Appendix D

Draft

Section 404(b)(1) Evaluation

SECTION 404(b)(1) EVALUATION

MILLER CREEK ROAD EIS

DTHF 70-00-00016

Prepared for:

Federal Highway Administration
Western Federal Lands

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SECTION 1: INTRODUCTION

The 404(b)(1) guidelines included in Title 40 of the Code of Federal Regulations, Part 230, provide the substantive criteria in evaluating discharges of dredged or fill material in Waters of the United States under Section 404 of the Clean Water Act. These criteria are applicable to all 404 permit decisions. The 404(b)(1) guidelines establish that dredged or fill material should not be discharged into the aquatic ecosystem unless it can be demonstrated that such discharges would not have unacceptable adverse impacts either individually or in combination with known and/or probable impacts of other activities affecting the ecosystem.

Section 230.10 of Subpart B of the 404(b)(1) guidelines establishes four conditions that must be satisfied to make a finding that a proposed discharge complies with the guidelines. These conditions include:

a) Except as provided under Section 404(b)(2), no discharge of dredged material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences;

b) No discharge of dredged or fill material shall be permitted if it violates state water quality standards, Section 307 of the Clean Water Act, or the Endangered Species Act of 1973;

c) No discharge of dredged or fill material shall be permitted which will cause or contribute to significant degradation of the waters of the United States; and

d) Except as provided under Section 404(b)(2), no discharge shall be permitted unless appropriate and practicable steps have been taken which will minimize adverse impacts of the discharge on the aquatic ecosystem.

Adverse impacts may be offset by compensatory mitigation to bring the proposed project into compliance with the 404(b)(1) guidelines. Impacts must be avoided to the maximum extent practicable and remaining unavoidable impacts will then be mitigated to the extent appropriate and practicable by taking steps to minimize impacts and compensate for the loss of aquatics resource functions and values.

Section 230.11 sets forth the factual determination which must be considered in determining whether a proposed discharge satisfies the four conditions of

compliance. These determinations are contained in the following sections of this evaluation.

SECTION 2: PROJECT DESCRIPTION

A. Location

A portion of the Miller Creek Road Environmental Impact Statement (EIS) project area is within the City of Missoula; the remainder is within unincorporated Missoula County. Missoula County is in the northwest portion of the state with Ravalli County to the south and Lake and Flathead Counties to the north. The project area is located entirely within the City of Missoula's urban growth area (see **Figure 1**). US 93 serves as the major north-south transportation corridor in western Montana.

The study area is approximately four miles long and three miles wide including portions of US 93, the Bitterroot River, the city of Missoula, Missoula County and Lolo National Forest. The study area begins near the intersection of Miller Creek Road and US 93 to the north and extends southward approximately four miles along US 93. The east-west boundaries are approximately .25 mile west of US 93 and approximately 2.5 miles east of US 93.

B. General Description

A Draft Environmental Impact Statement (DEIS) is being prepared concurrently with this evaluation. The Draft EIS is being prepared to examine various alternatives for improving access between the Miller Creek area and US 93 in the project area and to identify the associated environmental impacts. The document is currently in preliminary draft form. The Draft EIS, including a draft of this 404(b)(1) Evaluation will be submitted to regulatory agencies for review and comment.

The DEIS evaluates four build alternatives and the No-Action Alternative. In addition, a Preliminary Preferred Alternative has been chosen based on the meeting the project purpose and need with the least environmental impacts. The Preliminary Preferred Alternative is Alternative 5A, which is a widening of Miller Creek Road to meet the projected future 2025 traffic volumes, widening improvements along Old US 93, and intersection improvements at Old US 93/Brooks/Reserve Streets. Alternative 5A does not include a bridge crossing the Bitterroot River or any other Waters of the United States. The build alternatives evaluated in the DEIS (shown in **Figure 2**) and the No-Action Alternative are described below.

FIGURE 1: PROJECT LOCATION MAP

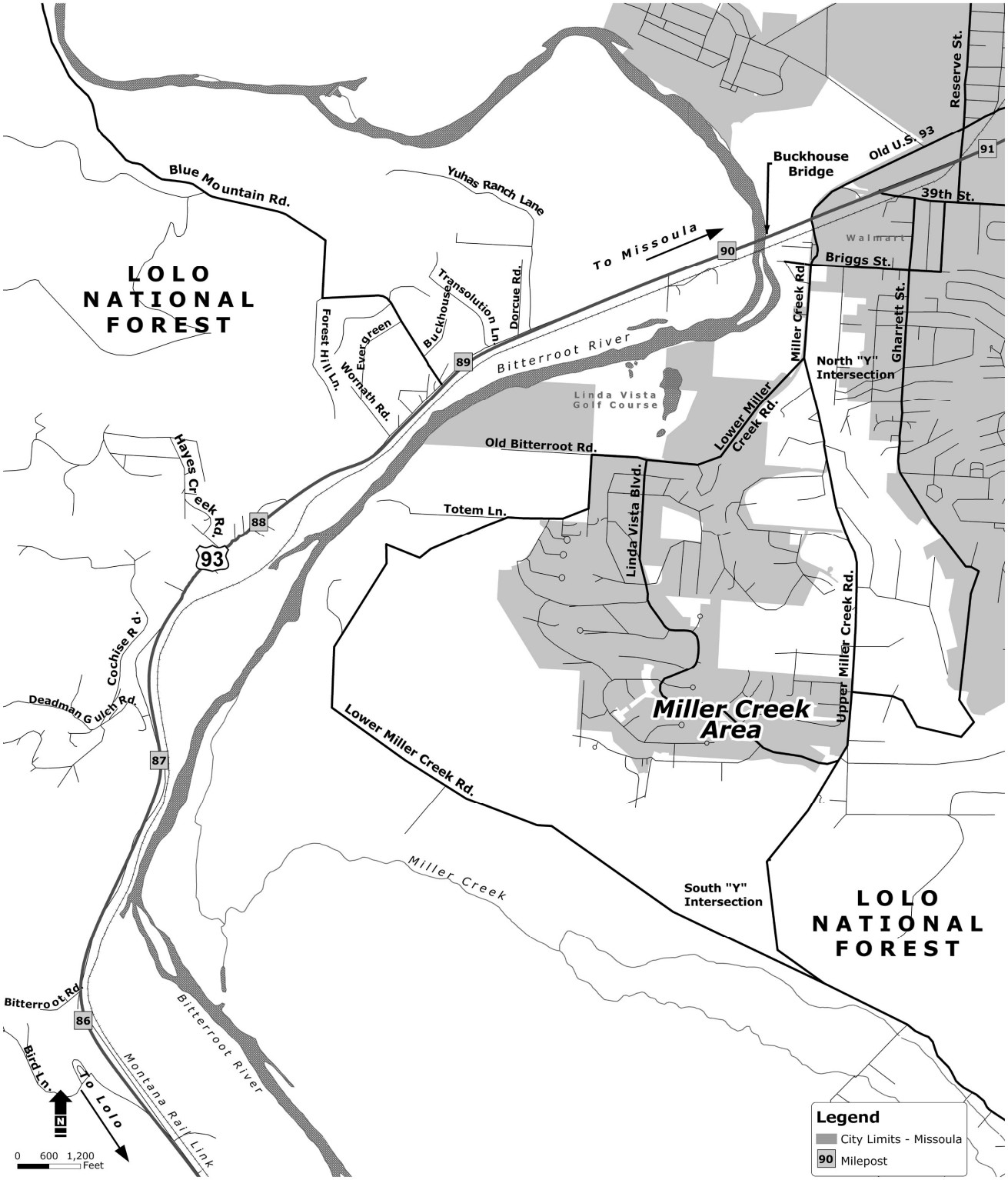
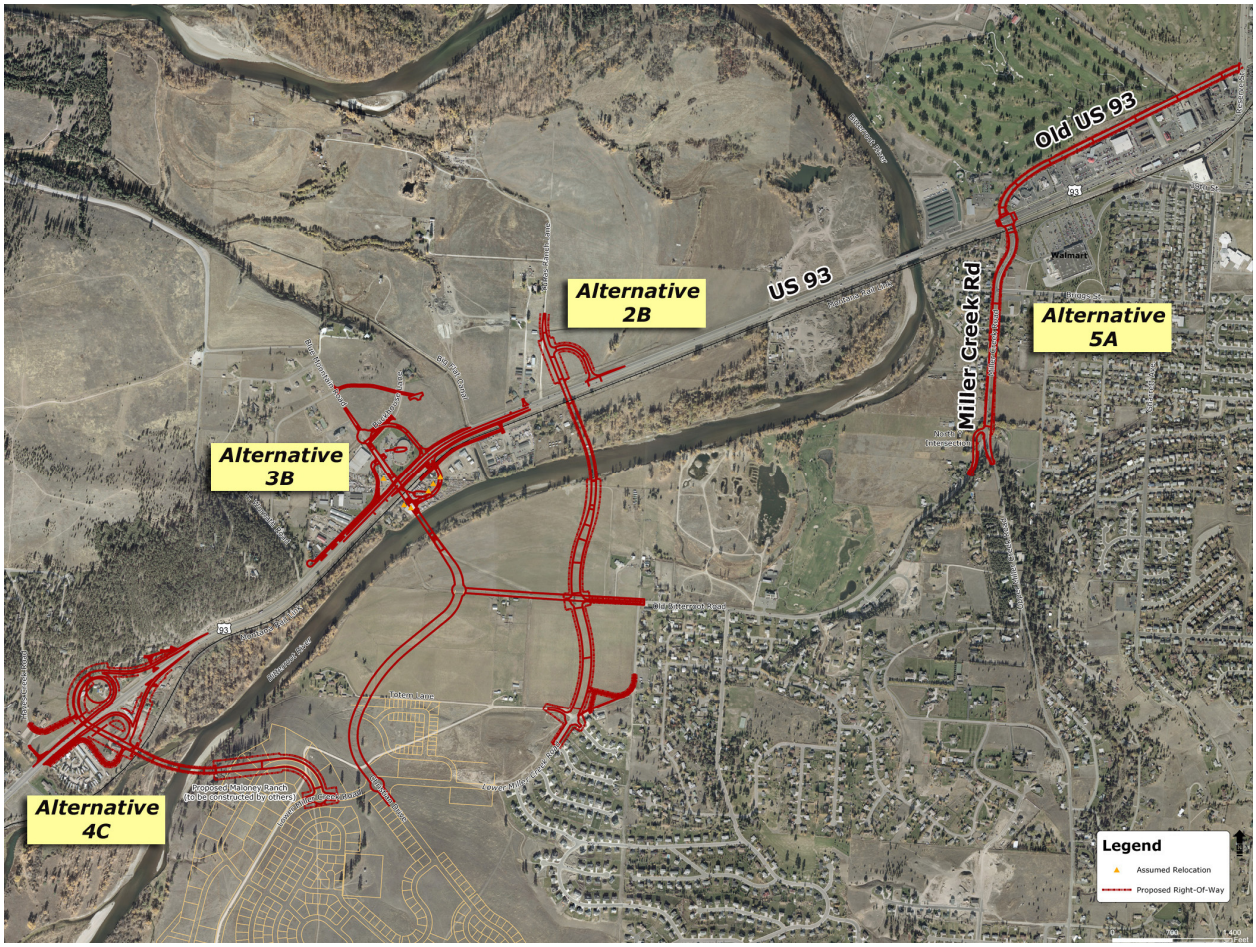


FIGURE 2: DEIS BUILD ALTERNATIVES



Old US 93 Improvements Common to All Build Alternatives

All of the build alternatives include the same improvements to Old US 93 and the intersection improvements of Old US 93/Brooks /Reserve Streets. Old US 93 would be widened to three lanes with a left-turn lane, sidewalk, and bike lanes. A new signal would be installed at this intersection. Old US 93 between Brooks Street and Reserve Street would be widened to accommodate a center left-turn lane plus bicycle lanes and sidewalks.

Miller Creek Road Limited Improvements Common Only to Bridge Alternatives (2B, 3B, and 4C)

The bridge alternatives 2B, 3B, and 4C all include the Limited Improvements to Miller Creek Road which would be widened to three lanes and additional turn-lanes at Briggs and US 93.

Summary of DEIS Alternatives

Alternative 1: No-Action Alternative—The No-Action Alternative consists of transportation improvements that are already in progress or are programmed for development by FHWA, Montana Department of Transportation (MDT), Missoula County, or the City of Missoula. The
No-Action Alternative also includes minor safety and maintenance improvements that might be required along the US 93 corridor. This alternative is fully evaluated in the DEIS and is used as a "baseline" against which the "build" alternatives are compared. The No-Action Alternative is assumed to include locally-funded widening improvements to Miller Creek Road.

Alternative 2B: North Lower Miller Creek Grade-Separated Intersection with Limited Improvements to Miller Creek Road—Alternative 2B would provide access between US 93 and the Miller Creek area with a new 70-foot wide road with bicycle lanes and sidewalks that would extend north from the junction of Maloney Ranch Road and Lower Miller Creek Road across the Bitterroot River. With Alternative 2B, this road would cross over the Bitterroot River, Montana Rail Link (MRL) track, and US 93 on a bridge structure then descend to a location approximately 350 feet north of US 93. From this point, the road would curve to the east and south back to a new signalized intersection with US 93. This "T" intersection with US 93 would provide full movement access/egress to and from US 93. This alternative also includes the Limited Improvements along Miller Creek Road.

Alternative 3B: Blue Mountain Road Grade-Separated Intersection with Limited Improvements to Miller Creek Road—Alternative 3B would provide a new 70-wide roadway with bicycle lanes and sidewalks extending Blue Mountain Road south in a grade-separated crossing of US 93, the MRL track, and the Bitterroot River to connect to Lower Miller Creek Road in the Miller Creek area. A new two-lane access ramp would connect US 93 and Blue Mountain Road with right-in/right-out unsignalized intersections. This access ramp could connect with Blue Mountain Road in a modern roundabout or "T" intersection. This alternative also includes the Limited Improvements along Miller Creek Road.

Alternative 4C: South Lower Miller Creek Interchange with Limited Improvements to Miller Creek Road—Alternative 4C would provide an interchange with the addition of ramp merge and diverge lanes at US 93, north of the intersection of US 93 and Hayes Creek Road. Two 2-lane bridges would be required; one to cross over the Bitterroot River and MRL track, and a second bridge to cross over the US 93 mainline and interchange ramp transitions. The grade of the railroad at this location is sufficiently lower than the grade of the highway to not interfere with the US 93 access configuration. East of the Bitterroot River, a two-lane 70-foot wide roadway with bicycle lanes and sidewalks would connect to the realigned segment of Lower Miller

Creek Road. This alternative also includes the Limited Improvements along Miller Creek Road.

Alternative 5A: Miller Creek Road At-Grade Intersection — Alternative 5A is the alternative which does not include a second access crossing the Bitterroot River. Miller Creek Road would be widened to four through lanes and additional turn lane at Briggs and US 93. The segment of Miller Creek Road between US 93 and the north "Y" intersection would be widened to provide four travel lanes (two lanes in each direction) with a left-turn lane at the southbound and northbound approaches to Briggs Street, bicycle lanes, and sidewalks. A new signal would be installed at the intersection of Miller Creek Road and Briggs Street. This alternative assumes that the north "Y" would be realigned to the north and west of its current location to form a more perpendicular "T" intersection under the locally-funded improvements by the City and County. A new signal would be installed at this intersection. Old US 93 between Brooks Street and Reserve Street would be widened to accommodate a center left-turn lane plus bicycle lanes and sidewalks.

C. Authority and Purpose

The FHWA hereby gives notice that it intends to prepare an Environmental Impact Statement (EIS) in accordance with the National Environmental Policy Act (NEPA), Public Law 910190, 83 Stat. 852 91969), as amended, for road and bridge improvements in the vicinity of Miller Creek Road, Missoula County, Montana.

The Federal Highway Administration (FHWA) proposes to provide safe and improved access between US 93 and the Miller Creek area in Missoula County, Montana. Primary access to the Miller Creek area is currently provided by Miller Creek Road with an indirect access (primarily residential) provided by Gharrett Street. Miller Creek Road experiences heavy traffic use particularly during the AM and PM peak traffic periods with substantial delays occurring at its junction with US 93 and at the north "Y" intersection of Miller Creek Road with Lower and Upper Miller Creek Roads. The indirect access provided by Gharrett Street has limited capacity and effectiveness for moving traffic into and out of the Miller Creek area and directs traffic through a residential neighborhood. Projected increased traffic resulting from approved future development and volumes on US 93 and Miller Creek Road, will result in additional traffic delays and further exacerbate the problems experienced by users of Miller Creek Road. An issue of concern has been the limited access in and out of the area presenting a delay for both residents and emergency service providers in the event of an emergency.

The project area is situated in one of the fastest growing areas in Missoula County. Population growth is expected to continue into the future, and current development

plans would result in approximately 3,000 dwelling units by 2025, thereby affecting the capacity, mobility, and safety of project area roads, including US 93 and Miller Creek Road. The existing primary roadway access to and from the project area is at capacity, and traffic volumes are expected to increase over the next 20 years with expected full build-out of the Miller Creek area. The following summarizes the needs for a safe and improved access between the Miller Creek area and US 93.

- Address high congestion levels at the Miller Creek Road/US 93 intersection.
- Address roadway deficiency and safety concerns at the Upper Miller Creek Road and Lower Miller Creek Road "Y" intersection, at the Miller Creek Road and US 93 intersection, and on US 93.
- Provide pedestrian and bicycle facilities and public transportation access.
- Improve access for emergency service providers.

D. General Description of the Dredged or Fill Material

1. General Characteristics of Material: The detail of this information is provided in the BRR. Because a bridge alternative is not identified as the preferred alternative, fill material is limited to that necessary for road reconstruction. Material used in wetland fills is likely to be an AASHTO-approved fill material with no organics, more granular soils, etc. Also some sub-excavation may be needed for construction of road base. While excavation and borrow sites have not been identified at this time, the site will be chosen in part on certain characteristics. General fill material may be suitable soils, including earth and crushed or naturally occurring sands and gravels.
2. Quantity of Material: The majority of wetland encroachments of fills in wetland areas will be the result of the reconstructed Miller Creek Road as part of the Limited Improvements associated with Alternatives 2B, 3B, or 4C; or the widening improvements associated with Alternative 5A. **Table 1** summarizes the estimated wetland and riparian impacts associated with each of the build alternatives. While the wetland and riparian impacts associated with the bridge crossing alternatives have been minimized by the design of longer bridges that avoid stream bank impacts, there is a greater likelihood of indirect impacts associated with bridge and abutment construction within the Bitterroot River and floodplain. All of the build alternative would include encroachments related to placement of fill into adjacent wetlands and required grading necessary for widening Miller Creek Road to accommodate wider shoulders or additional lanes. The river crossing alternatives include impacts associated with bridge, pier, and abutment construction within and adjacent to the Bitterroot River. The quantities of

proposed fill placement in wetlands, Waters of the United States and riparian vegetation is summarized in **Table 1.**

TABLE 1: SUMMARY OF IMPACT QUANTITIES

	Wetlands (ac)	Waters of the US (cu yds) (1)	Riparian Vegetation (ac)
Alt 1: No-Action Alternative	< 0.2 ac (2)	0	0
Alt 2B: North Lower Miller Creek Grade-Separated Intersection	0.2 ac	2700 cu yds.	0.1 ac
Alt 3B: Blue Mtn. Road Grade-Separated Intersection	0.2 ac	2700 cu yds.	0.2 ac
Alt 4C: South Lower Miller Creek Interchange	0.3 ac	4050 cu yds.	0.3 ac
Alt 5A: Miller Creek Road At-Grade Intersection	0.2 ac	0	0

(1) Impacts associated with pier/column construction (dredge and fill). Material excavated from within the coffer dams will be temporarily stockpiled outside the OHWM. After completion of the pile-driving operations and construction of the pier shafts, this same material will then be reused for backfill within the confines of the coffer dams.
(2) Impacts estimated for locally-funded project for comparison purposes

3. Source of Material: No specific borrow source locations have been identified to date. Borrow will not be taken from areas without proper environmental and archaeological clearances. Borrow sources will likely be chosen which are within close proximity to the project area and therefore will be similar to the on-site soils.

E. Description of the Proposed Discharge Sites

A Biological Resources Report (BRR) was prepared for this study (David Evans and Associates, Inc.,). The BRR documents the methodology used in delineating the wetlands and documents the location, size, and type of wetlands identified within the project corridor. Wetland area that may be impacted by each proposed alternative is identified in **Table 1**. The impact calculations were based on conceptual design (approximately 10 percent design) and are therefore preliminary estimates. Final impacts and further avoidance, minimization, and mitigation will be determined during final design.

1. Location of Sites: The project area lies within the Bitterroot River Basin, the Upper Clark Fork sub-major basin, and the Bitterroot Watershed (HUC [Hydrologic Unit Code] 17010205). The Bitterroot Watershed is located to the

west of the Continental Divide and drains approximately 2,900 square miles, the majority of which falls within Missoula and Ravalli Counties. The majority of wetlands within the project corridor are associated with the riparian areas of the Bitterroot River and its tributaries, and a ditch along Miller Creek Road. **Figure 3** shows the delineated wetland locations.

2. Size of Sites: A wetland survey, delineation, and function/value assessment of project area wetlands was conducted during late July 2003 and June 2004 in accordance with the 1987 USACE *Wetland Delineation Manual* (Environmental Laboratory, 1987) and Executive Order 11990. The *MDT Montana Wetland Assessment Method* was used as the locally accepted method to document the function/value assessment. The project area surveyed for the wetlands is limited to areas in the general vicinity of the build alternatives.
3. Type of Sites: Detailed information on the wetlands in the project area is presented in the *Biological Resources Report* prepared for the EIS. A total of 17 wetlands covering approximately 5.6 acres were identified in the project area. Of the 17 sites, 4 sites (wetlands 4, 8, 16, and 17) did not meet wetland qualifications. The remaining sites were classified under nine hydrogeomorphic types and were of MDT Function/Value Assessment Categories I, III, or IV. The MDT Montana Wetland Assessment Method rates the functions and values of wetlands from Category I (highest) through Category IV (lowest). No Category II wetlands were found in the project area. Only two of the wetlands were rated Category I. The wetland locations are detailed in **Table 2**.
4. Types of Wetland Habitats: Wetlands were divided into jurisdictional wetlands and non-jurisdictional wetland areas, ditches, and canals. The USACE made a final determination on the jurisdiction of the wetlands in a letter dated May 16, 2006 (see **Appendix A**). The following guidelines were used in categorizing wetlands as jurisdictional or non-jurisdictional.
    - Wetlands are defined by the USACE as areas which possess the three mandatory parameters described in Section 404 of the Clean Water Act (CWA), which are hydrophytic vegetation, hydric soils, and wetland hydrology. (The definition given is that of a wetland. AS mentioned below there are some areas that meet the three criteria for a wetland, but are not jurisdictional.)
    - Non-jurisdictional wetland areas are defined as wetlands not connected to waters of the US or to other jurisdictional wetlands by surface water or ground water based on the United States Supreme Court ruling of the Solid Waste Agency of Northern Cook County vs. U.S. Army Corps of Engineers (SWANCC decision), No. 99-1178, January 9, 2001.

FIGURE 3: DELINEATED WETLAND LOCATIONS

TABLE 2: SUMMARY OF WETLAND SITES

Wetland (1)	Legal Description	Vegetated Cowardin Classes (2)	MDT Wetland Rating Cat. (3)	Wetland Size in Project Area (acres)	Source of Wetland Hydrology	Narrative Description
1	T2N, R20W, S2	Palustrine, Emergent, Scrub-shrub	III	0.3	Bitterroot River	Narrow wetland bands and on slopes and a low cobble bar adjacent to Bitterroot River. USACE jurisdictional.
2	T2N, R20W, S2	Palustrine, Emergent	IV	0.01	Watering trough	Wetland in stock enclosure. Isolated, non-jurisdictional.
3	T2N, R20W, S2	Palustrine, Emergent	IV	0.1	Runoff, groundwater	Vegetated ditch at toe of highway embankment. Isolated, non-jurisdictional.
5	T2N, R20W, S2	Palustrine, Emergent, Aquatic bed	III	0.31	Irrigation flows	Narrow emergent wetland bands adjacent to Big Flat Canal and submerged vegetation in the channel. High species diversity. USACE jurisdictional.
6	T2N, R20W, S11	Palustrine, Emergent, Scrub-shrub	I	1.0	Bitterroot River	Narrow to wide wetland bands adjacent to the Bitterroot River. High species diversity. USACE jurisdictional.
5	T2N, R20W, S2	Palustrine, Emergent, Aquatic bed	III	0.31	Irrigation flows	Narrow emergent wetland bands adjacent to Big Flat Canal and submerged vegetation in the channel. High species diversity. USACE jurisdictional.
6	T2N, R20W, S11	Palustrine, Emergent, Scrub-shrub	I	1.0	Bitterroot River	Narrow to wide wetland bands adjacent to the Bitterroot River. High species diversity. USACE jurisdictional.
7 East	T2N, R20W, S2	Palustrine, Scrub-shrub	III	0.1	Bitterroot River	Mainly narrow, patchy wetland bands on a fill slope adjacent to Bitterroot River. USACE jurisdictional.

TABLE 2 (CONT.): SUMMARY OF WETLAND SITES

Wetland (1)	Legal Description	Vegetated Cowardin Classes (2)	MDT Wetland Rating Cat. (3)	Wetland Size in Project Area (acres)	Source of Wetland Hydrology	Narrative Description
7 West	T2N, R20W, S2	Palustrine, Emergent, Scrub-shrub	III	0.8	Bitterroot River	Narrow to wide wetland bands on slopes and gravel bars adjacent to Bitterroot River. USACE jurisdictional.
9	T2N, R20W, S2	Palustrine, Emergent	III	0.1	Bitterroot River	Narrow wetland bands on slopes and gravel bars adjacent to Bitterroot River. USACE jurisdictional.
10	T2N, R20W, S2	Palustrine, Emergent, Forested	III	0.1	Bitterroot River	Narrow wetland bands on slopes and gravel bars adjacent to Bitterroot River. USACE jurisdictional.
11	T2N, R20W, S11	Palustrine, Emergent, Scrub-shrub	I	1.0	Bitterroot River	Wetland bands on slopes and a large cobble bar adjacent to Bitterroot River and wetland bands adjacent to an overflow channel. USACE jurisdictional.
12	T2N, R20W, S2	Palustrine, Emergent	IV	0.07	Runoff	Wetlands adjacent to a small seasonally ponded area in a shallow swale. Isolated, non-jurisdictional.
13	T2N, R20W, S1	Palustrine, Emergent, Scrub-shrub	IV	0.7	Groundwater, runoff	Wetland on heavily grazed, private farming property. Hydrology from a channelized ditch that flows into the wetland through PVC pipes located at the northwestern portion of the property to maintain a ponded area for watering horses. Isolated, non-jurisdictional.

TABLE 2 (CONT.): SUMMARY OF WETLAND SITES

Wetland (1)	Legal Description	Vegetated Cowardin Classes (2)	MDT Wetland Rating Cat. (3)	Wetland Size in Project Area (acres)	Source of Wetland Hydrology	Narrative Description
14	T2N, R20W, S1	Palustrine, Emergent	IV	0.4	Bitterroot River, groundwater	Wetland in a topographically low area at the toe of slope of the RR. Groundwater from river to the west provides hydrology for this wetland. USACE jurisdictional.
15	T2N, R20W, S1	Palustrine, Emergent, Scrub-shrub	III	0.6	Groundwater	Wetland within golf course fenced property in topographically low area at toe of slope. Area around wetland is maintained golf course green. Isolated, non-jurisdictional.

(1)Wetlands 4, 8, 16, and 17 did not meet wetland qualifications.
(2)From Cowardin et al. 1979.
(3)From Berglund 1999.

In addition to these waters, isolated waters and wetlands, as well as man-made channels and ditches, may be Waters of the US, which must be determined on a case-by-case basis. If a ditch or canal returns flow to a Waters of the US, it is tributary to a Waters of the US, and activities undertaken in that water will require a USACE permit.

Under the authority of Section 404 of the Clean Water Act, Department of the Army permits are required for the discharge of fill material into waters of the United States. Waters of the United States include the area below the ordinary high water mark of stream channels and lakes or ponds connected to the tributary system, and wetlands adjacent to these waters.

Based on the guidance cited above, and on location adjacent to the Bitterroot River, a jurisdictional Waters of the US, the following wetlands were determined to be considered jurisdictional: 1, 5, 6, 7 East, 7 West, 9, 10, 11, and 14. Wetlands 2, 3, 12, 13, and 15 are considered isolated or excavated on dry land and,

therefore, non-jurisdictional. Wetlands 4 and 8 did not meet wetland qualifications.

1. Timing and Duration of Discharge: The timing and duration of construction activities will depend on the alternative chosen for the project and the type of construction activities required. Detailed schedules and phasing plans will be prepared during the final design. The timing and duration will be determined to minimize turbidity and other disturbances in the wetlands and/or Waters of the United States. Construction schedules will be specified to not conflict with spawning and migration periods for sensitive species.

F. Description of Disposal Method

The type of disposal methods will depend on the type of construction that may be conducted in a specific location. The build alternatives would consist of three construction methods: new roadway construction, bridge construction over the Bitterroot River and US 93, and roadway reconstruction. The river crossing alternatives would require all three methods. Alternative 5A, the preliminary preferred alternative does not include a bridge over the Bitterroot River and therefore would only require the roadway reconstruction method.

1. New roadway construction would be necessary for the new roadway that would connect the new US 93 intersection and bridge over the Bitterroot River with the roadway network in the Miller Creek area. New roadway construction would require the placement of fill material in wetlands adjacent to the Bitterroot River and floodplain. The fill material would be placed in the wetlands by large earth-moving equipment such as excavators and bulldozers. The fill material would likely be acquired from nearby source pits or excess material from other areas within the project corridor. The fill would be required to construct the necessary side slopes and adjust the elevation of the roadway.
2. For the bridge alternatives, bridge construction over the Bitterroot River and US 93 would require that the streambed be excavated to construct the footings and piers for the structure. Where feasible bridges would be build such that footings are outside of the wetland. Some bridge piers may utilize driven piling or drilled shafts, which result in minimal disturbance to the streambed and banks. The contractor will utilize coffer dams to minimize stream impacts. Coffer dams are temporary structures, which are constructed in the streambed and enclose the construction activities. After they are in place, the creek water trapped within the dam is pumped out to expose the creek bed and facilitate the excavation and construction activities. The excavated materials and pumped water from within the coffer

dams would be transferred to a temporary settling pond to remove sediment. The sediment would be disposed of in proper locations and the water would be returned to the stream. Any associated settling ponds required for construction will be identified before construction permits were obtained. However, the Preliminary Preferred Alternative does not require a bridge over the Bitterroot River, making these construction methods unnecessary.

3. Roadway reconstruction would be required for all alternatives for improvements along Miller Creek Road (Limited Improvements with Alts 2B, 3B, and 4C and stand alone with Alt 5A) and Old US 93. In addition, Alt. 2B and 3B require some reconstruction of US 93 to accommodate the new access ramps crossing the Bitterroot Branch of the Northern Pacific Railroad (MRL line) at grade. The construction method for roadway reconstruction would be similar to the new roadway construction method. Roadway widening and reconstruction requires the placement of fill material in wetlands located along Miller Creek Road.

SECTION 3: FACTUAL DETERMINATIONS (SECTION 230.11)

Individual and cumulative effects of the discharges for both the short-term and long-term were evaluated in making determinations where applicable. These are fully described in the project BRR. Because the FHWA has preliminarily identified a non-bridge alternative as the preferred alternative, this 404(b)(1) analysis references the BRR and DEIS for this detail. The impacts associated with Alternative 5A (preferred alternative) are limited to 0.2 acre of fill to non-jurisdictional wetlands and no direct impacts to Waters of the US.

A. Physical Substrate Determinations

See project BRR and DEIS.

B. Water Circulation, Fluctuation and Salinity Determinations

See project BRR and DEIS.

C. Suspended Particulate/Turbidity Determinations

See project BRR and DEIS.

D. Contaminant Determinations

See project BRR and DEIS.

E. Aquatic Ecosystems and Organism Determinations

See project BRR and DEIS.

F. Proposed Disposal Site Determination

See project BRR and DEIS.

G. Determination of Cumulative Effects on the Aquatic Ecosystem

See project BRR and DEIS Section 4.24.

H. Determination of Secondary Effects on the Aquatic Ecosystem

See project BRR and DEIS.

SECTION 4: FINDINGS OF COMPLIANCE

A. Adaptation of the Section 404(b)(1) Guidelines to This Evaluation

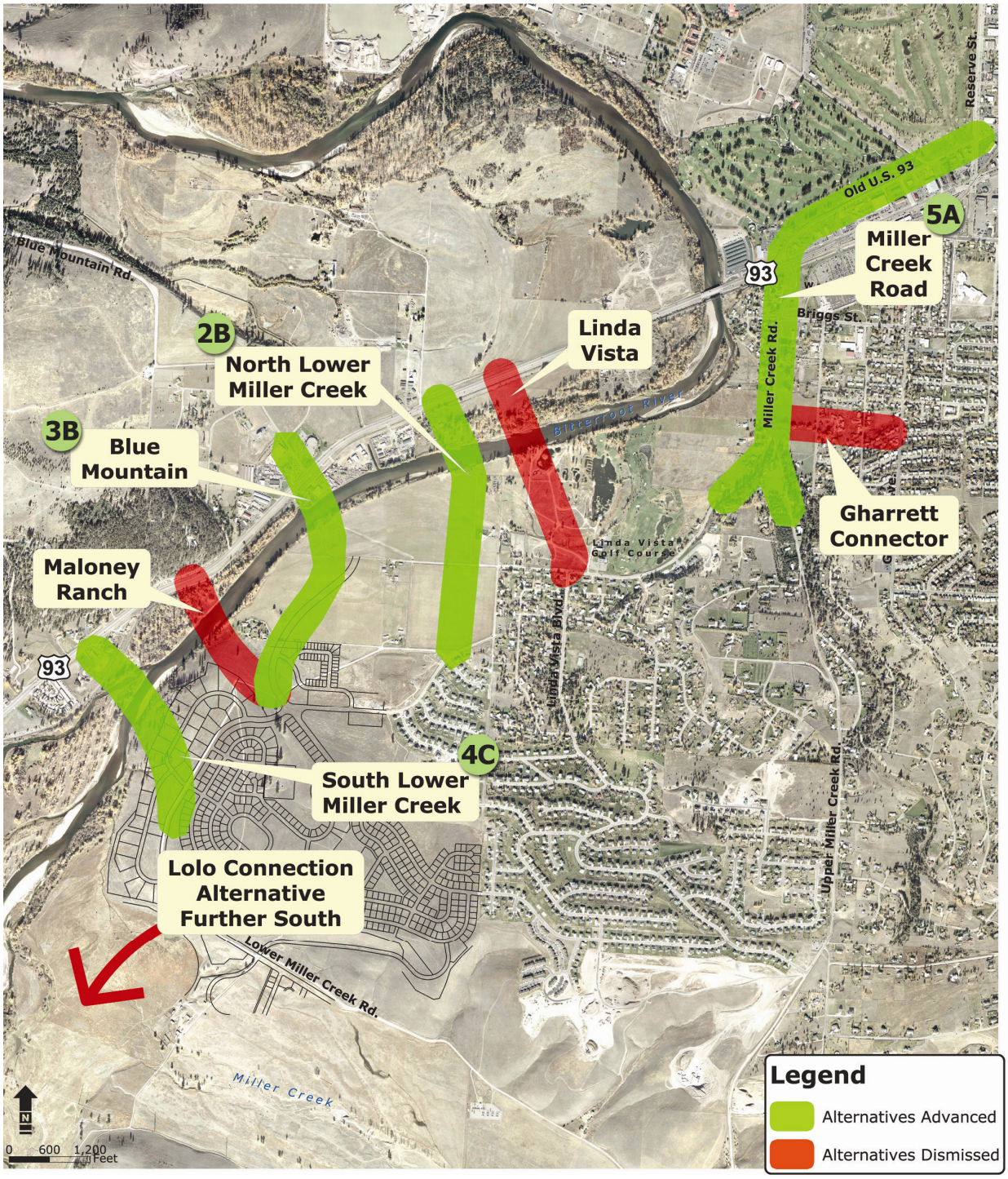
This evaluation is based on conceptual design of the project alternatives and identifies and quantifies the environmental impacts associated with the proposed action insofar as present design data allows. Before the project can be advanced to the design stage, the preferred alternative must be documented in a Record of Decision, and a formal design for it must be developed and approved. Some project specific information required for the Section 404(b)(1) evaluation may not be accurately depicted until final design plans are available.

B. Evaluation of Availability of Practicable Alternatives to the Proposed Discharge Site Which Would Have Less Adverse Impact on the Aquatic Ecosystem

Section 230.01(a) of the Guidelines state "except as provided under 404(d)(2), no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences." For the purpose of this requirement, practicable alternatives include, but are not limited to, activities which do not involve a discharge of dredged or fill material into the Waters of the US or discharges of dredged or fill material at other locations in Waters of the US. An alternative is practicable if it is "available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes."

Nine corridors were identified as potential alignments to meet purpose and need within the project area (**Figure 4**). These are: Lolo South; South Lower Miller Creek; Maloney Ranch; Blue Mountain; North Lower Miller Creek; Linda Vista; Gharrett Street Connector; Orchard Street Connector; and Miller Creek Road. To enhance connectivity within the Miller Creek area, the existing and future

FIGURE 4: PROJECT AREA WITH ORIGINAL 9 CORRIDORS



planned development was considered in defining and evaluating the alignment corridors. These alignment corridors were evaluated for fatal flaws, refined, and combined with US 93 connection options that then became the range of alternatives considered. These alternatives were evaluated for feasibility and reasonableness, after which five alternatives were dropped from further consideration. The outcome of this process is four build alternatives that best meet the purpose and need by providing safe and improved access between the Miller Creek area and US 93. (See **Figure 2**) Alternative 5A has been preliminarily identified as the Preferred Alternative. Each of the four build alternatives includes improvements to Miller Creek Road and impacts to the non-jurisdictional wetland #13.

Each of the three river crossing alternatives requires a bridge over the Bitterroot River and associated piers/column construction. Wetland impacts are closely associated with the stream bank and riparian corridor along the Bitterroot River. Wetlands were not found in the upper slope grasslands and floodplain areas. **Table 3** is a summary of the build alternative impacts to wetlands and jurisdictional Waters of the US.

Alternative 4C would have the greatest impacts to jurisdictional wetland and Waters of the United States due to the more extensive bridge construction and number of piers required within the channel. Of the build alternatives, Alternative 5A – Miller Creek Road At-Grade Intersection would result in the least amount of impacts to wetlands and jurisdictional Waters of the US and Alternative 4C would have the greatest impacts.

Under the No-Action Alternative, there would be no changes or improvements to access between US 93 and the Miller Creek area aside from the locally-funded improvements along Miller Creek Road and the north "Y" intersection. Emergency services would continue to experience difficulty and delay accessing the Miller Creek area, aside from the newly proposed fire station. Therefore, the purpose and need for this project to improve access between US 93 and the Miller Creek area would not be met.

Alternative 5A-Miller Creek Road At-Grade Intersection (preferred alternative) would improve access between US 93 and the Miller Creek area with addition travel lanes and turn lanes for residents and emergency service providers. The proposed typical section provides safe and improved accommodations for pedestrians and bicyclists. The widening of Old US 93 and the intersection improvements of Old US 93/Brooks/Reserve Streets are included with all of the build alternatives and effectively address congestion issues at the US 93/Miller Creek Road intersection. There would be no wetland or Waters of the US

impacted along Old US 93 or Brooks/Reserve Streets. This alternative would meet the purpose and needs of the project.

TABLE 3: SUMMARY OF WETLAND AND JURISDICTIONAL WATERS OF THE US IMPACTS

	Jurisdictional Wetland Impacts	Non-Jurisdictional Wetland Impacts (1)	Impacts to Waters of the US: Number of Piers/Columns within the Bitterroot River Channel	Riparian Vegetation Impacts
Alt 2B: North Lower Miller Creek Road Grade-Separated Intersection	Temp. impacts during construction/ precipitation events to wetlands #1 & # 9	0.2 ac	2 piers/6 columns	0.1 ac
Alt 3B: Blue Mtn. Road Grade-Separated Intersection	Temp. impacts during construction/ precipitation events to wetlands #5, #7East, #10	0.2 ac	2 piers/6 columns	0.2 ac
Alt 4C: South Lower Miller Creek Interchange	0.1 ac to wetland #6	0.2 ac	3 piers/9 columns	0.3 ac
Alt 5A: Miller Creek Road At-Grade Intersection	0	0.2 ac	0	0

(1) non-jurisdictional wetland impacts are associated with Wetland #13 adjacent to Miller Creek Road.

The bridge alternatives (2B, 3B, and 4C) would provide additional safety and access benefits to the Miller Creek area by creating a second access for residents and emergency service providers. An alternative that includes a second access is a high priority to the Miller Creek area residents. These alternatives would meet the project purpose and needs to varying degrees, Alternatives 2B and 3B to a greater degree, but require a crossing of the

Bitterroot River and associated impacts, whereas Alternative 5A meets the project purpose and needs without the same extent of impact or estimated cost. A second access would remain a future planned improvement for local officials.

However, the ability to meet the project purpose and needs, meet future traffic projections, avoid impacts to the Bitterroot River, have minimal environmental impacts, and maintain a reasonable construction cost are all reasons that Alternative 5A has been identified as the preliminary preferred alternative.

C. Compliance with Applicable State Water Quality Standards

Providing that following permits are issued, the proposed project will be in compliance with the State Water Quality Standards. However, as Alternative 5A - the preferred alternative would not require a bridge crossing the Bitterroot River, a number of these permits would not be required should the project Record of Decision choose Alternative 5A as the preferred alternative.

1. A Montana Stream Protection Act Permit (124 Permit) must be issued by the State of Montana Department of Fish, Wildlife, and Parks (MFWP).
2. A short-term exemption from Montana's Surface or Water Quality Standards (3a authorization) will be required. The Montana DEQ will issue this permit. The purpose of the law is to protect water quality, minimize sedimentation, and provides short-term exemptions from water quality standards to certain activities carried out in accordance with conditions prescribed by Montana DEQ. Approval of the application (outlines impacts) and issuance of the permit constitutes compliance.
3. The Montana Floodplain and Floodway Management Act will require Floodplain Development permits issued by the Floodplain Administrators for Missoula County. The purpose of this law is to restrict floodplain and floodway areas to used that will not be seriously damaged or present a hazard to life if flooded, thereby limiting the expenditure of public tax dollars for emergency operations and disaster relief. Application for the permit provides specific engineering information to evaluate impacts and approval of the application and issuance of the permit constitutes compliance.
4. The project will require a Section 402 Montana Pollutant Discharge and Elimination System permit from the Montana DEQ. The purpose of this law is to minimize soil erosion and sedimentation, thereby maintaining water quality and protecting aquatic resources. Specific plans for stormwater pollution prevention are developed and submitted for review by Montana DEQ, demonstrating how and where BMPs will be used to minimize adverse impacts to aquatic resources. Approval of the plan and establishment of such additional conditions as may be necessary through issuance of the permit constitute compliance.
5. Section 401 of the Clean Water Act requires the Montana DEQ to certify that any discharges into State Waters comply with water quality standards before Federal permits or licenses are granted. The purpose of this law is to restore and maintain the chemical, physical, and biological integrity of Montana's surface waters. Montana DEQ will review plans for construction of a given project as well as reviewing the status of other permits requested from and issued by other agencies before approving the proposal. Issuance of the permit constitutes compliance.

In all cases, review of proposed plans and possible impacts associated with implementation of the proposed action may require agencies to request modification of the design, implement mitigation measures, or meet other specified requirements before compliance is achieved through permit issuance. Strict adherence to the permits and their associated provisions and conditions constitute compliance during construction and after for the life of the improvement. Unapproved deviations or non-adherence to these conditions would constitute non-compliance with the law, requiring the owner to take corrective action or face associated penalties or civil action.

As long as acceptable construction practices and design procedures are followed, the acquisition of these permits should be fairly routine. BMPs will be identified using a SWPPP to ensure compliance with the State of Montana's Pollutant Discharge Elimination System regulations.

The DEIS further discusses the project relative to the State of Montana's Water Quality standards. Contractors will be required to strictly adhere to the provision of all permits and regulations. The project is in compliance with the following federal water quality standards:

a. Clean Water Act, as Amended (Federal Water Pollution Control Act), 33 USC 1251 et seq: The project is in compliance. Although Section 404 permit processing has not been completed, FHWA has been in contact with the USACE and EPA and early coordination is allowing proper planning to meet all requirements.
b. Fish and Wildlife Coordination Act, as Amended, 16 USC 61, et seq.: The project is in compliance. The MFWP and USFWS have been involved in the project planning and their comments have been incorporated into the DEIS and alternative design.
c. Floodplain Management (Executive Order 11988): The project is in compliance. The project will be designed to not have significant effects on floodplains.
d. Protection of Wetlands (Executive Order 11990): The project is in compliance. The project will involve fill within wetlands, but appropriate measures to avoid, minimize, then provide compensatory mitigation as required have been established.
e. Missoula Sole Source Aquifer designation under Section 1424(e) of the Safe Drinking Water Act: This designation requires review of projects to avoid Federal

funding to projects that may endanger the ground water resource. Issuance of a concurrence letter of no effect from the US Environmental Protection Agency (EPA) for the sole source aquifer.

6. The following federal water quality standards are not considered applicable to this project:
   a. Coastal Zone Management Act, as Amended, 16 USC 1531, et seq; This Act is not applicable because the project area does not involve a coastal zone.
   b. Estuary Protection Act, 16 USC 1221, et seq: This Act is not applicable because the project does not involve an estuary.
   c. Federal Water Project Recreation Act, as Amended, 16 USC 460-1(12) et seq: This Act is not applicable because the project is not considered to be a water recreation project.
   d. Marine Protection, Research, and Sanctuaries Act, 33 USC, 1401, et seq: This Act is not applicable because the project does not involve the discharge of materials into the ocean.
   e. Rivers and Harbors Act, 33 USC, 401, et seq: This Act is not applicable because the project would not place obstruction in a navigable waterway.
   f. Watershed Protection and Flood Prevention Act, 16 USC 1101, et seq: This Act is not applicable because the project does not involve the construction of dams in an upstream watershed.

D. Compliance with Applicable Toxic Effluent Standard or Prohibition under Section 307 of the Clean Water Act

Section 307 of the Clean Water Act imposes effluent limitations or prohibitions on discharge of materials containing toxic pollutants into surface waters, specifically adrin/dieldrin, several DDT compounds, endrin, toxaphene, benzidine, and polychlorinated biphenyis (PCB). The project will not discharge any of these specified toxic pollutants; therefore it will be in compliance with Section 307 of the Clean Water Act.

E. Compliance with Endangered Species Act of 1973, As Amended

A BRR has been prepared for this project that addresses impacts to threatened and endangered species. The BRR concluded that the project effect for all alternatives to bald eagles is *may affect, not likely to adversely affect*. The proposed alternatives will have *no effect* on grizzly bears, gray wolves, or Canada lynx. The proposed

alternatives *will not destroy or adversely modify* proposed critical habitat for Canada lynx. Should critical habitat be designated prior to construction of a preferred alternative, the project would have *no effect* on designated critical habitat for Canada lynx.

The alternatives that cross the Bitterroot River *may affect, and are likely to adversely affect* bull trout and designated critical habitat. *No effect* to bull trout or designated critical habitat would result from Alternative 5A.

F. Compliance with Specific Measures for Marine Sanctuaries Designated by the Marine Protection, Research, and Sanctuaries Act of 1972

Due to the fact that this project does not involve the ocean, this act is non-applicable.

G. Evaluation of Extent of Degradation of the Waters of the United States

Each of the following sections is previously discussed in this evaluation. The following statements represent the conclusions of these discussions.

1. Significant Adverse Effects on Human Health and Welfare: This project, particularly Alternative 5A, will not adversely affect municipal or private water supplies, recreation and commercial fisheries, aesthetics, or water-borne disease rates. Although temporary water quality degradation associated with turbidity and sedimentation and temporary cessation of informal fishing access would occur during construction (should a bridge alternative be identified as preferred), no long-term adverse impacts on water quality or the human environment are anticipated.
2. Significant Adverse Effects on Life Stages of Aquatic Life and Other Wildlife Dependent on Aquatic Ecosystems: Short-term localized disruption to wildlife habitat, benthos, invertebrates and vertebrates, photosynthesis, plankton, and sight feeders is expected to result from the turbidity and sedimentation caused by construction of the preferred alternative. However, this project would not significantly or adversely produce long-term effects on the life stages of aquatic organisms or other wildlife dependent upon aquatic ecosystems.
3. Significant Adverse Effects on Aquatic Ecosystem Diversity, Productivity, and Stability: This project, particularly Alternative 5A, would not produce significant adverse effects on the diversity, productivity, or stability of the aquatic ecosystems in the project area.
4. Significant Adverse Effects on Recreational, Aesthetic, and Economic Values: This project would not have a significant adverse effect on the recreational,

aesthetic, or economic value of any Waters of the United States or aquatic ecosystems in the project area.

H. Appropriate and Practicable Steps Taken to Minimize Potential Adverse Impacts of the Discharge on the Aquatic Ecosystem

The measures taken to minimize the adverse impacts of the discharge on the aquatic ecosystems have previously been described in this evaluation. To summarize, the most significant impact of the proposed project would be erosion of disturbed areas producing increased levels of suspended sediments and turbidity in the surface waters. For Alternative 5A this would be to the extent that runoff into the Bitterroot River occurs from increased surface runoff and impervious surface due construction activities and to the widening of Miller Creek Road, side streets intersections, and Old US 93. To minimize these adverse impacts during and after construction, a SWPPP will be established to identify and assure implementation of BMPs. General steps to minimize adverse impacts include:

- Runoff from the impervious surface areas associated with Alternatives 2B, 3B, and 4C bridges are planned to be intercepted and redirected to the detention systems south and east of the Bitterroot River to avoid contributions of contaminants to the Bitterroot River.
- Any improvements will be designed to be consistent with TMDLs that are in preparation by MDEQ.
- All work in and adjacent to wetlands and water resources will follow state, federal, and local permit requirements.
- A Stormwater Pollution Prevention Plan (SWPPP) employing Best Management Practices (BMPs) for controlling erosion and sediment transport would be implemented in the project area.
- Development of a revegetation plan, erosion control plan, and stormwater pollution prevention plan would be coordinated with appropriate permitting and resource agencies.
- Development of BMPs for winter maintenance operations.

I. Conclusions

Following the inclusion of appropriate and practicable conditions to minimize pollution or adverse effects on the aquatic ecosystem, the proposed disposal sites for the direct discharge of dredged or fill material are specified as complying with the requirements and the guidelines of Section 404 of the Clean Water Act. The appropriate and practicable conditions are discussed in Section H above.