please contact Steve Hartmann, Assistant Field Manager, at (406) 533-7671 if you have any questions.

Sincerely,

for Richard M. Hotaling
Field Manager

Montana Fish, Wildlife & Parks

Helena Area Resource Office
P.O. Box 200701-0701
Helena, MT 59620-0701

May 20, 2003 406-444-2535

Tony Gendusa, Ph.D.
Camp, Dresser, & McKee
20200 Wambli Lane
Huson, MT 59846

Gayle Joslin
Doug Skaar

Dear Mr. Gendusa,

I am responding to your request for Montana Fish, Wildlife & Parks' cooperation on the proposed highway project to Marysville as defined by the Montana Department of Transportation.

We are anxious to cooperate in this project. We must stress that this project has the potential to have a series detrimental consequences for wildlife and wildlife habitat. We request that the Environmental Impact Statement and Record of Decision fully address and provide for the following:

1. protect the function of the Continental Divide wildlife corridor by not contributing motorized impacts through highway placement to the Continental Divide area
2. evaluate the cumulative impact of publicly funded projects on the movement corridor
3. assure that wildlife and their habitat within the project area are not diminished
4. ensure wildlife crossings are fully accommodated through the use of structures, highway design, enforced speed restrictions (45 mph)

While a desire for a highway by some residents of Marysville is understandable, the costs both financially and to natural resources must be carefully evaluated. Straightening, widening, curbing and ultimately paving the existing Marysville road will encourage increased speed and volume of traffic with direct impact to wildlife. In addition to more traffic accidents, there will be more wildlife collisions, crushings, and an even more formidable barrier to wildlife movement than what currently exists from the present dirt road.

We note that information provided by the Montana Natural Heritage Program is not being applied as specified by MNHP. Your letter states, "The results of this search [of the biological data base housed at MNHP] indicated that only a single mammal species of concern has potential to occur within the project area" (Canada lynx). The cover letter that MNHP issues in response to every request for information they receive clearly states: "The results of a data search by the Montana Natural Heritage Program reflect the current status of our data collection efforts. These results are not intended as a final statement on sensitive species within a given area, or as a substitute for on-site surveys, which may be required for environmental assessments." This

cautionary note seems to have been ignored. As human development progresses when proper attention is not given to habitat and life-cycle necessities of wildlife, certain species can become "sensitive" or listed as threatened or endangered, while the habitat and population structure of other wildlife can be impacted. Specific wildlife inventory efforts in the project area should be part of the baseline data collection prior to construction.

An impact analysis radius of 1 mile is inadequate to evaluate the consequences to far ranging species such as wolves, grizzly bear, lynx or wolverine. Wolves and grizzly bear, species listed as threatened, are in the immediate proximity of the project area. The wolverine is a far ranging species whose presence in the project area has been demonstrated by multiple records. The fisher is a rare species in Montana, however one was reported near Roundtop Mountain on the Continental Divide just above the Great Divide Ski Area.

Of significantly more impact than the road construction project itself, is the fact that the proposed highway will terminate at the junction of Belmont Road and Ottawa Gulch and then funnel recreational vehicles into sensitive areas. This junction is 1.5 mile from the top of the Continental Divide and is the jumping off point for local snowmobilers and OHV enthusiasts. Once the road is in place, promotion of the Marysville area as a recreational vehicle destination location is sure to follow.

Although a one mile radius was used to determine which wildlife species might be affected, the highway project itself, would ultimately deliver thousands of vehicles to the edge of the Continental Divide throughout the winter and throughout the spring, summer and fall as well. Vehicles, in all forms (full-sized vehicles, ATVs, motorcycles, and snowmobiles) will be funneled onto the Continental Divide and into the heart of elk summer range; yearlong lynx habitat; winter denning habitat for bears, wolverine, and lynx; and habitat for a variety of other species. This proposed highway will have enormous consequences to all wildlife that utilize the Continental Divide and headwaters of both Little Prickly Pear Creek and the Little Blackfoot River as part of their yearlong home ranges.

Considerable effort is being expended to protect wildlife corridors and the flow of genetic material through the Northern Rockies from the Yellowstone to the Yukon. The purpose is to prevent species isolation and habitat fragmentation. This project and associated federal projects along the Continental Divide from Flesher Pass south through the Occidental Plateau must be assessed in lieu of cumulative impacts. This portion of the Continental Divide may be the most fragile component of the entire international corridor from the Greater Yellowstone Ecosystem to the Yukon.

Intrusions into Roadless Areas across the state by snowmobile and OHV enthusiasts have evolved into serious social and natural resource conflicts. Such violations in the Upper Little Prickly Pear-Blackfoot divide have been minimal, probably because local snowmobilers know and respect these areas. However, with a destination-recreation highway, non-local people are drawn in and are often insensitive to and ignorant of wildlife needs. In this circumstance, the

Nevada Mountain Roadless Area provides critical refugia for wildlife, and occurs within six miles of Marysville. It is important that Nevada Mountain as well as other nearby Roadless Areas do not become casualties of this highway project.

The minutes of the Marysville Road Users meeting indicate that the local snowmobile club would be contacted to obtain their input relative to their parking needs at Ottawa Gulch. This seems a bit premature in the process, particularly when all issues relative to natural resource impacts have not yet been addressed, or for that matter, when other users of the area, such as hunters and non-motorized recreationists have not been contacted. The Helena National Forest is currently going through the Travel Plan process that will specifically address this area, its sensitivities, and its recreational uses. All publicly financed projects need to be evaluated as to their cumulative effects.

During Marysville Highway meetings attended since last year, MFWP was assured that wildlife information would be included, that crossing structures and design would be discussed, and any other concerns relative to wildlife would be addressed. And perhaps they have, but we have not yet been contacted by anyone regarding these issues. Enclosed for your information are a series of distribution maps for some wildlife species that occur within the area.

We reiterate that the Environmental Impact Statement and Record of Decision must fully address and provide for:

- protecting the function of the Continental Divide wildlife corridor
- assuring that wildlife and their habitat within the project area are not diminished
- ensuring that wildlife crossings are fully accommodated
- evaluating cumulative impacts upon the wildlife movement corridor

As we have indicated in the past, we are available for consultation and would recommend that on-site wildlife inventory be factored into the baseline data collection for this project to address the aspects previously listed.

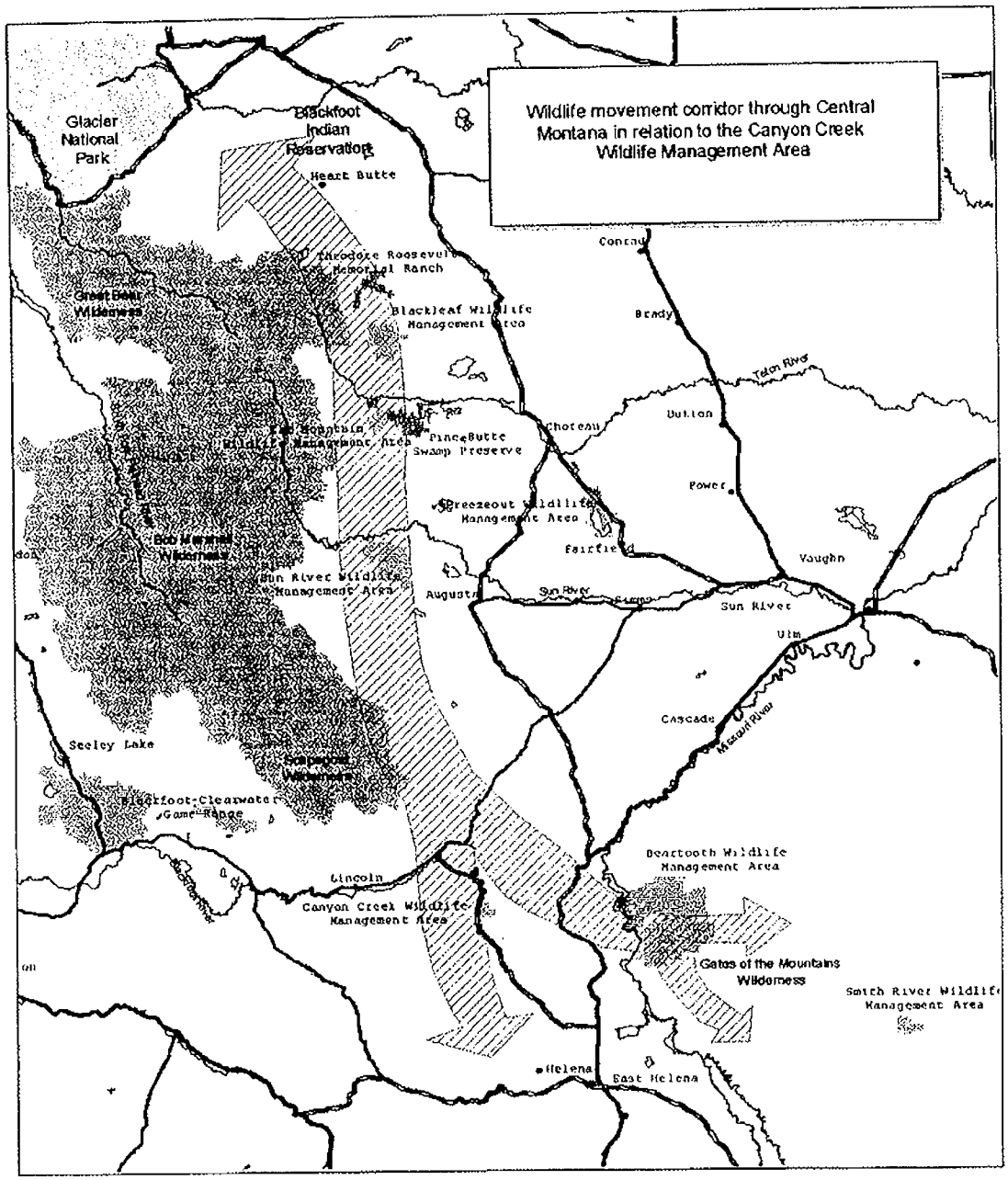
Thank you for your consideration.

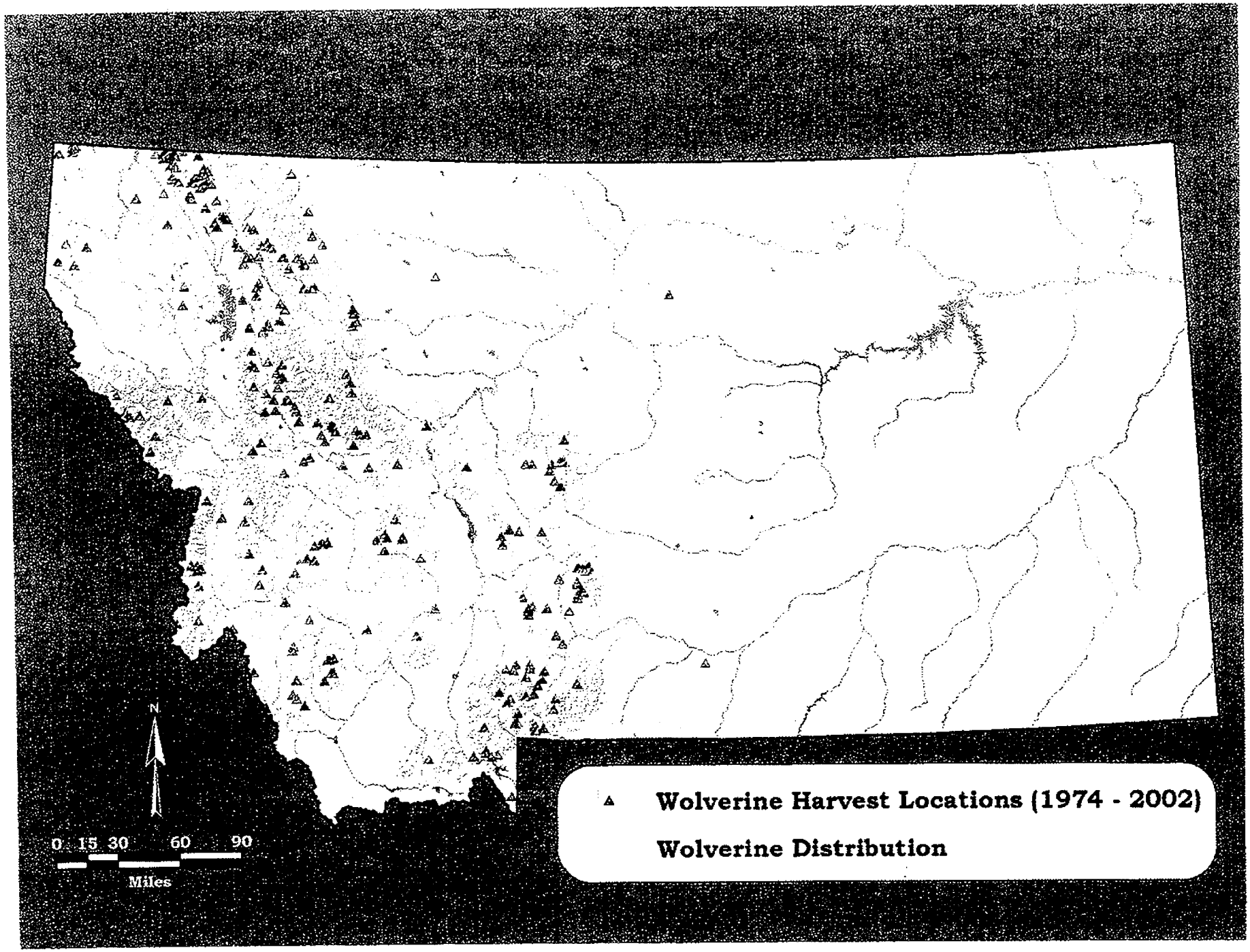
Sincerely,

Gayle Joslin
Wildlife Biologist

Encl: 6 maps

c: Amber Kamps, Lincoln District Ranger
Duane Harp, Helena District Ranger
Helena Snowdrifters Club
Bill Orsello, Helena Hunters and Anglers
David Rusoff, Wild Divide Chapter, Montana Wilderness Association


Wildlife movement corridor through Central Montana in relation to the Canyon Creek Wildlife Management Area
Glacier National Park
Blackfoot Indian Reservation
Heart Butte
Theodore Roosevelt Memorial Ranch
Great Bear Wilderness
Blackleaf Wildlife Management Area
Conrad
Brady
Teton River
Dutton
Choteau
Pine Butte Swamp Preserve
Power
Bob Marshall Wilderness
Sun River Wildlife Management Area
Augusta
Fairfield
Vaughn
Sun River
Ulm
Cascade
Missouri River
Seeley Lake
Scapegoat Wilderness
Blackfoot-Clearwater Game Range
Lincoln
Canyon Creek Wildlife Management Area
Beartooth Wildlife Management Area
Gates of the Mountains Wilderness
Smith River Wildlife Management Area
Helena
East Helena
0 10 20 Miles
Wilderness
Private Conservation Parcels
FWP Wildlife Management Areas
Grady/O'Connell/Sieben Easements
Bureau of Land Management
National Forest
State Lands
National Parks
Indian Reservations
N
Montana Fish, Wildlife & Parks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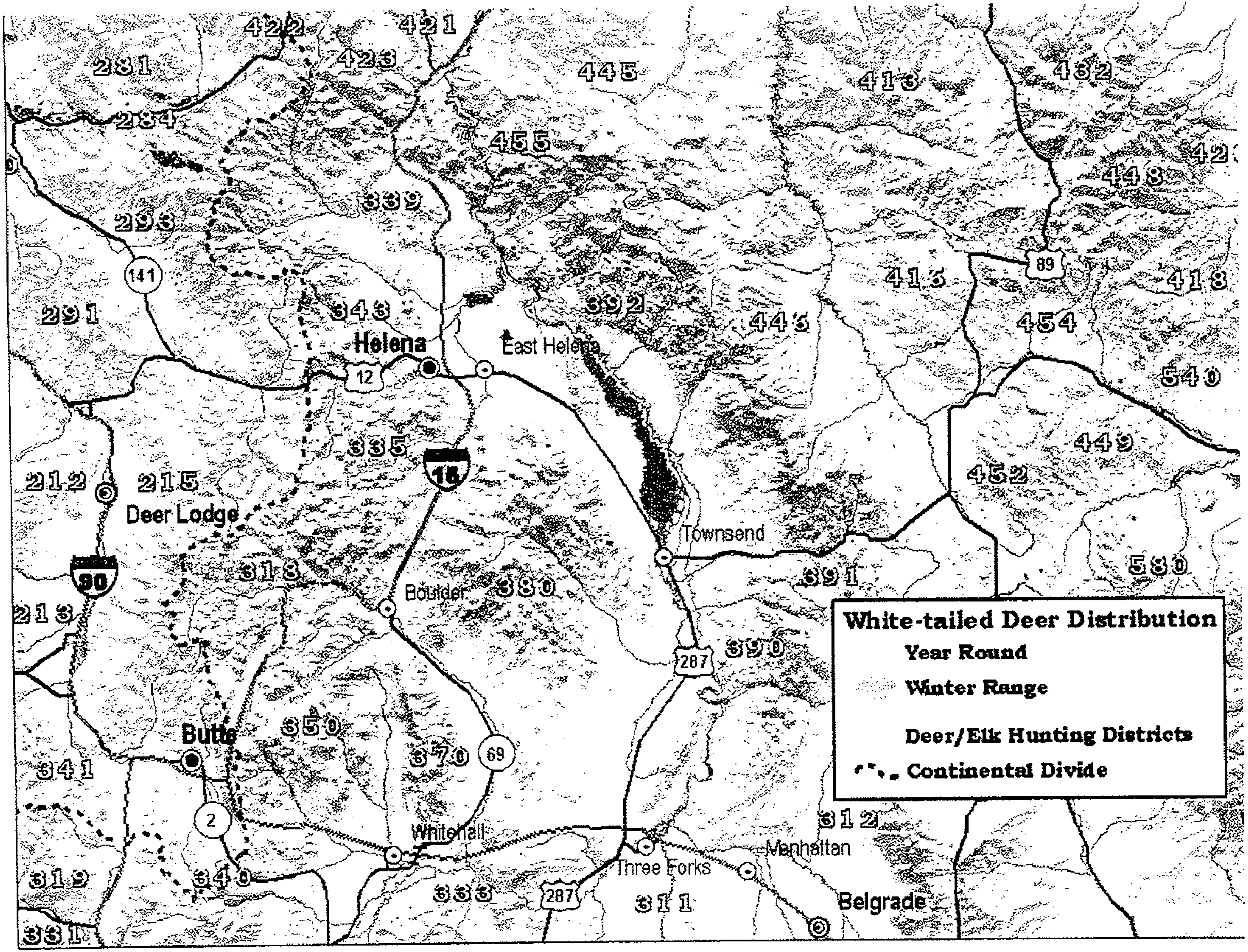
Miles
Wolverine Harvest Locations (1974 - 2002)
Wolverine Distribution


White-tailed Deer Distribution
Year Round
Winter Range
Deer/Elk Hunting Districts
Continental Divide
Helena
East Helena
Townsend
Deer Lodge
Boulder
Butte
Whitehall
Three Forks
Manhattan
Belgrade
422
421
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281
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445
413
432
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293
141
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343
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454
12
540
335
15
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212
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311
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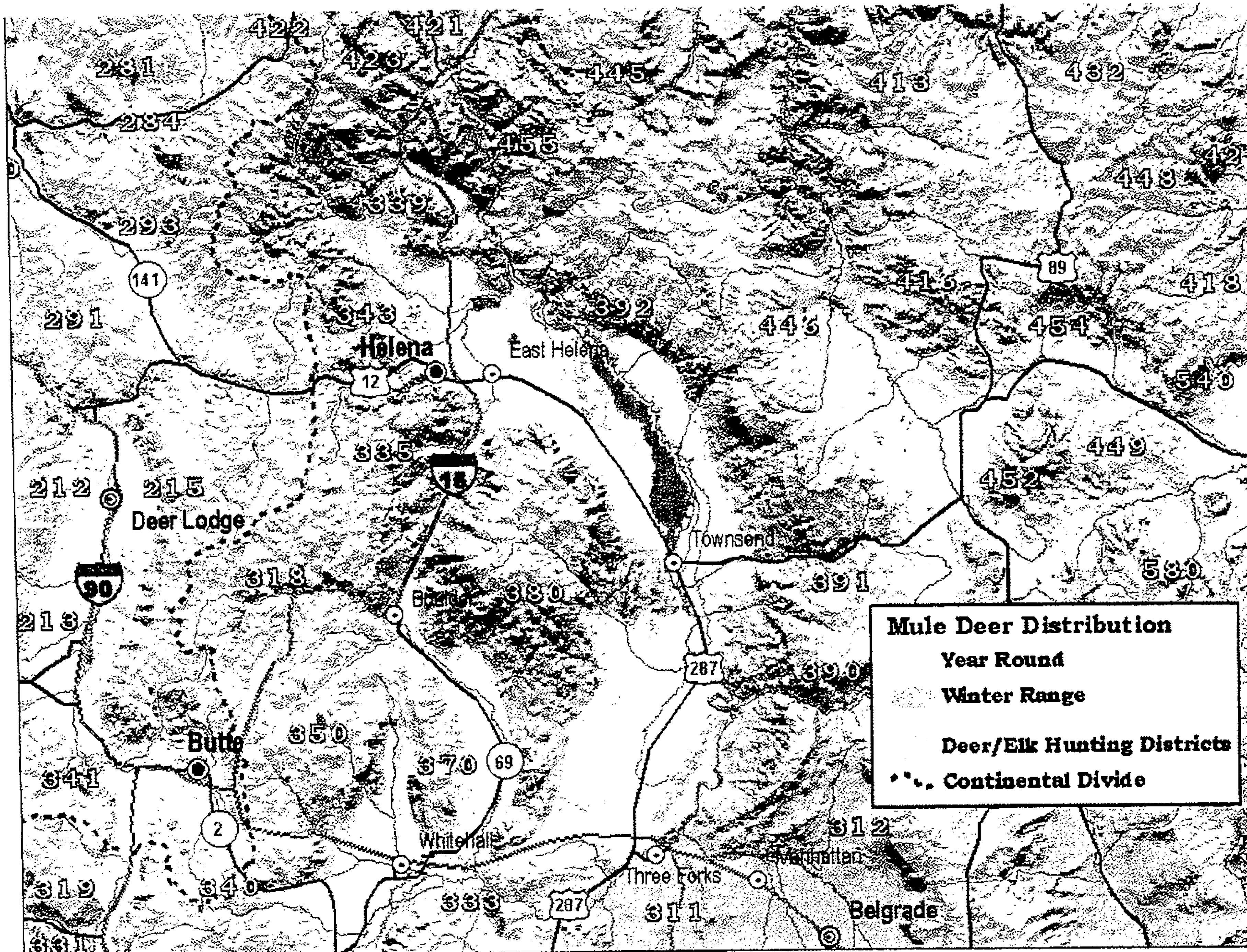

Mule Deer Distribution
Year Round
Winter Range
Deer/Elk Hunting Districts
Continental Divide
Helena
East Helena
Townsend
Deer Lodge
Butte
Whitehall
Three Forks
Belgrade
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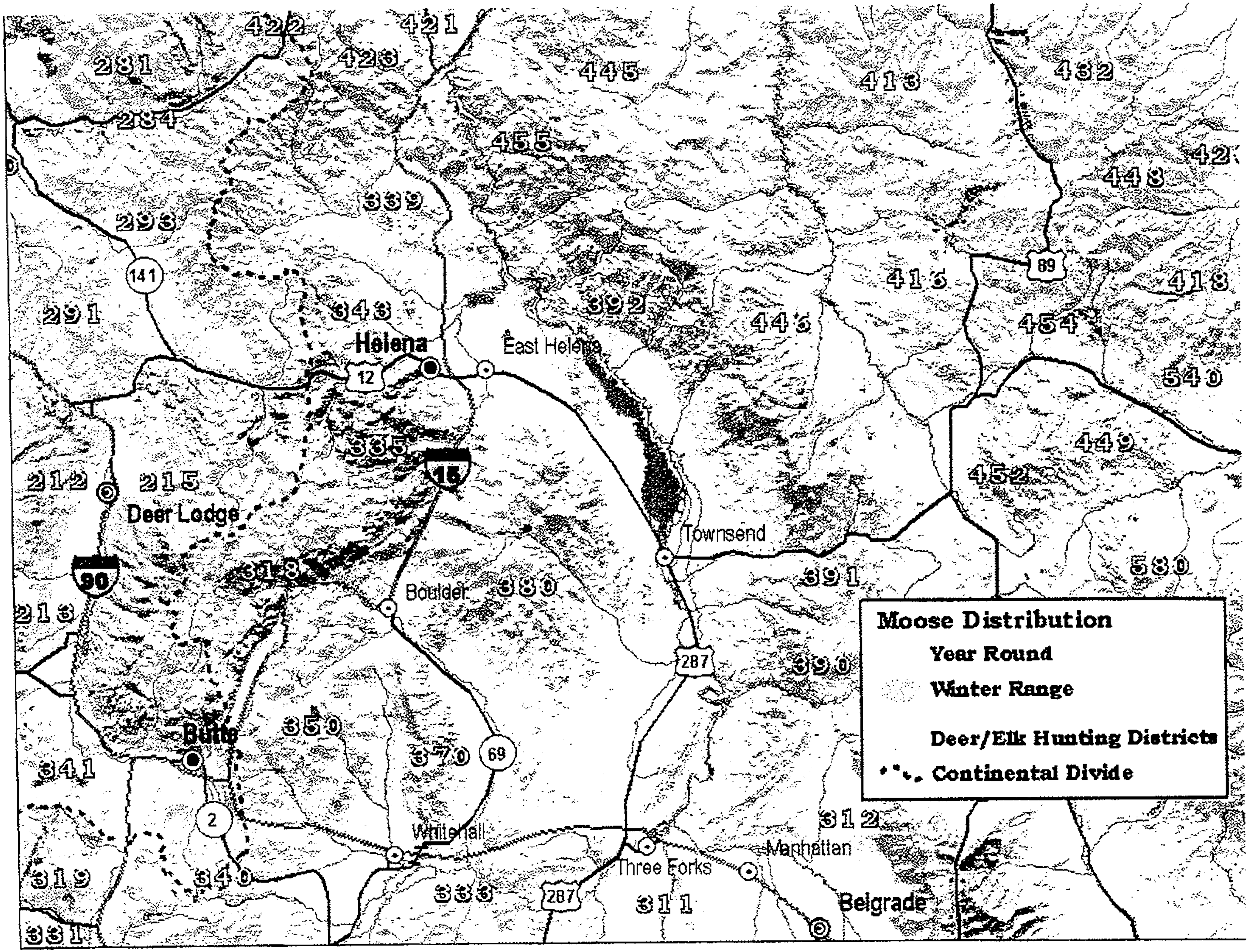

Moose Distribution
Year Round
Winter Range
Deer/Elk Hunting Districts
Continental Divide
Helena
East Helena
Townsend
Deer Lodge
Boulder
Butte
Whitehall
Three Forks
Manhattan
Belgrade
281
284
293
291
212
213
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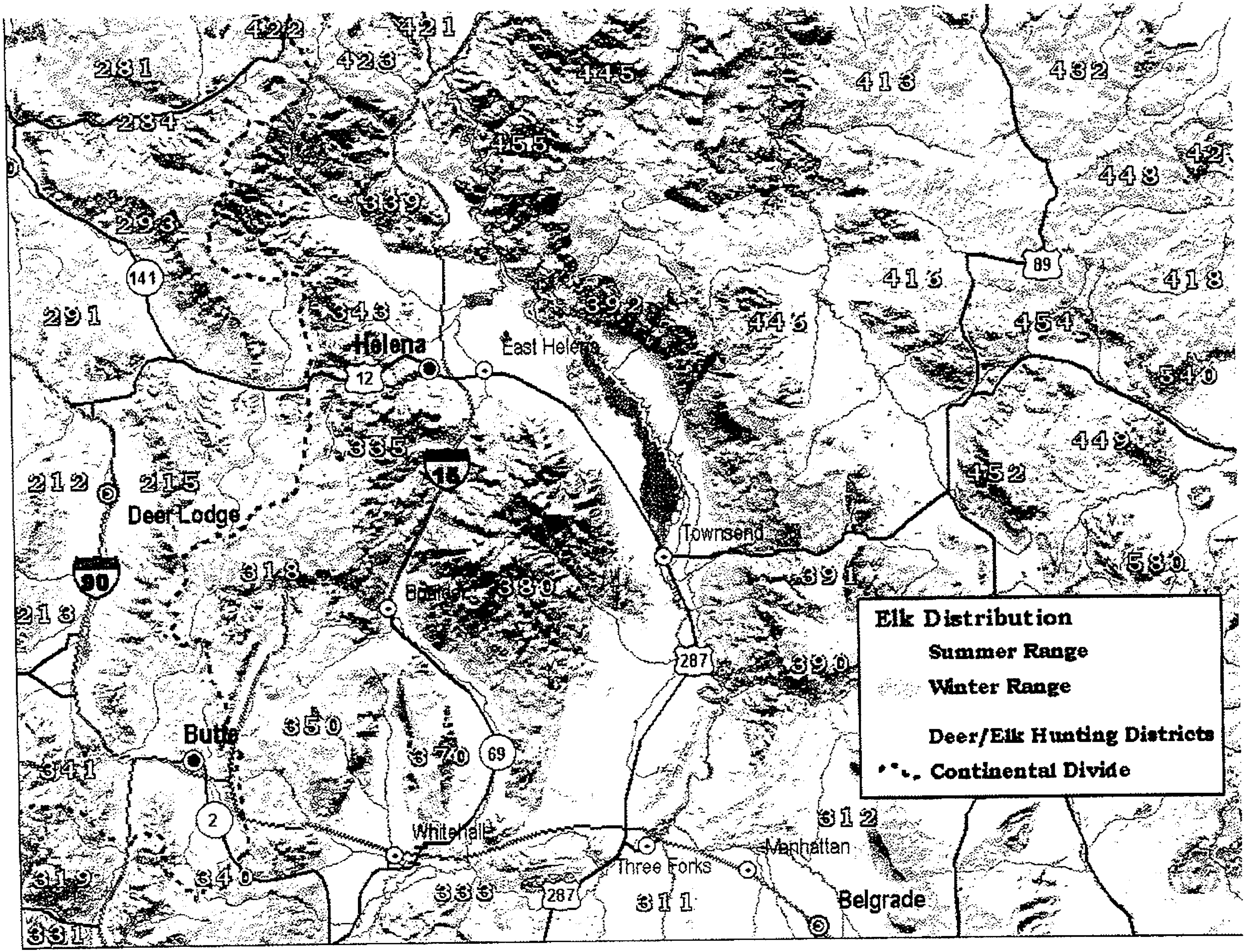

Elk Distribution
Summer Range
Winter Range
Deer/Elk Hunting Districts
Continental Divide
Helena
East Helena
Townsend
Deer Lodge
Butte
Whitehall
Three Forks
Manhattan
Belgrade
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United States Department of Agriculture
Forest Service
Helena National Forest
2880 Skyway Drive
Helena, MT 59601
406-449-5201

File Code: 7700
Date: June 4, 2003

Tony Gendusa, Ph.D.
CDM
20200 Wambli Lane
Huson, Montana 59846

Subject: Marysville Road Reconstruction Project, Lewis and Clark County, Montana

Dear: Dr. Gendusa

The Helena National Forest is happy to become a Cooperating Agency on the Marysville Road Project. Although none of the proposed project is on National Forest Land, the road does provide important access to the Forest. No National Forest Land in the area has present or planned usage as defined by Section 4(f) of the 1966 Department of Transportation Act (49 U.S.C. 303). Also, none of the National Forest System Lands in the area are recreational lands administered under Section 6(f) of the National Land and Water Conservation Fund Act (16 U.S.C. 460).

Please contact Duane Harp, Helena District Ranger, at 406-449-5490 for any resource related information you need on this project or Charlie McKenna, Forest Engineer, at 406-449-5201, ext. 227 for any transportation related information.

Sincerely,

THOMAS J. CLIFFORD
Forest Supervisor

cc: Duane Harp
Charlie McKenna

Eric Griffin
Director of Public Works
406-447-1636

3402 Cooney Drive
Helena, Montana 59602
Fax: 406-447-1633

LEWIS AND CLARK COUNTY

Public Works Department

August 19, 2003

Jeanne Riley, P.E.
CDM
34 North Last Chance Gulch, Suite 104
Helena, Montana 59601

Dear Jeanne:

This letter is to inform you that Lewis and Clark County would like to participate in the Marysville Road EA process. Please include Sharon Haugen, Director of Planning, in the process. She can be reached at 447-8342 or haugen@co.lewis-clark.mt.us via email.

If you have any questions, I can be reached at 447-1636.

Sincerely,

Eric Griffin, Director
Lewis and Clark County Public Works

CC: Sharon Haugen

United States Department of the Interior

FISH AND WILDLIFE SERVICE
MONTANA FIELD OFFICE
100 N. PARK, SUITE 320
HELENA, MONTANA 59601
PHONE (406) 449-5225, FAX (406) 449-5339

M.17 FHWA - Marysville Road

August 28, 2003

Tony Gendusa
CDM
34 North Last Chance Gulch
Suite 104
Helena, Montana 59601

Dear Dr. Gendusa:

This responds to your letter dated April 10, 2003, regarding the Environmental Assessment to be prepared for the Montana Department of Transportation and the Federal Highway Administration relative to the reconstruction of Marysville Road (TCSP 25(43); Control No. 4983) in Lewis and Clark County, Montana. Your letter requested that the U.S. Fish and Wildlife Service (Service) be a Cooperating Agency with regards to this project.

The Service agrees to be a Cooperating Agency for this project. As such, the Service will review and respond to documents required for compliance with the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.), the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.), and other applicable laws. The Service has provided initial verbal comments to you.

We look forward to working with you on this project. If you have questions regarding this letter, please contact Mr. Scott Jackson, of my staff, at (406)449-5225, extension 201.

Sincerely,

R. Mark Wilson

R. Mark Wilson
Field Supervisor

Montana Fish, Wildlife & Parks

1420 East 6th Avenue
Helena, MT 59620
September 24, 2003

Jeanne Riley, P.E.
CDM
34 North Last Chance Gulch, Suite 104
Helena, MT 59601

Dear Jeanne:

I am belatedly responding to your letter of August 18, 2003 where you asked if our agency was interested in participating in the EA process for the Marysville Road. The answer is yes. I will be the contact on fisheries/aquatic issues, while Gayle Joslin will be the contact on wildlife issues. If you could send updates and documents to both of us, that would work best. Gayle's address is: FWP, Helena Area Resource Office, 930 Custer Avenue West, Helena, MT 59620-0701. My address is shown above.

Sincerely,

Don Skaar

Don Skaar
Water Pollution Biologist

United States Department of the Interior

FISH AND WILDLIFE SERVICE
ECOLOGICAL SERVICES
MONTANA FIELD OFFICE
100 N. PARK, SUITE 320
HELENA, MONTANA 59601
PHONE (406) 449-5225, FAX (406) 449-5339

cc: Bob Thalt - Consultant Desi
M. Johnson - G.F. District
Paul Ferry - Highway Eng (Pre
Bonnie Steg - Env. Serv.
Jean Riley - Env. Serv.
Tom Gocksel - Env. Ser
Bob Effinger - Env. Ser
File

M.17 FHWA Marysville Rd.

April 27, 2004

Carl James
Federal Highway Administration
Montana Division
2880 Skyway Drive
Helena, Montana 59602

Dear Mr. James:

In a letter to the U.S. Fish and Wildlife Service (Service) dated February 19, 2004, you requested the initiation of formal section 7 consultation relative to the Marysville Road reconstruction project in Lewis and Clark County, Montana (TCSP 25(43); Control No. 4983). This project would entail the reconstruction of 11.4 kilometers (km) of the Marysville Road between its junction with Secondary Highway S-279 and the junction of Ottawa Gulch Road. The road would be widened to 7.4 meters and paved, and major cuts would occur in the upper 6.6 km to eliminate blind corners. Drainage improvements would include adding and replacing culverts throughout the corridor. Approximately 6.4 km of guardrail would be installed. A Biological Resources Report (BRR), dated November 2003, accompanied your letter and concluded that this proposed project would not be likely to adversely affect threatened Canada lynx (*Lynx canadensis*), threatened grizzly bears (*Ursus arctos horribilis*), nor threatened gray wolves (*Canis lupus*).

As you know, the District Court for the District of Columbia issued an order on December 26, 2002, enjoining the Service from issuing written concurrences for actions proposed by Federal agencies that "may affect, but are not likely to adversely affect" Canada lynx. Therefore, any actions subject to consultation that may affect lynx required formal consultation as described in 50 CFR 402.14. Although the BRR determined that this project may affect, but was not likely to adversely effect lynx, you requested formal consultation because this Court order was in effect at that time. However, we recently received word that the District of Columbia Court of Appeals issued a mandate vacating the injunction that prevented the Service from issuing letters of concurrence on Federal actions that may affect lynx. Accordingly, formal consultation is no longer required for the Marysville Road project.

The Service believes that the activities associated with the currently proposed road reconstruction project, as described in the BRR for this project, would not have the potential to cause adverse effects to Canada lynx, grizzly bears, nor to gray wolves. Therefore, we concur with the determination that this project would not be likely to adversely affect these species and formal

consultation is not required. The Service bases its concurrence on information displayed in the BRR, in particular the mitigation measures that would be implemented as part of this project to assure that federally-listed species are not adversely affected by highway reconstruction activities.

However, as documented in BRR for this project, the areas in the vicinity of the Marysville Road project provide high-quality habitat for many species of wildlife, including several species of rare forest carnivores. Projects that improve road conditions and allow easier motorized access to remote areas often increase risks to the wildlife that live in those areas. The Service is concerned that the ability of the continental divide area above Marysville to remain as secure habitat and an important wildlife movement corridor may be diminished if vehicle traffic increases in that area. If road improvements continue in this area and result in high quality roads up to and across the continental divide, additive direct and indirect effects to many species of sensitive wildlife may result. In such situations, the risks to wildlife in the area would likely rise as a result of a combination of direct mortality from vehicle collisions, indirect mortality associated with increased levels of human activity in the area, displacement from essential habitats, and habitat fragmentation. We recommend these concerns be fully evaluated if future road improvement projects are considered for this area.

This concludes informal consultation pursuant to regulations 50 CFR §402.13 implementing the Endangered Species Act of 1973, as amended (Act). This project should be re-analyzed if new information reveals effects of the action that may affect threatened or endangered species, if the project is modified in a manner that causes an effect not considered in this consultation, or if the mitigation measures are not fully implemented.

If you have questions about this letter or your responsibilities under the Act, please contact Scott Jackson, of my staff, at (406) 449-5225, extension 201.

Sincerely,

R. Mark Wilson

R. Mark Wilson
Field Supervisor

Copies to: Bob Effinger, MDT, Helena, MT
Todd Tillinger, COE, Helena, MT

U.S. ARMY CORPS OF ENGINEERS
HELENA REGULATORY OFFICE
10 WEST 15TH STREET, SUITE 2200
HELENA, MONTANA 59626

REPLY TO ATTENTION OF:

September 20, 2004

Helena Regulatory Office
Phone (406) 441-1375
Fax (406) 441-1380

Subject: Corps File Number **2003-90-243**
Marysville Road Reconstruction
TCSP 25(43), MDT Control Number 4983
Cooperating Agency Response

Mr. Kent Whiting
CDM, Inc.
34 North Last Chance Gulch, Suite 104
Helena, Montana 59601

Dear Mr. Whiting:

This letter is a response to a request that the US Army Corps of Engineers (Corps) be a Cooperating Agency for the highway reconstruction project listed above. The project is on the Marysville Road between Montana Secondary Highway 279 and the community of Marysville, located northwest of Helena in Lewis and Clark County, Montana.

Under the authority of Section 404 of the Clean Water Act, Department of the Army permits are required for the discharge of fill material below the ordinary high water mark of our Nation's rivers, streams, lakes or wetlands.

Pursuant to the National Environmental Policy Act, the Corps agrees to be a Cooperating Agency. Our participation as a Cooperating Agency will be limited to reviewing and commenting on project features that will or may affect Waters of the United States. This will be in addition to our regulatory and permitting responsibilities.

A preliminary review of the project features revealed that the proposed activities would likely require Department of Army permits. This office will provide more specific comments upon receipt of plan sheets or maps that show the projected fills and other impacts on Waters of the United States.

Todd Tillinger of this office will be the Corps' project manager. He may be reached at (406) 441-1375 or at todd.n.tillinger@usace.army.mil. Please reference Corps File Number 2003-90-243.

Sincerely,

Allan Steinle
Montana Program Manager

Copy Furnished: Jean Riley, Montana Department of Transportation Environmental Services, Helena

Montana Department of Transportation
2701 Prospect Avenue
PO Box 201001
Helena MT 59620-1001

David A. Galt, Director
Judy Martz, Governor

MASTER FILE COPY

October 22, 2004

Mark Baumler, Ph.D.
State Historic Preservation Office
1410 8th Avenue
P O Box 201202
Helena, MT 59620-1202

Subject: TCSP 25(43)
Marysville Road
Control No. 4983

Dear Mark:

Enclosed is the Determination of Effect for the above project in Lewis and Clark County. We have determined that the proposed project would have **No Effect** to the archaeological site at White House Park (24LC1827) and to the Lithic Scatter (24LC1915). There would be **No Adverse Effect** to the Marysville Historic Mining District (24LC1083) for the reasons described in the accompanying document. We request your concurrence.

If you have any questions, please contact me at 444-6258.

Jon Axline

Jon Axline, Historian
Environmental Services

Enclosure

cc: Mick Johnson, Great Falls District Administrator
Tom Martin, P.E., Consultant Design Bureau
Bonnie Steg, Resources Section

MEMORANDUM OF AGREEMENT
TCSP 25(43)
MARYSVILLE ROAD
LEWIS & CLARK COUNTY, MONTANA
Control No. 4983

WHEREAS the Federal Highway Administration (FHWA) proposes to assist the Montana Department of Transportation (MDT) in funding the Marysville Road reconstruction project.

WHEREAS FHWA has determined that the undertaking will have an effect on the Marysville Historic Mining District (24LC1083), a property eligible for inclusion in the National Register of Historic Places. The FHWA has consulted with the Montana State Historic Preservation Office (SHPO) pursuant to Section 106 of the National Historic Preservation Act (16 USC 470) and its implementing regulations, "Protection of Historic Properties" (36 CFR 800);

WHEREAS MDT participated in the consultation and have been invited to concur in this amended Memorandum of Agreement;

WHEREAS Lewis and Clark County owns the Right-of-Way in which this undertaking will occur and has been invited to concur in this Memorandum of Agreement;

NOW, THEREFORE; FHWA and the Montana SHPO agree that the undertaking will be implemented in accordance with the following stipulations in order to take into account the effect of the undertaking on historic properties.

Stipulations

1) The MDT will consult with the National Park Service to determine what level of Historic American Engineering Record (HAER) documentation is appropriate for the Water Diversion System (MPF-01) prior to the initiation of construction activities on Marysville Road and unless otherwise agreed to by the National Park Service and SHPO, MDT shall ensure that the recommended documentation is completed and accepted by HABS/HAER prior to the alteration of MPF-01 and that a copy will be made available to SHPO and to the University of Montana Archaeological Records Office.

2) The MDT shall ensure the rock retaining wall is reconstructed adjacent to the rechanneled Silver Creek in the vicinity of the original location of the retaining wall associated with MPF-01.

3) The MDT shall conduct testing in the proposed construction zone in the vicinity of the Chinese Laundry (HA-02) in the spring of 2005 after consulting with SHPO regarding the adequacy of the testing plan to determine if there are any artifacts or

features that might be impacted by proposed reconstruction project. If, after consulting with SHPO regarding the results and finding of that testing it is determined that there are significant features associated with HA-02 in the construction zone, the MDT will amend this MOA to include a research design and data recovery plan for the site. The MDT shall ensure that a data recovery plan agreed upon by SHPO and MDT is implemented and completed prior to the construction in the vicinity of HA-02.

4) The MDT will install two interpretive markers in Marysville that describe the history and development of mining in the area and the community. The interpretive markers will be developed in consultation with the local historical organization and the Helena-Lewis & Clark County Historic Preservation Commission.

5) The MDT will install an interpretive marker at the Powder House (SS-PH). The marker will describe the history of the feature and also be developed in consultation with the local historical organization and the Helena-Lewis & Clark County Historic Preservation Commission

6) If a dispute arises regarding the implementation of Agreement, FHWA shall consult with the objecting party to resolve the dispute. If any consulting party determines that the dispute cannot be resolved, FHWA shall request the further comments of the Advisory Council on Historic Preservation pursuant to the Council's regulations.

EXECUTION OF THIS MEMORANDUM OF AGREEMENT and implementation of its terms evidences that FHWA has taken into account the effect of the Undertaking on historic properties.

Federal Highway Administration — Date: 12/17/04

Montana State Historic Preservation Office — Date: 12/21/2004

Concurring Parties:

Montana Department of Transportation — Date: 11/18/04

Lewis & Clark County
Michael A. Murray, Chairman

12/10/04
Date

ATTEST:

Paulette DeHart, Clark of the Board

Consultant Design			
Action	Info	Routing	Attach / Initial
		Date 3/7/06	
		Bureau Chief	
		Consultant plans Eng	
		Design Supervisor	
		CTEP Engineer	
		DalSoglio	
		Tom Hanson	
		File Project	

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, OMAHA DISTRICT
HELENA REGULATORY OFFICE
10 WEST 15TH STREET, SUITE 2200
HELENA MT 59626

REPLY TO
ATTENTION OF

Helena Regulatory Office
(406) 441-1375 Phone
(406) 441-1380 Fax

March 2, 2006

Subject: Corps File Number **2003-9-0243**
Marysville Road
TCSP 25(43), MDT Control Number 4983
Comments on Administrative Draft Environmental Assessment

Mr. Michael S. DalSoglio, P.E.
Consultant Design Bureau
Montana Department Of Transportation
2701 Prospect Avenue
PO Box 201001
Helena, Montana 59620-1001

Dear Mr. DalSoglio:

This letter provides comments on the Administrative Draft Environmental Assessment for the highway reconstruction project listed above. The project is on the Marysville Road between Montana Secondary Highway 279 and the community of Marysville, located northwest of Helena in Lewis and Clark County, Montana.

This office completed a review of the document and we have the following comments:

1. Based on our review of the proposed project features, a Department of Army (DA) permit will be required for the work in Silver Creek, in unnamed drainages and tributaries, and in any wetlands adjacent to Silver Creek those waterways.
2. The document references construction in 2006, depending on funding. The time required to process a DA permit application ranges from 30 to 120 days after receipt of a complete application, and depends on the complexity of the proposed work and the expected level of impact on the aquatic environment. Please take this into account when scheduling the project for construction.
3. Stabilization of highway cut and fill slopes, along with establishment of vegetated buffers along Silver Creek, are identified as mitigation measures. Please provide specific details on the slope treatments and vegetated buffers when the Application is prepared for a DA permit. When the project is completed, there should be an appropriately sized vegetated buffer between the roadway and Silver Creek or wetlands to minimize the effects of road maintenance activities, including winter sanding and plowing.
4. Due to the historic mining and milling operations, Silver Creek and its adjacent wetlands are presently somewhat impaired. The Corps requests that you explore the practicability of offsetting unavoidable aquatic impacts within the adjacent Silver Creek floodplain.

Moving wetland or other aquatic resource mitigation out of the local valley would not aid in the recovery of Silver Creek or the adjacent riparian area.

5. While participation in the Montana In-Lieu Fee program could end up being a compensatory mitigation option, the Corps will likely consider it only as a last resort. Typically, In-Lieu Fee is used only when there are no appropriate or practicable compensatory mitigation alternatives, or in cases where the impacts are too small to make a stand-alone mitigation effort worthwhile.
6. When an application for a DA Permit is prepared, it must include a compensatory mitigation plan, and that plan will be subject to review and approval by the Corps as part of any permit decision. Compensatory mitigation will be in accordance with the Montana Regulatory Program Wetland Compensatory Mitigation Ratios (copy enclosed).
7. "May Affect, Not Likely to Adversely Affect" determinations were made for the Federally listed grizzly bear, Canada lynx, and gray wolf. Prior to making a final permit decision, the Corps will need documentation that consultation with the US Fish and Wildlife Service (USFWS) has been successfully completed.
8. Minimize disturbances to wetland vegetation and to upland vegetation along the creek.
9. Culverts and other project features in Silver Creek and its tributaries must allow unimpeded passage of fish and other aquatic organisms. It is recommended that any culverts and bridges provide a waterway that spans the bankfull width of the stream and simulates an unimpaired natural stream channel.
10. The channel change planned on Silver Creek between RP 5.9 and 6.0 must be designed and constructed to simulate the appropriate natural plan, pattern and profile for this reach of Silver Creek. There should be no overall net loss in channel length. It is recommended that a vegetated buffer be included for the zone between the road and the new creek channel to minimize adverse effects from road maintenance and runoff.

If there are questions please contact me at (406) 441-1375 and reference Corps File Number **2003-9-0243**.

Sincerely,

Todd N. Tillinger, P.E.
Project Manager

Enclosure:
Montana Regulatory Program Wetland Compensatory Mitigation Ratios, April 2005

Copies Furnished, without Enclosure:

Jeff Ryan, Montana Department of Environmental Quality – Water Protection
Glenn Phillips, Montana Fish, Wildlife and Parks - Fisheries Division
Scott Jackson. US Fish and Wildlife Service - Ecological Services

Wetland Compensatory Mitigation Ratios, Montana Regulatory Program

A	*Compensatory Mitigation Type*	B
1:1	Restoration (Re-establishment)[1]	1.5:1
1.5:1[+]	Restoration (Rehabilitation)[1]	2:1[+]
1:1	Creation (Establishment)	2:1
3:1[+]	Enhancement [2]	4:1[+]
4:1[+]	Preservation (Protection)[3]	4:1[+]
5:1	Upland Buffer[4]	5:1

Column A: Compensatory wetland mitigation site established and viable prior to project impact. Mitigation is in-kind per the chart below.

Column B: Compensatory wetland mitigation site not established prior to project impact (including pre-credits from a bank/reserve and in-lieu fee mitigation), or the compensatory mitigation wetland is out-of-kind per the above matrix. The Corps may, on a case-by-case basis, determine that a proposed out-of-kind mitigation wetland has greater value in a given watershed than the impacted wetland, and apply Column A ratios.

	Cowardin Class				
HGM Class		Emergent	Shrub/scrub	Forested	Aquatic Bed
	Riverine				
	Slope				
	Depressional				
	Lacustrine Fringe				

Note: "+" on the ratio chart indicates the Corps will consider a range of ratios for this type of compensatory mitigation. Listed ratios are the most favorable available for a given mitigation type. See explanations below for criteria used to determine if the lowest ratio applies.

Explanation of Superscripts

1. *Restoration: Re-establishment* refers to re-establishing a wetland where one formerly existed. Pre-disturbance hydrology, vegetation and wetland functions are re-established as practicable.

Restoration: Rehabilitation refers to restoring functions to a degraded wetland that still meets '87 Manual criteria. To achieve the lowest ratio the project must include restoration (not enhancement) of hydrologic function. Projects that simply involve a change in management will receive no less than a 5:1 ratio (example: remove cattle). Management change must be permanent to qualify as mitigation.

2. *Enhancement* credit will be granted if the proponent can demonstrate a functional lift using an approved functional assessment methodology. This requires establishment of a baseline assessment score and a performance standard consisting of a projected score. Be aware that overall functional lift may result from functional gains exceeding functional losses from a given enhancement project. Acceptability of the trade-off is a case-by-case determination.

Enhancement is only acceptable as mitigation if the Corps agrees (in consultation with the Interagency Wetland Group, an In-Lieu Fee Committee or Mitigation Banking Review Team, etc) the proposed enhancement is ecologically valuable in a given watershed. Ratio determination will be based on Best Professional Judgment.

3. *Preservation* is acceptable when:

a. It meets the criteria established in the 1995 Interagency Banking Guidance (Regionally important wetland under demonstrable threat); or
b. It is a minor component of an overall mitigation strategy; or
c. It is the only practicable method to mitigate impacts for a given project. Efforts to find acceptable mitigation sites must be documented.

The lowest ratio will be assigned in case 3a. above.

4. *Upland buffer* refers to a required water quality buffer unless other functions are specified for a given site. Fifty (50) feet is the maximum width eligible for credit for sites with a modest slope (5% or less) with herbaceous cover. A buffer of up to 100' on sites with steeper slopes and natural shrub/tree cover may be allowed. Credit generated by upland buffers can comprise no more than 25% of the total credit for a given mitigation project.

The Corps must determine a buffer in excess of 50' is necessary to protect a given aquatic site from known or likely impacts (ex: subdivision, road, farmed slope) before credit is provided for the additional width.

The buffer must be protected by the same legal mechanism required for the associated wetland to be eligible for credit.

The above ratios apply to compensatory wetland mitigation projects that rely on acreage as the accounting unit. A Corps-approved functional assessment methodology can also be used to track project impacts and compute credits at compensatory mitigation sites. If functional assessment is used, impact sites and compensatory mitigation sites must be evaluated with the same methodology. Until functional assessment becomes routine, keep two sets of "books" if possible, one utilizing functional assessment and on utilizing acreage/ratios. This is for comparison only. Once we commit to functional assessment for a given project, we will not switch to acreage accounting.

Ditch Wetlands

Based on a Ninth Circuit Court of Appeals ruling in *Headwaters, Inc v. Talent Irrigation District*, we consider irrigation and drainage ditches that are capable of conveying waters to jurisdictional waters of the United States to be tributaries of those waters. As such, the ditches are regulated under Section 404 of the Clean Water Act (33 CFR 328.3(a)(5)). This only applies to ditches that drain into a water of the United States, and which have an ordinary high water mark and/or a continuum of wetlands along the channel.

For these regulated ditches and canals supporting wetlands, the following mitigation policy applies:

1. Relocation of regulated ditches and canals that support wetlands will be considered self-mitigating at a 1:1 ratio if the new channel is dimensionally similar in cross-section and profile, and in the same type of substrate. Replacement channels with significant deviation in the listed parameters will require compensatory mitigation at the standard ratios.
2. On a case-by-case basis, standard ratios may apply if the ditch or canal is not maintained and has developed a high functioning wetland community.
3. If the ditch or canal is filled in or placed in a pipe for other than a typical road crossing or similar access, standard mitigation ratios apply. Wetlands adjacent to the filled channel will be included as impacts if supporting hydrology is removed.

Streams that have been channelized or otherwise made to resemble a ditch are still regarded as streams for determining mitigation requirements.

Montana Department of
ENVIRONMENTAL QUALITY

Brian Schweitzer, Governor

P.O. Box 200901 • Helena, MT 59620-0901 • (406) 444-2544 • www.deq.mt.gov

Consultant Design

Action	Info	Routing	Attach
		Date 3/10/06	
		Bureau Chief	
		Consultant plans Eng	
		Design Supervisor	
		CTEP Engineer	
		DalSoglio	

March 8, 2006

Michael S. DalSoglio, P.E.
Consultant Design Bureau
Montana Department of Transportation
P.O. Box 201001
Helena, MT 59620-1001

Dear Mr. DalSoglio:

The Department of Environmental Quality (DEQ) reviewed the Montana Department of Transportation's (MDT) administrative draft environmental assessment for improvements to the Marysville Road, between its intersection with Highway 279 and the Ottawa Gulch turnoff in Lewis and Clark County.

The DEQ's comments are as follows:

- On Page 3-36 the sediment mitigation discussion should reference "Montana Department of Transportation Design Considerations for Permanent Erosion Control Features To Reduce Sediment Transport." The discussion should include potential use of design features such as permanent sediment control basins and other structures that will prevent sediment/salt/sand from entering Silver Creek. The Marysville Road reconstruction project has the potential for long-term generation of tons of sediment. The elevation of this road will involve considerable winter maintenance (sand/salt etc.). The steep cut and fill slopes associated with the mountainous topography will likely be very difficult to revegetate and result in the potential for considerable long-term erosion.

- A bridge with curbing to direct sediment/salt to one end of the bridge or to drain ports that do not empty directly into Silver Creek should be considered. If a bridge is not considered feasible, the replacement culvert should be sized to approximately 1.5 bankfull width, or wider, of Silver Creek. The culvert should be imbedded approximately 30-50 percent into the stream bed and a stream constructed within it to simulate Silver Creek's features (sinuosity/substrate etc.). (Note - these design techniques were presented in a recent Forest Service seminar in Missoula, February 7-9, 2006. Several MDT personnel attended the seminar.)

- Silver Creek is a 303(d) listed stream for arsenic. Listed sources in the Total Maximum Daily Load (TMDL) document, which is currently out in draft form for

public comment, include abandoned mines and dirt roads. Additionally, Silver Creek flows into Lake Helena, which is listed for metals (arsenic and lead) and nitrogen and phosphorus. Sediment (especially in areas of abandoned mines) acts as a vehicle for metal and nutrient conveyance into waterbodies. Therefore, actions must be taken to minimize sediment delivery into Silver Creek during and after the construction of the proposed Marysville Road project.

- Channel changes, especially in the Drumlummon mill site will need to consult with the DEQ Mine Waste Cleanup Bureau for two reasons: 1) to minimize, mitigate and/or potentially reduce the metals loading associated with the proposed project disturbance in the vicinity of that site; and 2) ensure that the road work does not preclude or hinder additional clean-up activities that may be contemplated in the future for that site. DEQ suggests that MDT re-examine the potential for alternative realignment in that area, potentially moving the road further to the northwest (perhaps closer to or moving the rock face on the inside corner).

- Additionally, any impacts to wetlands should be mitigated on an equivalent basis (i.e. functional losses should be mitigated by equivalent functional mitigation) and DEQ's Wetlands Program should be contacted regarding their input and suggestions.

- Due to the previously mentioned concerns regarding sediment, DEQ suggests that MDT review and apply appropriate techniques listed in "Recommendations for Winter Traction Materials Management on Roadways Adjacent to Bodies of Water" (WTI, 2004, for MDT), and specifically, the use of dry and wet ponds, vegetated swales, and filter strips as part of this project.

If you have any questions please contact: Jeff Ryan, Water Quality Permitting, 444-4626; Robert Ray, Watershed Management (TMDL), 444-5319; John Koerth, Abandoned Mines, 841-5026; or Lynda Saul, Wetlands, 444-6652.

Sincerely,

Tom Ellerhoff

Tom Ellerhoff
Science Program Manager

Montana Fish, Wildlife & Parks

Marysville Road
TCSP 25(43)
CN 4983

Helena Area Resource Office
P.O. Box 200701-0701
Helena, MT 59620-0701

March 23, 2006

Consultant Design

Action	Info	Routing	Initial / Attach
	Date 3/27/06		
		Bureau Chief	
		Consultant plans Eng	
		Design Supervisor	
		CTEP Engineer	
		DalSoglio	
		Tom Hanson	
		Tom Gocksch	
		File Project	

Michael S. DalSoglio, P.E.
Consultant Design Bureau
Montana Department of Transportation
PO Box 201001
Helena, MT 59620-1001

Dear Mr. DalSoglio,

In response to my memo of March 21 indicating that I had not received either the Administrative Draft Environmental Assessment or the Biological Resources Report for the Marysville road project, I appreciate your effort to send copies of to my office yesterday with Mr. Tom Gocksch. Mr. Gocksch indicated that you would be able to provide me with a week to review the EA, however, I will not be in the office next week, so today I am responding to the best of my ability.

I have read all sections relevant to wildlife in the EA and Biological Resources Report (BRR). Although the comment period is over, we do hope you will carefully consider and include our comment. It is relevant to point out that the Biological Report was completed in June 2004 but not provided to MFWP until March 22, 2006, and as you know, the EA was distributed on February 7, 2006 with a deadline for comment of March 8. At this point it is important to distill the essence of our concern and comment.

Mr. Gocksch pointed out that it is the responsibility of MFWP to provide specific questions in order for his shop to provide specific answers. We disagree. The responsibility of the EA or EIS process is to fully evaluate environmental impacts (among other impact considerations), and that the proponent of a project bears the responsibility to provide a full and adequate assessment of such impacts. The Marysville Highway project will be funded with $10 million of Congressionally ear-marked revenue. The National Environmental Policy Act requires full and consistent consideration of federally funded project impacts on the environment.[1]

We believe we have in fact provided analysis direction and wildlife impact concerns in our initial correspondence of May 20, 2003 and request that correspondence be included in the record and reevaluated in the final EA analysis. We must again stress that this project has the potential to have a serious detrimental consequences for wildlife and wildlife habitat. We restate concerns that we identified in our earlier letter and continue to request full analysis of the following:

1. Protect the function of the Continental Divide wildlife corridor by not funneling motorized users to the Continental Divide
2. Evaluate the cumulative impact of various projects on wildlife and the movement corridor
3. Assure that wildlife, their habitat, and use of that habitat are not diminished
4. Ensure wildlife crossings are fully accommodated through the use of crossing structures, highway design, enforced speed restrictions (45 mph). After reviewing the proposed mitigation measures, we must now add to the list of wildlife crossing needs: No fencing.

There are approximately 300 elk that cross the Marysville Road relatively often. Within the general project vicinity there are at least 100 mule deer. Wildlife crossing the road is certainly a safety issue for wildlife. We note on page 2-15 of the EA in Table 2-3 Comparison of Impacts, that wildlife is not listed but is apparently included under "Environmental Impacts." But no impacts are listed for wildlife.

Wildlife impact analysis should logically include an analysis of site-specific findings as well as cumulative effects. In the Biological Resources Report we note that there was no literature review conducted on any of the following subjects: importance of wildlife movement corridors with respect to habitat fragmentation, consequences of road design in contributing to increased vehicle speed and wildlife collisions, cumulative effects to the immediate area and movement corridor, and recreational effects of OHV and snowmobiling along the continental divide.

Researchers have pointed out the importance of quantifying biological diversity with respect to road projects, but that there is often failure to address this issue adequately because of inadequate guidance. Byron[2] states, "In particular, lack of consideration of the full range of impacts (especially indirect and cumulative impacts), poor baseline surveys/data, poor interpretation of survey results, lack of explanation of the criteria used to determine impact magnitude and significance, lack of consideration of possible mitigation measures, and lack of post-project monitoring."

Macdonald and Smith[3] state, "Fragmentation of habitat is identified as a major threat to the existence of wildlife populations. Fragmentation caused by roadways carries with it the direct problem of roadkill, as well as other adverse impacts to wildlife and wildlife habitat, such as dissection and eventual isolation of populations, edge effects that change the character of the native habitat (e.g. intrusion by exotics), increased human access to and disturbance of previously remote habitat, and facilitation of development and urbanization."

Please note that all literature referenced in this correspondence is from the 1999 Proceedings of the Third International Conference on Wildlife Ecology and Transportation that was held in Missoula Montana, and hosted by the Montana Department of Transportation. Despite the availability of this document, no information from these proceedings nor from previous or subsequent proceedings of the Conference on Wildlife Ecology and Transportation were referenced in the EA or BRR. Ample time has elapsed to digest and incorporate applicable findings.

What was the scientific basis for conclusions drawn in the following paragraph (page 3-33 in Affected Environment, Impacts and Mitigation Measures and again partially repeated on page 3-57 Secondary and Cumulative Impacts) of the EA?

> "Any increase in recreation use as an indirect result of the Marysville project or in combination with other projects is not expected to be of a magnitude to result in adverse affects to wildlife. The Continental Divide wildlife corridor is substantially large enough to absorb minor changes in levels of human use without measurable impacts to wildlife. Additionally, distance between projects minimizes impacts. Adverse effects to mammal species as result of multiple construction activities are considered unlikely due to the localized, temporary, and seasonal nature of the construction projects, staggered construction scheduling, project work downtimes, and availability of alternative suitable habitats. There is expected to remain sufficient available time windows for use of project area habitat and a sufficient quantity of alternative undisturbed suitable habitat so as to make adverse effects unlikely."

No data supporting this conclusion is provided in either the EA or BRR. Regarding the first sentence, the writer's expectations do not constitute analysis of impact. There are 3 subjective qualifiers in the second sentence. Not all of the relevant "projects" were listed in the cumulative effects section. In relation to cumulative wildlife impacts, the following should have been included:

- the Rimini Recreation Highway (proposed to parallel the continental divide wildlife movement corridor for 8 miles and would occur within 1 mile of the divide),
- the proposed Montana Army National Guard/Helena National Forest Biathlon project,
- the recent expansion of the Great Divide Ski Area onto public lands.

Even in the cumulative impact section of the EA or BRR, projects that were listed were not actually evaluated regarding their cumulative impacts to wildlife. How was "sufficient quantity of alternative undisturbed suitable habitat" determined?

The Montana Chapter of The Wildlife Society compiled a report and bibliography entitled, *Effects of Recreation on Rocky Mountain Wildlife: A Review for Montana,* and substantial literature on this subject occurs elsewhere as well. Yet there is no indication that any effort was made to review or consider its application to this project, but "increase in recreation use" associated with the Marysville project was dismissed in this one subjective paragraph.

MFWP correspondence of 2003 indicates the improper application of Montana Natural Heritage Program data and goes on to state, "Specific wildlife inventory efforts in the project area should be part of the baseline data collection prior to construction." However, wildlife field analysis was not part of this process. Downloads of on-line databases (species of special concern, latilong data for birds, field guide reprints for T&E species) do not constitute site-specific effort.

Beyond referencing field guides, limited field work (incidental observations of wildlife in association with "Wetland Assessments") was conducted relative to quantifying wildlife – and it appears that this was the extent to which biological diversity was addressed. In fact, only the olive-sided flycatcher was noted, but it was noted on all 15 assessment sites, lending doubt to the veracity of information provided on these assessments relative to wildlife. The only notation relative to wildlife on the 18 forms provided to evaluate "Routine Wetland Determination" was one beaver pond.

In response to Section 4 of the EA (Comments & Coordination), Montana Fish, Wildlife & Parks wishes to be on record taking the position that this highway development project will not be in the best interest of wildlife. MFWP was solicited to be a "cooperating" agency for this project, and we agreed to "cooperate" in order to present our concerns. We clearly "stress[ed] that this project has the potential to have a series of detrimental consequences for wildlife and wildlife habitat."

Mitigation Measures

- We disagree with, and request removal of the following "mitigation" measure that is listed in the Executive Summary of the Biological Resources Report: "Construct right-of-way fence to allow for wildlife crossing depending on landowner agreement." MFWP does not consider fencing the roadway a wildlife mitigation measure – particularly when no crossing structures and provided. On the contrary, fencing will impede movement across this road and will be in direct opposition to our original and continued concern relative to regular wildlife movement across the Marysville Road. While judicious use of 3-strand barbed wire would be acceptable, woven wire is not. In addition, the syntax of this "mitigation" statement is entirely convoluted.

- We would be very interested to see data that supports creation of roadway fill slopes of "4:1 or steeper" as a valid wildlife mitigation measure. This "mitigation" was cited for every species listed, but we fail to see how steep slopes could possibly help facilitate wildlife movement across the roadway. Steep slopes and guardrails will be an impediment to wildlife crossing. We do not support increasing fill slope steepness as a mitigation measure. On the contrary, more gentle slopes would help wildlife of all species and ages cross the road safely and negotiate guardrails.

- We support establishment of *Wildlife Crossing* signs. Hindalang et al.[4] indicates that because signs are less expensive as a mitigation measure, they don't have to be dramatically effective at reducing wildlife-vehicle collisions to be cost-effective.

- Speed limits are not listed as a mitigation measure in either the BRR or EA, but MFWP believes that, except for the No Action Alternative, enforced speed limits would be the single most important deterrent to elk and deer/vehicle collisions. Literature shows that reduced speed zones have a significant effect on reducing the rate of elk vehicle collisions.[5] If the purpose of this project is to improve safety, speed limit enforcement should be a permanent part of this package.

- We note that our concerns about increased human access to the continental divide, and the resulting impacts to wildlife, were also expressed by R. Mark Wilson, Field Supervisor for the Montana Field Office of the USFWS, who cautioned:

> "... areas in the vicinity of the Marysville Road project provide high-quality habitat for many species of wildlife, including several species of rare forest carnivores. Projects that improve road conditions and allow easier motorized access to remote areas often increase risks to the wildlife that live in those areas. The Service is concerned that the ability of the continental divide area above Marysville to remain as secure habitat and an important wildlife movement corridor may be diminished if vehicle traffic increases in that area. If road improvements continue in this area and result in high quality roads up to and across the continental divide, additive direct and indirect effects to many species of sensitive wildlife may result. In such situations, the risks to wildlife in the area would likely rise as a result of a combination of direct mortality from vehicle collisions, indirect mortality associated with increased levels of human activity in the area, displacement from essential habitats, and habitat fragmentation. We recommend these concerns be fully evaluated if future road improvement projects are considered for this area."

MFWP recommends against road development up the Belmont Road to reduce the funneling of traffic toward the continental divide. Currently the point at which the project would begin is up Belmont Drive 0.7 miles past Marysville at the Ottowa Gulch Road junction. This spot is approximately 1.5 mile from the crest of the continental divide. So, road paving would start about 0.5 mile from the Great Divide Ski Area. Such a publicly funded road would be a huge economic benefit to the ski area ("build it and they will come"), but it would also be distinctly disadvantageous to wildlife in the form of motorized traffic being funneled to the divide (snowmobiles, ATVs, full-sized vehicles). These issues are not adequately evaluated in the Biological Resources report or in the draft EA.

- MFWP recommends that MDT or the county keep a record of all wildlife collisions (date, road location, species) beginning immediately, and summarize the information in an annual report. This is an important monitoring feature and would allow evaluation of the benefits/impacts of road construction. It is unfortunate that baseline information was not collected during the 3-4 year period prior to project implementation. If one were to conclude that there would be little or no impact to wildlife as a result of this project (as has been stated), then one might also presumed that that there have been no wildlife collisions on this road prior to the road's "improvement."

Montana's wildlife is highly valued in a variety of ways. The Montana Challenge project describes in detail the relationship that Montanans have with their wildlife, and the important role that wildlife plays in defining our way of life. It would seem that addressing wildlife impacts for this project in more than a cursory fashion would be in order. All publicly funded projects, especially one of this magnitude ($10 million), have the responsibility to assure that their actions to not diminish Montana's highly regarded wildlife resource.

We request serious consideration of mitigation points provided here. Please incorporate these comments into the record.

Sincerely,

Gayle Joslin
Wildlife Biologist

c: Kurt Alt, Wildlife Manager
Scott Jackson, USFWS

[1] Maurer, M. 1999. Development of a community-based, landscape-level terrestrial mitigation decision support system for transportation planners. Pages 99-109 *In:* Evink, G.L., P. Garrett and D. Zeigler, eds. 1999. Proceedings of the Third International Conference on Wildlife Ecology and Transportation. FL-ER-73-99. Florida Department of Transportation, Tallahassee, Florida. 330pp.

[2] Byron, H. 1999. Biodiversity issues in road environmental impact assessments: guidance and case studies. Pages 111-114 *In:* Evink, G.L., P. Garrett and D. Zeigler, eds. 1999. Proceedings of the Third International Conference on Wildlife Ecology and Transportation. FL-ER-73-99. Florida Department of Transportation, Tallahassee, Florida. 330pp.

[3] Macdonald, L. and S. Smith. Bridge replacements: an opportunity to improve habitat connectivity. Pages 231-236 *In:* Evink, G.L., P. Garrett and D. Zeigler, eds. 1999. Proceedings of the Third International Conference on Wildlife Ecology and Transportation. FL-ER-73-99. Florida Department of Transportation, Tallahassee, Florida. 330pp.

[4] Hindelang, M., D. Premo, E. Rogers, and K. Premo. Addressing deer-vehicle accidents with an ecological landscape GIS approach. Pages 185-192 *In:* Evink, G.L., P. Garrett and D. Zeigler, eds. 1999. Proceedings of the Third International Conference on Wildlife Ecology and Transportation. FL-ER-73-99. Florida Department of Transportation, Tallahassee, Florida. 330pp.

[5] Bertwistle, J. 1999. The effects of reduced speed zones on reducing bighorn sheep and elk collisions with vehicles on the Yellowhead Highway in Jasper National Park. Pages 89-97 *In:* Evink, G.L., P. Garrett and D. Zeigler, eds. 1999. Proceedings of the Third International Conference on Wildlife Ecology and Transportation. FL-ER-73-99. Florida Department of Transportation, Tallahassee, Florida. 330pp.

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General	Corps	Based on our review of the proposed project features, a Department of Army (DA) permit will be required for the work in Silver Creek, in unnamed drainages and tributaries, and in any wetlands adjacent to Silver Creek those waterways.		Acknowledged in Section 3.21.
General	Corps	The document references construction in2006, depending on funding. The time required to process a DA permit application ranges from 30 to 120 days after receipt of a complete application, and depends on the complexity of the proposed work and the expected level of impact on aquatic environment. Please take this into account when scheduling the project for construction.		Comment noted.
General	Corps	Stabilization of highway cut and fill slopes along with establishment of vegetated buffers along Silver Creek, are identified as mitigation measures. Please provide specific details on the slope treatments and vegetated buffers when the Application is prepared for a DA permit. When the project is completed, there should be an appropriately sized vegetated buffer between the roadway and Silver Creek or wetlands to minimize the effects of road maintenance activities, including winter sanding and plowing.		Comment noted.
3.12.3	Corps	Due to the historic mining and milling operations, Silver Creek and its adjacent wetlands are presently somewhat impaired. The Corps request that you explore the practicability of offsetting unavoidable aquatic impacts within the adjacent Silver Creek floodplain. Moving wetland or aquatic out of the local	*Final impacted wetland acreage would be determined based on final road plans. Required mitigation would be determined and plans developed in consultation with the USACE. On-site mitigation is preferred. However, probable mitigation would be through monetary compensation to the Montana Wetland Legacy*	*Final impacted wetland acreage would be determined based on final road plans. Required mitigation would be determined and plans developed in consultation with the USACE. On-site mitigation is preferred. In the event that mitigation sites within or adjacent to the project corridor are not*

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		valley would not aid in the recovery of Silver Creek or the adjacent riparian area.	*program, a program dedicated to constructing wetlands in the region. The preferred location for the constructed wetland would be the Silver Creek drainage and Lewis and Clark County, followed by a regional location.*	*available, mitigation would be through monetary compensation to the Montana Wetland Legacy program, a program dedicated to constructing wetlands in the region. In which case, the preferred location for the constructed wetland would be the Silver Creek drainage and Lewis and Clark County, followed by a regional location.*
3.12.3	Corps	While participation in the Montana In-Lieu Fee program could end up being a compensatory mitigation option, the Corps will likely consider it only as a last resort. Typically, In-Lieu Fee is used only when there are no appropriate or practicable compensatory mitigation alternatives, or in the case where the impacts are too small to make a stand-alone mitigation effort worthwhile.		See above.
General	Corps	When an application for a DA Permit is prepared, it must include a compensatory mitigation plan, and that plan will be subject to review and approval by the Corps as part of any permit decision. Compensatory mitigation will be in accordance with the Montana Regulatory Program Wetland Compensatory Mitigation Ratios.		Comment noted.
3.14.1		"May Affect, Not Likely to Adversely Affect" determinations were made for the Federally listed grizzly bear, Canada lynx, and gray wolf. Prior to making a final permit decision, the Corps will need documentation that consultation with the US Fish and		See Appendix C for USFWS Concurrence Letter.

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		Wildlife Service (USFWS) has been successfully completed.		
3.12.3	Corps	Minimize disturbances to wetland vegetation along the creek.		The following was added to the list of measures rec*ommended to avoid and minimize wetland impacts including impacts from siltation:* ■ *Minimize disturbances to wetland vegetation along the creek.*
3.13.2.2.2	Corps	Culverts and other project features in Silver Creek and its tributaries must allow unimpeded passage of fish and other aquatic organisms. It is recommended that any culverts and bridges provide a waterway that spans the bankfull width of the stream and stimulates an unimpaired natural stream channel.		Comment noted for design. Comment covered in original language of Section 3.13.2.2.2.
General	Corps	The channel change planned on Silver Creek between RP 5.9 and 6.0 must be designed and constructed to simulate the appropriate natural plan, pattern and profile for this reach of Silver Creek. There should be no overall net loss in channel length. It is recommended that a vegetated buffer be included for the zone between the road and the new creek channel to minimize adverse effects from road maintenance and runoff.		Comment noted. Will be addressed in design and permit stage of project.
3.13.2.2.2	DEQ	On Page 3-36 the sediment mitigation discussion should reference "Montana Department of Transportation Design Considerations for Permanent Erosion Control Features To Reduce Sediment Transport." The discussion should include potential use of design features such as permanent sediment control basins and other structures that will	*Sedimentation resulting from erosion of unstable slopes, as well as from sanding operations, would cause additional impacts. These impacts would be expected to be reduced with the reestablishment of vegetation.*	*The Marysville Road reconstruction project has the potential for long-term generation of tons of sediment. The elevation of this road may involve considerable winter maintenance (sand/salt etc.). Sedimentation resulting from erosion of unstable slopes, as well as from sanding operations may cause additional impacts. These impacts could be expected to be reduced with the reestablishment of*

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		prevent sediment/salt/sand from entering Silver Creek. The Marysville Road reconstruction project has the potential for long-term generation of tons of sediment. The elevation of this road will involve considerable winter maintenance (sand/salt etc.). The steep cut and fill slopes associated with the mountainous topography will likely be very difficult to revegetate and result in the potential for considerable long-term erosion.		*vegetation. Revegetating the steep cut and fill slopes associated with the mountainous topography may likely be difficult. The "Montana Department of Transportation Design Considerations for Permanent Erosion Control Features To Reduce Sediment Transport" would be referenced in the design. Permanent sediment control basins and other structures, where feasible, may considered in an effort to prevent sediment/salt/sand from entering Silver Creek.*
General	DEQ	A bridge with curbing to direct sediment/salt to one end of the bridge or to drain ports that do not empty directly into Silver Creek should be considered. If a bridge is not considered feasible, the replacement culvert should be imbedded approximately 30-50 percent into the stream and a stream constructed within it to simulate Silver Creek's features (sinuosity/substrate etc.). (Note-these design techniques were presented in a recent Forest Service seminar in Missoula, February 7-9, 2006. Several MDT personnel attended the seminar.		Design consideration noted.
General	DEQ	Silver Creek is a 303(d) listed stream for arsenic. Listed sources in the Total Maximum Daily Load (TMDL) document, which is currently out in draft form for public comment, include abandoned mines and dirt roads. Additionally, Silver Creek flows into Lake Helena, which is listed for metals (arsenic and lead) and nitrogen and phosphorus. Sediment (especially in areas of abandoned mines) acts as a vehicle for metal and nutrient conveyance into waterbodies.		See response for 3.13.2.2.2. Also, Corps has requested catch basins adjacent to roadway.

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		Therefore, actions must be taken to minimize sediment delivery into Silver Creek during and after construction of the proposed Marysville Road project.		
General	DEQ	Channel changes, especially in Drumlummon mill site will need to consult with DEQ Mine Waste Cleanup Bureau for two reason: 1) to minimize, mitigate and/or potentially reduce the metals loading associated with the proposed project disturbance in the vicinity of that site; and 2) ensure that the road work does not preclude or hinder additional cleanup activities that may be contemplated in the future for that site. DEQ suggests that MDT re-examine the potential for alternative realignment in that area, potentially moving the road further to the northwest (perhaps closer to or moving the rock face on the inside corner.)		Alternatives were looked at in Fall 2004. Ben Quinones (DEQ) was informed that the likely consideration would be to move the road and stream south of its present locations. Sampling was carried out to ensure that the toxic soils would not be impacted at the dump site.
General	DEQ	Additionally, any impacts to wetlands should be mitigated on an equivalent basis (i.e. functional losses should be mitigated by equivalent functional mitigation) and DEQ's Wetland Program should be contacted regarding their input and suggestions.		Covered under Corps comments. DEQ would be consulted as part of the Wetlands Working Group.
General	DEQ	Due to the previously mentioned concerns regarding sediment, DEQ suggests that MDT review and apply appropriate techniques listed in "Recommendations for Winter Traction Materials Management on Roadways Adjacent to Bodies of Water" (WTI, 2004, for MDT), and specifically, the use of dry and wet ponds, vegetated swales and filter strips as part of this project.		Design consideration noted.
General	MFWP	It is relevant to point out that the		MDT procedure is to submit the BRR to

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		Biological Resource Report was completed in June 2004 but not provided to MFWP until March 22, 2006.		USFWS for concurrence. It is not standard procedure to have MFWP review the BRR. Through agency meeting minutes as well as personnel contact, MFWP should have been fully appraised of the document status and when it was completed.
General	MFWP	We believe we have in fact provided analysis direction and wildlife impact concerns in our initial correspondence of May 20, 2003 and request that correspondence be included in the record and reevaluated in the final EA analysis.		The correspondence will be included in the *Draft* EA and will be included in the final. MDT through their consultant (Stahly Engineering & Associates) made attempts to ensure that MFWP personnel were invited to the monthly agency meetings for this project. MFWP personnel's last appearance to the monthly meetings was November 2002 meeting.
General	MFWP	We must again stress that this project has the potential to have serious detrimental consequences for wildlife and wildlife habitat. We restate that we identified in our earlier letter and continue to request full analysis of the following:		
		1. Protect the function of the Continental Divide wildlife corridor by not funneling motorized users to the Continental Divide.		The purpose of the project was safety, as stated in Sections 1.2 and 1.3 of the EA. Individuals are already accessing the Continental Divide area and due to the lack of development opportunity, use of the area is not expected to increase substantially as a result of the project.
		2. Evaluate the cumulative impact of various projects on the wildlife and the movement corridor.		Changes, delays and/or cancellations to numerous projects within Lewis & Clark County make a thorough evaluation of cumulative effects difficult to ascertain. A study of species populations, habitats and migration, along the Continental Divide between the Yellowstone and Yukon Areas, and the cumulative effects of habitat fragmentation is beyond the scope of the EA for this project.

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		3. Assure that wildlife, their habitat, and use of that habitat are not diminished.		Comment noted. The road accesses federal lands where there is little chance of development.
		4. Ensure wildlife crossings are fully accommodated through the use of crossing structures, highway design, enforced speed restriction (45 mph). After reviewing the proposed mitigation measures, we must now add to the list of wildlife crossing needs: No fencing.		Fencing would be designed and installed in accordance with the current MDT Fencing Policy and Procedures for Non-Interstate. Wildlife crossing structures are not warranted due to low traffic counts. Enforcement is an issue outside of the jurisdiction of MDT or FHWA.
Table 2-3	MFWP	We note on page 2-15 of the EA in Table 2-3 Comparison of Impacts, that wildlife is not listed but is apparently included under "Environmental Impacts." But no impacts are listed for wildlife.	*Will require realignment of culvert and relocation of 60 m of Silver Creek. Culvert replacement will allow for downstream fish passage. Impact to water diversion system. Wetland losses. Increased noxious weed establishment and control costs, sedimentation from cut slopes into Silver Creek and visual impacts from tree clearing.*	*Will require realignment of culvert and relocation of 60 m of Silver Creek. Culvert replacement installations will allow for aquatic species passage. Impact to water diversion system. Wetland losses. Increased noxious weed establishment and control costs, sedimentation from cut slopes into Silver Creek and visual impacts from tree clearing. Impaired wildlife movement due to reluctance to cross pavement and/or guardrail. Increased wildlife mortality due to higher traffic speeds.* *Note:* Mitigation measures are found in Chapter 3.
General	MFWP	Wildlife impact analysis should logically include any analysis of site-specific findings as well as cumulative effects. In the BRR, we note that there was no literature review conducted on any of the following subjects: importance of wildlife movement corridors with respect to habitat fragmentation, consequences of road design in contributing to increased vehicle speed and wildlife collisions, cumulative effects to the immediate area and movement corridor, and recreational effects of OHV and		Wildlife field surveys were not conducted, due to the fact that 1) the road project was driven by safety issues, 2) the project would be following the existing alignment, 3) significant changes in traffic patterns were not anticipated and 4) the project was not expected to result in development and/or habitat fragmentation. Site-specific findings not obtained. Cumulative effects found in Section 3.22 state that additional development not anticipated from road improvement and any fragmentation would already be in place. Auto, OHV and snowmobile traffic data are unavailable for the area.

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		snowmobiling along the continental divide.		
General	MFWP	Please note that all literature referenced in this correspondence is from the 1999 Proceedings of the Third International Conference on Wildlife Ecology and Transportation that was held in Missoula, Montana, and hosted by the Montana Department of Transportation. Despite the availability of this document, no information from these proceedings nor from previous or subsequent proceedings of the Conference on Wildlife Ecology and Transportation were referenced in the EA or BRR. Ample time has elapsed to digest and incorporate applicable findings.		Comment noted.
Section 3.13.1.1.2.2 Section 3.22.2 Section 3.22.3.2	MFWP	What was the scientific basis for conclusions drawn in the following paragraph (page 3-33 in Affected Environment, Impacts and Mitigation Measures and again partially repeated on page 3-57 Secondary and Cumulative Impacts) of the EA? *"Any increase in recreation use as an indirect result of the Marysville project or in combination with other projects is not expected to be of a magnitude to result in adverse affects to wildlife. The Continental Divide wildlife corridor is substantially large enough to absorb minor changes in levels of human use without measurable impacts to wildlife. Additionally, distance between projects minimizes impacts. Adverse effects to mammal species as result of multiple construction activities are considered unlikely due*	*3.22.2 Other Projects* *Known or reasonably foreseeable projects proposed by Federal agencies, State of Montana agencies, or others in the general vicinity of the Marysville Road project were reviewed to help assess the potential for cumulative impacts.* *Silver Creek Reclamation Project - In 2002, the DEQ Mine Waste Cleanup Bureau completed site investigations of the Silver Creek Drainage. Remedial design for cleanup of the mining related wastes is complete. DEQ planned to initiate reclamation activities in the drainage during the summer of 2004, however, funding cutbacks have delayed construction.* *Upper Ten Mile Creek/Rimini Reclamation - USEPA is remediating mine waste contamination at the Upper Tenmile Creek Mining Area Superfund Site. Contaminated residential yard soils and mine wastes from abandoned mines will*	Note: Changes, delays and/or cancellations to all projects within Lewis & Clark County make a thorough evaluation of cumulative effects ambiguous. However, the Marysville project is not expected to increase access to roadless areas in the general vicinity. A study of species populations, habitats and migration, along the Continental Divide between the Yellowstone and Yukon Areas, and the cumulative effects of habitat fragmentation on such a large scale is outside the scope of an EA. Proposed projects within the area are discussed in 3.22.2. Change to read: *3.22.2 Other Projects* *Known or reasonably foreseeable projects proposed by Federal agencies, State of Montana agencies, or others adjacent to the Continental Divide and in the general*

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		to the localized, temporary, and seasonal nature of the construction projects, staggered construction scheduling, project work downtimes, and availability of alternative suitable habitats. There is expected to remain sufficient available time windows for use of project area habitat and a sufficient quantity of alternative undisturbed suitable habitat so as to make adverse effects unlikely." No data supporting this conclusion is provided in either the EA or BRR. Regarding the first sentence, the writer's expectations do not constitute analysis of impact. There are 3 subjective qualifiers in the second sentence. Not all the relevant "projects" were listed in the cumulative effects section. In relation to cumulative wildlife impacts, the following should be included: • The Rimini Recreation Highway (proposed to parallel the continental divide wildlife movement corridor for 8 miles and would occur within 1 mile of the divide), • the proposed Montana Army National Guard/Helena National Forest Biathlon project, • the recent expansion of the Great Divide Ski Area onto public lands. Even in the cumulative impact section of the EA or BRR, projects were listed not actually evaluated regarding their cumulative impacts to wildlife. How	*be excavated and disposed in a regional mine waste repository on site. A new water system and road will be constructed in the community of Rimini. The remediation began in 2003 and is expected to take approximately 10 years.*	*vicinity of the Marysville Road project were reviewed to help assess the potential for cumulative impacts.* *Silver Creek Reclamation Project - In 2002, the DEQ Mine Waste Cleanup Bureau completed site investigations of the Silver Creek Drainage. Remedial design for cleanup of the mining related wastes is complete. DEQ planned to initiate reclamation activities in the drainage during the summer of 2004, however, funding cutbacks have delayed construction indefinitely.* *Upper Ten Mile Creek/Rimini Reclamation - USEPA is remediating mine waste contamination at the Upper Tenmile Creek Mining Area Superfund Site (unrelated to the Marysville Road Project). Contaminated residential yard soils and mine wastes from abandoned mines will be excavated and disposed in a regional mine waste repository on site. A new water system and road will be constructed in the community of Rimini. The remediation began in 2003 and is expected to take approximately 10 years.* *Rimini Forest Highway - Proposed to parallel the continental divide wildlife movement corridor for 8 miles and would occur within 2 miles of the divide. The project would begin at US 12 and extend southward. FHWA is presently completing an EA for the poject. The proposed work would be very similar to the Marysville project from the standpoint that it follows an existing alignment and is not expected to result in significant amount of increased traffic.*

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		was "sufficient quantity of alternative undisturbed suitable habitat" determined?		*The Montana Army National Guard/Helena National Forest Biathlon Project is being considered near McDonald Pass, west of Helena. The course would be adjacent to the existing cross-country ski area and US Highway 12. The project is currently in the Internal Draft EA stage. Use of the course could be primarily during the winter. However, some alternatives being considered include increase in summer use.* *Great Divide Ski Area recently (1999 – 2001) expanded their operation to include an additional 800 acres of federal and private lands. The expansion may increase traffic during the winter months.* *Note: Replace 3.22.3.2 Preferred Alternative with the following:* *Construction of the Marysville Road Improvement Project is planned for 2007 depending upon funding. The projects described above (Section 3.22.2) are not contiguous with the Marysville work and the planning, design and construction would likely not occur at the same time. Of the five projects listed, one is complete (the Great Divide Ski Area); one is presently occurring but has a terminal date (Upper Ten Mile Creek Reclamation Project); one has funding issues (Silver Creek reclamation project) and two are in the proposal stage (Rimini Forest Highway and Biathlon Project). MDT would continue to coordinate future projects with the public and appropriate agencies in order to review any potential cumulative impacts and identify any mitigation required for adverse impacts.*

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				Cumulative impacts brought on by the Silver Creek Reclamation project could only be hypothesized at this point due to scheduling of that project. The project could result in increased activity for a short duration, if and when it was to be carried out. Improved habitat would be expected to become possible outcome of the project. Impacts caused by the Upper Tenmile/Rimini Reclamation project are presently occurring and expected to be terminated by 2016. Other than reclaimed depository sites, no additional development is expected. Reclamation of the disturbed sites would be expected as well. The proposed Rimini Forest Highway project is very similar to the Marysville Road project, in the fact that it following an existing alignment and is not expected to significantly increase traffic nor development in the area. It is presently in the planning stage and dependent upon funding. Habitat in and around the Biathlon Course has had a history of public use and development (i.e. US Highway 12, MDT maintenance station, Frontier Town, microwave stations and access roads). Cumulative impacts are anticipated to be minimal from this project. Due to recent development at Great Divide Ski area, any minor or secondary effects from this project and the Marysville Road project may have a cumulative impact. The ski area is seasonally operated and the additional chairlifts recently opened access areas where wildlife would not be expected to be during the winter months, due to limited feeding opportunities.

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				Increased growth and development in the vicinity of the ski hill may result in an increase in impacts due to higher traffic volumes. These impacts may be such things as more noise or air pollution and increase human related activity. An increase in recreational use may be an indirect result of the project and other adjacent projects along the Divide. However, it is anticipated that the Continental Divide wildlife corridor is substantially large enough to absorb minor changes due to these activities without measurable impacts to wildlife. These areas would include the Nevada Mountain area east of the project, the Little Blackfoot Roadless Area southwest of McDonald Pass; and the Scapegoat Wilderness north of Highway 200. Additionally, there are large private, undeveloped holdings surrounding the project, such as the Grady and Sieben Ranches. Growth in the region is likely to occur regardless of the implementation of the Preferred Alternative. No capacity improvements are planned to the Marysville Road, thus negating the possibility of accommodating or generating greater amounts of traffic.
General	MFWP	The Montana Chapter of The Wildlife Society compiled a report and bibliography entitled "Effects of Recreation on Rocky Mountain Wildlife: A Review for Montana" and substantial literature on this subject occurs elsewhere as well. Yet there is no indication that any effort was made to review or consider its application to		Comment noted.

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		this project, but "increase in recreation use" associated with the Marysville project was dismissed in this one subjective paragraph.		
General	MFWP	MFWP correspondence of 2003 indicates the improper application of Montana Natural Heritage Program data and goes on to state, "Specific wildlife inventory efforts in the project area should be part of the baseline data collection prior to construction." However, wildlife field analysis was not part of this process. Downloads of on-line data basis (species of special concern, latlong data for birds, field guide reprints of T&E species) do not constitute site-specific effort.		Wildlife field surveys were not conducted, due to the fact that 1) the road project was driven by safety issues, 2) the project would be following the existing alignment, 3) significant changes in traffic patterns were not anticipated and 4) the project was not expected to result in development and/or habitat fragmentation. Site-specific findings not obtained. Cumulative effects found in Section 3.22 state that additional development not anticipated from road improvement and any fragmentation would already be in place (Field survey issue was never raised in the monthly meetings by MFWP.).
General	MFWP	Beyond referencing field guides, limited field work (incidental observations of wildlife in association with "Wetland Assessments") was conducted relative to quantifying wildlife-and it appears that this was the extent to which biological diversity was addressed. In fact, only the olive-sided flycatcher was noted, but it was noted on all 15 assessment sites, lending doubt to the veracity of information provided on these assessments relative to wildlife. The only notion relative to wildlife on the 18 forms provided to evaluate "Routine Wetland Determination" was one beaver pond.		Due to the fact that minor realignment work is anticipated in conjunction with this project. No additional development and minor changes in traffic pattern should be spawned from the project. Wildlife field surveys therefore were not thought necessary and not budget for. A wetland Assessment is not intended to be a wildlife survey. Wildlife information used in the assessment is generally on a broad, regional or drainage basis. (See the MDT publication MDT Montana Wetland Assessment Method.)
Section 4	MFWP	In response to Section 4 of the EA (Comments & Coordination), Montana Fish Wildlife and Parks wishes to be on record taking the position that this highway development project will not		The letter drafted by MFWP Wildlife Biologist Gayle Joslyn will be included in the final draft of the EA. However, in order for MFWP to go on record in opposition of the project, the correspondence would need to

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		be in the best interest of wildlife, MFWP was solicited to be a "cooperating" agency for this project, and we agreed to "cooperate" in order to present our concern. We clearly "stress[ed] that his project has the potential to have a series of detrimental consequences for wildlife and wildlife habitat.		come from the Director of MFWP. We have received cooperating input and coordination throughout the process, from MFWP Biologists Don Skaar and Steve Dalbey. At the two meetings when Ms. Joslyn was in attendance, the issue of wildlife surveys was not brought up nor discussed.
BRR	MFWP	We disagree with, and request removal of the following "mitigation" measures that is listed in the Executive Summary of the BRR: "Construct right-of-way to allow for wildlife crossing depending on landowner agreement." MFWP does not consider fencing the roadway a wildlife mitigation measure- particularly when no crossing structures are provided. On the contrary, fencing will impede movement across this road and will be in direct opposition to our original and continued concern relative to regular wildlife movement across the Marysville Road. While judicious use of 3-strand barbed wire would be acceptable, woven wire is not. In addition, the syntax of this "mitigation" statement is entirely convoluted.		The EA does not include fencing as a mitigation measure.
BRR	MFWP	We would be very interested to see data that supports creation of roadway fill slope of "4:1 or steeper" as a valid wildlife mitigation measure. This "mitigation" was cited for every species listed. But we fail to see how steep slopes could possibly facilitate wildlife movement across the roadway. Steep slopes and guardrails will be an impediment to wildlife crossing. We do not support increasing fill slopes as		Steepening of the slopes is being done to reduce the overall footprint of the project, correspondingly reducing the impacts to wetlands, Silver Creek and wildlife associated with these environs.

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		a mitigation measure. On the contrary, more gentile slopes would help wildlife of all species and ages cross the road and negotiate guardrails.		
General	MFWP	We support establishment of Wildlife Crossing signs. Hindalang et al.4 indicates that because signs are less expensive as a mitigation measure, they don't have to be dramatically effective at reducing wildlife-vehicle to be cost-effective.		Signs recommended (Section 3.13.1.1.3).
General	MFWP	Speed limits are not listed as a mitigation measure in either the BRR or EA, but MFWP believes that except for the No Action Alternative, enforced speed limits would be the single most important deterrent to elk and deer/vehicle collisions. Literature shows that reduced speed zones have a significant effect on reducing the rate of elk vehicle collisions. If the purpose of this project is to improve safety, speed limit enforcement should be a permanent part of this package.		Comment noted. Law enforcement is a decision of agencies other than MDT or FHWA (i.e. L&C County Sheriff, US Forest Service, MFWP).
General	MFWP	MFWP recommends against road development up the Belmont Road to reduce the funneling of traffic toward the Continental Divide. Currently the point at which the project would begin is up Belmont Drive 0.7 miles past Marysville at the Ottowa Gulch Road junction. This point is approximately 1.5 mile from the crest of the Continental Divide. So, road paving would start 0.5 mile from the Great Divide Ski Area. Such a publicly funded road would be a huge economic benefit to the ski area ("if you build it they will come"), but it would also be distinctly disadvantageous to wildlife		The County is responsible for constructing and maintaining County roads to their specific standards. The County will therefore need to make its own determination if the road accessing the ski hill above Marysville needs the County's attention or not.

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		in the form of motorized traffic being funneled to the divide (snowmobiles, ATV's, full-sized vehicles). These issues are not adequately evaluated in the BRR or in the draft EA.		
General	MFWP	We note that our concerns about increased human access to the continental divide, and the resulting impacts to wildlife, were also express by R. Mark Wilson, Field Supervisor for the Montana Field Office of the USFWS, who cautioned: "areas in the vicinity of the Marysville Road project provide high-quality habitat for many species of wildlife, including several species of rare forest carnivores. Projects that improve road conditions and allow easier motorized access to remote areas often increase risks to the wildlife that live in those areas. The Service is concerned that the ability of the continental divide area above Marysville to remain as secure habitat and an important wildlife movement corridor may be diminished if vehicle traffic increases in that area. If the road improvements continue in this area and result in high quality roads up to and across the continental divide, additive direct and indirect effects to many species of sensitive wildlife may result. In such situations, the risks to wildlife in the area would likely rise as a result of a combination of direct mortality from vehicle collisions, indirect mortality associated with increased levels of human activity in the area, displacement from essential habitats, and habitat fragmentation. We recommend these concerns be fully		Due to the fact that minor realignment work is anticipated with this project, with no additional development and minor changes in traffic pattern expected from the project; wildlife field surveys were not thought to be necessary. (Wildlife field survey issues were not brought up in the monthly meetings by MFWP.)

AGENCY COMMENTS Marysville Road Improvement Project TCSP 25(43) CN 4983				
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		evaluated if future road improvement projects are considered for this area." MFWP recommends against road development up the Belmont Road to reduce the funneling of traffic toward the continental divide. Currently the point at which the project would begin is up Belmont Drive 0.7 miles past Marysville at the Ottawa Gulch Road junction. This spot is approximately 1.5 miles from the crest of the continental divide. So, road paving would start about 0.5 mile from the Great Divide Ski Area. Such a publicly funded road would be a huge economic benefit to the ski area ("build it and they will come"), but it would also be distinctly disadvantageous to wildlife in the form of motorized traffic being funneled to the divide (snowmobile, ATV's, full-sized vehicles). These issues are not adequately evaluated in the BRR or in the draft EA.		
General	MFWP	MFWP recommends that MDT or the county keep a record of all wildlife collisions (date, road location, species) beginning immediately, and summarize the information in an annual report. This is an important monitoring feature and would allow evaluation of the benefits/impacts of road construction. It is unfortunate that baseline information was not collected during the 3-4 year period prior to the project implementation. If one were to conclude that there would be little or no impact to wildlife as a result of this projects (as has been state), then on		Comment noted. This is a county jurisdiction road, with county maintenance and is outside of MDT's jurisdiction. Therefore, MDT accident data records are not available for this roadway.

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		might also presume that there have been no wildlife collision on this road prior to the road's improvement.		

Appendix C
"Nationwide" Programmatic Section 4(f) Evaluation

Appendix C
Section 4(f) Evaluation

Section 4(f) of the U.S. Department of Transportation Act, as amended (49 U.S.C. 303) applies to Federally-funded transportation actions that affect sites on or eligible for the NRHP, publicly-owned parks, recreation lands, and wildlife and waterfowl refuges. Section 4(f) prohibits the use of these lands unless 1.) there is no prudent or feasible alternative to using the land, 2.) the project includes all possible planning to minimize harm. According to the regulations in 23 CFR 771.135(a), a Section 4(f) evaluation must be prepared for use of the Section 4(f) property. Two types of use constitute impact to a Section 4(f) property:

- Direct conversion of use of a Section 4(f) property results from the purchase, lease, easement, or agreement to change the use of all or a portion of the property.

- Constructive use results from an action that would "substantially impair" current use of a Section 4(f) property. Constructive use can occur from impacts related to noise, visual intrusion, major access restrictions, vibration or ecological intrusion. For historical properties, a constructive use occurs when there is an impact that would substantially impair the historic integrity of the property.

C.1 Affected Environment

As discussed in Section 3.16, there are three NRHP-eligible historic sites within the project area including:

- a lithic scatter in White House Park (24LC1827) in Marysville;

- a lithic scatter (24LC1915) near the junction of Marysville Road and Secondary 279; and

- the Marysville Historic Mining District (24LC1083). Twelve properties that contribute to the historic district are located within the Area of Potential Effect for the project.

C.2 Section 4(f) Impacts

C.2.1 No-Action Alternative

This alternative would not result in any impacts to Section 4(f) properties within the project study area.

C.2.2 Preferred Alternative

The proposed project would not result in direct or constructive use of any publicly-owned parks, recreation lands, and wildlife and waterfowl refuges within the project area. MDT has determined that implementation of the Preferred Alternative would result in No Adverse Effect to the Marysville Historic Mining District. As discussed in Section 3.16, the Preferred Alternative would result in impact to the water diversion system (MPF-01), which contributes to the Marysville Historic District. The Preferred

Alternative would realign the roadway to the east over the site of the water diversion system. In this location, the existing culvert would be replaced and a portion of Silver Creek up and downstream of the culvert realigned. Relocating the roadway and impacting the Water Diversion System had less impact to historically and culturally important properties in Marysville and contributes to their preservation.

In 1983, the FHWA developed a "Nationwide" Section 4(f) Evaluation form for projects requiring minor uses of land from NRHP-eligible historic sites. The word "minor" is defined as having either "no effect" or "no adverse effect" according to Section 106 of the National Historic Preservation Act and 36 CFR Part 800. A copy of the completed FHWA "Nationwide" Programmatic Section 4(f) Evaluation Form for the project's potential impact to the Marysville Historic Mining District water diversion system is included in this appendix. The form programmatically demonstrates compliance with the provisions of Section 4(f).

Cumulative Impacts

Potential for encountering Section 4(f) properties increases as roadway improvement projects disturb new lands in the vicinity of the project area. Section 4(f) requires that planning for federally funded highway project be conducted to identify alternatives that would not require the use of these properties and that would minimize harm to these properties should adverse effects be unavoidable.

C.3 Mitigation

The "Nationwide" Programmatic Section 4(f) Evaluation Form for the Marysville Historic Mining District water diversion system found in this **appendix** discusses measures to minimize harm to this property.

MONTANA DIVISION

"NATIONWIDE" *SECTION 4(f)* EVALUATION FOR MINOR IMPACTS ON HISTORIC SITES EXCLUDING HISTORIC BRIDGE REPLACEMENTS

Project # TCSP 25(43), (P.M.S. CN# 4983 Date: November 29, 2005

Project Name: Marysville Road Improvement Project Location: Water Diversion System (MPF-01)

Lewis and Clark County, Montana

NOTE: Any response in a box requires additional information. Consult the "Nationwide" Section 4(f) Evaluation criteria.

		YES	NO
1.	Is the *4(f)* site adjacent to the existing highway?	X	[ ]
2.	Does the proposed project require the removal or alteration of historic structures, and/or objects? **The roadway will be realigned over the site of MPF-01.**	X	[ ]
3.	Does the proposed project disturb or remove archaeological resources which are important to preserve in-place rather than to recover?	[ ]	X
4.	Is the impact on the *4(f)* site considered minor (i.e.: no effect; or no adverse effect)? **There will be no adverse effect to MPF-01.**	X	[ ]
5.	Has the STATE HISTORIC PRESERVATION OFFICE (SHPO) agreed in writing with the assessment of impacts, and the proposed mitigation?	X	[ ]
6.	Is the proposed action under an Environmental Impact Statement (E.I.S.)?	[ ]	X
7.	Is the proposed project on a new location?	[ ]	X
8.	The Scope-of-Work for the proposed project is one of the following:	X	[ ]

a) Improved traffic operation;
b) **Safety improvements**;
c) 3R;
d) Bridge replacement on essentially the same alignment; or
e) Addition of lanes.

ALTERNATIVES CONSIDERED

1.	The "do-nothing" **ALTERNATIVE** has been evaluated, and is not considered to be feasible and prudent. **See Section 2 of the EA**.	X	[ ]

The no-action alternative does not improve safety or correct geometric deficiencies with Marysville Road.

***NOTE**: Any response in a box requires additional information.*
Consult the "Nationwide" Section 4(f) Evaluation criteria.

	YES	NO
ALTERNATIVES CONSIDERED (conclusion:)		
2. An **ALTERNATIVE** has been evaluated on the existing alignment which Improves the highway without any *4(f)* impacts, and is also not considered to be feasible and prudent.	[X]	[ ]
The curve at the location of MPF-01 does not meet design standards. Roadway improvement in compliance with design standards cannot be accomplished on the existing alignment.		
3. An **ALTERNATIVE** on a new location avoiding the *4(f)* site has been evaluated, and is not considered to be feasible and prudent.	X	[ ]
Reconstructing the substandard curve without impact to MPF-01 would be possible. To accomplish this, the centerline of the road would be shifted 6 m (20 ft) to the north toward a rocky knoll across from MPF-01. To provide sufficient room for roadway relocation and widening, it would be necessary to remove a portion of the rock outcrop and several foundations (HA-05) which have been found to be contributing the Marysville Historic Mining District.		
MINIMIZATION OF HARM		
1. The proposed project includes all possible planning to minimize harm.	X	[ ]
2. Measures to minimize harm include the following:		
To mitigate the impacts to the Water Diversion System (MPF-01), the MDT intends to conduct Historic American Engineering Record (HAER) recordation of the feature. The MDT also intends to reconstruct the rubblestone retaining wall adjacent to the restored Silver Creek stream channel as close to its original location as possible.		
COORDINATION		
1. The proposed project has been **COORDINATED** with the following:		
a) SHPO **(January 27, 2004)**	X	[ ]
b) ADVISORY COUNCIL ON HISTORIC PRESERVATION	[ ]	[X]
c) Property owner **(Public Meeting March 2, 2003)**	X	[ ]
d) Local/State/Federal agencies	X	[ ]
2. One of the preceding had the following comment(s) regarding this proposed project, and/or the mitigation:		
SHPO concurred with NRHP eligibility determination for MPF-01 on January 21, 2004.		

SUMMARY

All required **ALTERNATIVES** have been evaluated and the proposed project meets all the criteria included in the "Nationwide Programmatic" *Section 4(f)* evaluation approved on December 23, 1986. This Programmatic Evaluation includes all possible planning to minimize harm which will be incorporated in this proposed project.

APPROVAL

This document is submitted pursuant to **49 U.S.C. 303** and in accordance with the provisions of **16 U.S.C. 470f**.

Montana Department of Transportation — Date: 7/12/06

Approved: Robert J. Selstad — Date: 7/11/06
Federal Highway Administration

"ALTERNATIVE ACCESSIBLE FORMATS OF THIS DOCUMENT WILL BE PROVIDED ON REQUEST."

cc:

Appendix D
Preparers

Name and Title	Company	Project Responsibility
Patricia Burke, P.E. Byron Stahly, P.E. Colt Wise, P.E. Project Manager	Stahly Engineering and Associates	Project Management, Design, Alternatives, Hydraulics, Public Involvement, ROW
Murray Strong Environmental Specialist	Stahly Engineering and Associates	Wetlands
Kent Whiting Project Manager	CDM	EA Project Management, QA/QC
Jeanne Riley, P.E. Project Engineer	CDM	Purpose and Need, Hazardous Waste, Air Quality, Socio-Economic, Farmlands, Environmental Justice, Visual Assessment, Water Quality
Tony Gendusa, Ph.D. Aquatic/Ecological Toxicologist	CDM	Biological Resources, Threatened and Endangered Species
Marc Wallace Environmental Scientist	CDM	Noise
Bob Rennick Environmental Scientist	CDM	Vegetation
Dan Hall Archaeologist	Western Cultural	Cultural Resources
Jon Axline Heidy Bruner Michael DalSoglio, P.E. Tom Gocksch Stacy Hill, P.E. Phil Johnson Lyle Manley Stephen Prinzing, P.E., E.S.E Jean Riley, P.E. Paul Sturm	MDT	EA Review
Carl James Bob Seliskar	FHWA	EA Review