

**United States Department of the Interior
Bureau of Land Management**

**Environmental Assessment
for the**

**City of Grand Junction's
Leach Creek & Bosley Wash Detention Basins**

**Water Division 5
Mesa County, Colorado**

Grand Junction Field Office
2815 H Road
Grand Junction, Colorado 81506

DOI-BLM-CO-130-2012-0023-EA
COC-75375

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CHAPTER 1 - INTRODUCTION

1.1 IDENTIFYING INFORMATION

BACKGROUND: This EA has been prepared by the BLM in response to the City of Grand Junction's application for a Transportation and Utility Systems and Facilities Right-of-Way Grant to construct an earthen stormwater detention basin in the intermittent Leach Creek and Bosley Wash drainages located on BLM land in the desert area north and east of Grand Junction, Colorado. Under current conditions, stormwater originating from Leach Creek and Bosley Wash traverse through residential and commercial areas in Grand Junction and has caused flooding and severe property damage. The detention basin is needed to protect lives and properties by detaining stormwater runoff from severe storm events.

Material for the Leach Creek embankment would be borrowed from the floor of the detention basin, encompassing approximately 9.98 acres. The embankment would measure approximately 1,470 feet in the East-West direction and 37-feet high from the bed of Leach Creek. The spillway would be 600-feet long by 500-feet wide. The maximum probable area of influence during the 100-year storm event would be 56.755 acres. The proposed Bosley Wash detention basin would be built to the same design criteria as the Leach Creek structure but at a smaller scale which is appropriate to fit the smaller drainage area.

The project has been designed by Mr. S. Bret Guillory, PE, and Mr. David R. Donohue, PE. The project would be reviewed by the State of Colorado Department of Natural Resources, Office of the State Engineer and would be constructed and maintained in accordance with their specifications. The City would perform regular operation and maintenance of the detention facility, including removal of any accumulated debris and sediment that may be deposited by flood events.

CASEFILE/PROJECT NUMBER: COC-75375

PROJECT NAME: City of Grand Junction Leach Creek & Bosley Wash Detention Basins
PLANNING UNIT: Grand Junction Field Office

1.2 PROJECT LOCATION AND LEGAL DESCRIPTION

Leach Creek detention basin:

Ute Principal Meridian:
T. 1 N., R. 1 W., Section 13: SW $\frac{1}{4}$ NE $\frac{1}{4}$.

Bosley Wash Detention Basin:

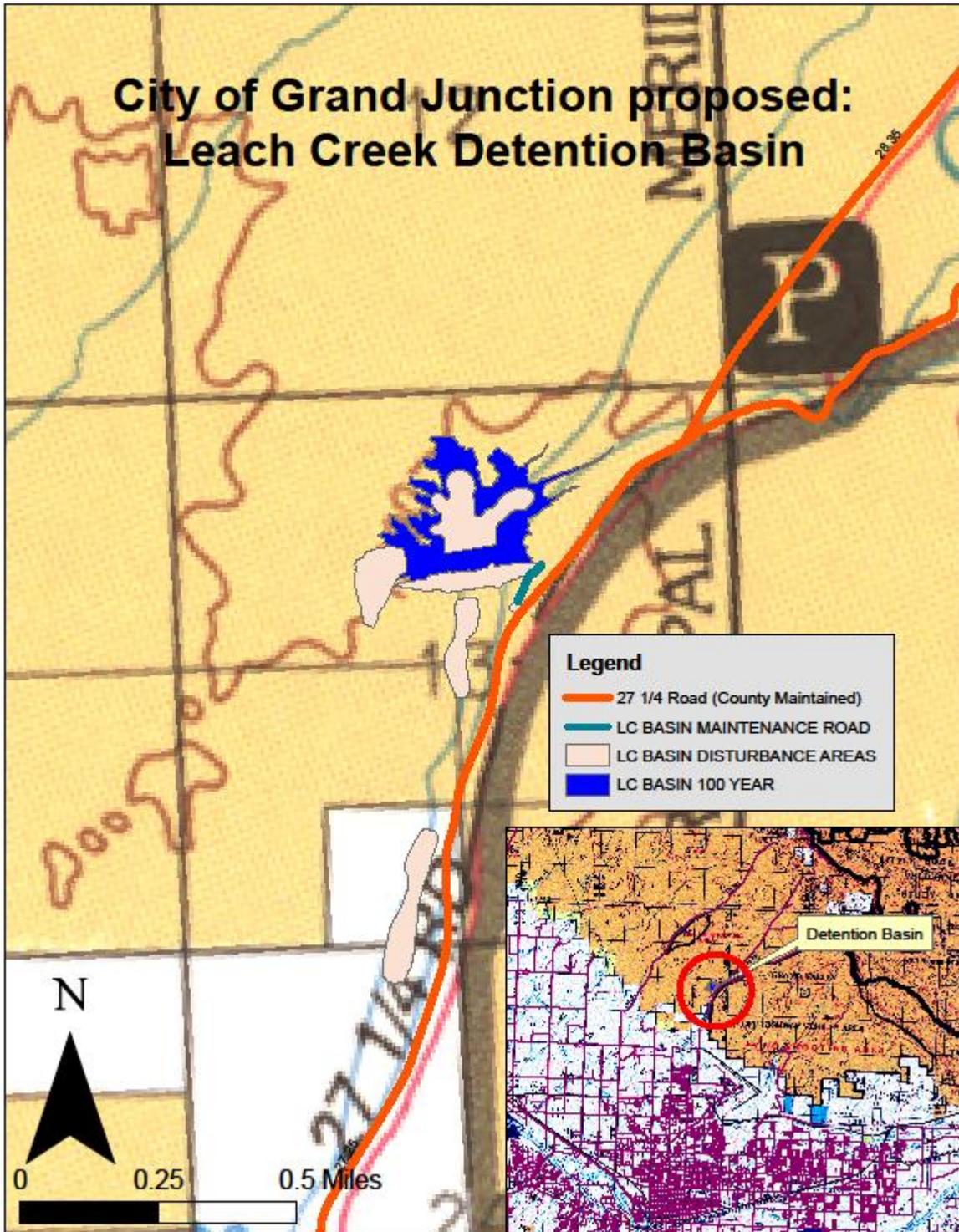
Ute Principal Meridian:
T. 1 N., R. 1 E., Section 36: NE $\frac{1}{4}$ SE $\frac{1}{4}$

Sixth Principal Meridian:
T. 11 S., R. 99 W., Section 11: NW $\frac{1}{4}$

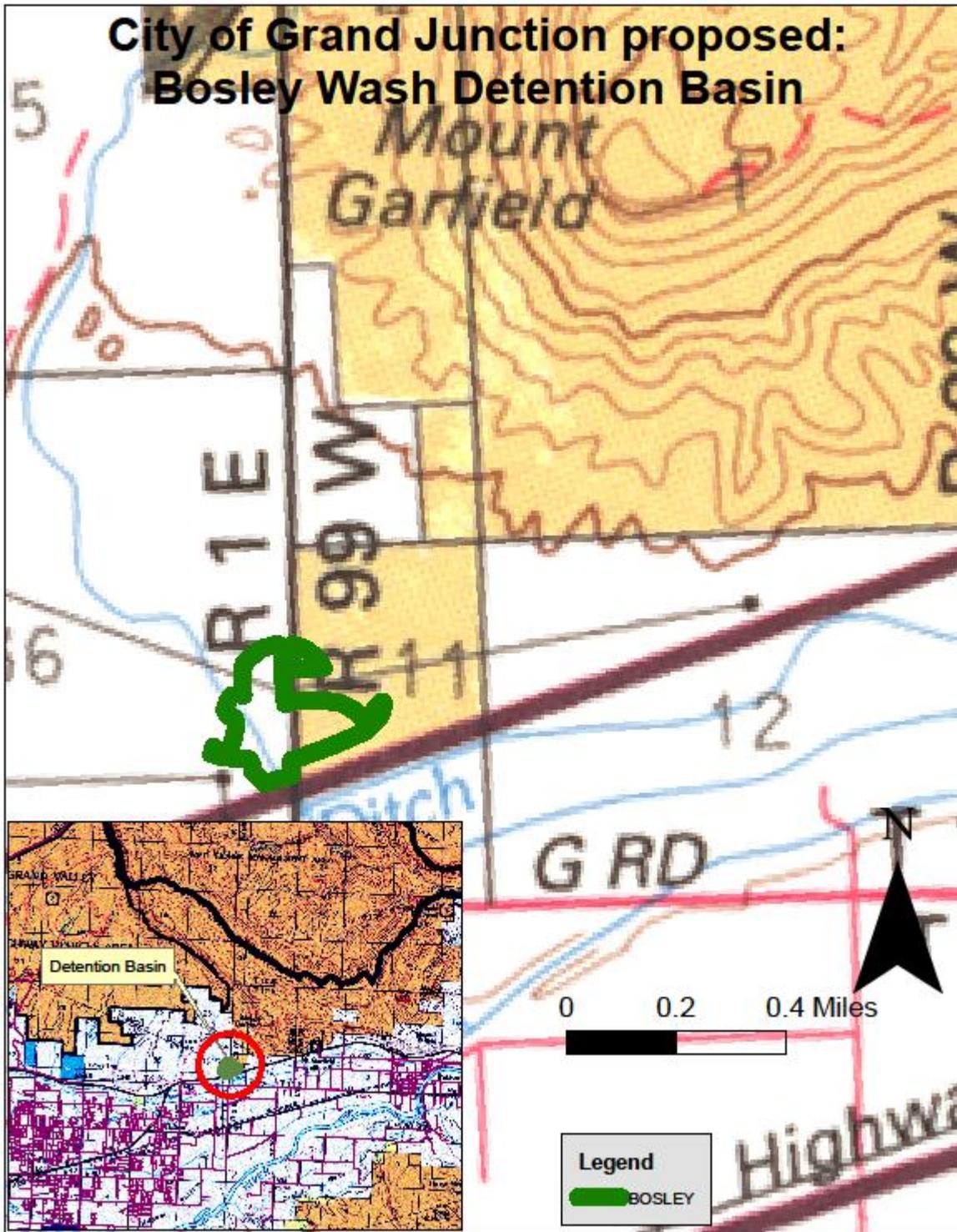
The project area is located in Mesa County, Colorado, and is within the Corcoran Point United States Geologic Survey (USGS) Quadrangle.

The proposed Leach Creek detention basin would be located west of Grand Junction Regional Airport off of 27 ¼ road approximately 2.17 miles north of H Road. The proposed Bosley Wash detention basin would be located south of Mount Garfield and north of I-70 between 33 Road and 35 Road.

MAP 1.2-1 Leach Creek Detention Basin



Map 1.2-2 Bosley Wash Detention Basin



1.3 PURPOSE AND NEED

The purpose of the action is to provide the City of Grand Junction with authorization to use public lands for the construction, operation, and maintenance of stormwater detention basins to protect downstream life and property. The need for the action is established by the BLM’s responsibility under FLPMA to respond to a request for a right-of-way grant for transportation and utility systems and facilities on Federal lands. If permitted, this action would include development of appropriate stipulations that would be consistent with the goals, objectives and decisions of the Grand Junction Resource Area Resource Management Plan as well as with applicable policies, regulations and laws.

1.4 DECISION TO BE MADE

The BLM will decide whether or not to grant the requested right-of-way based on the analysis contained in this Environmental Assessment (EA). The BLM may choose to: a) accept the project as proposed, b) accept the project with modifications, or c) modify the proposed project by incorporating reasonable alternatives. The Decision Record associated with this EA may not constitute the final approval for the proposed action. It provides the BLM Authorized Officer (AO) with an analysis from which to base the final approval for the proposed right-of-way grant.

1.5 PUBLIC PARTICIPATION AND SCOPING

1.5.1 Internal Scoping: NEPA regulations (40 CFR §1500-1508) require that the BLM use a scoping process to identify potential significant issues in preparation for impact analysis. The principal goals of scoping are to allow public participation to identify issues, concerns, and potential impacts that require detailed analysis.

Table 1– Potentially Impacted Resources (identified through internal scoping):

Resources	Not Present On Location	No Impact	Potentially Impacted	Mitigation necessary	BLM Evaluator Initial & Date	Comments
PHYSICAL RESOURCES						
Air and Climate	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	ND 2/13/12	See below
Water Quality (surface & subsurface, floodplains)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	ND 2/14/12	See below
Soils	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	ND 2/13/12	See below
Geological/Mineral Resources	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	DSG 2/9/12	No impacts to unique geological features or minerals.

Table 1– Potentially Impacted Resources (identified through internal scoping):

Resources	Not Present On Location	No Impact	Potentially Impacted	Mitigation necessary	BLM Evaluator Initial & Date	Comments
BIOLOGICAL RESOURCES						
Special Status Plants	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	JT 2/22/12	
Special Status Wildlife	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	JT 2/22/12	
Migratory Birds	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	JT 2/22/12	
Other Important Wildlife Habitat	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	JT 2/22/12	
Vegetation, Forestry	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	SC 2/10/12	
Invasive, Non-native Species	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	MT 4/11/12	
Wetlands/Riparian Zones	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND 2/14/12	No riparian present.
HERITAGE RESOURCES AND HUMAN ENV.						
Cultural or Historical	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ALR 2/10/12	Unknown prior inventory to
Paleontological	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	DSG 2/9/12	
Tribal & American Indian Religious Concerns	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ALR 2/10/12	Unknown prior inventory to
Visual Resources	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	CPP 2/24/12	
Social/Economic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CE 3/2/12	Unless it comes up in public scoping
Transportation and Access	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	CPP 2/24/12	See below
Wastes, Hazardous or Solid	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	AEK 2/9/12	
LAND RESOURCES						
Recreation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	CPP 2/24/12	See below
Special Designations (ACEC, SMAs, WSR)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CPP 2/24/12	
Wilderness & Wilderness Characteristics	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND 2/14/12	No designated wilderness or WSA

Table 1– Potentially Impacted Resources (identified through internal scoping):

Resources	Not Present On Location	No Impact	Potentially Impacted	Mitigation necessary	BLM Evaluator Initial & Date	Comments
						present.
Range Management	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SC 2/10/12	
Wild Horse and Burros	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND 2/14/12	Outside of the HMA
Land Tenure, ROW, Other Uses	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	RBL 2/23/12	
Fire/Fuels	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	JP 3/2/12	

1.5.2 External Scoping: Persons/Public/Agencies Consulted: Formal scoping letters were mailed electronically to the following parties: Keith Fife, Mesa County, Long Range Planning Director; Tim Moore, 5-2-1 Drainage Authority Manager; Ed Neilson, NRCS Area 1, Resource Conservationist; Kathy Portner, AICP, Grand Junction-Neighborhood Service Manager; Gene & Gail Shotsberger, Grand Vista, Summer Hill, and Paradise Hills Subdivisions; Rex Tippetts, Grand Junction Regional Airport, Airport Manager; Ed Warner, USBR Upper Colorado Area Office, Acting Area Manager.

This project was also posted on the Grand Junction Field Office NEPA website to notify and solicit comments from other interested parties.

1.6 ISSUES:

Table 1 displays issues identified through internal scoping.

The following comments identifying potential issues were received through Public Scoping:

Colorado Parks & Wildlife (CPW): “The locations of the Leach Creek and Bosley Wash Basins are in open desert areas, and the impacts to wildlife would be minimal. However, CPW would like to provide the following comment. The pup raising period for white-tailed prairie dogs is generally between 1 March and 15 June. Avoidance of construction activities during this time would minimize the impacts to the local prairie dog colonies.”

Issue: Impacts to white-tailed prairie dogs during the pup raising period.

BLM Response: Construction activities associated with both projects would occur during the months of August and September thus avoiding impacts to white-tailed prairie dogs during the pup raising period (March 1- June 15).

Bureau of Reclamation (BOR): “The development of these two detention basins should benefit the operation and maintenance of the Government Highline Canal by reducing the amount and force of water and debris reaching the canal during storm events and spring runoff.”

Issue: No issue.

BLM Response: N/A

Bureau of Reclamation (BOR): “The uncontrolled 21-inch reinforced concrete outlet pipes seems small in terms of passing debris. If the debris structure is not properly designed, the outlet pipe will likely plug quickly with silt and debris during a major storm event, thus potentially causing the basin to spill.”

Issue: Undersized outlet pipe could impair function of the proposed detention basin.

BLM Response: Routine maintenance would be required through State Engineer Office permitting requirements to keep the structure functional. Design features of the proposed project include a trash rack on the upstream end of the outlet pipe for the detention ponds. The rack would be designed to provide adequate protection from debris clogging the pipe and would be maintained after larger storm events. The outlet would also be inspected periodically throughout the year to ensure that it would function adequately.

Bureau of Reclamation (BOR): “All water discharged or spilled from these detention basins should remain in the source drainage basin and not be routed to general overland flow or to another drainage.”

Issue: Accelerated erosion of ephemeral channels tributary to Leach Creek or Bosley Wash caused by overflow from the proposed basin.

BLM Response: While the proposed spillways would utilize a portion of ephemeral tributary drainages, these spillways would be armored to minimize erosion. Once exiting the spillway, water would be delivered directly into Leach Creek or Bosley Wash (See attachment A).

Bureau of Reclamation (BOR): “Because of water quality and canal capacity concerns, the detained water should not enter the Government Highline Canal.”

Issue: Water quality impacts to the Government Highline Canal.

BLM Response: The proposed structures would mute flood hydrographs in both watersheds effectively reducing potential for floodwaters to contaminate canal waters.

Bureau of Reclamation (BOR): “The potential effect of the Leach Creek detention dam and basin on the 27¼ Road relocation and public access to public lands should be addressed.”

Issue: Conflict with 27 ¼ Road relocation.

BLM Response: The proposed 27 ¼ Road relocation would occur downstream of the proposed Leach Creek structure on private land and would not be impacted. Access to public lands is addressed in chapter 3 of this document (transportation/access).

Bureau of Reclamation (BOR): “The proposed airport expansion and relocation of 27¼ Road should be coordinated with the proposed Leach Creek detention basin.”

Issue: Conflict with proposed expansion of the Grand Junction Regional Airport.

BLM Response: The City of Grand Junction has coordinated with Grand Junction Regional Airport in the location and design of the proposed Leach Creek structure. Grand Junction Regional Airport was also included in external scoping and provided no comment.

Bureau of Reclamation (BOR): “The dams should be protected from potential damage due to recreational use of area, particularly OHV use.”

Issue: Degradation of the proposed Leach Creek Structure associated with recreational usage.

BLM Response: The structure would be inspected on an annual basis with a Dam Safety Engineer from the State Engineers Office. Maintenance on structures of this size includes grading of the crest, upstream, and downstream face of the dam. This is typically completed on an as needed basis, and is looked at during the annual inspection. There is no practical way to limit access to the structure. Project engineers don't anticipate that these structure would be any more maintenance intensive than the existing Indian Wash detention facility, which does not experience adverse impact from OHV traffic.

Bureau of Reclamation (BOR): “The potential effect of the Bosley Wash detention dam and basin to existing power lines and pipelines should be addressed.”

Issues: Direct impacts to power and pipelines.

BLM Response: See chapter 3 Land Status/Realty Authorizations.

CHAPTER 2 – PROPOSED ACTION AND ALTERNATIVES

2.1 INTRODUCTION

The purpose of this chapter is to provide information on the alternatives considered for the City of Grand Junction Use Lease application: Proposed Action and No Action.

2.2 ALTERNATIVES ANALYZED IN DETAIL

2.2.1 Proposed Action

The City of Grand Junction is proposing to construct, operate and maintain two earthen stormwater detention basins on Federal lands within the Bureau of Land Management (BLM) Grand Junction Field Office (see section 1.1 for location information). Construction of the proposed structures would occur in August and September and would take 14-28 days for each structure. The Leach Creek structure would be constructed in 2012 while the Bosley Wash structure would be constructed at a later date.

Leach Creek Detention Basin (map 1.2-1): The proposed Leach Creek detention basin would be constructed using heavy equipment and include a maximum of 50 acres of new surface disturbance. Material for the embankment would be borrowed from the floor of the detention basin, encompassing approximately 9.98 acres. The embankment for the retention basin would measure approximately 1,470 feet in the East-West direction and 37-feet high from the bed of Leach Creek. The embankment would have 3:1 slopes on both the downstream and upstream sides. The 16-foot wide embankment top would be graded to 3% to prevent the infiltration of water at the crest. Outlet works would consist of an uncontrolled 21-inch reinforced concrete pipe with a debris structure on the upstream side. Additionally, a 600-foot long by 500-foot wide spillway would be constructed to protect the embankment from overtopping by events greater than the 100-year flood. The maximum probable area of influence during the 100-year rain event would be 56.755 acres.

Bosley Wash Detention Basin (map 1.2-2): The proposed Bosley Wash detention basin would be built to the same design criteria as the Leach Creek structure and would include a maximum of 22.2 acres of new surface disturbance. Surface disturbance would be split between private (13.8 acres) and federal surface (8.4 acres). Because the proposed structure would inundate 34 Road, the road would be re-routed on adjacent private land to maintain access and avoid conflict with the structure.

Both projects are designed by Mr. S. Bret Guillory, PE and Mr. David R. Donohue, PE, as high hazard dams, would be reviewed by the State of Colorado Department of Natural Resources, Office of the State Engineer and would be constructed and maintained in accordance with their specifications (see attachment A). The City of Grand Junction has coordinated with the Army Corps of Engineers and would be operating under Nationwide Permit - 43 to fulfill Federal Water Pollution Control Act, section 404 regulatory requirements. Likewise, the City of Grand Junction would obtain stormwater discharge permits from the 521 drainage authority or the State prior to construction. Best Management Practices (BMPs) outlined in the City of Grand Junction's Storm Water Management Plan would be implemented as appropriate to mitigate erosion and soil loss from the construction site.

Sediment and natural debris accumulate in the basin would be removed by the City and disposed of on private land in closed basins (used as fill in pits). At the proposed construction site, topsoil would be striped to a depth of 6 inches and segregated to avoid mixing of soil horizons. Once

construction would be complete, spoil material from the construction site and the downstream face of the embankment would be capped with segregated topsoil, and seeded to promote stabilization. The proposed access road would remain open for maintenance operations. Specification drawings (Exhibit A) for the proposed Leach Creek facility are attached to this document.

The proposed right-of-way grant would include access to the site over approximately 100 feet of an existing unmaintained two track road (100' long by 12' wide) on BLM. No widening or improvements to this road are proposed by the City. Any water used would come from municipal water sources.

2.2.2 No Action Alternative

Under this alternative, BLM would deny the application for the Transportation and Utility Systems and Facilities Use Lease, and the proposed facility would not be constructed. No surface disturbance would occur on public lands in the project area under this alternative. The City of Grand Junction would need to look for an alternate location in the watershed to construct the desired flood detention structure.

2.3 ALTERNATIVES CONSIDERED BUT NOT ANALYZED IN DETAIL

2.3.1 The City considered construction of several small detention basins in the developed areas of Grand Junction. This alternative was not carried forward for analysis because it is not feasible for the City to acquire numerous developed residential and commercial properties adjacent to Leach Creek or Bosley Wash. Likewise, it is not feasible to relocate residents or businesses and relocate/reconstruct public streets and utilities.

2.3.2 The City considered installation of several large underground storm-drain lines through the developed areas of Grand Junction. Installation of underground storm-drain lines through the urbanized areas would require 72-inch to 96-inch culverts to extend from the northern limits of Grand Junction to the Colorado River. The construction of these storm-drain lines in existing drainage channels and ditches would be detrimental to riparian areas as well as provide a more efficient conduit for sediment, salts, and selenium to enter the Colorado River. Stormwater conveyed through the system would discharge at a high volume and velocity into the Colorado River, which could be detrimental to the riparian area and the critical habitats in the river.

2.4 PLAN CONFORMANCE REVIEW

The Proposed Action is subject to and has been reviewed for conformance with the following plan (43 CFR 1610.5, BLM 1617.3):

Name of Plan: Grand Junction Resource Management Plan (RMP)

Date Approved: January 1987

Page or Decision Number: Page 2-29, 2-38

Decision Language: Respond, in a timely manner, to requests for utility authorizations on public land while considering environmental, social, economic, and interagency concerns.

The proposed action is not located within a zone identified as sensitive to the placement of public utilities. The proposed action is situated within a “water emphasis” zone which specifically identifies the need for salinity and sediment reduction in the Grand Valley desert to protect downstream water quality.

In January 1997, the Colorado State Office of the BLM approved the Standards for Public Land Health and amended all RMPs in the State. Standards describe the conditions needed to sustain public land health and apply to all uses of public lands.

Standard 1: Upland soils exhibit infiltration and permeability rates that are appropriate to soil type, climate, land form, and geologic processes.

Standard 2: Riparian systems associated with both running and standing water function properly and have the ability to recover from major disturbance such as fire, severe grazing, or 100-year floods.

Standard 3: Healthy, productive plant and animal communities of native and other desirable species are maintained at viable population levels commensurate with the species and habitat’s potential.

Standard 4: Special status, threatened and endangered species (federal and state), and other plants and animals officially designated by the BLM, and their habitats are maintained or enhanced by sustaining healthy, native plant and animal communities.

Standard 5: The water quality of all water bodies, including ground water where applicable, located on or influenced by BLM lands will achieve or exceed the Water Quality Standards established by the State of Colorado.

Because standards exist for each of these five categories, and a finding must be made for each of them in an environmental analysis. These findings are located in Chapter 3 of this document.

CHAPTER 3 - AFFECTED ENVIRONMENT AND EFFECTS

3.1 INTRODUCTION

This section provides a description of the human and natural environmental resources that could be affected by the Proposed Action and presents comparative analyses of the direct, indirect and cumulative effects on the affected environment that could result from the approval of the Proposed Action and/or other alternatives analyzed. This EA includes information from the Grand Junction Resource Area RMP (BLM 1987).

BLM Manual H-1790-1 (BLM, 1988) lists critical elements that must be addressed in NEPA analyses. These elements include: air quality, Areas of Critical Environmental Concern, cultural resources, environmental justice, farmlands, floodplains, invasive non-native species, migratory birds, Native American religious concerns, threatened and endangered species, wastes, water quality, wetlands/riparian zones, Wild and Scenic Rivers, and designated wilderness. These critical elements, as well as non-critical elements that are within the project area or that may be potentially impacted by the project, are addressed in this chapter. Each element is discussed to a level of detail commensurate with the degree of impact that the Proposed Action and alternatives may have on that critical element.

3.1.1 Elements Not Affected

The following elements, identified as not being present or not affected will not be brought forward for additional analysis: Special Status Plants, Wetlands/Riparian Zones (including Public Land Health Standard 2), Special Designations, Minerals and Geology, Wild and Scenic Rivers, Wilderness and Wilderness Characteristics, Prime or Unique Farm Lands, and Environmental Justice.

3.1.1 Past, Present, Reasonably Foreseeable Actions

NEPA requires federal agencies to consider the cumulative effects of proposals under their review. Cumulative effects are defined in the Council on Environmental Quality (CEQ) regulations 40 CFR §1508.7 as "...the impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable actions regardless of what agency...or person undertakes such other actions." The CEQ states that the "cumulative effects analyses should be conducted on the scale of human communities, landscapes, watersheds, or airsheds" using the concept of "project impact zone" or more simply put, the area that might be affected by the proposed action. The area that may be affected by this project would include potential disturbance areas, flood prone areas downstream of proposed structures, and water quality in the Colorado River downstream of Bosley Wash to the Colorado/Utah state line. While the boundaries for cumulative impact analysis will vary for different resources, this area was considered appropriate for all resources and uses. To assess past, present and reasonably foreseeable actions that may occur within the affected area a review of GJFO NEPA log and our field office GIS data was completed. The following list includes all past, present and reasonably foreseeable actions known to the BLM that may occur within the affected area:

Past and Present Actions: Livestock grazing; oil and gas development (including roads, and pipelines); undeveloped recreation (including motorized, mechanized, foot, equestrian, hunting, etc.); right-of-way authorizations for roadways, utilities, and industrial, commercial and residential development along the I-70 corridor.

Reasonably Foreseeable Actions: In addition to continuation of the past and present actions, we expect the following to occur in the future: Climate change; increase in visitor use; and changes in management as a result of new land allocation decisions in the upcoming RMP revision. This list of past, present and reasonably foreseeable actions was considered when analyzing cumulative effects in sections 3.2, 3.3, 3.4, and 3.5 below.

3.2 PHYSICAL RESOURCES

3.2.1 Air Quality and Climate

Current Conditions: Air quality in the project area is typical of undeveloped regions in the western United States. The GJFO is not within a non-attainment or a maintenance area, thus, Clean Air Act conformity regulations do not apply.

The primary sources of air pollutants in the region are fugitive dust from the desert to the west of the planning area, unpaved roads and streets, seasonal sanding for winter travel, motor vehicles, and wood-burning stove emissions. Seasonal wildfires throughout the western U. S. may also contribute to air pollutants and regional haze. The ambient pollutant levels are usually near or below measurable limits, except for high short-term increases in PM₁₀ levels (primarily wind-blown dust), ozone, and carbon monoxide. Occasional peak concentrations of CO₂ and SO₂ may be found in the immediate vicinity of combustion equipment. Locations vulnerable to decreasing air quality include the immediate areas around mining and farm tilling, local population centers, and distant areas affected by long-range transportation of pollutants.

Two fully-automated air quality monitoring stations (AQMS) are operated near the intersection of 7th Street and Pitkin Avenue at the Mesa County Powell Building in Grand Junction, CO. These sites are considered the main anchor for air monitoring in the Grand Valley (Mesa County Health Department, 2012). Representative monitoring of air quality from these sites indicate existing air quality is well within acceptable standards (CDPHE 2012b).

No Action

Direct and Indirect Effects: Because no surface disturbance would occur under the No-Action alternative, direct impacts to air quality associated with fugitive dust and combustion equipment would not occur.

Cumulative Effects: No-Action would not result in any impact to air quality and thus would not contribute in any way to cumulative effects.

Proposed Action

Direct and Indirect Effects: New surface disturbance associated with construction and maintenance on 50 acres in the Leach Creek project area would result in increased production of fugitive dust (PM₁₀) during the August-September construction window in 2012. These same type of impacts would occur from 22.2 acres of new surface disturbance in the Bosley Wash project area projected to occur during the August-September construction window in 2013. Increased vehicular travel to the construction sites via unpaved routes would also increase fugitive dust production when compared to current conditions. Increased PM₁₀ levels would be short term (2-4 weeks in August-September), and localized (limited to the area in immediate proximity to the facility and access road).

Cumulative Effects: An additional 72.2 acres of surface disturbance would occur in the Leach Creek and Bosley Wash watersheds elevating fugitive dust production on the local scale during construction (2-4 weeks in August-September). Existing surface disturbance associated with OHV use in the Leach Creek watershed is anticipated to expand with increasing recreational use in this area also elevating fugitive dust production (OHV use is not permitted on public lands in the Bosley Wash watershed). However, within the project area, OHV use is typically lowest during the construction time period (BLM. 2012). Therefore, air quality impacts associated with fugitive dust production from the proposed project is not anticipated to add to these future impacts.

Protective/Mitigation Measures: Restricting surface disturbing activities to periods when wind speeds are less than 35 mph, following posted speed limits, and limiting vehicle speeds to 15 mph or less on un-posted routes will suffice as mitigation.

3.2.4 Soils (includes a finding on Standard 1)

Current Conditions: All soils within the project areas are developing in and from shale and sandstones of the Mancos and Mesa Verde Formations. The area is dissected by many gullies, with runoff-producing events carrying sediment into the gully system.

The Leach Creek watershed above the proposed structure encompasses approximately 5500 acres, and is primarily comprised of Mesa County soil mapping units 68 (~2300 acres) and 75 (~1735 acres). Soil mapping units 27 (~100 acres), 34 (~230 acres), 52 (~936 acres) and 77 (~150 acres) occur to a lesser extent within the watershed as well. Soil mapping unit 68 is strongly saline (~25mmhos/cm) and has a moist bulk density between 1.15 and 1.3 g/cc. Soil mapping unit 75 is moderately saline (~16 mmhos/cm) and has a moist bulk density between 1.15 and 1.3 g/cc. The most abundant soluble mineral in the area is gypsum with calcite next in abundance. Appreciable amounts of sodium and magnesium hydrated sulfates and other carbonates are present also. Chloride salts do not appear in appreciable amounts (Johnson R.K., Schumm S.A., 1982).

The Bosley Wash watershed above the proposed structure is 294 acres in size, is primarily comprised of Mesa County soil mapping unit 74 (~144 acres) and 52 (~126 acres). Soil mapping units 68 (~17 acres) and 904 (~7 acres) occur to a lesser extent within the watershed as well. Soil mapping unit 52 is non-saline and has a moist bulk density between 1.15 and 1.3 g/cc. Soil mapping unit 74 is also non-saline and has a moist bulk density between 1.25 and 1.35 g/cc. Neither of these mapping units was identified as containing gypsum (NRCS 2009).

Average sedimentation rates from primary soil units were estimated using the moist soil bulk densities reported in NRCS soil mapping data for the Mesa County Soil Survey Area and measured annual average soil sedimentation rates occurring on Mancos shale derived soils in grazed watersheds within the Badger Wash study area which indicating average sedimentation rates of 2.03 acre/ft./year (Lusby et.al., 1978). Soils in the Badger Wash study area are also derived from Mancos shale geology and are representative of soils

found in the project area. Natural sedimentation rates within the project area for soil mapping units 52, 68, and 75 are estimated to be between 4.96 and 5.61 tons/acre/year. For soil unit 74, natural sedimentation rates are estimated to be between 5.39 and 5.82 tons/acre/year.

Estimates for percent salt content per unit weight of the affect soils were conducted through the BLM's Grand Valley Desert Watershed Activity Plan (BLM 1985). The activity plan estimates 3 percent salt content per unit weight for soils in the affected area. Using this estimate, salt yields for soil mapping units 68 and 75 ranges between 0.15 and 0.17 tons/acre/year. Because soil mapping units 52 and 74 are identified as non-saline in NRCS soil mapping descriptions (NRCS 2009) it is assumed that salt yields from these soil mapping units are negligible.

Finding on Public Land Health Standard 1: A formal Land Health Assessment was conducted within the proposed project area in 2005 by BLM. Soils within the area proposed for disturbance were identified as not meeting in this assessment. Rational for this assessment indicate active gully formation and lack of appropriate soil stabilizing vegetation. Soils outside of the disturbance area but within the affected watershed were identified as meeting. However, the biologic integrity in these areas was identified as meeting with problems. This determination was based primarily on the lack of desirable plant species in the area. In areas where biologic integrity is compromised soil health can be also be highly susceptible to deterioration.

No Action

Direct and Indirect Effects: No direct effects to soil resources are anticipated to occur as a result of the No action alternative because the right-of-way grant would be denied. Indirect effects of the no-action alternative would be continued erosion of stream banks and flood prone areas downstream of the proposed detention basin. Further soil loss and property damage would occur following large precipitation events.

Cumulative Effects: Current rates of erosion and sedimentation as outlined under current conditions would persist with current levels of use (recreation and livestock grazing) within both watersheds. However, it is anticipated that recreational use (OHV) in the Leach Creek Watershed would increase with time. As a result, surface disturbance would increase as would erosion potential. This in turn would elevate rates of erosion and sedimentation above current conditions leading to further soil loss and property damage downstream.

Proposed Action

Direct and Indirect Effects: Erosion potential from the construction area would be elevated during construction, and maintenance activities as soils would be striped of stabilizing agents such as vegetation, woody debris, and rock. However, design features brought forward from the City's Stormwater Management Plan would reduce the significance of this direct effect to soil erosion. Natural erosion rates outside of the construction area and up-stream of the proposed detention facility would persist at rates

estimated under the affected environment. Below the facility it is anticipated that stormwater erosion would be less than under current conditions as the detention basin would reduce flood peaks limiting soil loss from stream banks and flood prone areas. Upland erosion rates would remain unchanged from current conditions.

Cumulative Effects:

Some level of impacts to soil resources (increased erosion potential) would continue as use of the existing access road would continue for maintenance and for recreational purposes (Leach Creek only). Recreational activities (primarily OHV use) within the Leach Creek watershed would continue at current levels or increase with time. As a result, vegetation and soil health would continue to decline which would increase erosion potential above the Leach Creek structure. Increased erosion above the structure would result in more sedimentation to the basin and require more frequent maintenance actions by the City.

Cattle grazing would continue within both watersheds under current management guidelines. Continuation of grazing under the current livestock grazing management plan would not result in increased impacts to soil resources over time. Current estimates for sedimentation rates outlined under current conditions account for impacts from livestock grazing.

Project design features would reduce impacts to soil resources in two ways. First, flood peaks below the structures would be reduced from current potential, limiting soil loss from stream banks and flood prone areas downstream of the structure. As a result, downstream soil loss would be less than under current conditions. Secondly, deposition of sediment above the proposed structure would increase the base level of the stream reducing potential energy often attributable to head cutting, gully advancement, and soil erosion. This increase in stream base level would occur gradually over the life of the facility and would be limited in extent by periodic removal of sediment and debris from the basin. The proposed detention basins would slow the accelerated movement of sediment and salts resulting from upstream surface disturbance (e.g. OHV use, lingering impacts from historic cattle use, vegetation manipulations, road building, etc...).

Finding on Standard 1: Implementation of the proposed action would not result in a change to the current finding for Public Land Health Standard 1.

Protective/Mitigation Measures:

- All top-soils stripped from the project area will be stockpiled and re-vegetated in a manner that blends with the surrounding landscape, maintains soils productivity, and allows for efficient use in reclamation efforts within the ROW area.
- The type and extent of stormwater best management practices implemented at the project site shall be sufficient to minimize soil loss from the project site. The

BLM shall require additional erosion control measures in the future if site conditions warrant and/or if existing BMPs are insufficient to protect the resource.

3.2.5 Water (surface and groundwater, floodplains) (includes a finding on Standard 5)

Current conditions: Surface disturbance associated with the proposed project would be situated entirely within water quality stream segment 13a (Leach Creek and Bosley Wash) of the Lower Colorado River Basin. Stream segment 2b and 3 of the Lower Colorado River Basin would be indirectly affected by the proposed action as both Leach Creek and Bosley Wash are ephemeral tributaries to the Colorado River near Grand Junction, Colorado. Minimum standards for physical and biological, as well as numeric standards for inorganic and metals are identified in Regulation No. 37 Classifications and Numeric Standards for Lower Colorado River Basin (CDPHE 2012).

The 2010 CDPHE-WQCC Regulation No. 93 Section 303d List of Impaired Waters and Monitoring and Evaluation List, was reviewed to determine if Lower Colorado River stream segments 2a, 3, and 13a were listed. The entire portion of stream segment 2a was listed on the Monitoring and Evaluation list for sediment impairments. Stream segments 3 and 13a were not identified on the 303(d) or Monitoring and Evaluation list (CDPHE-WQCC, 2010). Using current sedimentation rates identified in the soils section, it is estimated that the watershed area upstream of proposed detention facilities produce between 26,142 and 29,527 tons of sediment annually.

Salt in the upper Colorado River is of concern for a number of political and socioeconomic reasons. Salinity limits in the 1974 U.S. agreement with Mexico require the United States to deliver Colorado River water of a particular quality to the border. Irrigation of crops, protection of wildlife habitat, and treatment for municipal water along the course of the river also place restrictions on the river's salt content (Tuttle & Grauch, 2009). The Colorado River Basin Salinity Control Act (Public Law 93-320) was enacted in June 1974. The Act was amended in 1984 by Public Law 98-569. Public Law 98-569 includes directing the BLM to develop a comprehensive program for minimizing salt contributions from lands under its management. Studies conducted by the Bureau of Reclamation estimate that 580,000 tons of salt are added to the Colorado River annually from the Grand Valley alone (BOR 2011). It is also estimated that up to 15% of salt loading from the Grand Valley comes from diffuse sources on public lands (BLM 1985b).

Estimates of percent salt content per unit weight from the soils section ranges between 0.15 and 0.17 tons/acre/year for soil mapping units 68 and 75 (highly saline or moderately saline). Because soil mapping units 52 and 74 are identified as non-saline in NRCS soil mapping descriptions (NRCS 2009) it is assumed that salt yields from these soils are negligible. Based on natural sedimentation rates and soil salt content, salt loading from the Leach Creek and Bosley Wash watersheds (above the proposed structures) likely contributes between 827 and 938 tons of salt annually to the Colorado River (~1.1% of total salt contributions in the Grand Valley). It should be noted that the estimated salt yields are potential and not necessarily actual. Actual salt loading from

public lands depends on various factors such as: amount of precipitation, soil composition and texture, slope, percent vegetation cover, soil disturbance, etc...).

Finding on Public Land Health Standard 5: None of the affected stream segments are identified on the State's 303(d) list of impaired water bodies therefore; stream segments 2a, 3, and 13a currently meet Public Land Health Standard 5.

No Action: No direct effects to water resources are anticipated to occur as a result of the No action alternative because the right-of-way grant would be denied. Indirect effects of the no-action alternative would be continued erosion of stream banks and flood prone areas downstream of the proposed detention basin. Sedimentation rates and salt loading to the Colorado River would persist under current rates (~827 to 938 tons of salt/year).

Cumulative Effects: Sedimentation and salt loading rates outlined under current conditions would persist with current levels of use (recreation and livestock grazing) within both watersheds. However, it is anticipated that recreational use (OHV) in the Leach Creek Watershed would increase with time. As a result, surface disturbance would increase as would erosion potential. This in turn would elevate sedimentation and salt loading rates leading to additional sedimentation and salinization to the Colorado River (salt loading is anticipated to be greater than 827-938 tons/year).

Proposed Action

Direct and Indirect Effects: Erosion potential from the construction area would be elevated during construction, and maintenance activities as soils would be stripped of stabilizing agents such as vegetation, woody debris, and rock. However, design features brought forward from the City's Stormwater Management Plan would reduce the significance of this direct effect to water quality.

Below the structures it is anticipated that stormwater erosion would be less than under current conditions as the detention basins would reduce flood peaks limiting soil loss from stream banks and flood prone areas. Reduced erosion downstream of the structures would improve water quality as sedimentation and salt loading rates to the Colorado River would be reduced from current conditions below the structure.

Natural erosion rates outside of the construction area and up-stream of the proposed detention facility would persist at rates estimated under the affected environment. However, stormwater detained by the detention basin would deposit some sediment and salts typically carried downstream to the Colorado River. It is important to understand that because the proposed structures would be designed to detain and slowly release floodwaters, it would not be appropriate to assume that all of the potential sediment or salt would be deposited in the basins. Therefore, the proposed structures would reduce the volume of salt and sediment currently being produced from these watersheds to the Colorado River. Overall, downstream water quality would be improved as less than 827-

938 tons of salt and less than 26,142-29,527 tons of sediment would reach the Colorado River from the affected watersheds.

Potential surface water contamination could occur if equipment fuel or oil were to enter drainage in the project area.

Cumulative Effects: Some level of impacts to water resources (increased erosion potential) would continue as use of the existing access road would be necessary for maintenance actions and would also be used for recreational purposes (Leach Creek only). Recreational activities (primarily OHV use) within the Leach Creek watershed would continue at current levels or increase with time. As a result, vegetation and soil health would continue to decline which would increase erosion potential above the Leach Creek structure. Increased erosion above the structure would result in more deposition of sediment and salt in the basin requiring more frequent maintenance actions by the City. Salt loading and sedimentation rates to the Colorado River would not be altered because the proposed structures would continue to be maintained in a functional state as high hazard dams. Sediment removed during maintenance activities would be used as fill material in closed pits outside of active channels (on private land) limiting sediment/salt transport potential and water quality impacts.

Cattle grazing would continue within both watersheds under current management guidelines. Continuation of grazing under the current livestock grazing management plan would not result in increased impacts to soil resources over time. Current estimates for sedimentation rates outlined under current conditions account for impacts from livestock grazing.

Project design features would reduce impacts to soil resources in two ways. First, flood peaks below the structures would be reduced from current conditions, limiting downstream sedimentation and water quality degradation. Secondly, deposition of sediment above the proposed structure would increase the base level of the stream reducing potential energy often attributable to soil erosion and leading towards water quality deterioration. This increase in stream base level would occur gradually over the life of the facility and would be limited in extent by periodic removal of sediment and debris from the basin. The proposed detention basins would slow the accelerated movement of sediment and salts resulting from upstream surface disturbance (e.g. OHV use, lingering impacts from historic cattle use, vegetation manipulations, road building, etc...).

Finding on Standard 5: Implementation of the proposed action would not result in a change to the current finding for Public Land Health Standard 5 because none of the effected stream segments are currently identified as impaired. However, by reducing sedimentation and salt loading from current conditions, the proposed project would promote water quality improvement in the Colorado River.

Protective/Mitigation Measures:

- The type and extent of stormwater best management practices implemented at the project site shall be sufficient to minimize soil loss from the project site. The BLM shall require additional erosion control measures in the future if site conditions warrant and/or if existing BMPs are insufficient to protect the resource.
- Fueling of vehicles and equipment within 100 feet of streams, including ephemeral channels, would be prohibited.

3.3 BIOLOGICAL RESOURCES

3.3.2 Sensitive Species

Current Conditions:

Leach Creek: At least three BLM Sensitive Species are known in the Leach Creek area along 27-1/4 Road area during the last two decades: white-tailed prairie dog, burrowing owl, and Great Basin spadefoot toad. Sensitive plants are not known in the area. As one of the closest access points to the desert near Grand Junction, this area has experienced an abundance of human use, including legal activities such as hiking, horseback riding, off-road vehicle use, and target practice, along with illegal actions like trash dumping and vandalism. This has not affected prairie dogs, which are still abundant in the area. Burrowing owls are not known in the area since 1995, most likely due to the increasing human use. The owls have a relatively high level of tolerance for predictable human activity, so with prairie dogs present, there is the possibility of burrowing owl foraging or nesting. Spadefoot toad was last documented in the area in 1996; between water available in Leach Creek itself and several small nearby stock/water retention ponds, they could still be present. Little or no effort has been made to monitor reptiles or amphibians in the area.

Bosley Wash: Documentation of sensitive wildlife or plant species in the Bosley Wash area is completely lacking. The site is disturbed by a residential access road passing through the private land on the project site, adjacent to the BLM portion of the project area. Interstate 70 borders the project area on the south. A site visit on March 26, 2012 confirmed that prairie and their burrows were not present. The wash itself does not have an organized, visible water channel, indicating the presence of even ephemeral water is rare, reducing the likelihood of amphibians using the area.

No Action

Direct and Indirect Effects: No effects sensitive wildlife or plant species are anticipated to occur as a result of the No action alternative because the Use lease would be denied.

Cumulative Effects: No cumulative effects to sensitive wildlife or plant species are anticipated to occur as a result of the No action alternative because the Use lease would be denied.

Proposed Action

Direct and Indirect Effects: The proposed actions at Leach Creek and Bosley Wash would disturb 50 and 22.5 acres of land. Approximately 75% (37.5 and 17 acres, respectively) of the acreage involved at both sites would be directly disturbed by vegetation removal and surface disturbance and excavation. This would destroy existing prairie dog burrows in the higher areas of terrain above the current Leach Creek channel. The rest of the 50 acres (12.5) at within the maximum pool elevation at Leach Creek would potentially be inundated during a flash flood event, flooding more prairie dog burrows. In either case, construction or inundation, prairie dogs could be injured or killed by suffocation or drowning if they are not removed or able to escape. White-tailed prairie dogs are not present at the Bosley Wash project site.

The same effects from construction at Leach Creek would be likely for Great Basin Spadefoot toads likely to be hibernating during the normally dry construction period in August and September. Following construction of the dam, habitat conditions could become somewhat more favorable for the toad, to the extent that high water events could pool water behind the dam for short periods and provide a wider, wetter area than currently results from high water events in Leach Creek's current channel, which pools very little water. If toads are present at Bosley Wash, similar effects would be expected.

Burrowing Owls are not likely to be affected in the project area due to the intense, widely dispersed, and unpredictable nature of human activity in the immediate Leach Creek project area. If owls were to nest in the area this spring and summer, their breeding activity will be over prior to the start of construction. Adults and young tend to disperse from the nest burrow following fledging. Nest sites within the project area disturbed by construction would not be available in future years. Nesting nests outside the area of construction disturbance but within maximum pool elevation could be subject to inundation during a major event prior to young birds fledging (May-July).

Cumulative Effects: Cumulative effects from the project is the immediate loss of approximately 25 acres of white-tailed prairie dog habitat in the Leach Creek project area, with another 12.5 acres potentially lost in a major storm event that would fill the highwater pool behind the dam. Prairie dog habitat in the immediate surroundings would be subject to the same disturbance factors (primarily human) that currently exist, and which would not likely be increased or decreased due to the construction and presence of the detention dam. Cumulative effects on Great Basin spadefoot toad would be negligible in the long-term, with some potential loss of individuals during construction but followed by more favorable water conditions over the long term due to periodic water detention by the dam project.

3.3.3 Threatened or Endangered Species (includes a finding on Standard 4)

Current Conditions:

Leach Creek: Individual land health units within the project area are rated as either “not meeting” or “meeting with problems” the biotic land health standards. Biologic integrity is not meeting Land Health Standard 4 due to excessive amounts of cheatgrass, low numbers of perennial grasses/limited diversity of perennial grasses, and no forbs. Part of this is due to the high amount of human presence and activity in the area. No Threatened or Endangered species are known in the area.

No Action

Direct and Indirect Effects: No change from current situation.

Cumulative Effects: No change from current situation.

Proposed Action

Direct and Indirect Effects: Construction of the projects would not have direct or indirect effects on Threatened and Endangered species. Therefore, no effect on Public Land Health Standard 4 would occur.

Cumulative Effects: Construction of the projects would not have any cumulative effects on Threatened and Endangered species.

Protective/Mitigation Measures: None needed.

3.3.4 Vegetation (includes a finding on Standard 3)

Current Conditions: The proposed projects would occur in Salt Desert Overflow Ecological Sites. Currently, vegetation in the proposed project areas includes: greasewood, Gardner’s saltbush, mat saltbush, fourwing saltbush, annual wheatgrass, cheatgrass, tumbleweeds, halogeton, and occasional Indian ricegrass, galleta grass and shadscale. Due to degraded rangeland conditions, the annual weedy plants cheatgrass, annual wheat grass, tumbleweeds and halogeton dominate in the proposed project areas.

Finding on Public Health Standard 3: A Land Health Assessment conducted in 2009 by the BLM identified the proposed project areas as not meeting Land Health Standard 3 (Healthy, productive plant and animal communities of native and other desirable species are maintained at viable population levels commensurate with the species and habitat’s potential) because of low diversity/loss of functional structural groups, sites dominated by invasive annuals (cheatgrass, annual wheat grass and halogeton), and very little-if any-perennial cover.

No Action

Direct and Indirect Effects: Under the No Action Alternative, erosion would continue in the areas of the proposed ponds and below the ponds especially during big flood events

that would have potential for further degradation of rangeland conditions and negative impacts on vegetation.

Cumulative Effects: No cumulative effects would occur under the No Action alternative because the Use Lease would not be approved to allow implementation of the projects.

Proposed Action

Direct and Indirect Effects: During construction of the projects vegetation would be destroyed and damaged on 50 acres at Leach Creek and 22.5 acres in Bosley Wash. After completion of the projects, the disturbed areas around the ponds would be seeded with perennial plants that would benefit the vegetation as currently the project areas are dominated by annual, weedy types of plants. Use of the existing access road would have minimal impacts to vegetation as the two track road is already in place. Implementation of the detention ponds would help slow erosion in the areas of the ponds and below the ponds which would help stabilize the soils allowing for plants to establish which would further stabilize the soils. In general, the projects would be expected to maintain or improve vegetation conditions at and below the ponds

Cumulative Effects: Livestock grazing; oil and gas development (including well pads, roads, and pipelines); undeveloped recreation (including motorized, mechanized, foot, equestrian, hunting, etc.); right-of-way authorizations for roadways, utilities, and industrial, commercial and residential development along the I-70 corridor have occurred in the past and are presently occurring and would be expected to continue into the future. The main impact of the cumulative effects in the future for these project areas would be uncontrolled motorized recreational use. Without control of the motorized recreational use, Land Health Standard 3 would not likely be met in the near future but construction of these projects would not have a negative impact on rangeland conditions and would not be a causing factor for not meeting Standard 3 and may play a part in making progress towards meeting Standard 3 if motorized recreational use can be better controlled.

Protective/Mitigation Measures: Under the Proposed Action, the disturbed areas around the ponds of the projects would be seeded upon completion of the projects.

3.4 HERITAGE RESOURCES AND HUMAN ENVIRONMENT

3.4.1 Cultural Resources

Current Conditions: A records search of the general project area, and a Class III inventory of the Area of Potential Effect (APE), as defined in the National Historic Preservation Act (NHPA), was completed by Alpine Archaeological Consultants, a Colorado BLM permitted cultural resource contracting firm (GJFO CRIR 8312-02). Conditions of the existing cultural environment are incorporated by this reference but the following briefly summarizes cultural resources in the APE. A single isolated find (5ME18491), a historic can was found in the APE. The find is considered not eligible to

the National Register of Historic Places. The project inventory and evaluation is in compliance with the NHPA, the Colorado State Protocol Agreement, and other federal law, regulation, policy, and guidelines regarding cultural resources.

No Action

Direct, Indirect and Cumulative Effects: There would be no impact to cultural resources if the No Action Alternative was selected.

Proposed Action

Direct, Indirect and Cumulative Effects: There would be no direct, indirect and cumulative effects to significant cultural resources if the project were to go forward as proposed.

Protective/Mitigation Measures: Based on the findings of the cultural resource inventory report, no significant cultural resources would be affected during this project. The following standard stipulations would protect any cultural resources that may not be known to the BLM:

All persons in the area who are associated with this project shall be informed that any person who, without a permit, injures, destroys, excavates, appropriates or removes any historic or prehistoric ruin, artifact, object of antiquity, Native American remains, Native American cultural item, or archaeological resources on public lands is subject to arrest and penalty of law (16 USC 433, 16 USC 470, 18 USC 641, 18 USC 1170, and 18 USC 1361). Strict adherence to the confidentiality of information concerning the nature and location of archeological resources would be required of the proponent and all of their subcontractors (Archaeological Resource Protection Act, 16 U.S.C. 470hh)

Inadvertent Discovery: The National Historic Preservation Act (NHPA) [16 USC 470s., 36 CFR 800.13], as amended, requires that if newly discovered historic or archaeological materials or other cultural resources are identified during the Proposed Action implementation, work in that area must stop and the BLM Authorized Officer (AO) must be notified immediately. Within five working days the AO will determine the actions that will likely have to be completed before the site can be used (assuming in place preservation is not necessary).

The Native American Graves Protection and Repatriation Act (NAGPRA) [25 USC 3001 et seq., 43 CFR 10.4] requires that if inadvertent discovery of Native American Human Remains or Objects of Cultural Patrimony occurs, any activity must cease in the area of discovery, a reasonable effort made to protect the item(s) discovered, and immediate notice be made to the BLM Authorized Officer, as well as the appropriate Native American group(s) (IV.C.2). Notice may be followed by a 30-day delay (NAGPRA Section 3(d)).

The operator may relocate activities to avoid the expense of mitigation and delays associated with this process, as long as the new area has been appropriately inventoried

and has no resource concerns, and the exposed materials are recorded and stabilized. Otherwise, the operator shall be responsible for mitigation costs. The BLM authorized officer will provide technical and procedural guidelines for relocation and/or to conduct mitigation. Upon verification from the BLM authorized officer that the required mitigation has been completed, the operator will be allowed to resume construction.

Antiquities, historic ruins, prehistoric ruins, and other cultural or paleontological objects of scientific interest that are outside the authorization boundaries but potentially affected, either directly or indirectly, by the proposed action shall also be included in this evaluation or mitigation. Impacts that occur to such resources as a result of the authorized activities shall be mitigated at the operator's cost, including the cost of consultation with Native American groups

3.4.2 Paleontological Resources

Current Conditions: Both project areas have surfaces mapped as Upper Cretaceous age Mancos Shale. The Mancos Shale ranges in thickness between 3,500 to 4,500 feet thick, and is composed of clay, mudrock and silty sandstone. This geologic unit is rated as a Class 3 with the BLM Potential Fossil Yield Classification (PFYC) system. It's given this rating because it has a moderate potential for producing scientifically significant vertebrate fossils. There are no surveyed paleontological sites within a square mile of either proposed construction site.

No Action

Direct and Indirect Effects: The construction would not occur, so no new discoveries would be made and no paleontological resources would be damaged by earth moving equipment.

Cumulative Effects: Impacts to unknown paleontological resources may continue to occur from ongoing motorized recreational activities.

Proposed Action

Direct and Indirect Effects: Unknown paleontological resources on the surface or in the subsurface could be damaged by earth moving equipment. If paleontological resources are discovered and uncovered, but left in place they could be vandalized or stolen.

Cumulative Effects: Any impacts that may occur from the proposed construction activities would add to impacts currently resulting from ongoing motorized recreational activity in the area.

Protective/Mitigation Measures: The operator shall inform all persons associated with operations under this authorization that any objects or sites of paleontological or scientific value, such as vertebrate or scientifically important invertebrate fossils, shall not be damaged, destroyed, removed, moved, or disturbed. If in connection with authorized operations any of the above resources are encountered, all activities that might

further disturb such materials shall be suspended. The BLM authorized officer shall be notified of the findings and the discovery shall be protected until the BLM authorized officer gives notice to proceed. If ground-disturbing activities cannot be immediately suspended, the operator shall work around or set the discovery aside in a safe place to be accessed by the BLM-permitted paleontologist.

A preconstruction paleontological survey would not be required for these projects since the geologic unit affected is not a Class 4-5 unit and there are no surveyed paleontological sites within a square mile.

3.4.3 Tribal and Native American Religious Concerns

Current Conditions: American Indian religious concerns are legislatively considered under several acts and Executive Orders, namely the American Indian Religious Freedom Act of 1978 (PL 95-341), the Native American Graves Environmental Assessment Protection and Repatriation Act of 1990 (PL 101-601), and Executive Order 13007 (1996; Indian Sacred Sites). In summary, these require, in concert with other provisions such as those found in the NHPA and ARPA, that the federal government carefully and proactively take into consideration traditional and religious Native American culture and life and ensure, to the degree possible, that access to sacred sites, the treatment of human remains, the possession of sacred items, the conduct of traditional religious practices, and the preservation of important cultural properties are considered and not unduly infringed upon. In some cases, these concerns are directly related to “historic properties” and “archaeological resources”. In some cases elements of the landscape without archaeological or other human material remains may be involved. Identification of these concerns is normally completed during the land use planning efforts, reference to existing studies, or via direct consultation. There is no known evidence that suggests the project area holds special significance for Native Americans, or is actively used to maintain any traditional practices.

No Action

Direct, Indirect and Cumulative Effects: None.

Proposed Action

Direct, Indirect and Cumulative Effects: None.

Protective/Mitigation Measures: The Ute have a generalized concept of spiritual significance that is not easily transferred to Western models or definitions. As such the BLM recognizes that the Ute have identified sites that are of concern because of their association with Ute occupation of the area as part of their traditional lands. No traditional cultural properties, unique natural resources, or properties of a type previously identified as being of interest to local tribes, were identified during the cultural resources inventory of the project area. No additional Native American Indian consultation was conducted for the proposed project.

3.4.4 Visual Resources

Current Conditions:

The proposed project areas lie north of Grand Junction along the northern slopes of the Grand Valley. This area is in the northeastern portion of the Colorado Plateaus physiographic province. The proposed projects lie within the Grand Junction Valley Visual Resource Inventory Scenic Quality Rating Unit: SQRU 26 – VRI Class IV, Scenic Quality B, Sensitivity Low, Foreground/Middle-ground Distance Zone.

The Leach Creek site is generally a panoramic type landscape with broad views of the north desert and the distant backdrop of the Book Cliffs to the north, and the developed residential, commercial and agricultural areas of the Grand Valley and distant views of the Colorado National Monument and Uncompahgre Plateau to the south and west. The landscape in the immediate project area is characterized by low, rolling, mostly barren hills with some sparse low-growing grasses and shrubs. The landscape is criss-crossed with multiple roads and trails as well as the ephemeral washes that drain the area. Lines are mostly horizontal, with some vertical and diagonal elements. Colors are mostly muted tans and grays. Texture is smooth to medium. The casual observer would generally be recreationists driving along 27 ¼ Road or one of the OHV routes traversing the area.

The Bosley Wash site lies immediately north of Interstate 70 and is nearly flat, but flanked immediately to the northeast by the dominant feature of Mount Garfield with its vertical cliffs and steep erosion sculpted ribs and gullies. To the south is the interstate highway and the developed residential, commercial and agricultural areas of the Grand Valley and distant views of the Colorado National Monument, Uncompahgre Plateau, San Juan Mountains and Grand Mesa to the west, south and east. The casual observer would mainly be motorists traveling along Interstate 70. The proposed project site is also observable by hikers from the top of Mount Garfield. The landscape in the immediate project area is characterized by a mostly barren plain with some sparse low-growing grasses and shrubs. Lines are mostly horizontal, with some vertical and diagonal elements created by nearby homes and fences. Colors are mostly muted tans and grays. Texture is smooth to medium.

As per the 1987 GJFO RMP, the proposed project sites lie within undesignated VRM areas, however, the Bosley Wash site lies just outside the area around Mount Garfield designated as VRM Class I. It has been the general practice of the GJFO to manage undesignated areas using VRM Class III objectives which allow moderate levels of change to the landscape and where management activities may attract attention, but should not dominate the view of the casual observer. Change should repeat the basic elements found in the natural landscape. The objective in VRM Class I areas is to preserve the existing character of the landscape and the level of change to the landscape should be very low; and must not attract the attention of the casual observer.

No Action

Direct and Indirect Effects: The proposed structures would not be built and would not introduce new visual contrast to the area.

Cumulative Effects: Potential changes to land use allocations through the RMP revision could either increase or decrease visual impacts to the area, depending on the alternative selected.

Anticipated increases in recreation traffic, and expansion of the Grand Junction Regional Airport could introduce additional visual contrast to the Leach Creek area. Potential developments along the Interstate 70 corridor would likely introduce additional visual contrast to the Bosley Wash area.

Proposed Action

Direct and Indirect Effects: Construction of the proposed dams would remove vegetation, expose soil and create a new landform, introducing moderate contrasts in line, form, color and texture to the landscape in the short term. Over time, these contrasts would weaken as soils weathered and vegetation was reestablished.

The moderate size, and built elements (outlet works, spillway) of the Leach Creek dam would potentially attract attention initially, but the contrast would likely lessen over time as travel routes are reestablished around the dam and detention area. The level of change to the characteristic landscape created by the proposed project would be moderate. The dam and detention facility would meet the VRM Class IV objectives described above.

The Bosley Wash project would have similar visual impacts as those described for Leach Creek but to a lesser extent due to the smaller size of the dam and detention area, and due to the absence of recreational use in the area, and the shorter viewing time of the site by high speed interstate travelers. The proposed site's location in the foreground of views of Mount Garfield increases its visual sensitivity, however, the prominence of the slopes and cliff faces of the mountain would likely draw viewer's attention beyond the visual extent of the project. The dam and detention facility would meet the VRM Class IV objectives described above.

Cumulative Effects: Potential changes to land use allocations through the RMP revision could either increase or decrease visual impacts to the area, depending on the alternative selected. The impacts to visual resources from the proposed action (described above) would be added to any additional developments resulting from increasing recreation, airport expansion or interstate corridor development. The proposed projects and other reasonably foreseeable developments would not impact the attainment of VRM Class IV objectives, but could impact more restrictive VRM classifications that could result from the RMP revision.

3.4.5 Social and Economic:

Current Conditions:

Currently no floodwater detention basins exist within the Leach Creek or Bosley Wash watersheds. Under current conditions, stormwater originating from these watersheds traverse through residential and commercial areas in Grand Junction and has caused flooding and severe property damage. The detention basin is needed to protect lives and properties by detaining stormwater runoff from severe storm events. The proposed action is within an area of intensive OHV recreational use and annual visitation to the project area is estimated at approximately 60,000. Recreation in this area primarily occurs during the spring and fall months.

The requirements for environmental justice review were established by Executive Order 12898 (February 11, 1994). That order declared that each federal agency is to identify “disproportionately high and adverse human health or environment effects of its programs, policies, and activities on minority populations and low income populations.”

According to Census 2010, the only minority population of note in the impact area is the Hispanic community of Mesa County. Persons describing themselves as Hispanic or Latino represented 13.3 percent of the population, considerably less than the Colorado state figure for the same group (20.7 percent). Blacks, American Indians, Asians and Pacific Islanders each accounted for around 1 percent of the population, below the comparable state figure in all cases. The census counted 11.8 percent of the Mesa County population as living in families with incomes below the poverty line, compared to 12.6 percent for the entire state.

No Action

Direct and Indirect Effects: Stormwater detention basins would not be constructed and downstream property owners would still incur damage from severe flooding events. Recreational opportunities would not be curtailed in anyway as a result of the proposed action.

Cumulative Effects: Stormwater detention basins would not be constructed and downstream property owners would still incur damage from severe flooding events. Property values could be decreased as a result of the no-action alternative.

Proposed Action

Direct and Indirect Effects: If constructed, these detention basins would limit potential damage to downstream property owners. Recreational usage during the construction window (August-September) would be directed away from the project area (Leach Creek) during this time period. Because the low income/minority population is distributed throughout Mesa County no disproportional effects would occur to low income/minority populations with implementation of the proposed action.

Cumulative Effects: With construction of the proposed stormwater detention basins, flood damage to downstream property owners would be reduced from current conditions.

3.4.8 Transportation/Access

Current Conditions: Access to the Leach Creek site is via 27 ¼ Road which is managed and maintained by Mesa County. The primary use of this road is for access to recreation opportunities, including OHV use, target shooting, mountain biking, hiking, running and dog walking. It is also used for access to utilities (power lines and gas pipelines) that traverse the area. Based on BLM traffic counter data, 27 ¼ Road receives an estimated 135,000 visits per year near the project area. The travel management prescription limits motorized travel to existing routes along the west side of 27 ¼ Road where Leach Creek is located. Multiple OHV routes (mostly full-size two track roads) criss-cross the proposed project area.

The Bosley Wash site is accessed by crossing Interstate 70 on the 33 Road overpass, then traveling east along the interstate frontage road to 34 Road. This road is used primarily for access to scattered residences on private property. A locked gate blocks motorized access onto BLM property east of 34 Road. No traffic counter data is available for this area but traffic is light.

No Action

Direct and Indirect Effects: In this alternative the projects would not be built and there would be no direct effects to transportation and access on the proposed project sites. Transportation and access could be affected indirectly if future flooding damages roads or trails, or creates hazardous travel conditions.

Cumulative Effects: The travel safety issues left unaddressed by not implementing the flood mitigation measures in the proposed action would be compounded by local population growth and accompanying increases in development and traffic adjacent to the proposed project sites.

Proposed Action

Direct and Indirect Effects: At the Leach Creek site several prominent existing routes cross the proposed project area and would be at least temporarily impacted by the project. Travelers and recreationists would be required to detour around the site during construction. The construction phase would also slightly increase the volume of traffic, and dust levels on 27 ¼ Road. Following construction, most routes across the project area would likely be reestablished, but the physical character of most of those routes would be altered. For example, the dam would create an obstacle to routes running in or directly parallel to the Leach Creek Wash.

Cumulative Effects: Potential changes to land use allocations through the RMP revision could result in either increased or decreased traffic, and changes to the type of traffic on the road and trail network in the 27 ¼ Road area, depending on the alternative selected. The flood mitigation provided by the proposed project would help protect future transportation infrastructure associated with increases in recreational use of the 27 ¼ Road area, and interstate corridor development near the Bosley Wash site.

3.4.9 Wastes, Hazardous or Solid

Current Conditions: Hazardous wastes are not a part of the natural environment. The area regularly is subject to illegal solid waste disposal and at any given time, the area may have solid wastes on site.

No Action

Direct and Indirect Effects: No impacts

Cumulative Effects: None

Proposed Action

Direct and Indirect Effects: The only possible solid/hazardous waste impacts might be from fuel spills from the construction process. Much of that might be behind the detention structure and would be trapped in the sediment of the detention structure. Spilled fuel could eventually make its way to the Colorado River, having a minimum impact on water quality.

Cumulative Effects: Expected to be negligible impacts to water quality if fuel spills occurred and were not cleaned up.

Protective/Mitigation Measures: Any fuel spills should be cleaned up immediately and contaminated soil should be disposed of properly.

3.5 LAND RESOURCES

3.5.2 Recreation

Current Conditions: The Leach Creek site is within a high use recreation area that is used extensively by OHV recreationists, recreational target shooters, hikers, runners, mountain bikers and dog walkers. Annual visitation to the area is estimated at 135,000 based on BLM traffic counter data. Several OHV routes cross the proposed project area. There are no developed recreation facilities in the immediate vicinity.

The Bosley Wash site is used only occasionally for recreation. Pedestrian and equestrian users occasionally enter BLM lands east of the site at the base of Mount Garfield.

No Action

Direct and Indirect Effects: In this alternative the proposed structures would not be built and recreation would continue to occur in its current manner.

Cumulative Effects: Anticipated increases in local population and recreation demand would increase recreation use around the Leach Creek site. Potential changes to land use

allocations through the RMP revision could result in either an increased or decreased emphasis on recreation management in the 27 ¼ Road area.

Recreation use near the Bosley Wash site would not be likely to increase.

Proposed Action

Direct and Indirect Effects: During construction, the Leach Creek site would be unavailable to recreationists and would likely increase dust levels in the area, potentially impacting recreation experiences and safety. Once completed, the proposed dam and detention basin would likely be attractive play areas to some OHV users. Without physical barriers to prevent access, the dam would likely be used as a jump or hill climb obstacle. This could enhance some recreationists experiences, but could potentially damage the structures or create safety hazards to recreationists. When filled with water and/or mud, the retention pond would likely attract some OHV users seeking “mud bogging” opportunities, again enhancing recreation opportunities for some, but also likely resulting in some vehicles getting stuck in the mud. These effects would be similar to those created by existing natural features in the area.

The proposed action at Bosley Wash would temporarily limit recreational access and increase dust levels for a small number of recreationists during the construction phase of the projects. Long-term impacts to recreation would be minimal.

Cumulative Effects: Anticipated increases in local population and recreation demand would increase recreation use around the Leach Creek site. Increased use would result in additional traffic on and around the dam and detention basin, accentuating the impacts described under the proposed action. Potential changes to land use allocations through the RMP revision could result in either an increased or decreased emphasis on recreation management in the 27 ¼ Road area. Other development (utilities, energy exploration) in the area could focus more recreation use in the project area, again accentuating the impacts described above.

Cumulative effects to recreation from the Bosley Wash site would be minimal.

3.5.6 Land Status/Realty Authorizations

Current Conditions: Realty Authorizations within the project area for the Leach Creek site include the following:

COC-43074 - pipeline ROW issued to Maralex Resources Inc. This ROW was issued in 1986 for a pipeline to connect to the 6-19-1-1 well, which has been shut-in since the 1980s. The pipeline was never constructed.

COC-26316 - road ROW issued to Mesa County for 27 ¼ Road.

The Grand Junction Regional Airport is proposing a transfer of approximately 200 acres public land, lying southeast and southwest of the Leach Creek project area, for reconstruction of the main runway and other airport improvements.

There are no existing realty authorizations with the project area for the Bosley Wash Site. The BLM portion of the project is on lands donated to the BLM by Mesa County in 1989.

No Action

Direct and Indirect Effects: None.

Cumulative Effects: None.

Proposed Action

Direct and Indirect Effects: As long as the City of Grand Junction coordinates the construction of the project with the existing ROW holders (Mesa County and Maralex Resources Inc.) and the Grand Junction Regional Airport, impacts would be minimal.

Cumulative Effects: Two new rights-of-way would be issued. Cumulative impacts would be minimal.

Protective/Mitigation Measures: The City of Grand Junction should coordinate the construction of the project with Mesa County, Maralex Resources Inc., and the Grand Junction Regional Airport to avoid conflicts with existing rights-of-way and the proposed airport land transfer and airport improvement project.

CHAPTER 4 - CONSULTATION AND COORDINATION

4.1 LIST OF PREPARERS AND PARTICIPANTS

INTERDISCIPLINARY REVIEW

NAME	TITLE	AREA OF RESPONSIBILITY
Christina Stark	Riparian Coordinator/Project Manager	Riparian
Julia Christiansen	Natural Resource Specialist	Oil and Gas
Alissa Leavitt-Reynolds	Archaeologist	Cultural Resources, Native American Religious Concerns
Chris Pipkin	Outdoor Recreation Planner	Access, Transportation, Recreation, VRM, Wilderness, ACECs
Matt McGrath	Interpretive Specialist	Wild & Scenic Rivers, NCA
Jim Dollerschell	Range Management Specialist	Range, Wild Horse & Burro Act
Scott Gerwe	Geologist	Minerals, Geology, Paleontology
Alan Kraus	Hazard Materials Specialist	Hazardous Materials
Robin Lacy	Realty Specialist	Land Status/Reality Authorizations
John Toolen	Wildlife Biologist	Migratory Bird Treaty Act, T&E Species, Terrestrial & Aquatic Wildlife
Anna Lincoln	Ecologist	Range, Land Health Assessment, T&E Plant Species
Scott Clarke	Range Management Specialist	Vegetation, Range, Riparian, Floodplains
Collin Ewing	Environmental Coordinator	Environmental Justice, Prime & Unique Farmlands, Environmental Coordinator
Nate Dieterich	Hydrologist	Air Quality Water Quality, Hydrology, Water Rights, Soils
Jacob Martin	Range Management Specialist	Range, Forestry
Mark Taber	Range Management Specialist	Invasive, Non-Native Species (Weeds)
Lathan Johnson	Fire Ecologist Natural Resource Specialist	Fire Ecology, Fuels Management

4.2 TRIBES, INDIVIDUALS, ORGANIZATIONS, OR AGENCIES CONSULTED

CHAPTER 5 - REFERENCES

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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
GRAND JUNCTION FIELD OFFICE
FINDING OF NO SIGNIFICANT IMPACT
City of Grand Junction's
Leach Creek & Bosley Wash Detention Basins
DOI-BLM-CO-130 2012-0023-EA

Based on the analysis of potential environmental impacts contained in the attached environmental assessment, and considering the significance criteria in 40 CFR 1508.27, I have determined that the Proposed Action will not have a significant effect on the human environment. An environmental impact statement is therefore not required.

BACKGROUND

This EA has been prepared by the BLM in response to the City of Grand Junction's application for a Transportation and Utility Systems and Facilities Right-of-Way Grant to construct an earthen stormwater detention basin in the intermittent Leach Creek and Bosley Wash drainages located on BLM land in the desert area north and east of Grand Junction, Colorado. Material for the Leach Creek embankment would be borrowed from the floor of the detention basin, encompassing approximately 9.98 acres. The embankment would measure approximately 1,470 feet in the East-West direction and 37-feet high from the bed of Leach Creek. The spillway would be 600-feet long by 500-feet wide. The maximum probable area of influence during the 100-year storm event would be 56.755 acres. The proposed Bosley Wash detention basin would be built to the same design criteria as the Leach Creek structure (but at a smaller scale) and would include a maximum of 22.2 acres of new surface disturbance. Surface disturbance would be split between private (13.8 acres) and federal surface (8.4 acres). Both projects are designed by Mr. S. Bret Guillory, PE, and Mr. David R. Donohue, PE. Both projects would be reviewed by the State of Colorado Department of Natural Resources, Office of the State Engineer and would be constructed and maintained in accordance with their specifications. The EA was made available for public review on March 12, 2012. Comments were received from private individuals, affected Home Owners Associations, Colorado Parks & Wildlife, and the Bureau of Reclamation. Issues identified through external scoping are addressed in the EA.

Intensity

I have considered the potential intensity/severity of the impacts anticipated from the Name Project decision relative to each of the ten areas suggested for consideration by the CEQ. With regard to each:

1. Impacts that may be both beneficial and adverse. This project may have minor short term impacts to soils, water quality, wildlife, and recreation; however these impacts are not significant. This project will have a long term net benefit for water quality and will help reduce

non-point sources of pollution (in this case sediment, salt and selenium) from BLM lands to the Colorado River system.

2. *The degree to which the proposed action affects public health and safety.* The proposed action is not expected to adversely impact public health and safety. Rather, the proposed action would help protect public health and safety downstream as flood water peaks would be reduced.

3. *Unique characteristics of the geographic area such as proximity of historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.*

There are no significant impacts to riparian vegetation, parklands, prime farmlands, wetlands, or wild and scenic rivers within the project area. The project has been modified to avoid impacts to cultural and historic resources. There are no municipal water supplies in the project area.

4. *The degree to which the effects on the quality of the human environment are likely to be highly controversial.*

The impacts of floodwater detention basins in ephemeral systems are generally well known and documented in the academic and practicing communities. Therefore the environmental effects are not likely to be controversial.

5. *The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.*

Floodwater detention basins have a long history in the region and pose no unique or unknown risks.

6. *The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.*

This decision is like one of many that have previously been made and will continue to be made by BLM responsible officials regarding floodwater detention basins on public lands. The decision is within the scope of the Resource Management Plan and is not expected to establish a precedent for future actions. The decision does not represent a decision in principle about a future consideration.

7. *Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.*

There are no significant cumulative effects on the environment, either when combined with the effects created by past and concurrent projects, or when combined with the effects from natural changes taking place in the environment or from reasonably foreseeable future projects.

8. *The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historic resources.* There would be no adverse impacts to the above resources. The project has been modified to avoid impacts to cultural and historic resources.

9. The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973. No impacts are expected to endangered or threatened species or their designated critical habitats.

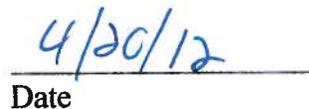
10. Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment. This decision complies with other Federal, State, or local laws and requirements imposed for the protection of the environment.

FINDING OF NO SIGNIFICANT IMPACT

On the basis of the information contained in the EA, and all other information available to me, it is my determination that: 1) the implementation of the Proposed Action or alternatives will not have significant environmental impacts beyond those already addressed in the "Record of Decision and Resource Management Plan," (BLM 1987); (2) the Proposed Action is in conformance with the Resource Management Plan; and (3) the Proposed Action does not constitute a major federal action having a significant effect on the human environment. Therefore, an environmental impact statement or a supplement to the existing environmental impact statement is not necessary and will not be prepared.

This finding is based on my consideration of the Council on Environmental Quality's (CEQ) criteria for significance (40 CFR '1508.27), both with regard to the context and to the intensity of the impacts described in the EA.




Date

Field Manager
Grand Junction Field Office

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
GRAND JUNCTION FIELD OFFICE

DECISION RECORD
City of Grand Junction's
Leach Creek & Bosley Wash Detention Basins
DOI-BLM-CO-130-2012-0023-EA

DECISION: It is my decision to authorize the City of Grand Junction's application for a Transportation and Utility Systems and Facilities Right-of-Way Grant to construct an earthen stormwater detention basin in the intermittent Leach Creek and Bosley Wash drainages located on BLM land in the desert area north and east of Grand Junction, Colorado. This decision is contingent on meeting all mitigation measures and monitoring requirements listed below.

External Scoping: Persons/Public/Agencies Consulted: Formal scoping letters were mailed electronically to the following parties: Keith Fife, Mesa County, Long Range Planning Director; Tim Moore, 5-2-1 Drainage Authority Manager; Ed Neilson, NRCS Area 1, Resource Conservationist; Kathy Portner, AICP, Grand Junction-Neighborhood Service Manager; Gene & Gail Shotsberger, Grand Vista, Summer Hill, and Paradise Hills Subdivisions; Rex Tippetts, Grand Junction Regional Airport, Airport Manager; Ed Warner, USBR Upper Colorado Area Office, Acting Area Manager.

This project was also posted on the Grand Junction Field Office NEPA website to notify and solicit comments from other interested parties.

Table 1 displays issues identified through internal scoping.

The following potential issues were received through Public Scoping:

Issue: Impacts to white-tailed prairie dogs during the pup raising period.

Issue: Undersized outlet pipe could impair function of the proposed detention basin.

Issue: Accelerated erosion of ephemeral channels tributary to Leach Creek or Bosley Wash caused by overflow from the proposed basin.

Issue: Water quality impacts to the Government Highline Canal.

Issue: Conflict with 27 ¼ Road relocation.

Issue: Conflict with proposed expansion of the Grand Junction Regional Airport.

Issue: Degradation of the proposed Leach Creek Structure associated with recreational usage.

Issues: Direct impacts to power and pipelines.

All public comments identifying the potential issue outlined above as well as BLM response to these comments are located in section 1.6 of DOI-BLM-CO-130-2012-0023-EA. All issues identified through the scoping process are also addressed through design features of the proposed action (see chapter 2) or the effects analysis of the proposed action (chapter 3).

A Finding of No Significant Impact (FONSI) has been prepared and executed. Based on the analysis of potential environmental impacts contained in the attached environmental assessment, and considering the significance criteria in 40 CFR 1508.27, I have determined that the Proposed Action will not have a significant effect on the human environment. An environmental impact statement is, therefore, not required.

RATIONALE: I have considered the potential intensity/severity of the impacts anticipated from the Leach Creek and Bosley Wash Stormwater Detention Project decision. Issues identified in the internal scoping were analyzed and mitigated as necessary. This project may have minor adverse and short term impacts to air, soils, wildlife, visual resources, and transportation. However, with the incorporation of mitigating measures, these impacts would be limited primarily to periods of construction and maintenance and are not significant. Long term impacts to soils and water quality would be beneficial as sediment and salt loading to the Colorado River system would be reduced from current conditions. Likewise, public health and safety below the two structures would be enhanced as peak flood flows would be muted which would help mitigate flood damage. No significant cumulative impacts would occur.

As proposed with the design criteria and attached mitigation, there would be no effect on the current status or trends for the Public Land Health Standards. Other items considered are documented in the FONSI for the action.

MITIGATION MEASURES\MONITORING: Mitigation measures that are to be incorporated as stipulations for the Right-of-Way (ROW) grant are included as Attachment D, Conditions of Approval.

PROTEST/APPEALS: This decision may be appealed to the Interior Board of Land Appeals, Office of the Secretary, in accordance with the regulations contained in 43 CFR, Part 4 and using Form 1842-1. If an appeal is taken, your notice of appeal must be filed in this office (2815 H Road, Grand Junction, Colorado) within 30 days from receipt of this decision. The appellant has the burden of showing that the decision appealed from is in error.

If you wish to file a petition (request) pursuant to regulation 43 CFR 2801.10 or 43 CFR 2881.10 for a stay (suspension) of the effectiveness of this decision during the time that your appeal is being reviewed by the Board, the petition for a stay must accompany your notice of appeal. A petition for a stay is required to show sufficient justification based on the standards listed below. Copies of the notice of appeal and petition for a stay must also be submitted to each party named in this decision and to the Interior Board of Land Appeals and to the appropriate Office of the Solicitor (see 43 CFR 4.413) at the same time the original documents are filed with this office. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

NAME OF PREPARER: Nate Dieterich, Hydrologist

NAME OF ENVIRONMENTAL COORDINATOR: Collin Ewing

DATE:

SIGNATURE OF AUTHORIZED OFFICIAL:

A handwritten signature in blue ink, appearing to read "Catherine Robinson", written over a horizontal line.

Grand Junction Field Manager

DATE SIGNED:

ATTACHMENTS:

- A. Project Design Specification Drawings (Leach Creek)
- B. Project Map Leach Creek
- C. Project Map Bosley Wash
- D. COAs, Stipulations

Attachment D

Conditions of Approval (COAs) STIPULATIONS

1. The holder shall operate, maintain and reclaim the facilities and all work areas within the ROWs in strict conformity with the Right-of-Way (ROW) grant stipulations. Any relocation, additional construction, additional equipment, or use that is not in accord with the application, shall not be initiated without the prior written approval of the authorized officer. Any inconsistencies between the application and the Stipulations will be resolved in accordance with BLM Regulations.
2. Noncompliance with any of the stipulations will be grounds for an immediate temporary suspension of activities and facility operation if it constitutes a threat to public health and safety or the environment.
3. Copies of the right-of-way grants with the stipulations and Plans of Development shall be kept on site during maintenance activities. All maintenance personnel shall review the grant and stipulations before working on the right-of-way.
4. The holder shall notify all existing right-of-way holders in the project area prior to beginning any surface disturbance or maintenance activities. The holder shall obtain an agreement with any existing ROW holders or other parties with authorized facilities that cross or are adjacent to those of the holder to assure that no damage to an existing ROW or authorized facility will occur. The agreement(s) shall be obtained prior to any use or maintenance of the ROW or existing facility.
5. The City of Grand Junction will coordinate the construction of the project with Mesa County, Maralex Resources Inc., and the Grand Junction Regional Airport to avoid conflicts with existing rights-of-way and the proposed airport land transfer and airport improvement project.
6. The holder shall notify the BLM authorized officer at least 48 hours prior to the commencement of initial surface disturbing activities under this grant. The BLM contact is Nate Dieterich or Catherine Ventling, Grand Junction Field Office, 2815 H Road, Grand Junction, CO 81506, phone (970) 244-3030 or 244-3009. A preconstruction meeting will be held with the holder and the contractor to ensure terms, conditions and stipulation are understood and complied with. Throughout the life of the grant, the BLM authorized officer shall be notified at least 30 days prior to any non-emergency related surface disturbance or maintenance activities, and within 30 days following an emergency activity.
7. The exterior boundaries of the ROW areas shall be clearly flagged prior to any surface disturbing activities during maintenance and reclamation activities.
8. To prevent the spread of invasive species, the holder shall perform a pre-mobilization inspection insure that all disturbance related construction equipment and vehicles are clean and free of soil, mud and vegetative material prior to moving onto public lands. Driving through or parking on noxious weed infestations will be avoided.
9. When saturated soil conditions and/or soil rutting of 3 inches or greater exist on or along the right-of-way, travel shall be halted until soil material dries out sufficiently for construction to proceed without undue damage and erosion to the right-of-way.

10. The holder shall disturb and remove only the minimum amount of soils and vegetation within the authorized ROW necessary for the maintenance of structures and facilities.
11. All top-soils stripped from the project area will be stockpiled and re-vegetated in a manner that blends with the surrounding landscape, maintains soils productivity, and allows for efficient use in reclamation efforts within the ROW area.
12. The holder shall promptly remove and dispose of all waste caused by its activities. The term "waste" as used herein means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, petroleum products, ashes and equipment. No burning of trash, trees, brush, or any other material shall be allowed.
13. Fueling of vehicles and equipment within 100 feet of streams, including ephemeral channels, is prohibited. Any fuel spills should be cleaned up immediately and contaminated soil should be disposed of properly.
14. No signs or advertising devices shall be placed on the premises or on adjacent public lands, except those posted by or at the direction of the authorized officer.
15. All existing authorized roads used for construction and maintenance shall be maintained in as good as, or in better than existing condition. This may include, but is not limited to, roadway surface repairs (blading the roadway), cleaning ditches and drainage facilities, and dust abatement. After construction, existing roads shall be restored to meet or exceed conditions existing prior to construction. All road maintenance activities must be approved by the authorized officer.
16. The type and extent of stormwater best management practices implemented at the project site shall be sufficient to minimize soil loss from the project site. The BLM shall require additional erosion control measures in the future if site conditions warrant and/or if existing BMPs are insufficient to protect the resource.
17. Surface disturbing activities will be restricted to periods when wind speeds are less than 35 mph. Posted speed limits will be followed, and vehicle speeds will be limited to 15 mph or less on un-posted routes.
18. The proponent shall inform all persons associated with operations under this authorization that any objects or sites of paleontological or scientific value, such as vertebrate or scientifically important invertebrate fossils, shall not be damaged, destroyed, removed, moved, or disturbed. If in connection with authorized operations any of the above resources are encountered, all activities that might further disturb such materials shall be suspended. The BLM authorized officer shall be notified of the findings and the discovery shall be protected until the BLM authorized officer gives notice to proceed. If ground-disturbing activities cannot be immediately suspended, the operator shall work around or set the discovery aside in a safe place to be accessed by the BLM-permitted paleontologist.
19. All persons in the area who are associated with this project shall be informed that any person who, without a permit, injures, destroys, excavates, appropriates or removes any historic or prehistoric ruin, artifact, object of antiquity, Native American remains, Native American cultural item, or archaeological resources on public lands is subject to arrest and penalty of law (16 USC 433, 16 USC 470, 18 USC 641, 18 USC 1170, and 18 USC 1361). Strict adherence to the confidentiality of information concerning the nature and location of archeological resources will

be required of the proponent and all of their subcontractors (Archaeological Resource Protection Act, 16 U.S.C. 470hh)

20. Pursuant to 43 CFR 10.4(g) the proponent of this authorization must notify BLM, by telephone, and with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), you must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by BLM.
21. Inadvertent Discovery: The National Historic Preservation Act (NHPA) [16 USC 470s., 36 CFR 800.13], as amended, requires that if newly discovered historic or archaeological materials or other cultural resources are identified during the Proposed Action implementation, work in that area must stop and the BLM Authorized Officer (AO) must be notified immediately. Within five working days the AO will determine the actions that will likely have to be completed before the site can be used (assuming in place preservation is not necessary).
22. The Native American Graves Protection and Repatriation Act (NAGPRA) [25 USC 3001 et seq., 43 CFR 10.4] requires that if inadvertent discovery of Native American Human Remains or Objects of Cultural Patrimony occurs, any activity must cease in the area of discovery, a reasonable effort made to protect the item(s) discovered, and immediate notice be made to the BLM Authorized Officer, as well as the appropriate Native American group(s) (IV.C.2). Notice may be followed by a 30-day delay (NAGPRA Section 3(d)).
23. The proponent may relocate activities to avoid the expense of mitigation and delays associated with this process, as long as the new area has been appropriately inventoried and has no resource concerns, and the exposed materials are recorded and stabilized. Otherwise, the operator shall be responsible for mitigation costs. The BLM authorized officer will provide technical and procedural guidelines for relocation and/or to conduct mitigation. Upon verification from the BLM authorized officer that the required mitigation has been completed, the operator will be allowed to resume construction.
24. Antiquities, historic ruins, prehistoric ruins, and other cultural or paleontological objects of scientific interest that are outside the authorization boundaries but potentially affected, either directly or indirectly, by the proposed action shall also be included in this evaluation or mitigation. Impacts that occur to such resources as a result of the authorized activities shall be mitigated at the operator's cost, including the cost of consultation with Native American groups
25. As part of the required reclamation for all post construction and maintenance activities, all disturbed areas (not within the basins themselves) shall be seeded with a seed mixture suitable to specific site conditions. This mixture shall be approved prior to reclamation by the authorized officer. All seed mixtures must be certified to be weed-free. Application rates are for pure, live seed (PLS). Certification and seed tags must be submitted to the Field Manager within 30 days of seeding.
26. Prepare seedbed by ripping heavily compacted soils, contouring land forms, compacting loose soils and then spreading topsoil back on the surface in a roughened state. Scatter removed vegetation and shredded wood back on the surface and broadcast seed with an approved seed mix. Broadcast application shall be used at 2 times the recommended application rate. Surface rock that was removed during surface scrubbing and clearing shall be scattered back across the ROW to mimic natural conditions. Disturbed portions of the right-of-way surface shall be left rough and not smoothed to help facilitate runoff collection, seed germination and seedling survival.

Seeding should be completed after September 15 and prior to December 15 or in the early spring once soils have thawed.

Mulches and soil amendments may be used to improve reclamation success.

27. On the ROW, the proponent will monitor and control those noxious weeds that may occur or be found, as listed in the booklet, *Noxious Weeds of Mesa County*. If chemical control is necessary, use of pesticides will comply with the applicable federal and state laws. Pesticides will be used only in accordance with their registered uses and within limitations imposed by the Secretary of the Interior. Prior to the use of pesticides, the proponent will obtain from BLM written approval of a plan showing the type and quantity of material to be used, the pest(s) to be controlled, method of application, location of storage and disposal of containers, and any other information deemed necessary by BLM. Emergency use of pesticides will be approved in writing by BLM prior to such use.
28. The proponent will comply with all applicable federal laws and regulations existing or hereafter enacted or promulgated. In any event, the proponent will comply with the Toxic Substances Control Act of 1976, as amended (15 U.S.C. 2601 et seq.) with regard to any toxic substances that are used, generated by or stored on the ROW or on facilities authorized under this ROW grant (see 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193). Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 will be reported as required by the Comprehensive Environmental Response, Compensation and Liability Act of 1980, Section 102b. A copy of any report required or requested by any federal agency or state government as a result of a reportable release or spill of any toxic substances will be furnished to BLM concurrent with the filing of the reports to the involved federal agency or state government.
29. The proponent will comply with applicable state standards for public health and safety, environmental protection and siting, construction, operation and maintenance, if these state standards are more stringent than federal standards for similar projects. Proponent shall comply with all local, State, and Federal regulations and permit requirements.
30. Sixty days prior to termination of the right-of-way, the proponent shall contact the authorized officer to arrange a joint inspection of the right-of-way. This inspection will be held to agree to an acceptable termination and rehabilitation plan. This plan shall include removal of facilities, recontouring and seeding at the discretion of the authorized officer. The authorized officer must approve the plan in writing prior to the proponent's commencement of any termination activities.