

RECLAMATION

Managing Water in the West

Final Environmental Assessment Orchard Mesa Irrigation District Canal System Improvement Project

**Upper Colorado River Endangered Fish Recovery Program
Western Colorado Area Office
Upper Colorado Region**



August 2013

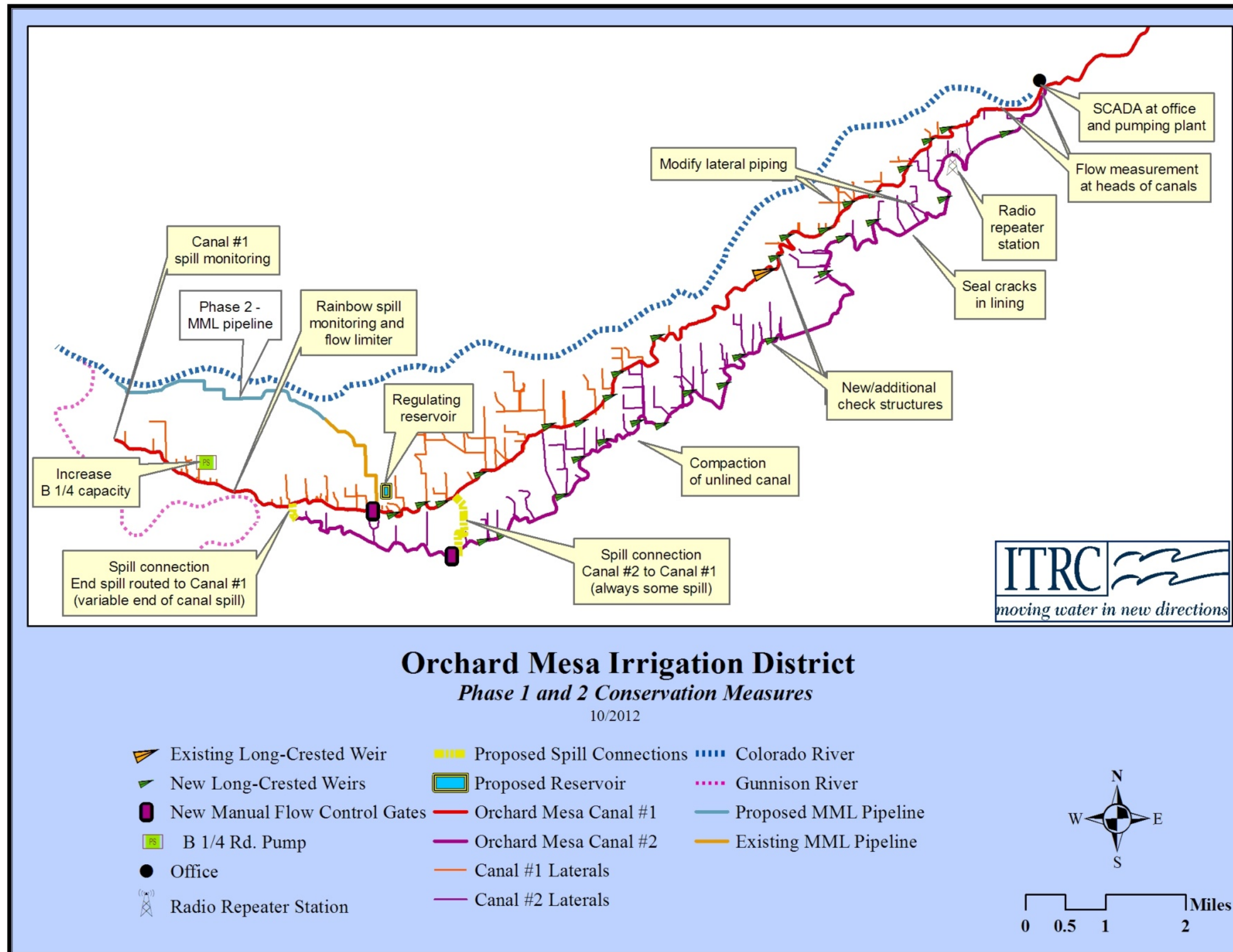


Figure 1-Project Map (from ITRC 2012)

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CHAPTER 1 – INTRODUCTION

PROPOSED ACTION

On behalf of the Upper Colorado River Basin Endangered Fish Recovery Program (Recovery Program), Reclamation proposes to construct system improvements for the Orchard Mesa Irrigation District (OMID) Division of the Grand Valley Project. The improvements will provide a more reliable water supply throughout the canal system and generate an estimated 17,000 ac-ft. of water savings per year. The savings result from reduced main canal and lateral spills, recovering spills from main canals in urban areas, and elimination of spills from the Mutual Mesa Lateral (MML). Conserved water would then be redirected to the Grand Valley Power Plant (power plant) to increase hydropower generation and river flows in the 15-Mile Reach¹. Existing water shortages to urban and agricultural water users would also be reduced. Reclamation and OMID will enter into an agreement for operations and maintenance of the system improvements.

NEED FOR AND PURPOSE OF ACTION

The U.S. Fish and Wildlife Service identified the need for additional flows within the 15-Mile Reach (Service 1999) and the Upper Colorado River Endangered Fish Recovery Program (Recovery Program) has identified the proposed project as a source to contribute additional flows. The purpose of the project is to assist in recovery of four endangered fishes. Reclamation prepared this EA in cooperation with other federal and state agencies to comply with the National Environmental Policy Act (NEPA), Endangered Species Act (ESA), and related U.S. Department of the Interior policies and regulations. If, based on this analysis, Reclamation concludes the proposed action would have no significant impact on the human environment; preparation of an Environmental Impact Statement would not be required before the action could be implemented.

¹ The 15-Mile Reach is the portion of the Colorado River defined as from River Mile 171 to River Mile 185 (Grand Valley Irrigation Company Diversion Dam near Palisade, Colorado to the confluence with the Gunnison River).

BACKGROUND INFORMATION

Upper Colorado River Basin Endangered Fish Recovery Program

In 1988, the Governors of Colorado, Utah and Wyoming; the Secretary of the Interior; and the Administrator of Western Area Power Administration entered into a cooperative agreement to initiate the Recovery Program. The Recovery Program is an interagency partnership created to recover the endangered Colorado pikeminnow, razorback sucker, humpback chub and bonytail while allowing continued and future water development.

Recovery Program elements include:

- Habitat management including identifying and acquiring instream flows, changing operations of Federal dams, and operating other reservoirs in a coordinated manner to benefit endangered fish.
- Habitat development including restoring floodplain/wetland habitats, constructing fish passageways around dams and other barriers in the river, and constructing fish screens in major canal diversions.
- Native fish propagation and genetic management involving establishing facilities to hold adult brood stock to prevent extinction of these rare fish and maintain their genetic resources; develop rearing ponds; conduct research to improve survival of endangered fish raised in captivity and stocked in the wild; and support appropriate stocking and reintroduction efforts.
- Managing non-native species and sport fishing in habitat considered “critical” to endangered fish. This also involves educating and distributing information to anglers to reduce accidental capture of endangered fish.
- Research, monitoring, and data management provides information about what these fish need to survive, grow, and reproduce in the wild. Efforts include compiling data on the number, sizes, and locations of endangered fish; monitoring endangered fish population trends; and making river Flow Recommendations.

15-Mile Reach of the Colorado River

The 15-Mile Reach is a reach of the Colorado River that extends from the confluence of the Gunnison River upstream 15 miles to the Grand Valley Irrigation Company Diversion Dam near Palisade, Colorado (See Figure 1). The Colorado River from the confluence to the Utah State Line is commonly referred to as the 18-Mile Reach. The Service issued a programmatic biological opinion (PBO) (Service 1999) which addressed Reclamation’s operations and depletions, other depletions, and Recovery Program actions in the Upper Colorado River above the confluence with the Gunnison River. The Service found that the 15-Mile Reach is affected more than any of the other reaches by water depletions because it is located downstream of several large diversions and upstream of the Gunnison River. The PBO states:

“Extremely low water conditions that occur during the late summer and early fall months reduce habitat for Colorado pikeminnow and razorback sucker. Reduced flows during spring runoff reduce the ability for many habitats to be created and maintained. Therefore, many of the recovery actions are targeted for the 15-Mile Reach. Colorado pikeminnow and razorback sucker occur in the 15-Mile Reach, humpback chub and bonytail currently are not known to occur there. The 15-Mile Reach is a particularly important section of the river for Colorado pikeminnow and razorback sucker; it is critical to recovery of each species’ Colorado River populations.”

SCOPING

A scoping letter was mailed to interested parties on November 25, 2009 and an open house was held at the Mesa View Elementary School on December 3, 2009 to discuss and review the proposed project.

Alternatives evaluated in this EA are limited to the Proposed Action and No Action alternatives. The alternatives are discussed in Chapter 2. During scoping, Reclamation identified the following potential issues and concerns which are discussed in greater detail in Chapter 3.

Water Resources

Water Rights—Reduce canal spills while protecting Orchard Mesa Irrigation District Water Users, Impacts to water rights on the Colorado River and along affected tributary washes

Water Quality—Water quality impacts and Clean Water Act compliance

Land and Vegetation Resources

Construction Easements—Obtain temporary construction easements; minimize disturbance to residents

Riparian and Wetlands—Reduced spills in washes, drains and along the river corridor could result in reduction of riparian and wetland habitat types.

Jurisdictional Wetlands—The Proposed Action will affect surface and subsurface hydrology supplied to wetland areas along the project alignment. As an irrigation maintenance project, the Proposed Action is exempt from requiring a Section 404 Permit pursuant to the Clean Water Act (33 USC 1344). The applicable U.S. Army Corps of Engineers exemptions for Farm or Stock Pond or Irrigation Ditch Construction and Maintenance. A copy of the Exemption Summary and the ACOE Guidance Letter are provided as Attachment C.

Weed Management—Concerns with weed management

Hydropower—Impacts to power production at the power plant

Cultural Resources—Avoid or mitigate adverse impacts to historic characteristics of the canal system

Economic—Concerns with potential property devaluation

Threatened and Endangered Species—Contribute to progress of the Recovery Program

CHAPTER 2—PROPOSED ACTION AND ALTERNATIVES

Alternatives evaluated in this draft environmental assessment include the No Action and Proposed Action Alternatives.

NO ACTION ALTERNATIVE

Under the No Action Alternative, Reclamation would not implement canal system improvements on the Orchard Mesa Irrigation District (OMID) system. Seasonal water shortages would continue to occur on the lower end of the system and water savings would not contribute flows needed for the 15-Mile Reach to assist in recovery of the endangered fishes.

PROPOSED ACTION

Under the Proposed Action, Reclamation would construct system improvements for the OMID component of the Grand Valley Project. The improvements would 1) provide a more reliable water supply throughout the canal system and throughout the irrigation season, and 2) produce an estimated 17,000 ac-ft. of water savings per year. Conserved water would be redirected to the Grand Valley Power Plant resulting in increased hydropower generation and increased flows in the 15-Mile Reach.

Proposed Improvements include:

- Construction of a new 80-100 ac-ft. regulating reservoir on approximately 15 acres of land on central Orchard Mesa (**Regulating Reservoir**),
- Improve water level control in Orchard Mesa Canals No. 1 & 2 (**Check Structures and Other Improvements**),
- Installation of simple remote monitoring system and electronic flow meters (**SCADA System**),
- Increased pump capacity at existing B ¼ Rd Pump (**B ¼ Pump**),
- Construction of interties between the Canals No. 1 and No. 2 to help balance flows in the irrigation system and upgrades to canal end spills (**Interties and Upgrades to Canal End Spills**),
- Reduced canal and lateral seepage (**Lining and Piping**), and
- Improved operational procedures (**Improved Operations**),

Additional descriptions of the proposed improvements are as follows:

Regulating Reservoir

A regulating reservoir would be built adjacent to Canal No. 1 at a property recently acquired



Figure 1-Proposed OMID Regulating Reservoir

from the Colorado River Water Conservation District (CRWCD) shown in Figure 1. Reclamation will construct an 80-100 ac-ft. regulating reservoir. The reservoir would be lined to prevent seepage and fenced for safety. To form the reservoir embankments, approximately 52,000 cubic yards of compacted fill material will be placed. Fill material will be excavated from the bottom of the reservoir. The reservoir will have an east-west dike dividing the reservoir in half eliminating the need for a tall embankment on the north end of the reservoir. The reservoir would have the ability to receive and store water from Canal No. 1. As needed, water

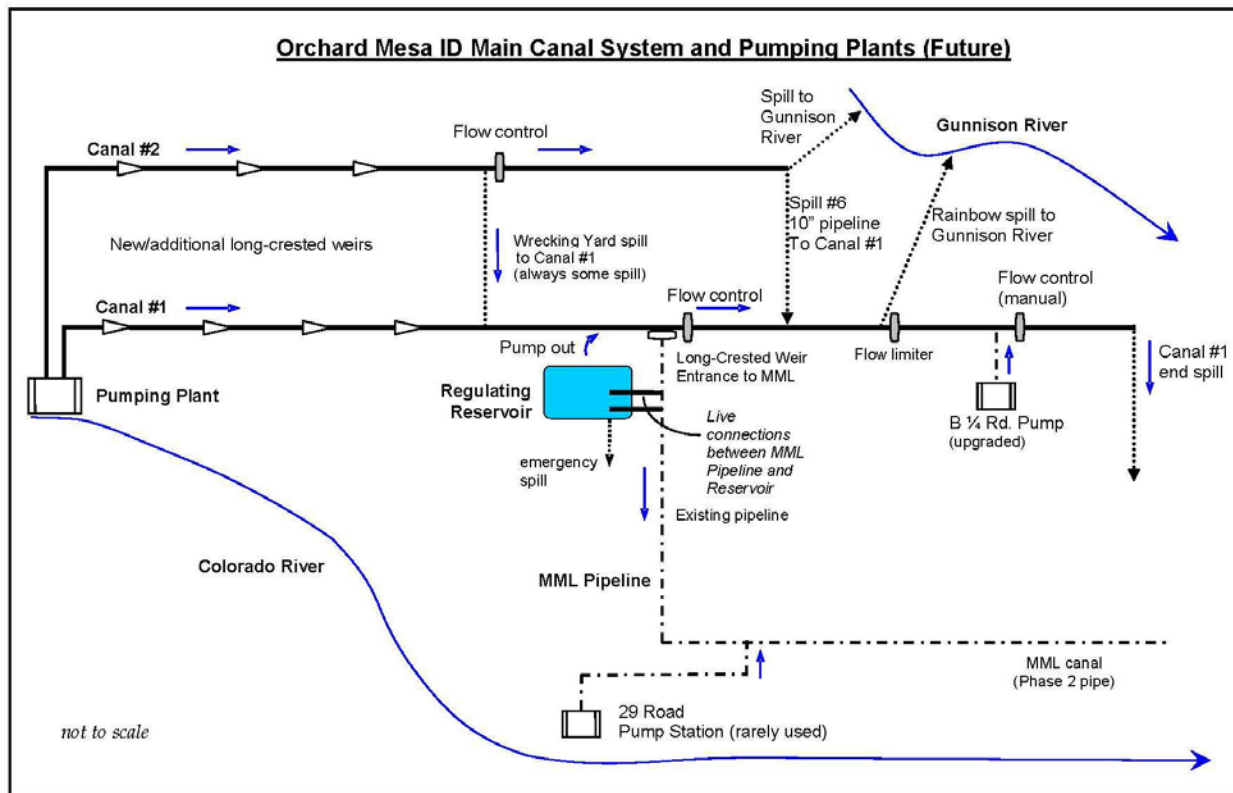


Figure 2-Control Strategy for OMID (from ITRC 2012)

would then be put back into the canal system to meet peak demands. Figure 2 illustrates the operational strategy for regulating reservoir.

Check Structures and Other Canal Improvements

The proposed check structure improvements will involve upgrading existing check structures and the construction of new check structures at selected locations in Orchard Mesa canals No. 1 & 2 north of U.S. Highway 6 & 50. The check structures will improve the water level control by keeping the water level more constant at varying canal flows.

Present operations require the canals be kept full to provide sufficient water elevation to make water deliveries at each turnout. If canal flow is reduced, the lower water surface elevation is not sufficient to provide water at turnouts for irrigators to take and use their allocated water. Likewise, if canal flows are constant and irrigation demands decrease, water must be spilled back to either the Colorado or Gunnison rivers at various points along each canal.

Other canal improvements include improving some individual canal deliveries and raising reaches of the canal bank.

Check Structures

Two types of long-crested weirs structures (V-Type and Straight Line weirs) are being considered for use on Orchard Mesa Canals No.1 and No. 2. Figure 3 illustrates the two types of long-crested weirs. The Straight Line structure is approximately twice the length of the V-type structure. A total of 17 long-crested weir check structures would be constructed in Canal No. 1 and 16 in Canal No. 2. The approximate locations of these structured are shown in Figure 4.

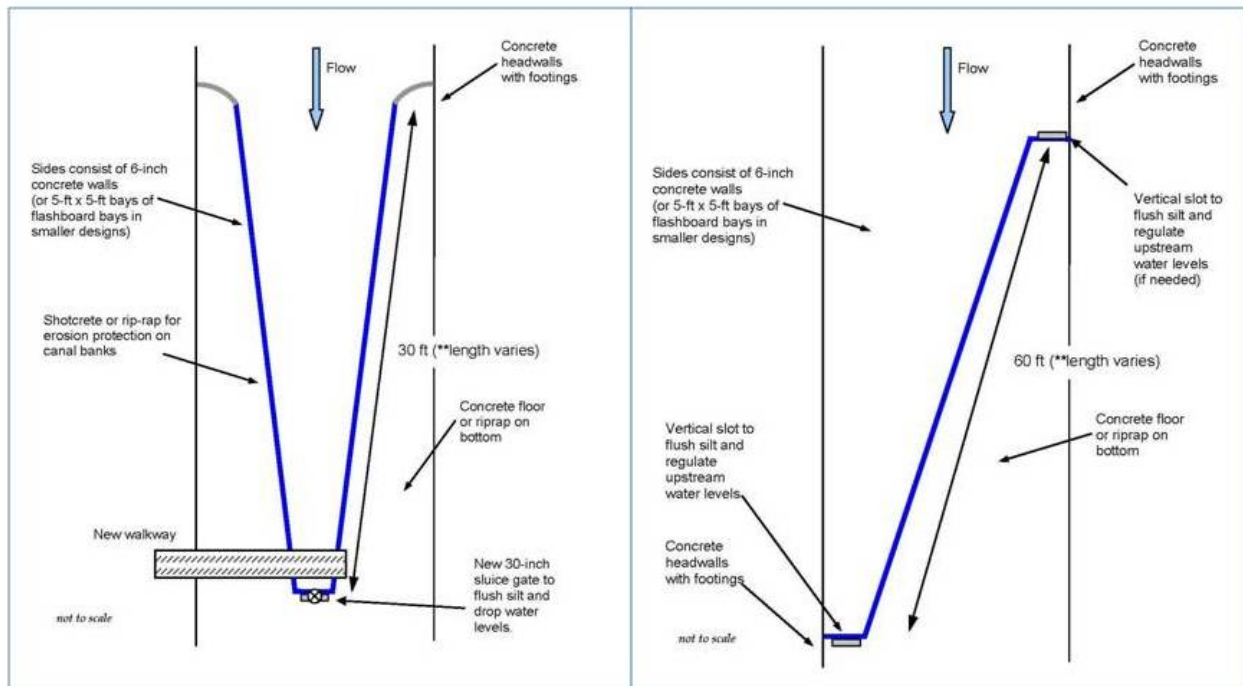


Figure 3-V-Type and Straight Line Weir Concepts

Other Canal Improvements

Other canal improvements include:

- 1) Raising canal banks in 7 sections within Canal No. 1 and 5 sections within Canal No. 2 to address insufficient freeboard. This involves placing additional fill material along the canal bank to increase the elevation up to 1 foot. The lengths of the canal bank raising will be between 200 ft. and 500 ft., with the exception of one site. That section includes a 2,500 ft. section of Canal No. 1 near U.S. Highway 50; other locations may be identified during project development and will be addressed at that time.
- 2) Installing a “bump” structure in Canal No.1 and two “bump” structures in Canal No. 2. “Bumps” are used in areas where there is adequate freeboard and riprap. The bumps are created by placing concrete blocks in the bottom of the canal to raise water levels during low flows which enables adjacent turnouts to be serviced.

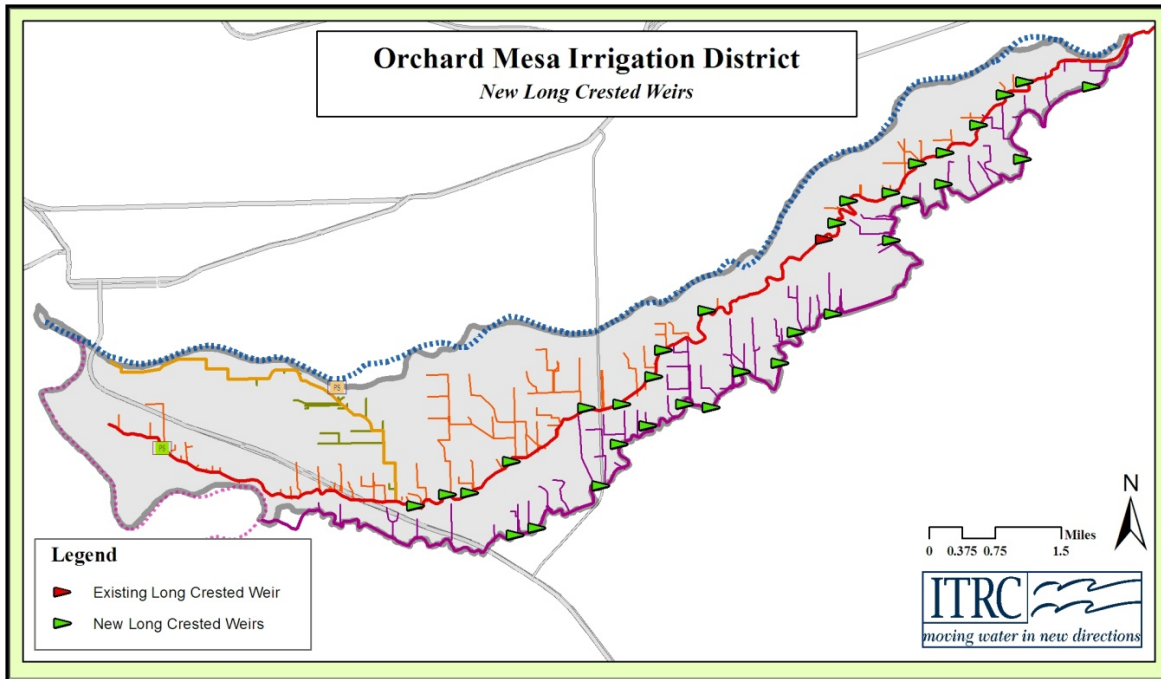


Figure 4-Approximate Locations of New Long-Crested Weirs²

- 3) Relocate two turnouts by installing the turnout gate upstream of the new long-crested weir, and supplying the turnout with a new pipeline in the canal bank (Turnouts 1-61 and 1-63) to provide adequate water delivery elevation;
- 4) Raise the existing turnout box at (2-39) to provide adequate freeboard;
- 5) Modify turnouts in delivery boxes on Canal No. 1 at Turnout 1-58-B and Turnouts 2-16 to 2-21 on Canal No.2 in order to minimize existing restrictions. Modifications may include replacing cut-throat flumes with ramp flumes or some other measuring device to minimize restrictions.

The approximate locations for the other proposed canal improvements are shown below in Figure 5.

² Figure from ITRC 2012.

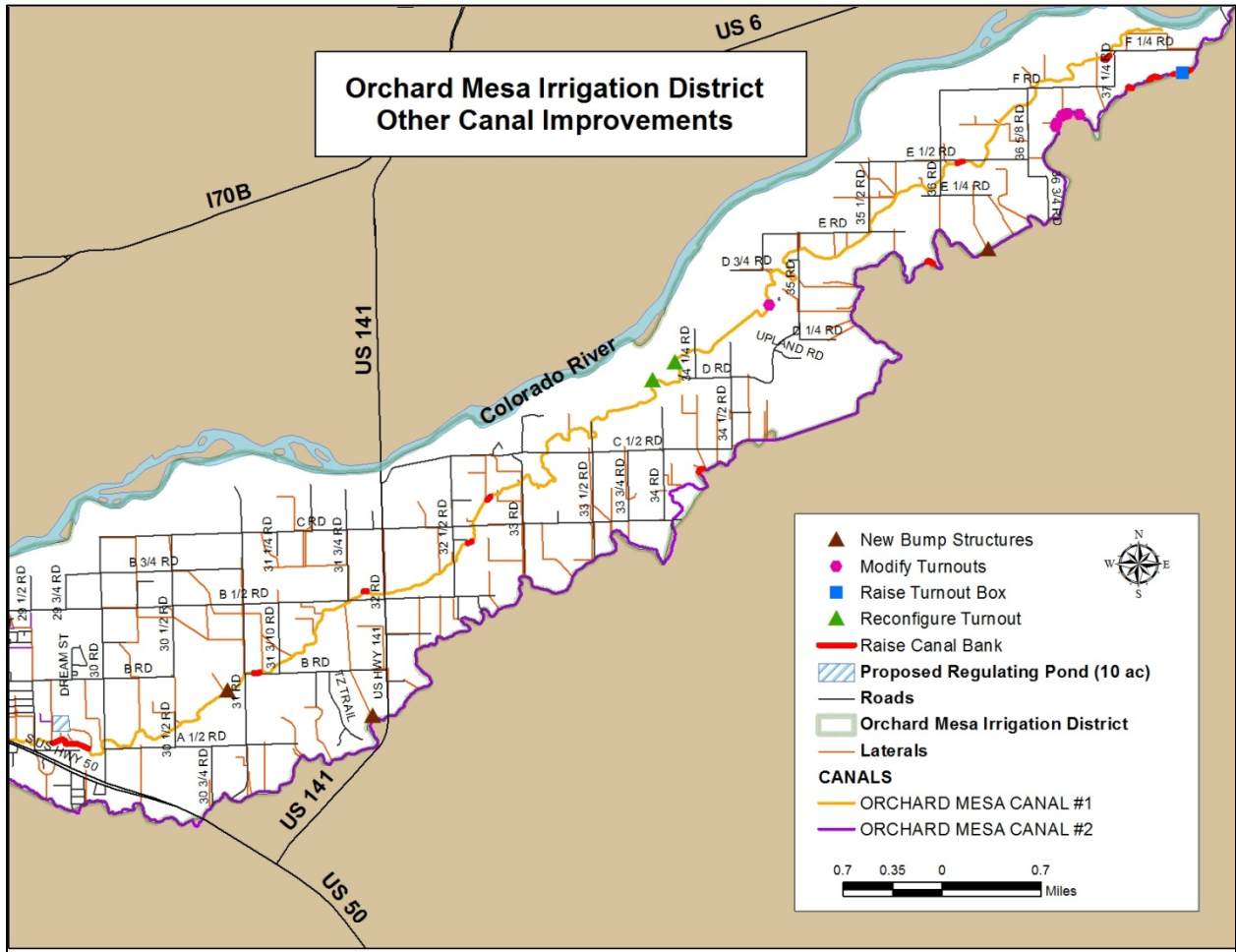


Figure 5-Other Canal Improvements

B 1/4 Pump Facility Improvements

OMID operates an existing pump facility (B 1/4 Pump) which pumps water from an irrigation drain back to Canal No. 1 (Figure 6). The pump has a capacity of 1800 gallons per minute (gpm) and is manually adjusted by a ditch rider about twice a week. Proposed improvements to the B 1/4 Pump includes the following:

1. Increase the motor from 50 hp to 100 hp and increase the pump size from 1800 gpm to 3600 gpm (8 cfs).
2. Increase the pipeline size from 12 in to 18 in.
3. Install a variable frequency drive so that the pump flow rate can be adjusted automatically to maintain a constant water level upstream of the new sluice gate in Canal No. 1.
4. Install an automatic trash screen at the B 1/4 Pump to minimize labor and keep the pump intake clean.



Figure 6-B 1/4 Road Pump

5. Install a sluice gate in Canal No. 1 with a 15 foot long-crested weir approximately 300 foot downstream to regulate flow down the remaining portion of Canal No. 1.
6. Raise and reline approximately 1000 feet of both banks of Canal No. 1 upstream of the new flow control gate. The banks will be raised by about 1 foot.
7. Improve conditions around the pump house.

SCADA System

Supervisory Control and Data Acquisition (SCADA) is a valuable tool in enhancing water management. The only automated control proposed will be done on the VFD pumps used to pump water from the reservoir into Canal No. 1 and B ¼ pump (see Table 1). The proposed SCADA system will improve the reliability and flexibility of water deliveries throughout the service area. The proposed SCADA sites and their functions are shown below in Table 1.

Table 1-Proposed OMID SCADA

No.	Location (Name)	Automatic Control	Remote Manual Control	Remote Monitoring	Base Station	Radio System
1	Regulating Reservoir and Canal #1	√	√	√		
2	B 1/4 Road Pump Station and Discharge	√	√	√		
3	Head of Canal #1			√		
4	Head of Canal #2			√		
5	Wrecking Yard Spill			√		
6	Canal #2 End Spill (Spill #6)			√		
7	Canal #1 Rainbow Spill			√		
8	Canal #1 End Spill			√		
9	Office and Mobile Base Station				√	
10	Radio Repeater Station					√

Interties and Upgrades to Canal End Spills

A canal intertie allows for the transfer of water from one canal directly to another canal and functions similarly to a canal spill. An existing spill from Canal No. 2 to Canal No. 1 near Hwy 50 (Wrecking Yard Spill) will be realigned to north of Hwy 50 and a new flow control gate installed. The spill at the end of Canal No. 2 will also be rerouted to Canal No. 1 via the existing Spill No. 6 pipeline along Rainbow Drive (Rainbow Intertie). With modifications to the Wrecking Yard Spill and the new pipeline/drain ditch connection to the regulating reservoir, the spill at the end of Canal No. 2 will be reduced by about 2 to 3 cfs.

The proposed modifications to the two canal end spills and canal interties are as follows.

Wrecking Yard Spill

- Construct a new long crested weir spill box in Canal No. 2 just upstream of Hwy 50. The existing spill gates south of Hwy 50 will be abandoned.
- Install a new pipeline north of Hwy 50 from the new spill box along an existing drain ditch to provide operation flexibility to deliver up to 15 cfs from Canal No. 2 to Canal No. 1 and to the new regulating reservoir.

Upgrades to Canal No. 2 End Spill

- Modify the existing End spill on Canal No. 2 to reroute spills to Canal No. 1 via the Rainbow Intertie. The existing concrete lining will be removed and the canal reshaped into a rectangular cross-section for about 150 feet upstream and 15 feet downstream of the spill.
- Install a new long crested weir immediately downstream of the side inlet to the Rainbow spill pipeline.

Rainbow Spill

- Install a measuring flume (Replogle flume) to measure the flow rate approaching the spill points.
- Install a SCADA system consisting of a water level sensor, data radio, and solar power system to allow field personnel to remotely monitor any spill that occurs.
- Install a new flow limiting structure immediately downstream of the Rainbow Spill in Canal No. 1.

Upgrades Canal No. 1 End Spill

The spill at the end of Canal No. 1 will continue to be routed to Duck Pond. With Modifications to the operations of the lower portion of Canal No. 1, spills flows at Duck Pond will be reduced. Proposed modifications to Canal No. 1 End Spill include:

- Install a measuring flume (Replogle flume) approximately 50 feet upstream of the end spill.
- Modify and reshape Canal No. 1 for about 100 feet upstream and 50 feet downstream of the flume. This involves removing existing lining and reshaping the canal into a rectangular cross-section.
- Install a SCADA system consisting of a water level sensor, data radio, and solar power system to allow field personnel to remotely monitor any spill that occurs similar to that described in the upgrades to the Rainbow Spill.

Lining and Piping

Most of Canal No. 2 is lined in one form or another, but about 40,000 feet of the lining is in very poor condition. To address leakage, it is proposed that cracks in the lining be cleaned and sealed with an elastomeric compound.

Most of Canal No. 1 is unlined and proposed improvements include the use of a vibratory compactor to help reduce seepage. The canal sides and bottom will be compacted to a depth of 18-24 inches using an excavator with a vibratory compactor head. There may be a need to repeat

this process due to freeze/thaw conditions. If this process needs to be repeated, OMID would be provided the necessary equipment to re-compact the canal prism.

Laterals that deliver water from Canal No. 1 and No. 2 are currently operated and maintained by the water users served by the individual laterals. In most cases, the laterals are open earth ditches. As part of the improvements, individual laterals that organize into legal entities and provide rights-of-way would be replaced with pressured pipelines. This would be done on a voluntary basis as funding for the overall project allows. The effect of these actions would be to eliminate seepage losses and spills back to the Colorado and Gunnison rivers. Laterals replaced with pressurized pipelines would also facilitate improved on-farm irrigation efficiency. Because the participating laterals have not yet been identified, each lateral will need to be evaluated on an individual basis to determine if existing NEPA and Historic Preservation Act compliance is adequate or if additional inventories are needed.

Improved Operations

Finally, water conservation is highly dependent on OMID's operations. Significant water conservation can only be obtained if OMID operates the system to avoid/minimize operational spills from the district-operated canal system and the laterals. The proposed improvements previously described, provide the foundation for more efficient on-farm management in the future.

Other Improvement Considered but Eliminated

Piping the remaining 15,000 feet of open ditch of the Mutual Mesa Lateral (MML pipeline extension) was also proposed. The pipeline is described as Phase 2 in the Irrigation Training and Research Center planning report (ITRC 2012). The estimated cost of piping the remaining open ditch was greater than \$3 million, with an estimated savings of about 745 AF/year. However, based on improved operation and maintenance, the effects of piping of the MML are included in this environmental analysis and OMID may elect to construct the pipeline at a later time as additional funds become available.

A new pump station at Duck Pond Park to recycle drainage water into the downstream end of the proposed MML extension was also considered. It was anticipated that an additional 9 cfs could be re-circulated and pumped back to the upstream regulating reservoir. This feature was eliminated from further consideration because the additional power costs associated with operating the pumps would likely be a disincentive for OMID to utilize the pumps to their maximum potential. The initial construction costs associated with this feature were just under \$1 million.

Finally, piping sections of Canals No. 1 and No. 2 near the downstream ends was considered. However, at a cost of about \$5.3 million and a predicted savings of 1,000 AF, this improvement was considered cost prohibitive.

CHAPTER 3 – AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This chapter discusses resources that may be affected by actions taken to construct, operate and maintain the OMID Canal System improvements. During preparation of this environmental assessment, issues and concerns were identified from public scoping, discussions with OMID, resource agencies, and other interested parties (see Chapter 4, Consultation and Coordination, for further details).

For each resource, the potentially affected area and/or interests are identified, existing conditions described, and impacts predicted under the No Action and Proposed Action Alternatives. This chapter is concluded with a summary comparison of the alternatives and a list of mitigation measures.

GRAND VALLEY PROJECT

The Grand Valley Project is located in west-central Colorado in the Colorado River Basin. Water is furnished to about 33,368 acres of land along the Colorado River in the vicinity of Grand Junction.

Soon after passage of the Reclamation Act in 1902, an evaluation of the proposed Government Highline Canal, now part of the Grand Valley Project was requested by local citizens. In 1905, the Grand Valley Water Users Association (GVWUA) was organized to cooperate with the Reclamation Service in developing a project. After investigation, the Reclamation Service proposed a project consisting of a diversion dam and distribution canal to irrigate lands at higher valley levels than those being operated by private interests.

The Grand Valley Project was one of the projects examined and reported upon favorably by a board of Army Engineers in accordance with the act of June 25, 1910 (36 Stat. 835) and approved by the President on January 5, 1911. The Grand Valley Project was constructed primarily for agricultural and provides irrigation water to the GVWUA, OMID, Palisade Irrigation District (PID), and Mesa County Irrigation District (MCID) (Figure 5).

ORCHARD MESA IRRIGATION DISTRICT

OMID was organized in 1904 and became part of the federal Grand Valley Project in 1922. OMID provides water for approximately 6,700 landowners and 9,200 acres south of the Colorado River from east of Palisade to Grand Junction. OMID's water, along with the Grand Valley Water Users Association, Palisade Irrigation District, and Mesa County Irrigation Districts' water, is diverted from the Colorado River into the Government Highline Canal at the Grand Valley Project Diversion Dam (Figure 7). Approximately 4.6 miles downstream of the

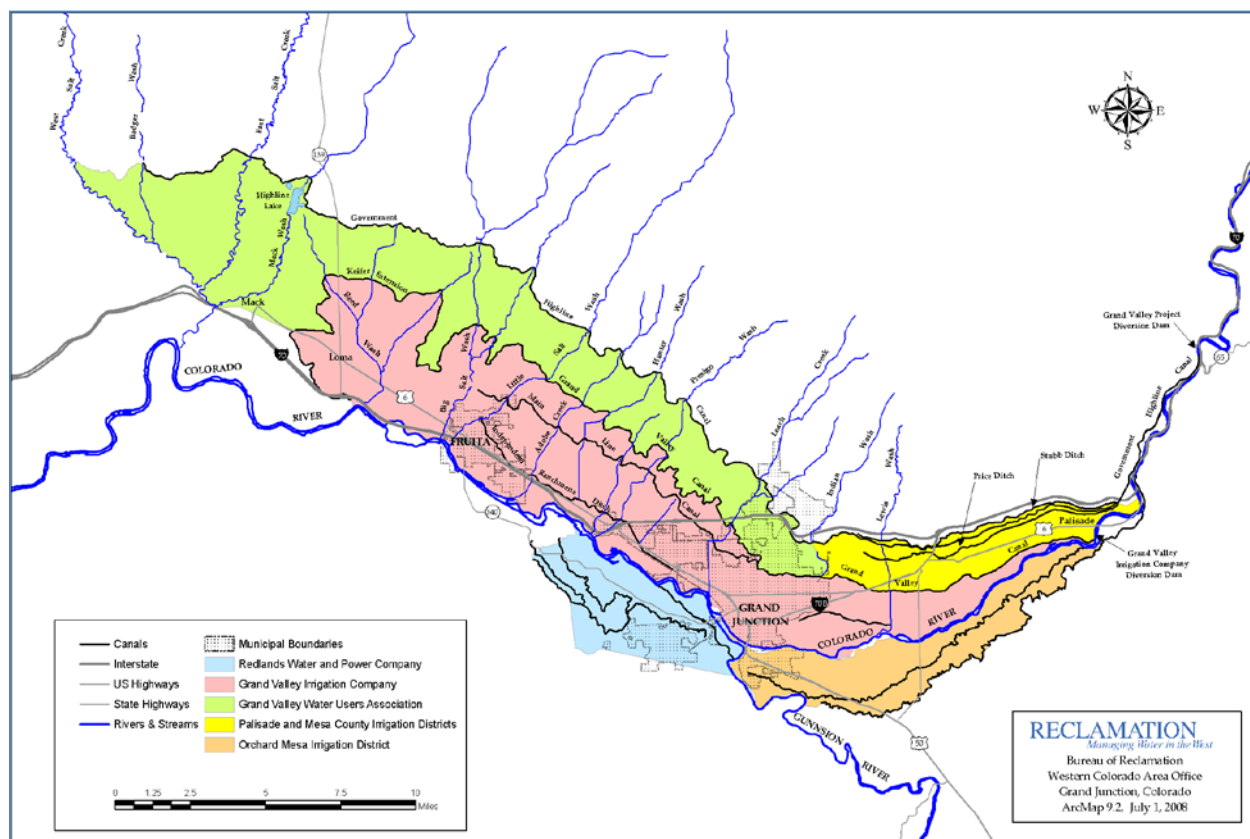


Figure 7-Grand Valley Irrigation Entities

diversion dam, OMID's water splits from the Government Highline Canal and travels under the Colorado River via the Colorado River Siphon.

The Colorado River Siphon conveys water from the Government Highline Canal to the head of the 3.5-mile-long Orchard Mesa Power Canal on the east side of the river. The siphon is reinforced concrete with a capacity of about 800 cubic feet per second. Orchard Mesa Pumping Plant lifts water from the Orchard Mesa Power Canal to the distribution system. The plant contains four pump units: two pumps have a combined design capacity of 100 cubic feet per second (cfs) and a lift of 41 feet to Canal No. 1 and the other two pumps have a combined design capacity of 75 cfs with a lift of 130 feet to Canal No. 2. Water is then conveyed to laterals, which in turn, deliver the water for on-farm use. With exception of the MML, all laterals are privately owned and operated. The canals have capacities of 90 and 70 cfs, respectively, and a combined length of 31.6 miles.

GRAND VALLEY POWER PLANT

The power plant is about one mile south of Palisade, Colorado at the lower end of the Orchard Mesa Power Canal adjacent to the Orchard Mesa Pumping Plant. It operates under a maximum head of 79 feet and has a capacity of 3 Megawatts (MW). The plant was constructed by the

United States with funds advanced by Public Service Company of Colorado (PSCC). Between 1931 and 2011, PSCC operated the plant under a lease agreement with the United States, the Grand Valley Water Users Association, and OMID. On February 17, 2011, the Lease of Power Privilege (Contract No. 0-07-40-P0180) was amended, removing PSCC as a party to the contract. The operation and maintenance responsibility of the power plant were assumed by GVVUA and OMID.

WATER RIGHTS AND USE

The Colorado River and its tributaries provide municipal and industrial water to about 33 million people and irrigation to nearly 4 million acres of land in the United States. The Colorado River's headwaters originate in the Rocky Mountains of Colorado and Wyoming and the River travels southwesterly for approximately 1,450 miles through the states of Colorado, New Mexico, Utah, Arizona, Nevada and California.

Existing Conditions:

Average annual streamflow below Grand Junction including the Gunnison River, averaged 4.9 million acre-feet from 1975 to 2005 (CDWR 2007). The Colorado River is the major source of irrigation water in the Grand Valley of Western Colorado. Diversions into the Government Highline Canal average 770,000 acre-feet per year. Transmountain Diversions are also a major water use in the Upper Colorado River as shown in Table 2.

Table 2-Upper Colorado Transmountain Diversions

Diversion	Acre-Feet per Year	Uses
Colorado-Big Thompson (Reclamation)	232,000	Irrigation and Municipal
Moffat Tunnel (Denver)	57,000	Municipal
Robert's Tunnel (Denver)	58,600	Municipal
Fryingpan-Arkansas Project (Reclamation)	51,000	Irrigation and Municipal
Independence Pass Diversion	38,500	Irrigation and M&I
Homestake Division (Colorado Spring & Aurora)	24,000	Municipal

Figure 8 represents a timeline of key water developments in the Upper Colorado River Basin in Colorado (CDWR 2007). Two large systems provide the majority of irrigation water for the Grand Valley, the Grand Valley Project and Grand Valley Irrigation Company (GVIC). These two systems provide irrigation water for an estimated 65,500 acres utilizing relatively senior water rights. The amount of water available for diversion for these two systems combined with PID and MCID is typically represented by the flow in the Colorado River at the Cameo stream gage and the flows of Plateau Creek; the cumulative demands are often referred to as the Cameo Demand.

Year	Project
1880	(1882) Grand Valley Irrigation Canal
1885	
1890	(1890) Grand River Ditch
1895	
1890	
1895	
1900	
1910	
1915	(1915) Grand Valley Project
1920	(1919) Orchard Mesa Irrigation District
1925	
1930	
1935	(1935) Independence Pass Transmountain Diversion
	(1936) Frazer River Collection System
	(1938) Colorado-Big Thompson Project
1940	(1940) Williams Fork Diversion Project
1945	(1948) Continental-Hoosier Diversion System
1950	
1955	(1959) Williams Fork Reservoir
1960	(1961) Homestake Diversion Project
	(1963) Colbran Project
	(1964) Blue River Diversion System
1965	(1968) Silt Project
1970	(1972) Fryngpan-Arkansas Project
1975	
1980	
1985	
1990	
1995	(1995) Wolford Mountain Reservoir
2000	
2005	
2010	

Figure 8-Major Water Development on the Colorado River in Colorado.

Grand Valley Irrigation Company

GVIC owns and operates the Grand Valley Irrigation Canal which diverts a portion of the Colorado River near the town of Palisade, Colorado. GVIC provides irrigation water for about 27,720 acres on the north side of the river and the main canal has a capacity of approximately 650 cfs. GVIC owns two direct flow water rights for 520.81 cfs and 119.47 cfs (Table 3). The larger right is one of the most senior water rights in the entire Upper Colorado River basin.

Grand Valley Project

The Grand Valley Project was constructed by Reclamation in 1915 and delivers water to the federally owned irrigation system operated by the GVWUA and OMID. The project also delivers water to two other irrigation systems, Palisade (PID) and Mesa County Irrigation (MCID) districts. The capacity of the initial reach of the Government Highline Canal is estimated to be about 1,620 cfs and the Grand Valley Project serves about 42,000 acres. GVWUA holds a large senior water right in the amount of 730 cfs (Table 3).

Table 3-Summary of Significant Colorado River Water Rights in the Grand Valley

Name	Amount (cfs)	Appropriation Date	Admin. Number	Use
Grand Valley Canal (GVIC)	520.81	08/22/1882	22729.11922	Irrigation
Palisade Irrigation District ¹	80.0	10/01/1889	22729.14519	Irrigation
OMID ^{1,2}	10.2	10/01/1900	22729.18536	Irrigation
Mesa County Irrigation District ¹	40.0	07/01/1903	22729.19544	Irrigation
OMID ^{1,2}	450.0	10/25/1907	22729.21116	Irrigation/Power
Government Highline Canal (Grand Valley Project)	730.0	02/27/1908	22729.21241	Irrigation
Government Highline Canal ³ (Grand Valley Project)	400.0	02/27/1908	30895.21241	Power/Commercial
Grand Valley Canal (GVIC)	119.47	04/26/1914	30895.23491	Irrigation
Palisade Irrigation District ^{1,4}	23.5	06/01/1918	2283.78	Irrigation

¹Diverted through the Government Highline Canal.

²Of 460.2 cfs owned by OMID, approximately 272 cfs used at Pumping Plant and 188.2 cfs used for irrigation.

³During the irrigation season, the 400 cfs water right for the Power Plant is effectively limited to 309.8 cfs. This water right is decreed for 800 cfs during the non-irrigation season.

⁴This water right can only be diverted when space is available in the Government Highline Canal. It is generally not considered part of the Cameo Demand.

OMID services approximately 9,200 acres. Water is conveyed from the Government Highline Canal to the Orchard Mesa Power Canal via a siphon under the Colorado River. During the irrigation season, approximately 310 cfs is delivered to the power plant. The United States' power right is decreed at 800 cfs but by stipulation is limited to 400 cfs during the irrigation season. The power right is further limited to about 310 cfs at times when OMID is diverting its full decreed amount of 460 cfs and GVWUA, PID and MCID are diverting their full entitlement of 850 cfs.

Of the remaining water in the Orchard Mesa Power Canal, 17.2 cfs is delivered to the Vinelands area and the balance is delivered to the OMID Pumping Plant where hydraulic pumps are used to lift irrigation water to higher lands in the OMID service area south of the Colorado River. Typically, the OMID pumping plant requires 272 cfs to lift about 171 cfs to the irrigated lands. The water rights owned by the OMID total about 460 cfs and are summarized in Table 3.

Orchard Mesa Check

The Orchard Mesa Check (Check) is a structure below the common afterbay of the OMID Pumping Plant and the Grand Valley Power Plant. The operation of the Check provides the ability to raise the water level in the common afterbay to a level which causes water to flow through the bypass channel and return to the Colorado River upstream of the GVIC Diversion Dam.

The check operated on an informal basis without a decreed right since around 1926 to manage flows in the Colorado River for the benefit of the United States, GVWUA, and OMID. To formalize operation of the check in 1991, these entities filed an application in Colorado State Water Court (Water Division 5, Case No. 91CW247) and it is informally known as the Orchard

Mesa Check Case. Resolution of the case resulted in a negotiated Stipulation and Agreement entered into on September 4, 1996. A brief summary of the Decree Provisions from the agreement follows. Please review the Decree for additional detail regarding the stipulations.

- (1) Except as provided elsewhere in the agreement, the United States agrees to not exercise the Power Right from April 1 through October 31 of each year so as to place an administrative call which results in the curtailment of diversions by upstream water rights.
- (2) During the months of April through October, when Grand Valley Project diversions under the irrigation rights are less than 1,310 cfs, the power right may be exercised so as to maintain a total call of 1,310 cfs at the Grand Valley Project diversion dam.
- (3) At any time during the months of April through October, when diversion by the GVIC are less than 400 cfs, the Power Right may be exercised for up to the amount that diversion by such GVIC rights are less than 400 cfs.
- (4) If the Orchard Mesa Check is physically inoperable due to an Act of God or an emergency situation beyond the control of the Co-Applicants, the United States may exercise the Power Right to the full decreed amount for a period not to exceed a total of 14 days during the April 1 through October 31 period in any given year or until the Orchard Mesa Check becomes operable, whichever occurs first. For purposes of this provision, an emergency situation shall not be deemed to occur if the Orchard Mesa Check is inoperable due to lack of funding or the non-performance of ordinary maintenance.
- (5) Any calls of the power right may be made only when and to the extent the power right is in priority, there is capacity in the power canal, and all water called there under is delivered to and through the power plant.
- (6) The priority date of the power rights shall be considered to be August 3, 1934. The United States agrees not to seek administration under a more senior priority, which the United States asserts is decreed as February 27, 1908.
- (7) No provisions of the stipulation and agreement affect the right of the United States to call for the 800 cfs power right from November 1 through March 31.
- (8) During April 1 through October 31 and conditions below are met, diversions by Historic Users Pool (HUP) beneficiaries shall not be curtailed by any administrative call by water rights listed in the stipulation.

- a. The Check is operable.
- b. There is at least 66,000 af available for releases for the benefit of HUP beneficiaries when Green Mountain Reservoir ceases to be in-priority for its initial fill under the Blue River Decrees.
- c. The Shoshone Rights continue to be exercised.

No Action: The No Action Alternative would not directly affect on water rights and uses. However, existing and future uses rely on significant progress towards down-listing and delisting the endangered fish and cover depletions under the 15-Mile Reach PBO and the umbrella of the Recovery Program. Failure to meet sufficient progress could result in the need for development and implementation of additional recovery actions.

Proposed Action: Under the Proposed Action, implementation of the proposed OMID system improvements would conserve an average of 17,000 acre feet per year in irrigation demand, while improving the equitable distribution and reliability of water service (ITRC2012). The project will also reduce the amount of water needed for pumping to lift water from the power canal to Canals No. 1 & 2. However, the water to operate the pumps already contributes to the 15-Mile Reach unless the Check is in operation. Both project savings are illustrated in Table 4 below.

Table 4-Potential Reduction in OMID Diversion Demand

Month	Average Reduction in Irrigation Demand		Average Reduction in Hydraulic Pumping	
	acre feet	cfs	acre feet	cfs
April	2,242	37.7	3,699	62.2
May	2,159	35.1	3,562	57.9
June	1,511	25.4	2,493	41.9
July	1,679	27.3	2,770	45.1
August	2,207	35.9	3,642	59.2
September	3,080	51.8	5,083	85.4
October	4,121	67.0	6,800	110.6
Annual	17,000	40.1	28,050	66.1

During most periods, the reduction in irrigation demand will result in increased flows in the 15-Mile Reach. Under most conditions, water not needed for irrigation demand or hydraulic pumping would be returned to the 15-Mile Reach through the Grand Valley Power Plant. However, under certain low flow conditions, the saved water may be used by OMID or may accrue to other irrigation water users in the Grand Valley instead of the 15-Mile Reach.

A Grand River Consulting Corporation report (2008) assumed that OMID conservation elements would reduce irrigation demand by an average of 40 cfs and reduce hydraulic pumping demands by 66 cfs, for a total reduction in OMID diversions of 106 cfs. The design capacity of the OMID Power Canal is about 860 cfs while the cumulative demand for OMID and Grand Valley Power

Plant is about 850 cfs during the irrigation season. As a result, the capacity of the canal can physically limit the amount of water that can be supplied to OMID and the Grand Valley Power Plant. The OMID water right is senior to the power plant, and the OMID demands are satisfied first as previously shown in Table 3. Diversions to the power plant are limited by the amount of physical capacity that exists in either the Government Highline Canal or the OMID Power Canal, above and beyond the water demands of more senior Cameo water rights. As OMID demands are reduced by the proposed canal improvements, additional capacity will exist in both the Government Highline Canal and the OMID Power Canal, and diversions to the power plant will increase so long as the water rights for the power plant are in-priority.

Pursuant to the Check Stipulations, the total amount of water that can be called by the Cameo Demand is limited to 1,950 cfs, so long as the three conditions are met. The United States agreed that the power plant will not place an administrative call when all the other Cameo water rights are diverting their decreed capacities. However, the power plant may place a call to the extent that the collective irrigation rights that are delivered through the Government Highline Canal are less than 1,310 cfs. If the OMID irrigation demand is reduced by 106 cfs, the power plant could use the 106 cfs and the total water right call associated with the Cameo Demand would remain at 1,950 cfs (Grand River Consulting Corp).

The proposed OMID improvement may allow the additional diversion of water (over and above historical amounts) by upstream water rights that are junior to the OMID water right but are senior to the power plant. The Grand River Consulting Corp. Report (2008) concluded that as long as the Shoshone Call is not altered, those rights upstream of Shoshone will be curtailed prior to the time of a Cameo Call either with or without the OMID improvements.

However, two water rights (GVWUA 730 cfs and Busk-Ivanhoe System 180 cfs) may benefit from a reduced demand by the OMID water right (Table 5). The Busk-Ivanhoe transmountain diversion project, operated by the cities of Pueblo and Aurora collects surplus water from the headwaters of Ivanhoe Creek, and historically has delivered it through the Busk-Ivanhoe Tunnel. Both water rights could potentially divert water during those periods when the calling Cameo right is the GVWUA 730 right. The senior OMID right reduced by 106 cfs may benefit the GVWUA 730 cfs right by increasing the supply available by 106 cfs and concurrently reducing demand on the Green Mountain HUP Pool. Also if the reduction in OMID demand causes the GVWUA 730 cfs right to be fully satisfied, the river call would switch to the more junior power plant right and the Busk Ivanhoe Project would come into priority and would be able to divert additional water. A summary of potential benefits to these water users is listed below (Grand River Consulting Corp. 2008).

- The irrigation water supply available at the Grand Valley Diversion Dam will increase by the amount of the total OMID demand reduction (106 cfs)
- The increased irrigation supply will allow either a reduction in Green Mountain Reservoir HUP irrigation releases, or a reduction in the amount of water diverted by the Orchard Mesa Check.

Table 5- Key Colorado River Basin Water Rights in Relation to a Change in Cameo Call that may occur w/ OMID Improvements.

Structure	Owner	Amount (cfs)	Previous Adj. Date	Primary Calling Water Right	Remarks	
Shoshone Power Plant	PSCC	1250.0	12/5/1905	N/A		
Grand Valley Canal	GVIC	520.81	3/25/1912	N/A		
Grand Valley Project	PID	80.0	3/25/1912	N/A		
Grand Valley Project	OMID	102.0	3/25/1912	N/A		
Grand Valley Project	MCID	40.0	3/25/1912	N/A		
Grand Valley Project	GVWUA	730.0	3/25/1912	N/A	<i>Existing: Calling right in driest periods, will receive additional supply when short of water</i>	
<i>Busk Ivanhoe Project</i>	<i>Pueblo/Aurora</i>	<i>35.0</i>	<i>9/28/1927</i>	<i>Cameo</i>	In driest periods only, may stay in-priority a few weeks longer.	
<i>Busk Ivanhoe Project</i>	<i>Pueblo/Aurora</i>	<i>50.0</i>	<i>9/28/1927</i>	<i>Cameo</i>		
<i>Busk Ivanhoe Project</i>	<i>Pueblo/Aurora</i>	<i>25.0</i>	<i>9/28/1927</i>	<i>Cameo</i>		
<i>Busk Ivanhoe Project</i>	<i>Pueblo/Aurora</i>	<i>70.0</i>	<i>9/28/1927</i>	<i>Cameo</i>		
Fremont No. 1 Ditch	Climax	65.0	1/9/1930	Shoshone	Only affected if Shoshone Call is reduced in later summer months	
Fremont No.2 Ditch	Climax	35.0	1/9/1930	Shoshone		
Fremont No.2 Ditch	Climax	25.0	1/9/1930	Shoshone		
Clinton Creek Ditch	Climax	50.0	1/9/1930	Shoshone		
Boreas No. 2 Ditch	Englewood	16.0	8/22/1932	Shoshone		
Con-Hoosier System	Colorado Springs	40.0	8/22/1932	Shoshone		
Con-Hoosier System	Colorado Springs	10.0	8/22/1932	Shoshone		
Con-Hoosier System	Colorado Springs	20.0	8/22/1932	Shoshone		
Con-Hoosier System	Colorado Springs	17.0	8/22/1932	Shoshone		
Fraser River Div Project	Denver Water	910.0	7/9/1934	Shoshone		
Fraser River Div Project	Denver Water	370.0	7/9/1934	Shoshone		
Williams Fork Div Project	Denver Water	620.0	7/9/1934	Shoshone		
Warren E Wurtz Ditch	Pueblo BOWW	85.0	8/2/1934	Shoshone		
Columbine Ditch	Pueblo BOWW	60.0	8/2/1934	Shoshone		
Grand Valley Project	USA	800.0	8/3/1934	N/A		<i>Future w/OMID: Potential calling right in some dry periods</i>
Grand Valley Canal	GVIC	119.4	8/3/1934	N/A		<i>Existing & Future: Calling Cameo right in moderately dry periods.</i>
Grand Valley Project	PID	23.5	8/3/1934	N/A		
Ind Pass System	Twin Lakes	625.0	9/18/1934	Cameo	No Change: Junior to Cameo Call in either scenario	

PSCC: Public Service Company of Colorado; GVIC: Grand Valley Irrigation Company; PID: Palisade Irrigation District; OMID: Orchard Mesa Irrigation District; GVWUA: Grand Valley Water Users Association;

- Additional water retained in the HUP will reduce potential irrigation shortages later in the year and may provide as much as 19,000 acre-feet of additional irrigation supply in critical dry years such as 1977 or 2002.
- For the Busk Ivanhoe system, diversion records reflect late summer diversions by the project do not exceed 2 cfs and are typically less than 1 cfs. It is estimated that on a worst case the basis the change in a Cameo Call may keep the Buck Ivanhoe system in priority for several additional weeks in a dry year such as 1977 or 2002, during which time the project may realize additional diversion of less than 100 acre-feet. In most cases, the Busk Ivanhoe Project is in-priority during the irrigation season and the potential change in priority date of a Cameo Call will not change the amount of water diverted by the project.

In addition, the OMID improvements may provide additional water supplies to the Grand Valley Irrigators during critically dry periods when the Green Mountain Reservoir HUP may not have adequate water to meet all irrigation demands. In a dry year, when the GVWUA call is on for approximately 90 days, over 19,000 acre feet of additional water may be available for irrigation use (Grand River Consulting Corp. 2008).

In conclusion, there may be times during dry conditions where operation of the improvements may benefit other water rights. However, outside of dry conditions, the improvements will generally benefit the 15 Mile Reach with additional flow.

WATER QUALITY

Existing Conditions:

Generally, the water quality entering the 15-Mile Reach of the Colorado River is good. However as irrigation return flows from the Grand Valley enter the Colorado River via tributaries and drains, water quality begins to diminish. Selenium levels are elevated in the 15-Mile Reach tributaries and drains. The Gunnison River and irrigation return flows downstream of the 15-Mile Reach continue to diminish water quality. Segments of the Colorado and Gunnison rivers in Table 6 are listed as impaired because of elevated selenium and iron concentrations (CDPHE 2012).

In addition, Reclamation conducted water quality monitoring within the Orchard Mesa Irrigation System from June 2010 through January 2011. A summary of the data collected is presented in Tables 7 to 10.

Table 6-2010 Colorado's 303 (d) List of Impaired Waters

WBID	Segment Description	Portion	Colorado's Monitoring & Evaluation Parameter(s)	Clean Water Act Section 303 (d) Impairment	303 (d) Priority
COGULG02	Gunnison River, Uncompahgre River to Colorado River	all	sediment	<i>E. coli</i>	H
COLCOLC02b	Colorado River, Rapid Creek to Gunnison River	Humphrey Backwater area		Se	M
	Colorado River, Rapid Creek to Gunnison River	all	Sediment, Se		
COLCLC13b	Tributaries to Colorado River from Government Highline Canal to Salt Creek	all		Se	M
		Indian Wash	Fe (Trec)		

No Action: Under the No Action Alternative, no change to existing water quality trends is predicted. Generally, water quality samples at each site are within acceptable ranges and meet existing water quality standards.

Proposed Action: At various times as needed by irrigation demand, OMID will pump up to 8 cfs from an irrigation drain at the existing B ¼ Pump. These return flows, combined with other drainage, currently pass through Duck Pond Park and end up in the Gunnison River. Under the proposed actions, the pump at the B ¼ Pump would be doubled to a maximum pumping capacity of 8 cfs. The drainage area for the B ¼ Pump is primarily agricultural and residential. As presented in Tables 7 through 10, water quality was monitored between April 2010 and January 2011 at selected sites within the OMID boundaries. Water quality is within an acceptable range; however selenium and copper concentrations are elevated in several months at the Chipeta Golf Course and Duck Pond Park. Neither of these locations contribute flows directly to the B ¼ Pump. It should be noted that if, in the future, land uses upstream of the pump change substantially, changes in water quality may also occur. If this drainage area becomes more urban and/or industrial in the future, water quality may be impacted and suspending pumping at the B ¼ Pump for 24 hours after a rainfall event to maintain the water

quality in the lower reach of Canal No. 1 may be appropriate to allow surface runoff to flow through the system prior to resuming pump operations.

Table 7-Water Quality Measurements at the OMID Pump Forbay*

PARAMETER	SAMPLE DATE						
	6/8/10	7/19/10	8/17/10	9/22/10	10/26/10	12/10/10	1/28/11
Arsenic (Total)	0.000	0.000	0.000	0.000	0.012	0.000	0.00
Barium (Total)	0.08	0.11	0.23	0.24	0.29	0.14	0.12
Cadmium (Total)	0.0006	0.0000	0.0000	0.0000	0.0025	0.0000	0.0000
Chromium (Total)	0.002	0.000	0.003	0.000	0.007	0.002	0.000
Fluoride	0.21	0.22	0.32	0.40	0.67	0.23	0.34
Lead (Total)	0.012	0.002	0.003	0.000	0.021	0.003	0.006
Mercury (Total)	0.00000	0.00000	0.00000	0.0000	0.00000	0.00000	0.00000
Nitrate	0.57	0.21	0.24	0.26	0.57	0.30	0.38
Selenium (Total)	0.000	0.000	0.000	0.000	0.000	0.002	0.002
Silver (Total)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Color (Cp/Pt Unit)	3	0	0	1	0	2	2
pH	7.20	7.7	8.4	7.90	7.8	7.8	7.8
Conductivity (umhos)	260	870	950	1040	1100	1200	1450
Sodium	14	90	98	109	93.0	150	145
Calcium	33	57	83	66	62	68	75
Magnesium	7	14	14	13.1	18	27	21
Potassium	1.6	3.3	3.6	4.1	4.2	4.3	5.0
Chloride	14	108	162	153	119	184	212
Sulfate	36	100	103	129	94	150	137
Alkalinity (Phenol.)	0	0	12	0	0	0	0
Alkalinity (Total)	80	120	129	133	141	152	155
Bicarbonate	97	145	127	161	170	184	187
Carbonate	0	0	14	0	0	0	0
Dissolved Solids	192	490	562	610	913	688	864
Hardness	111	199	264	218	231	280	271
Turbidity (NTU)	110	3.3	11.0	8.2	920	5.10	22
Boron (Total)	0.00	0.07	0.00	0.00	0.03	0.06	0.01
Copper (Total)	0.013	0.000	0.001	0.007	0.020	0.007	0.91
Iron (Total)	5.41	0.24	0.65	0.23	30.8	0.24	0.104
Manganese (Total)	0.286	0.023	0.046	0.024	0.725	0.012	0.008
Molybdenum (Total)	0.003	0.003	0.003	0.005	0.002	0.003	0.00
Ammonia	1.05	0.00	0.02	0.01	0.03	0.00	0.00
Phosphate	0.01	0.00	0.00	0.00	0.00	0.00	0.01
Zinc (Total)	0.235	0.019	0.013	0.047	0.10	0.01	0.03

*Measured in mg/l unless otherwise noted.

Table 8-Water Quality Measurements at the OMID Canal No.1 at Mutual Mesa Lateral*

PARAMETER	SAMPLE DATE				
	6/8/10	7/19/10	8/17/10	9/22/10	10/26/10
Arsenic (Total)	0.000	0.000	0.000	0.000	0.000
Barium (Total)	0.11	0.12	0.25	0.26	0.28
Cadmium (Total)	0.0006	0.0000	0.0002	0.0000	0.0004
Chromium (Total)	0.000	0.000	0.007	0.001	0.002
Fluoride	0.24	0.30	0.33	0.41	0.49
Lead (Total)	0.003	0.001	0.003	0.000	0.009
Mercury (Total)	0.00000	0.00000	0.00000	0.00000	0.00000
Nitrate	0.64	0.25	0.39	0.36	0.47
Selenium (Total)	0.000	0.000	0.000	0.000	0.000
Silver (Total)	0.0000	0.0000	0.0000	0.0000	0.0000
Color (Cp/Pt Unit)	3	0	0	0	2
pH	7.20	7.80	8.20	7.8	7.70
Conductivity (umhos)	420	970	1020	1180	1330
Sodium	17.0	91	100	110	100
Calcium	50	68	79	86	106
Magnesium	9	14	17	18	19
Potassium	2.0	3.3	4.2	4.1	4.0
Chloride	24	108	123	145	132
Sulfate	85	145	160	164	209
Alkalinity (Phenol.)	0	0	0	0	0
Alkalinity (Total)	90	124	129	129	145
Bicarbonate	109	150	156	156	175
Carbonate	0	0	0	0	0
Dissolved Solids	284	588	696	686	856
Hardness	157	227	267	287	342
Turbidity (NTU)	130	10.0	53.5	20.5	400
Boron (Total)	0.00	0.03	0.00	0.00	0.01
Copper (Total)	0.011	0.004	0.000	0.010	0.004
Iron (Total)	7.10	0.43	2.72	1.03	21.3
Manganese (Total)	0.257	0.035	0.040	0.033	0.261
Molybdenum (Total)	0.005	0.003	0.005	0.003	0.002
Ammonia	0.23	0.06	0.02	0.00	0.03
Phosphate	0.01	0.01	0.02	0.01	0.00
Zinc (Total)	0.140	0.022	0.030	0.045	0.05

*Measured in mg/l unless otherwise noted.

Table 9-Water Quality Measurements at the Orchard Mesa Golf Course*

PARAMETER	SAMPLE DATE						
	6/8/10	7/19/10	8/17/10	9/22/10	10/26/10	12/10/01	1/28/11
Arsenic (Total)	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Barium (Total)	0.09	0.13	0.23	0.34	0.27	0.06	0.08
Cadmium (Total)	0.0000	0.0000	0.0002	0.0000	0.0002	0.0000	0.0000
Chromium (Total)	0.000	0.000	0.004	0.001	0.001	0.002	0.000
Fluoride	0.45	0.48	0.43	0.51	0.61	0.93	1.31
Lead (Total)	0.001	0.000	0.001	0.000	0.013	0.001	0.000
Mercury (Total)	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Nitrate	0.61	0.52	0.45	0.49	0.76	2.21	2.08
Selenium (Total)	0.002	0.004	0.002	0.002	0.002	0.008	0.023
Silver (Total)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Color (Cp/Pt Unit)	2	0	0	2	0	5	0
pH	7.60	7.70	8.10	7.70	7.70	7.80	7.50
Conductivity (umhos)	1020	1460	1340	1640	2010	3420	3540
Sodium	45	104	102	125	125	210	170
Calcium	127	159	143	155	213	655	634
Magnesium	24	28	28	52.8	38	126	128
Potassium	2.0	4.0	4.1	4.1	4.5	3.9	4.9
Chloride	52	112	119	138	138	174	169
Sulfate	317	363	328	470	568	2170	1880
Alkalinity (Phenol.)	0	0	0	0	0	0	0
Alkalinity (Total)	117	157	149	155	177	225	233
Bicarbonate	141	190	180	188	214	272	282
Carbonate	0	0	0	0	0	0	0
Dissolved Solids	702	1010	920	974	1310	2980	2780
Hardness	415	511	471	603	684	2150	2100
Turbidity (NTU)	76.0	10.2	42.0	18.0	130	11.0	3.00
Boron (Total)	0.00	0.07	0.00	0.00	0.07	0.02	0.19
Copper (Total)	0.005	0.000	0.002	0.003	0.001	0.038	0.000
Iron (Total)	3.58	0.81	1.89	0.80	5.44	0.71	0.39
Manganese (Total)	0.114	0.039	0.113	0.038	0.145	0.165	0.021
Molybdenum (Total)	0.003	0.005	0.004	0.005	0.002	0.013	0.011
Ammonia	0.00	0.07	0.07	0.00	0.05	0.05	0.00
Phosphate	0.01	0.01	0.00	0.10	0.01	0.00	0.01
Zinc (Total)	0.140	0.027	0.023	0.086	0.04	0.02	0.03

*Measured in mg/l unless otherwise noted.

Table 10-Water Quality Measurements at Duck Pond Park*

PARAMETER	SAMPLE DATE								
	4/5/10	4/5/10	6/8/10	7/19/10	8/17/10	9/22/10	10/26/10	12/10/11	1/28/11
Arsenic (Total)	0.0000	0.000 ⁺	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Barium (Total)	0.80	0.75 ⁺	0.15	0.13	0.22	0.26	0.19	0.03	0.08
Cadmium (Total)	0.0000	0.0000 ⁺	0.0000	0.0000	0.0006	0.0000	0.0004	0.0000	0.0000
Chromium (Total)	0.000	0.000 ⁺	0.000	0.000	0.003	0.001	0.002	0.000	0.000
Fluoride	---	1.23	0.38	0.39	0.38	0.53	0.74	1.25	1.02
Lead (Total)	0.000	0.000 ⁺	0.004	0.002	0.002	0.000	0.007	0.003	0.003
Mercury (Total)	0.00000	0.00000 ⁺	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Nitrate	---	2.50	0.70	0.30	0.45	0.49	1.24	2.57	2.82
Selenium (Total)	0.012	0.008 ⁺	0.000	0.002	0.000	0.002	0.000	0.002	0.009
Silver (Total)	0.0000	0.0000 ⁺	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Color (Cp/Pt Unit)	---	2	1	0	0	0	0	5	2
pH	---	7.70	7.50	7.70	8.10	7.80	7.60	8.00	7.60
Conductivity (umhos)	---	4400	920	1120	1260	1490	2060	3900	4500
Sodium	---	300	46	95	105	125	135	300	285
Calcium	---	544	101	102	113	89	237	560	507
Magnesium	---	297	23	21	26	19	13	152	160
Potassium	---	7.7	2.1	3.5	4.2	4.3	5.5	5.2	5.9
Chloride	---	232	48	112	123	138	127	191	200
Sulfate	---	2360	261	223	280	270	575	1910	1780
Alkalinity (Phenol.)	---	0	0	0	0	0	0	0	0
Alkalinity (Total)	---	237	117	116	149	147	173	254	302
Bicarbonate	---	287	142	140	180	178	209	307	365
Carbonate	---	0	0	0	0	0	0	0	0
Dissolved Solids	---	3740	620	704	860	926	1410	3490	3590
Hardness	---	2580	346	340	388	298	644	2020	1920
Turbidity (NTU)	---	3.6	82.0	9.2	35.0	16.0	170	1.05	1.40
Boron (Total)	0.85	0.68 ⁺	0.03	0.06	0.00	0.01	0.12	0.02	0.47
Copper (Total)	0.000	0.000 ⁺	0.005	0.002	0.027	0.004	0.000	0.020	0.013
Iron (Total)	0.34	0.00 ⁺	4.22	0.43	2.73	0.83	5.29	0.21	0.48
Manganese (Total)	0.400	0.388 ⁺	0.223	0.041	0.110	0.058	0.268	0.356	0.409
Molybdenum (Total)	0.026	0.018 ⁺	0.002	0.002	0.005	0.006	0.003	0.015	0.015
Ammonia	---	0.15	0.07	0.13	0.07	0.00	0.05	0.05	0.00
Phosphate	---	0.01	0.02	0.01	0.00	0.01	0.02	0.00	0.00
Zinc (Total)	0.007	0.007 ⁺	0.154	0.039	0.033	0.058	0.04	0.02	0.04

*Measured in mg/l unless otherwise noted. ⁺Dissolved Measurement

LAND USE AND RIGHT OF WAY

Existing Conditions: Both the City of Grand Junction and Mesa County regulate land uses within the OMID. OMID can generally be divided into three distinct areas. A majority of the upper two-thirds of the OMID service area is comprised of small-acreage farms which average less than 10 acres in size (Figure 9). OMID service area transitions from rural to urban with residential, commercial and industrial being the predominate land use types in the lower one-third portion of the OMID District. The upper-third consists mostly of agricultural lands which are dominated by orchards, while the middle-third of the district is predominately

characterized as irrigated pasture and residential. The primary use of OMID water in the lower-third is for household lawns and gardens (most of which is within the City of Grand Junction).

Mesa County is responsible for establishing zoning districts for the unincorporated areas of Mesa County. Within the OMID service area, both Mesa County and City of Grand Junction have authority for land use zoning. Figure 10 summarizes both Mesa County and City of Grand Junction zoning types. For ease of interpretation, both entities' data has been summarized into the following categories (Mesa County 2013, City of Grand Junction 2009):

Rural Zoning Districts-The rural zoning districts are intended to primarily provide for protection and continuation of agriculture and forestry and the preservation of environmentally sensitive lands. The zoning class also includes very low-density-single-family residential developments.

Urban Residential Zoning Districts-Urban Residential zoning districts are generally appropriate for application in the Urban Development Boundary of the Grand Junction Comprehensive Plan, in Rural Communities where sewer is available, and near municipalities. This includes single and multi-family housing densities as low as 1 unit per 5 acres, to high as, 24 units per acre.

Business Districts-Business zoning districts are zoned and either light (B-1) or concentrated (B-2). Only B-1 districts occur within the project area. B-1 districts are intended to accommodate low-intensity neighborhood service and office uses that are compatible with the sale and character of residential neighborhoods. There are no currently zoned B-2 districts within this OMID service area.

Commercial Districts-Commercial zoning districts include limited commercial (C-1) and general commercial (C-2) districts. C-1 districts are intended to accommodate retail, service, and office uses conducted entirely indoors. C-2 districts include moderate to high-intensity commercial uses, which may include outdoor display or storage. Within the OMID, the majority of C-1 districts and all of C-2 district are adjacent to Highway 50.

Industrial Districts-Industrial zoning districts include both limited (I-1) and general (I-2) districts. There are no I-1 districts within the OMID service area and all I-2 districts are located along the Gunnison River. I-2 districts are intended to accommodate areas of heavy and concentrated fabrication, manufacturing, and industrial uses.

Planned Unit Development Districts-Planned Unit Development Districts (PUD) are intended to encourage innovative land planning and site design concepts that implement and are consistent with the Mesa County Master Plan. PUD's also include mobile home parks, recreation parks, fairgrounds, and golf courses. Within the City of Grand Junction boundaries, the City zones parks, open space, schools, libraries, recreation facilities, and other public facilities as a Community Services and Recreation zoning district.

The Orchard Mesa Open Land Overlay District is a special PUD that includes irrigated lands on Orchard Mesa and is applicable to tracts of land 10 acres or larger and require developers to maintain a minimum of 50% open space and a maximum of density of 1 dwelling per 2.5 acres.

Right-of-way for construction, operation and maintenance of existing OMID facilities is held by either OMID and/or the Bureau of Reclamation. OMID has existing recorded easements for some facilities, while Reclamation holds right-of-way under the Canal Act of 1890 (26 Stat.391, 43 USC § 945). The Canal Act expressly reserved to the federal government an easement of right-of-way across lands to allow construction of canals and ditches to provide irrigation to the arid west.

Impacts

No Action: The No Action Alternative would have no effect on existing land uses and existing rights-of-ways.

Proposed Action: Land uses in unincorporated Mesa County are regulated by the Mesa County Land Development Code (Mesa County 2013) and future land use goals, policies and guidelines managing growth in Mesa County are guided by the Mesa County Master Plan (Mesa County 2000). Land uses within the City of Grand Junction are regulated by the City of Grand Junction Zoning and Development Code (2010) and future land use goals, policies and guidelines are contained in the City of Grand Junction Comprehensive Plan (City of Grand Junction 2009).

The proposed action complements both City and County long-range plans by improving the existing irrigation delivery system on Orchard Mesa and supporting existing agriculture, which compliments current and future land uses in the lower-third of the OMID service area, by allowing OMID to accommodate daily and hourly fluctuations in irrigation demands in an urban residential setting. The proposed action would convert approximately 10 acres of irrigated field into a permanent regulating reservoir. OMID would operate and maintain the regulating reservoir to respond to changes in irrigation demands in the lower OMID delivery system.

It is anticipated that the majority of construction activities can be accomplished using the existing public and canal operation & maintenance roads. In a few cases, additional right-of-way may be needed to allow for the relocation or construction of new facilities if not included under current right of way (i.e. portions of the Wrecking Yard Intertie and B ¼ Pump Station pipeline). New right of way will be handled on a case by case basis and would be negotiated and acquired by OMID or Reclamation. If damage occurs to existing crops, buildings, or structures during construction, payment will be made by the United States to the landowner on the basis of an appraisal approved by the United States, or the United States will, at its option, restore the property to the condition which existed prior to construction.

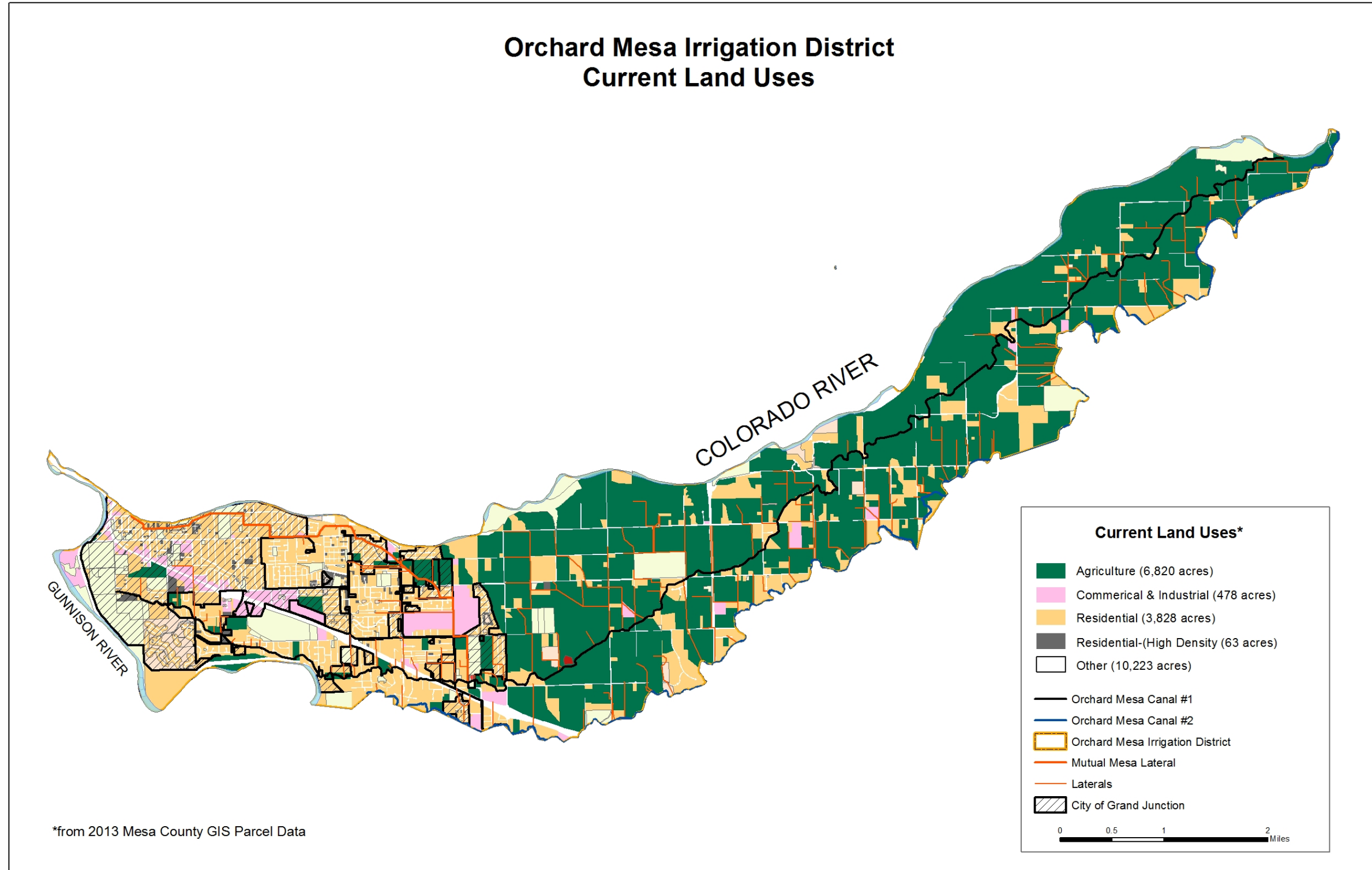


Figure 9-OMID Irrigation District Land Use Classifications

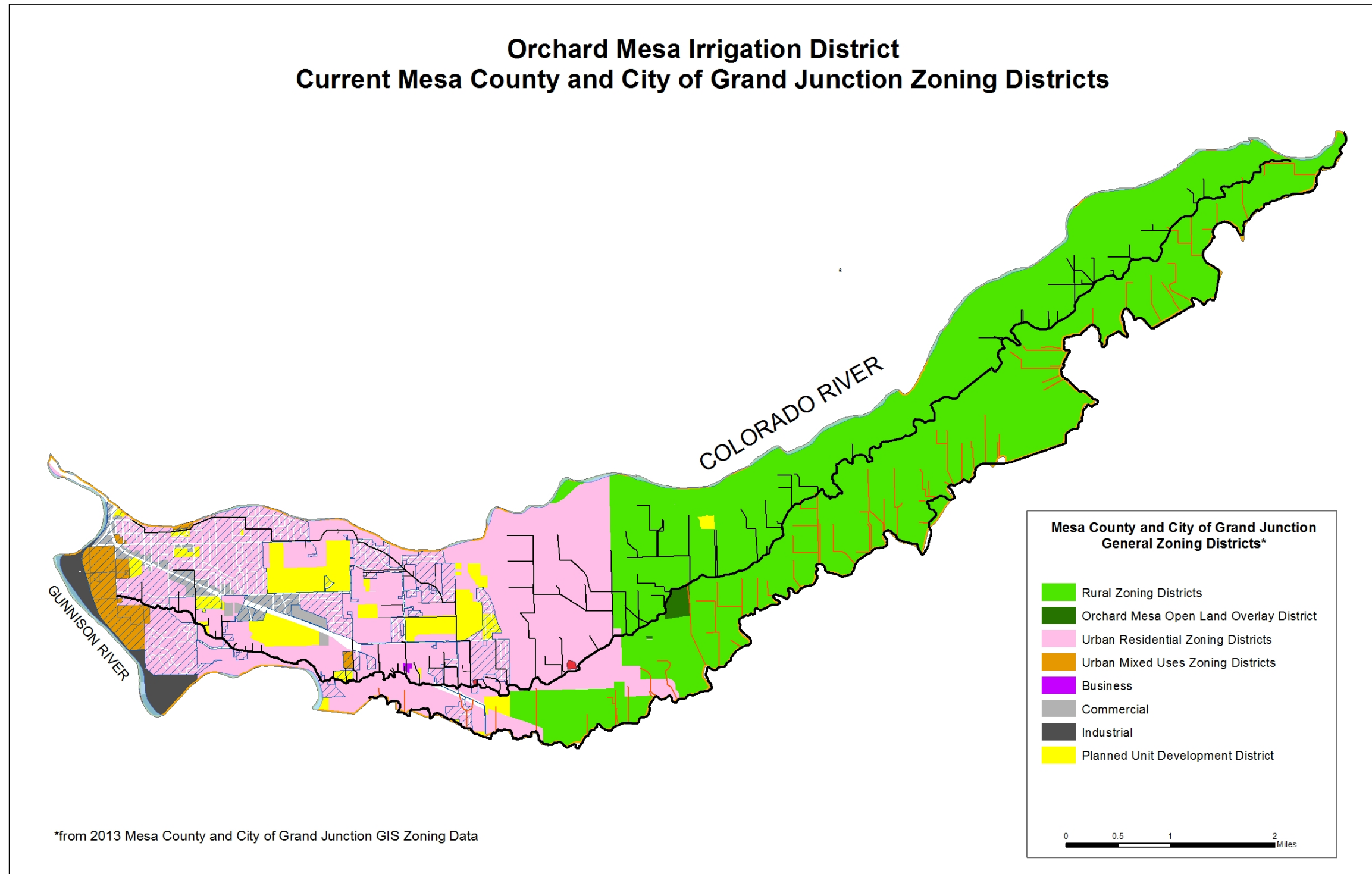


Figure 10-Mesa County and City of Grand Junction Zoning

FISH AND WILDLIFE RESOURCES

Existing Conditions: Fish and wildlife resources common to the project area primarily include species that have adapted to a rural/urban environment. As previously identified in the Land Use Section, those areas that are more rural in nature tend to support more and diverse fish and wildlife resources. As noise and disturbances increase and areas become more urban, fish and wildlife resources become less abundant and less diverse. As can be expected, areas along rivers and streams support the largest numbers and diversity of wildlife. Agricultural lands in the project area are important source of food and shelter for wildlife.

There are two wildlife areas within the OMID service area that serve as important refuges for wildlife species in the Grand Valley. The Tilman Bishop State Wildlife Area is approximately 101 acres of Colorado River bottomland located on the south bank of the Colorado River near the Town of Palisade. The property was dedicated in 2006 and is managed by Colorado Parks and Wildlife and offers hunting, fishing and wildlife viewing opportunities. Public access is prohibited during the nesting and migrating period, from March 15 through July 15.

The Orchard Mesa Wildlife Area is approximately 153 acres of bottomland located along the south bank of the Colorado River between 29 1/2 Road and 31 Road. It was purchased in 1996 by Reclamation and developed to meet fish and wildlife habitat replacement for the Grand Valley Unit of the Colorado River Basin Salinity Control Program and the Upper Colorado River Endangered Fish Recovery Program. This wildlife area is managed to maintain replacement habitat under a contract with the Western Colorado Wildlife Habitat Association. Hunting and fishing opportunities are similar to the Tilman Bishop Wildlife Area. Public access is also restricted from March 15 through July 31.

Common wildlife species in the project area include mule deer, mourning dove, Canada goose, black billed magpie, Gambel's quail and beaver. Table 11 lists the common riparian species found within the Grand Valley. Dominant native fish species include flannel-mouth sucker, bluehead sucker and roundtail chub. Non-native fish species include largemouth bass and channel catfish. Endangered Colorado River fishes are discussed in the next section.

Table 11-Avian Species Present or Likely using Grand Valley Riparian Areas

American bittern	European starling*	Northern pintail*
American crow*	Evening grosbeak	No. Rough-winged swallow
American goldfinch*	Ferruginous hawk	Olive-sided flycatcher
American kestrel*	Field sparrow	Orchard oriole
American redstart	Forster's tern	Osprey
American robin*	Gadwall*	Prairie falcon
Ash-throated flycatcher*	Golden eagle*	Purple martin
American white pelican	Gray catbird*	Red-tailed hawk*
American widgeon*	Great blue heron*	Ring-billed gull
Bald eagle	Great egret	Rose-breasted grosbeak
Barrow's goldeneye	Greater sandhill crane	Rufous-sided Towhee*

Belted kingfisher*	Green-backed heron	Sage sparrow
Berwick's wren*	Green-winged teal*	Savannah sparrow
Black swift	Hooded merganser*	Scissor-tailed flycatcher
Black tern	House finch*	Scott's oriole
Black-billed magpie*	House wren*	Sharp-shinned hawk*
Black-capped chickadee*	Indigo bunting	Short-eared owl
Black-chinned hummingbird*	Interior least tern	Snow goose
Black-crowned night heron*	Killdeer*	Snowy egret
Black-headed grosbeak*	Lazuli bunting*	Solitary vireo*
Black-necked stilt	Least bittern	Song sparrow*
Black-throated gray warbler*	Least flycatcher	Sora
Blue-grey gnatcatcher*	Little blue heron	Spotted sandpiper*
Blue grosbeak*	Loggerhead shrike	Turkey vulture*
Bobolink	Long-billed curlew	Upland sandpiper
Brown-headed cowbird*	Long-eared owl	Vaux swift
Bufflehead	Mallard*	Violet-green swallow*
Burrowing owl	Marsh Wren	Western Kingbird*
Canvasback	McCown's longspur	Western Meadowlark*
Cassin's kingbird	Merlin	Western snowy plover
Cedar waxwing*	Mockingbird*	Western tanager*
Chestnut-collared longspur	Mountain Plover	Western yellow-billed cuckoo
Cinnamon teal*	Mourning dove	Western wood pewee*
Columbian sharp-tailed grouse	Northern cardinal	White-faced ibis*
Common nighthawk*	Northern flicker*	White-throated swift*
Cooper's hawk	Northern goshawk	Willet
Dickcissel	Northern harrier	Yellow warbler*
Eared grebe	Northern oriole*	Yellow-breasted chat*

*Document during breeding bird and winter surveys. Table 5 was compiled from White and Broderick 1995 and 1997 and Broderick 1998.

Terrestrial Vertebrate Studies of the Grand Valley, Colorado (Reclamation, 1976) includes a comprehensive list of terrestrial species recorded or likely to occur within the project area.

No Action: The No Action Alternative is predicted to have no additional effects on fish and wildlife species. As rural areas become more urbanized, wildlife use is expected to decrease with habitat fragmentation. In dry and normal spring runoff years, the 15-Mile Reach of the Colorado River would continue to experience prolonged periods of low flows which limit aquatic habitat and connectivity between the 18-Mile Reach of the Colorado River, the Gunnison River and the Colorado River upstream of Palisade.

Proposed Action: The proposed action will result in some reduced fish and wildlife habitat associated with reduced spills and seepage from Canals No. 1 and No. 2. As water conservation increases, drainages and associated seeps are predicted to contribute and receive less water to support riparian and wetland type habitats, but some spills are projected to continue as well as on-farm tail water. Impacts to these artificial habitats will be offset with the benefit of additional flows in the 15-mile reach of the Colorado River. An estimated 17,000 acre-feet will be returned to the Colorado River via the Grand Valley Power Plant. This would directly benefit

the riverine system and fish species in the Colorado River by increasing base flows in the Colorado River.

THREATENED AND ENDANGERED SPECIES

This section focuses on potential impacts to threatened, endangered and other sensitive species that may be affected by the proposed action. Table 12 lists the species that may occur within the project area or may be affected by the proposed action.

The OMID service area is within the range of several threatened, endangered, or candidate species. Species with potential to occur within the project area include the razorback sucker, Colorado pikeminnow, bonytail, and yellow-billed cuckoo. The project area does not provide suitable habitat for the other species listed in Table 12.

Of the four listed Colorado River fishes: Colorado pikeminnow, razorback sucker and bonytail are likely to occur in vicinity of the project area. Portions of the Colorado River and its 100-year floodplain are included as designated critical habitat for these species. Reclamation previously consulted with the Fish and Wildlife Service regarding Reclamation's operations and depletions in the Upper Colorado River above the confluence with the Gunnison River and included the OMID portion of the Grand Valley Project and the portion of the Colorado River commonly referred to as the "15-mile Reach". The Fish and Wildlife Service issued a programmatic biological opinion (PBO) in December 1999 for Reclamation's operations and depletions, other depletions, and funding and implementation of recovery program actions in the upper Colorado River above the confluence with the Gunnison River (Service 1999).

The 15-mile PBO included numerous actions aimed at recovery of the four listed Colorado River fishes. Augmentation of late summer and fall base flows in the 15-Mile Reach during July, August, and September were identified as important because this reach can be extremely dewatered due to agricultural diversions (Service 1999).

No Action: Under the No Action Alternative, Reclamation would not implement efficiency improvements on the OMID system to meet requirements of the 15-Mile Reach PBO. The Recovery Program would need to explore other alternatives to meet these requirements to provide additional flows to the 15-mile Reach. The No Action Alternative is predicted to have no direct effect on other listed or candidate species.

Proposed Action: The major benefit of the proposed action would be to provide an estimated 17,000 acre-feet of water to the 15-mile reach of the Colorado River during the irrigation season. This would provide a direct benefit to the razorback sucker, Colorado pikeminnow and bonytail and designated critical habitat. Therefore, Reclamation has

Table 12-Threatened and Endangered Species

Species Name	Status	Habitat Requirement Summary	Range in Project Area?	Habitat in Project Area?
Humpback Chub (<i>Gila cypha</i>)	Endangered w/ Critical Habitat	Canyon bound river reaches or similar habitats.	No	No
Razorback Sucker (<i>Xyrauchen texanus</i>)	Endangered w/ Critical Habitat	Colorado and Gunnison River and associated floodplains and backwater habitats.	Yes	Yes
Colorado Pikeminnow (<i>Ptychocheilus lucius</i>)	Endangered w/ Critical Habitat	Colorado and Gunnison River and associated floodplains and backwater habitats.	Yes	Yes
Bonytail (<i>Gila elegans</i>)	Endangered w/ Critical Habitat	Colorado and Gunnison River and associated floodplains and backwater habitats.	Yes	Yes
Canada Lynx (<i>Lynx Canadensis</i>)	Threatened	Spruce/fir/mixed conifer/lodgepole pine forests, or mixed deciduous/conifer.	No	No
Mexican Spotted Owl (<i>Strix occidentalis lucida</i>)	Threatened	Old growth forests and canyon type habitats	No	No
Colorado hookless cactus (<i>Sclerocactus glaucus</i>)	Threatened	Alluvial river terraces along the Colorado and Gunnison river; and in the Plateau and Roan Creek drainages in the vicinity of DeBeque, Colorado	Yes	No
Debeque phacelia (<i>Phacelia submutica</i>)	Threatened	Restricted to barren clay exposures of the Atwell Gulch and Shire members of the Wasatch formation. Generally occurs on moderately steep slopes, benches, and bench tops above the valley floors	No	No
Greenback cutthroat trout (<i>Oncorhynchus clarki ssp. Stomias</i>)	Threatened	Inhabits cold water streams and cold water lakes with adequate stream spawning habitat present during spring	No	No
Gunnison sage-grouse (<i>Centrocercus minimus</i>)	Proposed Endangered	Variety of habitats such as large expanses of sagebrush with a diversity of grasses and forbs and healthy wetland and riparian ecosystems.	No	No
North American wolverine (<i>Gulo gulo luscus</i>)	Proposed Threatened	Prefer high elevations, deep, persistent and reliable spring snow cover.	No	No
Yellow-billed cuckoo (<i>Coccyzus americanus</i>)	Candidate	Low elevation river corridors with extensive mature and dense cottonwood galleries.	Yes	Yes

determined that the proposed project may affect (beneficial effect) the razorback sucker, Colorado pikeminnow, bonytail and humpback chub and designated critical habitat.

The proposed yellow-billed cuckoo may also use dense riparian cottonwood habitats along the Colorado River within the project area. However, the proposed action is not predicted to directly impact these habitats. Therefore, the proposed action is predicted to have no effect on yellow-billed cuckoo.

The Fish and Wildlife Service has concurred with Reclamation's determination that the proposed project, may affect, but not likely to adversely affect the endangered Colorado River endangered fishes or their critical habitat because it will result in increased flows to the 15-mile reach which will be beneficial to endangered fishes and critical habitat. A copy of the Service's concurrence memorandum dated August 19, 2013 is included in Attachment B.

UNIQUE GEOGRAPHIC FEATURES

To meet requirements of environmental laws and U.S. Department of the Interior policies, Reclamation specifically addresses potential impacts of any proposed action on unique

geographic features—which include prime and unique farmland, wild or scenic rivers, rivers placed on the nationwide river inventory, refuges, floodplains or wetlands.

Prime and Unique Farmland

The U.S. Department of Agriculture’s Natural Resources Conservation Service (NRCS) identifies farmlands of national and statewide importance in the region, based on soil types and irrigation status. It is the policy of NRCS to “maintain and keep current an inventory of the prime farmland and unique farmland of the Nation...The objective of the inventory is to identify the extent and location of important rural lands needed to produce food, feed, fiber, forage, and oilseed crops” (7 CFR 657.2). The Proposed Action crosses two types of USDA-designated important farmland: Prime Farmland if Irrigated (~5,925 acres) and Prime Farmland if Irrigated and Drained (~48 acres)(NRCS 2013). All of these important farmlands occur adjacent and are served by Orchard Mesa Canals No. 1 and No. NRCS defines prime and unique farmlands as follows:

Prime farmland has the best combination of physical and chemical characteristics for producing food, feed, forage fiber and oilseed crops. Unique farmland is land other than prime farmland that is used for the production of specific high-value food and crops, such as citrus, tree nuts, olives, cranberries, and other fruits and vegetables. It has a special combination of soil quality, location, growing season, and moisture supply required to produce sustained high quality crops when properly managed. In addition, farmlands of statewide importance are lands that nearly meet the requirements for prime farmland and have been identified by state agencies.

Wetlands

Wetlands and other “Waters of the United States” are subject to the Clean Water Act (CWA) with regulatory compliance administered by the U.S. Army Corps of Engineers (ACOE) and the Environmental Protection Agency (EPA). 33 CFR 328.3 defines “Water of the United States” as follows:

1. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters subject to the ebb and flow of the tide.
2. All interstate waters including wetlands.
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including such waters:
 - i. Which are or could be used by interstate or foreign travelers for recreational or other purposes; or

- ii. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
 - iii. Which are used or could be used for industrial purpose by industries in interstate commerce;
4. All impoundments of waters otherwise defined as water of the United States under the definition;
 5. Tributaries of waters identified above;
 6. The territorial seas;
 7. Wetlands adjacent to water identified above;
 8. Water of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding CWA jurisdiction remains with the EPA.

Included in Attachment C is a map that displays the available data from the National Wetland Inventory for the OMID service area. The Colorado and Gunnison rivers are clearly considered waters of the United States subject to the CWA. Sink Creek is another major drainage that bisects the East Orchard Mesa Area within the project area. The OMID service area also includes a number of drains constructed under the Orchard Mesa Division of the Grand Valley Project. These drains were constructed to collect tail water and drain agricultural areas back to the rivers.

No Action: The No Action Alternative would have no effect on unique geographic features.

Proposed Action: Under the Proposed Action Alternative, temporary disturbance to some agriculturally important lands may occur during construction. These lands will be returned to production immediately following construction and restoration of the ground surface. No farmlands will be permanently removed from production as a result of the Proposed Action. The Proposed Action would give OMID and landowners the ability to better manage their irrigation water with efficiencies gained from the improved system. A reduction of salt accumulation in these soils may also occur in some areas with piping earthen laterals, this benefit is also directly related to on-farm improvements such as when converting flood irrigation to gated pipe, sprinkler or micro-drip irrigation. No direct adverse effects on agriculturally significant lands are expected to occur due to implementation of the Proposed Action.

The Colorado and Gunnison rivers, and Sink Creek would be affected by the proposed action. The primary effect of the proposed action on the Colorado River would be increasing the volume of water in the Colorado River by an estimated 17,000 acre-feet during the irrigation season. This would result in increased flows in the Colorado River at critical times to meet requirements of the 15-Mile PBO. Reduced canal spills and decreases in irrigation return flows will also result in reduced return flows via Sink Creek, OMID drains, and other drainages to the Gunnison and Colorado Rivers.

The ACOE in Regulatory Guidance Letter No. 07-02 (ACOE 2007) addressed exemptions for construction or maintenance of Irrigation Ditches and Maintenance of Drainage Ditches under Section 404 of the CWA. Based on the criteria included in the guidance letter, Orchard Mesa Canals No. 1 and No. 2 and their associated laterals meet the requirements for the exemption under Section 404 of the CWA. In addition, the guidance states that wetlands established solely due to the presence of irrigation water, irrigated fields, or irrigation ditches do not qualify as wetlands for the purposes of applying the 404(f) exemption for construction and maintenance of irrigation ditches and for maintenance of drainage ditches. Where sufficient information is not available to determine the hydrological contribution of irrigation water to a particular wetlands, such wetlands are not removed from consideration as wetlands or waters of the United States. Because all construction activities are limited to the existing OMID canals, lateral, and in uplands sites; no jurisdictional wetland determinations are considered necessary and the proposed project is not predicted to impact jurisdictional wetlands as defined by the ACOE.

The affected reaches of the Colorado and Gunnison rivers are not under study or recommendation for designation as a wild or scenic river. Similarly, no refuge exists in the affected area. However, the proposed action affects spills and return flows to the Colorado and Gunnison rivers and their 100-year floodplains.

INDIAN TRUST ASSETS

Indian trust assets (ITAs) are legal interests in property held by the United States for Indian Tribes or individuals. Reclamation and other Federal agencies share the responsibility to protect these assets. Trust assets may include: lands, minerals, hunting and fishing rights, traditional gathering grounds, and water rights. No Indian trust assets are known to occur in the project area and therefor no impacts are predicted under any of the alternatives.

ENVIRONMENTAL JUSTICE

Executive Order 12898 on Environmental Justice provides that Federal agencies analyze programs to assure that they do not disproportionately adversely affect minority or low income populations or Indian Tribes. The project area is located within Mesa County, Colorado with an estimated total population of 146,723 in 2010 (U.S. Census Bureau 2013). The population estimate for the Orchard Mesa Census Designated Place (CDP) in 2010 was 6,836. Orchard Mesa is an unincorporated area adjacent to the city of Grand Junction and includes a majority of the OMID service area. Ethnic diversity in percent of populations for Mesa County and Orchard Mesa CDP are presented below in Table 13 (2010 U.S. Census Population Finder).

The median household income for the Orchard Mesa CDP from 2007-2011 was \$52,986, compared to \$57,685 for the entire State of Colorado (U.S. Census Bureau 2013). Persons living below poverty level were listed at 12.7%, as compared to 12.5% for the statewide average.

There are no predicted disproportionate impacts to minority or low income populations or Indian Tribes under both the No Action and Proposed alternatives.

Table 13-Ethnicity of Mesa County and Orchard Mesa CDP

Ethnicity	Mesa County % of Population	Orchard Mesa CDP % of Population
Caucasian	94%	90.5%
African American	0.9%	0.5%
Asian	0.9%	0.2%
American Indian and Alaskan Native	1.5%	1.5%
Native Hawaiian and Pacific Islander	0.1%	0.2%
Identified by two or more	2.1%	2.7%
Persons of Hispanic or Latino Origin (2011)	13.6%	12.2%
Caucasian persons not of Hispanic Origin (2011)	82.7%	84.7%

SOCIOECONMIC CONDITONS

Implementation of the proposed action would provide a minor amount of local employment. The total estimated costs are about \$16.5 million dollars (contract and non-contract costs) associated with improvements to the OMID delivery system. This would introduce a small amount of money into the local economy, but it is not expected to affect public services such as schools or transportation.

Regionally, the proposed action contributes to the overall success of the Upper Colorado River Endangered Fish Recovery Program. The Recovery Program was initiated in 1988 with the signing of a cooperative agreement by the Governors of Colorado, Utah, and Wyoming, the Secretary of Interior; and the Administrator of Western Area Power Administration. The Recovery Program provides Endangered Species Act compliance for continued operation of federal water and power projects in accordance with project purposes. The program continues to work to recover endangered fish in the Upper Colorado River Basin while water development proceeds in accordance with federal and state laws and interstate compacts. The Upper Colorado River Endangered Fish Recovery Program currently provide ESA compliance for 2,025 federal and non-federal water projects depleting more than 2.8 million acre-feet per year (Recovery Program 2013). The economic benefits to the Upper Basin states supported by the recovery program are substantial.

CULTURAL RESOURCES

Existing Conditions: Previous inventories and consultations with the Colorado State Historic Preservation Officer (SHPO) have determined that the Orchard Mesa Canal's No. 1 and No. 2, Orchard Mesa Pumping Plant and Orchard Mesa Power Canal were eligible for inclusion on the National Register of Historic Places (NRHP).

In 2010, Reclamation contracted with JGMS, Inc. and the Louis Berger Group, Inc. to conduct Class III inventories of the areas potentially affected by the proposed project. JGMS, Inc. prepared a report entitled *Class III Cultural Resource Inventory of the Orchard Mesa System Improvements, Mesa County, Colorado* (Pinontkowski and Funka 2011). Additional inventories and recordation were completed in 2011 under a contract with Alpine Archaeological Services, Inc. with the National Fish and Wildlife Foundation (NFWF) on behalf of the Recovery Program. Alpine prepared an additional reports entitled *Recordation and Evaluation of the Grand Valley Power Plant (5ME17604) and a Residential Complex (5ME17605)* (Horn 2011) and *Recordation and Evaluation of the Orchard Mesa Canals No. 1 and No. 2 (5ME290 and 5ME4926), Mesa County, Colorado* (Horn 2013).

Impacts:

No Action: The No Action Alternative would have no effect on cultural resources.

Proposed Action: Reclamation has completed consultation with the Colorado State Historic Preservation Office (SHPO) on eligibility and effects on Orchard Mesa Canals No. 1 and No. 2, Grand Valley Power Plant, Mutual Mesa Lateral and the residential site. Orchard Mesa Canals No. 1 and No. 2, Grand Valley Pumping Plant and Orchard Mesa Power Canal have previously been determined eligible. During consultation with the SHPO, the Grand Valley Power Plant was also determined eligible to the NRHP.

Reclamation consulted with the SHPO and determined that the proposed action would have adverse effects to Orchard Mesa Canals No. 1 and No. 2. Reclamation and the SHPO are developing a Memorandum of Agreement (MOA) pursuant 36 CFR 800.6 to mitigate for adverse effects to eligible resources.

RECREATION RESOURCES

Existing Conditions: Hiking, walking, jogging, biking, river rafting, and bird watching are all popular outdoor recreation activities that occur on a regular basis in the Grand Valley. Mesa County, the cities of Fruita and Grand Junction, town of Palisade, and numerous state, federal governments and non-profit organizations have developed an extensive trail system along the north bank of the Colorado River (Colorado Riverfront Trail) that extends from Palisade through Grand Junction and ends near Fruita, Colorado. As mentioned in previous sections, Tillman Bishop and Orchard Mesa Wildlife areas also provide important recreations opportunities for hunting and fishing within the OMID service area. There are also other

recreational opportunities at local area parks managed by the City of Grand Junction and Mesa County.

No Action: The No Action alternative would have no effect on recreation resources.

Proposed Action: The proposed action would have no impact on the Colorado Riverfront Trail system as this system is located north of the Colorado River outside the project area. Both Tillman Bishop and Orchard Mesa Wildlife Areas receive some irrigation tailwater via existing drains and canal spills. It is not anticipated that these properties' recreation uses (i.e. hunting, fishing, bird watching) would be affected by reduced canal spills.

The local public parks managed by the city of Grand Junction and Mesa County and the Chipeta Golf Course all use irrigation water provided by the OMID system. Improvements to the delivery system would improve the irrigation supply and reliability, which in turn would have positive impact on recreation uses that rely on irrigation (i.e. grasses for parks and golf courses).

Under the Proposed Action, no adverse impacts to recreation resources are predicted.

PUBLIC SAFETY

This section addresses potential risks, and hazards and safety issues for the general public. It does not address the risks and hazards associated with specific activities (i.e., hunting, rafting).

No Action: The No Action Alternative would have no effect on current risks and hazards associated operating and maintaining the OMID system.

Proposed Action: Activities associated with existing OMID facilities (i.e. check structures, interties, pumping facilities) are not predicted to change existing public safety hazards association with open canals and laterals.

The design of the new 80-100 acre-foot regulating reservoir incorporates fencing around the facility to provide site security and restrict public access. Because of its proximity to local schools and housing developments, routinely monitoring the reservoir site on a regular basis is needed.

Signs will be posted designating construction sites and warning the general public of the hazards associated with heavy equipment construction.

In addition, appropriate signage should be incorporated to address slow vehicles and large equipment entering construction sites.

CUMULATIVE IMPACTS

Cumulative impacts are impacts on the environment, which result from the incremental impact of the action, when added to other past, present, and reasonably foreseeable future actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

Past and present activities that have affected river related resources in the area include irrigation and hydropower generation, urban development, gravel mining and river recreation. Large scale irrigation projects and transmountain diversions (i.e. Colorado Big Thompson Project, Frying Pan-Arkansas Project, Grand Valley Project, Grand Valley Irrigation Company) have significantly impacted water supply and the riverine ecosystem of the Colorado River Basin. The Grand Valley Unit of the Colorado River Basin Salinity Control and the Upper Colorado River Endangered Fish Recovery programs have been implementing actions, which cumulatively have resulted in beneficial impacts on the endangered Colorado River fishes, water quality and the river ecosystem.

Implementation of all or any of these projects has affected and continues to affect the human environment including but not limited to water quality, water rights, socioeconomic, and fish and wildlife resources.

SUMMARY AND ENVIRONMENTAL COMMITMENTS

Environmental Commitments

This section discusses the environmental commitments and related mitigation developed to protect resources and mitigate adverse impacts to a non-significant level. The following environmental commitments will be implemented as an integral part of the Proposed Action. Environmental commitments include:

1. Construction Activities confined to Surveyed Areas-All construction activities will be confined to within 50 feet of the canals and existing access roads, and within 50 feet of the surveyed extension alignment. The construction footprint for the regulating reservoir will be limited to within the purchased property. All construction activities outside of this corridor may require additional review by Reclamation to determine if the existing surveys and information are adequate to evaluate additional impacts outside this corridor. Additional NEPA/ESA compliance activities may be required if determined by Reclamation.
2. Disturbed Areas-During construction, any topsoil disturbed construction will be saved and then redistributed after completion of construction activities. All disturbed areas will be smoothed, shaped, and contoured to as near their pre-project conditions as practicable. Re-seeding and planting will occur at appropriate times with weed-feed seed mixes per Reclamation and the underlying landowners' specifications.

3. Water Quality-Best Management Practices (BMP's) will be incorporated into all construction contracts and be implemented to minimize erosion and protect water quality of downstream resources. If any dewatering is needed during construction, the construction contractor will be required to obtain required Section 402 permits prior to dewatering.
4. Trenching-During construction of pipelines, trenching and burying pipelines concurrently will be required to minimize entrapment of small wildlife and herpetofauna. Construction of escapement ramps are required if large portions of trenches are left open overnight.
5. Noxious Weed Control- OMID will be required, as part of continued operations and maintenance, to control noxious weeds (Russian knapweed, thistle, etc.) that may become problems in areas disturbed during construction. Weed control in disturbed areas may be funded by the Recovery Program as maintenance.
6. Clean Water Act 404 Permits-It is not anticipated that 404 permits will be needed for construction activities as no jurisdictional wetlands have been identified within the construction footprint. If wetlands can be directly affected by discharge of dredge or fill, additional consultation with the Army Corps will occur to determine if permits are needed to the activity. Construction of check structures and piping within the existing canals and lateral prisms is exempt from CWA. However, any new structures with existing project drains may require CWA 404 permits.
7. NPDES Permits and Stormwater Pollution Prevention Plan-Reclamation's construction contractor shall prepare a stormwater pollution prevention plan and Reclamation will request coverage under the National Pollutant Discharge Elimination System General Permit for Discharges from Construction Activities (Permit No. COR12000F) from the Environmental Protection Agency prior to initiating any construction related activities.
8. Federally Listed Species- In the event that threatened or endangered species are encountered during construction, the construction contractor shall stop construction activities until Reclamation has completed consultation with the Service to ensure that adequate measures are in place to avoid or reduce impacts to the species.
9. Cultural Resources-Prior to any ground disturbing activities, Reclamation will implement mitigation, as required for sites eligible to the NRHP as documented in a Memorandum of Agreement (MOA) between Reclamation and the SHPO. When finalized conditions included in the MOA are incorporated as environmental commitments. Also, in the event that additional cultural and/or paleontological resources are discovered during construction, the Construction Contractor shall stop construction activities until Reclamation has completed consultation with the SHPO and appropriate measures are implemented to protect or mitigate the discovered resource.
10. Hazardous Materials-During construction, the use, storage and disposal of hazardous waste materials and wastes on-site will be managed in accordance with all federal, state, and local standards.

11. Operation and Maintenance-Prior to construction, Reclamation and OMID will execute an operation and maintenance contract that identifies operation and maintenance responsibilities (A copy of the contract is included as Attachment E).

The implementation of environmental commitments and mitigation measures would reduce impacts associated with the Proposed Action to insignificant levels. Table 14 summarizes predicted impacts of the No Action and Proposed Action alternatives analyzed in this EA.

Table 14-Summary of Impacts

Resource Issue	Alternatives	
	No Action	Proposed Action
Water Rights and Use	No direct effect on water rights and uses. However, if the Recovery Program fails to meet the requirements of the 15-mile PBO, existing and future water uses could be adversely impacted if the program fails to serve as the Reasonable and Prudent Alternative to avoid jeopardy.	The Proposed Action would annually conserve about 17,000 acre-feet of water, which would be used to meet 15-mile PBO requirements in the Colorado River. Existing water rights would be protected and the proposed action would assist in continuing certainty to water users in the Upper Colorado River Basin who rely on the PBO and Recovery Program for ESA coverage.
Water Quality	No change predicted	No change predicted.
Land Use	No change in existing land use trends or existing right-of-ways.	Temporary disturbances may occur in a few locations where the existing canal and O&M road footprint may be inadequate for canal improvements. Existing right of ways held by Reclamation and OMID are adequate for the majority of the improvements. Ten acres or irrigated land would also be converted to a regulating reservoir.
Fish and Wildlife Resources	No Change in existing trends.	Some reduction in available fish and wildlife habitat associated with canal spills and seeps are predicted. This is compensated by increased habitat associated with increased flows in the 15-Mile reach.
Threatened and Endangered Species	Could limit both Recovery Programs from requirements under the 15Mile PBO.	Beneficial effects to endangered fish are predicted. The proposed action would have no effect on other listed species.
Unique Geographic Features	No effect on unique geographic features.	Some minor temporary disturbances to some agriculturally important lands during construction are predicted.

		Beneficial effects to the Colorado River. Reduced return flows to Gunnison River and Sink Creek are also predicted.
Indian Trust Assets	No effect.	No effect.
Environmental Justice	No effect.	No effect.
Social and Economic Factors	No effect.	Provide only short-term employment opportunities during construction. No effect to public services.
Cultural Resources	No effect.	Adverse effects to NRHP eligible sites (historic) are predicted to occur. Predicted adverse impacts will be mitigated to a non-significant level (HABSHAER documentation).
Recreation Resources	No effect.	No adverse effects predicted.
Public Safety	No effect.	No change associated with existing facilities. Additional security and maintenance (signing and fencing) needed to address hazards associated with construction and the new regulating reservoir.
Cumulative Effects	No effect.	Beneficial effect predicted and complement actions of the Grand Valley Unit of the CRBSCP and Upper Colorado River Endangered Fish Recovery Program

CHAPTER 4-CONSULTATION AND COORDINATION

GENERAL

Plans for OMID efficiency improvements have been under development for several years. The Irrigation Training & Research Center, California Polytechnic State University was contracted and worked closely with OMID and Reclamation to develop strategies to implement water conservation measures that would result in water savings that could be used to augment flows in the 15-Mile Reach of the Colorado River. These strategies were presented to the Upper Colorado River Endangered Fish Recovery Program to assist in meeting requirements of the 15-Mile Reach PBO and in recovery of the Colorado River endangered fishes (ITRC 2012). The project will be funded with appropriated capital construction funding authorized for the Upper Colorado River Endangered Fish Recovery Program.

Reclamation solicited public comments and held a public scoping meeting at the Mesa View Elementary School on December 3, 2009. Public scoping was based on a draft ITRC report dated December 2007 (ITRC 2007). Issues identified during scoping include effects on property values, weed control, and dust and traffic control during construction. Comments were also received regarding a proposed pumping plant at Duck Pond Park, which has been removed as a project feature and is no longer being considered.

On July 10, 2013 Reclamation released a draft environmental assessment (draft ea) for public review and comment. A total of 36 agencies and organizations and 357 individuals who live on or near Orchard Mesa Canals No. 1 and No.2 were mailed letters notifying the availability of the draft ea on Reclamation's website and how to request a printed copy of the draft ea. Comments were requested by August 2, 2013. A total of two comment letters were received by Reclamation. Copies of the comment letters are include in Attachment B and discussed in greater detail below.

Colorado River Water Conservation District Comment Letter dated August 8, 2013

Comment 1: "One discrepancy we wanted to point out has to do with the Busk-Ivanhoe water rights. The EA states (Page 23), "In most cases, the Bush-Ivanhoe Project is in priority year round..." This is not quite correct. The water rights were originally decreed for supplemental irrigation use in the Arkansas River basin. Pueblo's one-half of the water rights were changed to municipal use but are subject by decree to a season of use from March 24 through November 25. Aurora's one-half of the water rights are currently the subject of a change case and we would

expect that any decree that may be entered would recognize the same seasonal limitations.”

Response 1: In the final ea “...year round...” was changed to read “during the irrigation season”.

Mesa County Department of Public Works Comment Letter dated August 1, 2013

Comment 1: “Mesa County will require an access permit for any new access to and from county roads.”

Response 1: No new access from county roads is anticipated at this time. If new access needs are identified during construction, Reclamation and/or its construction contractor would consult and coordinated with Mesa County and the City of Grand Junction as appropriate.

Comment 2: Additional county permits that may be required include: grading, building, surface disturbance permits for work within County rights-of-way... We encourage the coordination of this project with Mesa County and the City of Grand Junction to ensure impacts structures related to the road system and stormwater drainage infrastructure are carefully considered and efficiencies may result.”

Response 2: Reclamation will continue to coordinate with both Mesa County and the City of Grand Junction and obtain additional permits, if appropriate. Typically for construction activities on federal lands and easement, Reclamation does obtain local land use permits, but does coordinates with those entities to ensure that any issues or concern are adequately addressed and that federal requirements complement local codes.

Comment 3: “Mesa County requires a floodplain permit for any construction activity that takes place in the Colorado River floodplain. The *Mesa County Land Development Code*, section 7.13 contains specific criteria necessary to obtain this permit. For more information please contact Mesa County Floodplain Administrator, Julie Constan at 970-255-5055.”

Response 3: See Response 2.

Comment 4: We understand a weed management plan, including follow-up control measures will be required as an element of the reclamation and revegetation plan for the project. Please contact the Mesa County Weed, and Pest Inspector, Melissa Werkmeister at 970-255-0795 with any questions regarding noxious weeds in Mesa County, review of your weed management plan, or any questions you may have.

Response 4: Thank you for the contact information.

Comment 5: “The Recreation portion of the DEA correctly recognizes the importance to the Colorado Riverfront trail system. It is important that DEA also recognize that the Urban Master

Plan adopted in 1997 includes the potential for non-motorized trails generally following the alignment of the portions of the Orchard Mesa Irrigation District Canals and drainages. That Plan is currently proposed for revisions as the Grand Valley Trails Master Plan and will be considered for adoption by Mesa County and the City of Grand Junction later this year.

Response 5: Reclamation has submitted comments to Mesa County and City of Grand Junction regarding the Grand Valley Trails Master Plan. For reference, included as Attachment D, please find a copy of Reclamation's letter to Mr. Christian Reece, chairman, City of Grand Junction Planning commission dated August 13, 2013.

Comment 6: The proposed regulating reservoir site is currently with a rural residential area, but the surrounding area is planned for future urban residential development per the jointly adopted Grand Junction Comprehensive Plan (2010). As urbanization occurs the area will be annexed into the City of Grand Junction. Among potential issues that should be considered in the DEA include: Colorado State Engineer or FEMA inspection of the structure, mosquito control, routine maintenance and inspection, security, and proximity to Mesa View Elementary school.

Response 7: Reclamation believes the EA adequately addresses the potential for future urbanization with the project area and the EA relies heavily on the Grand Junction Comprehensive and the Mesa County Master plans.

In regards to Colorado State Engineer or FEMA inspections, Reclamation will comply with all applicable state and federal laws and regulations. As regulating reservoir designing continues, who owns the impoundment, the height of any dam or embankment, and the size of impoundment dictate which agency(s) have jurisdiction.

Reclamation and the Orchard Mesa Irrigation District continue to work closely with Grand Valley Mosquito Control District to suppress larval mosquito populations and implement continued control strategies.

Routine maintenance and inspections are addressed within the operation and maintenance agreement between Reclamation and the Orchard Mesa Irrigation District. Security and proximity to the Mesa View Elementary School concerns are addressed with security fencing, signage and ensuring adequate drainage and flow control from and to the canal and Mutual Mesa Lateral.

CONSULTATION WITH OTHER AGENCIES

Reclamation consulted with local, federal and state agencies and request assistance in identifying issues and concerns associated with the proposed project. See the distribution list (Attachment A) and comment responses above for agencies consulted and comments received during public scoping and development of the draft and final EAs.

Reclamation also consulted with the Fish and Wildlife Service and the Colorado State Historic Preservation Officer as required under the Endangered Species Act and the Historic Preservation Act. Please refer to the Threatened and Endangered Species and Cultural Resources sections of the EA for additional information regarding these consultations.

REFERENCES

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ATTACHMENT A
Distribution List

DISTRIBUTION LIST

Appendix A contains the distribution list for this environmental assessment.

- Colorado State Representatives
- Colorado State Senator
- U.S. Congressional Delegation
- Army Corps of Engineers, Grand Junction, CO
- Bureau of Land Management, Grand Junction, CO
- U.S. Fish and Wildlife Service, Grand Junction, CO
- U.S. Geological Survey, Grand Junction, CO
- Natural Resource Conservation Service, Grand Junction, CO
- Upper Colorado River Endangered Fish Recovery Program, Denver, CO
- Western Area Power Administration, Salt Lake City, UT
- Colorado Division of Water Resources
- Colorado Division of Parks and Wildlife, Grand Junction, CO
- Colorado Water Conservation Board, Denver, CO
- Colorado Department of Transportation, Grand Junction, CO
- Colorado Historical Society, Office of Archaeology and Historic Preservation, Denver, CO
- Colorado Department of Public Health and Environment, Grand Junction, CO
- Colorado River Water Conservation District, Glenwood, CO
- Utah Department of Natural Resources, Salt Lake City, UT
- Mesa County, Grand Junction, CO
- City of Grand Junction, Grand Junction, CO
- Orchard Mesa Irrigation District, Palisade, CO
- Grand Valley Water Users Association, Grand Junction, CO
- Grand Valley Irrigation Company, Grand Junction, CO
- Palisade Irrigation District, Palisade, CO
- Mesa County Irrigation District, Clifton, CO
- Redlands Water and Power Company, Grand Junction, CO
- Colorado River Energy Distributors Association, Phoenix, AZ
- Colorado Riverfront Commission, Grand Junction, CO
- Club 20, Grand Junction, CO
- Western Colorado Congress, Grand Junction, CO
- Colorado Environmental Coalition, Grand Junction, CO
- Trout Unlimited, Grand Junction, CO
- Grand Valley Audubon Society, Grand Junction, CO
- Water Consult, Loveland, CO
- The Nature Conservancy, Salt Lake City, UT
- Private landowners adjacent to OMID Canals No. 1 and No. 2

ATTACHMENT B
Comment Letters and Consultations



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Ecological Services
764 Horizon Drive, Building B
Grand Junction, Colorado 81506-3946

IN REPLY REFER TO:
ES/CO: BR
TAILS 06E24100-2013-I-0192

August 19, 2013

Memorandum

To: Area Manager, Western Colorado Area Office, Bureau of Reclamation, Grand Junction, Colorado

From: Western Colorado Supervisor, Ecological Services, Grand Junction, Colorado
Patricia S. Elliott

Subject: Orchard Mesa Irrigation District, Canal System Improvement Project

This responds to your July 16, 2013, correspondence regarding the proposed Orchard Mesa Irrigation District (OMID), Canal System Improvement Project. We understand that the project is on the behalf of the Upper Colorado River Endangered Fish Recovery Program to improve the flow conditions in the 15-mile reach of the Colorado River.

Bureau of Reclamation (Reclamation) proposes to construct system improvements for the OMID Division of the Grand Valley Project. The improvements will provide a more reliable water supply throughout the canal system and generate an estimated 17,000 acre-feet (AF) of water savings per year. The savings result from reduced main canal and lateral spills, recovering spills from main canals in urban areas, and elimination of spills from the Mutual Mesa Lateral. Conserved water will be redirected to the Grand Valley Power Plant to increase hydropower generation and river flows in the 15-Mile Reach. Existing water shortages to urban and agricultural water users would also be reduced. Reclamation and OMID will enter into an agreement for operations and maintenance of the system improvements.

It is anticipated that implementation of the canal system improvements will result in an average of an additional 40 cfs in the 15-mile reach during irrigation season (April – October). Under extreme low flow conditions, when the Orchard Mesa Check is in operation, flows released to the 15-mile reach may be reduced or unavailable.

Your determination is that the proposed OMID project may affect, but is not likely to adversely affect the endangered Colorado pikeminnow (*Ptychocheilus lucius*), razorback sucker (*Xyrauchen texanus*), humpback chub (*Gila cypha*) or bonytail (*Gila elegans*) or their designated critical habitat. Your determination is based on the fact that the proposed project will be

beneficial to the endangered fish and their critical habitat by increasing the flows in the 15-mile reach under most circumstances.

The US Fish & Wildlife Service (Service) has reviewed your biological determination and concurs that the proposed project, may affect, but is not likely to adversely affect the endangered Colorado River endangered fishes or their critical habitat because it will result in increased flows to the 15-mile reach which will be beneficial to endangered fishes and critical habitat.

The Service commends Reclamation for the support they provide to the Recovery Program in their efforts to implement recovery actions for the endangered fishes. If the Service can be of further assistance, please contact me at the letterhead address or (970) 243-2778, extension 26.

Cc: CRRP, Denver



MESA COUNTY DEPARTMENT OF PUBLIC WORKS

Administration - Building - Engineering - Road and Bridge
Traffic - **Planning** - Solid Waste Management

200 S. Spruce Street • P.O. Box 20,000 - Dept. 5022 • Grand Junction, CO 81502-5001
Ph (970) 244-1636 Fax (970) 244-1769

1 August 2013

Ed Warner, Area Manager
Bureau of Reclamation, Western Colorado Area Office
2764 Compass Dr., Suite 106
Grand Junction, CO 81506-8785

Re: Draft EA OMID Canal System Improvement Project

Dear Mr. Warner:

Thank you for the opportunity to comment on the draft Environmental Assessment (DEA) for the Orchard Mesa Irrigation District (OMID) Canal System Improvement Project. Mesa County is committed to conservation of natural resources and is supportive of this project. Reductions in canal seepage will also benefit adjacent property owners and Mesa County roads and other infrastructure. While supportive of the project, the County offers the following:

Mesa County requires an access permit for any new access to and from county roads. Additional county permits that may be required include: grading, building, surface disturbance permits for work within County rights-of-way. Please contact Mesa County Public Works Department at 970-244-1765. We encourage the coordination of this project with Mesa County and the City of Grand Junction to ensure impacts structures related to the road system and stormwater drainage infrastructure are carefully considered and efficiencies may result.

The County may require an administrative site plan review for temporary use activities in construction staging areas. Section 3.5.11 of the *Mesa County Land Development Code* provides the information necessary to obtain this clearance. For further information or specific questions please contact the Planning Division at 970-244-1636.

Mesa County requires a floodplain permit for any construction activity that takes place in the Colorado River floodplain. The *Mesa County Land Development Code*, section 7.13 contains specific criteria necessary to obtain this permit. For more specific information please contact Mesa County Floodplain Administrator, Julie Constan at 970-255-5055.

We understand a weed management plan, including follow-up control measures will be required as an element of the reclamation and revegetation plan for the project. Please contact the Mesa County Weed, and Pest Inspector, Melissa Werkmeister at 970-255-0795 with any questions regarding noxious weeds in Mesa County, review of your weed management plan, or any questions you may have.

Comments - Draft EA – OMID Canal Improvements Project
1 August 2013

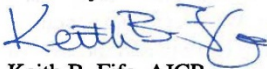
The Recreation portion of the DEA correctly recognizes the importance to the Colorado Riverfront trail system. It is important that the DEA also recognize the that Urban Trails Master Plan adopted in 1997 includes the potential for non-motorized trails generally following the alignment of the portions of the Orchard Mesa Irrigation District canals and drainages. That Plan is currently proposed for revisions as the Grand Valley Trails Master Plan and will be considered for adoption by Mesa County and the City of Grand Junction later this year.

The proposed regulating reservoir site is currently within a rural residential area, but the surrounding area is planned for future urban residential development per the jointly adopted Grand Junction Comprehensive Plan (2010). As urbanization occurs the area will be annexed into the City of Grand Junction. Among potential issues that should be considered in the DEA include: Colorado State Engineer or FEMA inspection of the structure, mosquito control, routine maintenance and inspection, security, and proximity to Mesa View Elementary school.

Thank you for consideration of our comments. As a partner in the Mesa County Riverfront project we support the protection and conservation of the Colorado River riparian area for a variety of purposes including critical wildlife habitat, irrigation diversions, and recreational uses.

If I can be of assistance to you please contact me at 970-244-1650.

Sincerely,



Keith B. Fife, AICP
Long Range Planning Director

pc: Pete Baier, Public Works Director
Linda Dannenberger, Land use and Planning Division Director
Mike Meininger, Engineering Director
Melissa Werkmeister, Weed and Pest Inspector
file



Colorado River District

Protecting Western Colorado Water Since 1937

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AUG 8 2013
AUG 13 2013

CLASS _____
PRJ. _____
CNTR. _____
FLDR. _____

CLASS	INITIALS	SURNAME
8/14	EW	E Warner
8/16	TD	T Dunn
8/20	TS	T Stroff
		Burkberg
		Warner

August 8, 2013

Ed Warner, Area Manager Bureau of Reclamation
Western Colorado Area Office
2764 Compass Drive, Suite 206
Grand Junction, CO 81506

Re: Orchard Mesa Irrigation District Canal System Improvement Project Draft Environmental Assessment

Dear Mr. Warner:

We received and reviewed the draft Environmental Assessment (EA) for the above project. As you know, having made the initial acquisition of the property for the regulating reservoir, the Colorado River District has been a strong supporter of the project, and we are a strong supporter of the findings and conclusions of the EA. We believe they support a Finding of No Significant Impact.

One discrepancy we wanted to point out has to do with the Busk-Ivanhoe water rights. The EA states (Page 23), "In most cases, the Busk-Ivanhoe Project is in priority year round..." This is not quite correct. The water rights were originally decreed for supplemental irrigation use in the Arkansas River basin. Pueblo's one-half of the water rights were changed to municipal use but are subject by decree to a season of use from March 24 through November 25. Aurora's one-half of the water rights are currently the subject of a change case and we would expect that any decree that may be entered would recognize the same seasonal limitation.

We would be appreciative if the final EA could make this correction.

Thank you for the opportunity to comment. We are looking forward to the completion of this very important project.










Best regards,

Dan R. Birch
Deputy General Manager

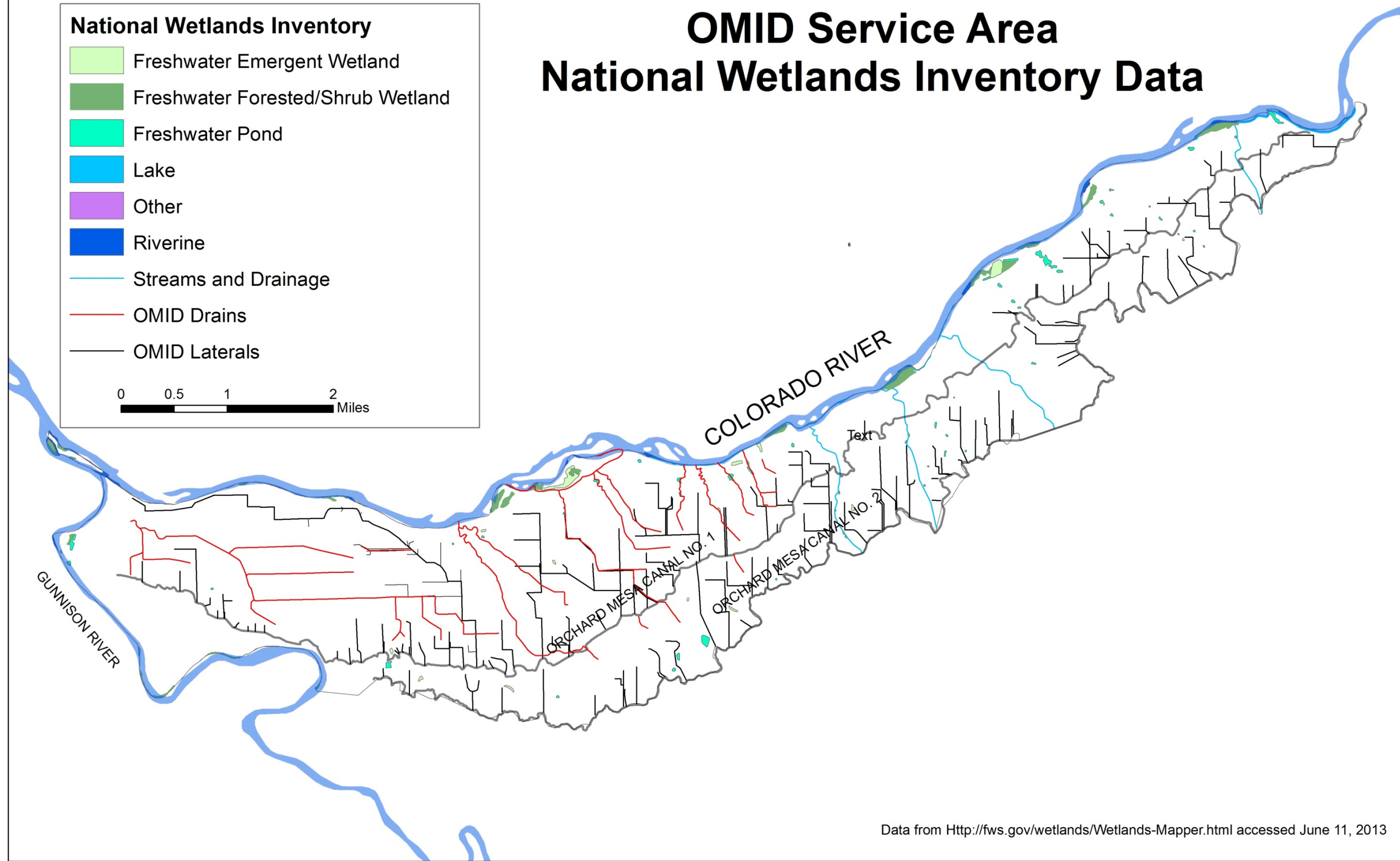
ATTACHMENT C
National Wetland Inventory
and
Clean Water Act Exemptions

OMID Service Area National Wetlands Inventory Data

National Wetlands Inventory

-  Freshwater Emergent Wetland
-  Freshwater Forested/Shrub Wetland
-  Freshwater Pond
-  Lake
-  Other
-  Riverine
-  Streams and Drainage
-  OMID Drains
-  OMID Laterals

0 0.5 1 2 Miles



Data from <http://fws.gov/wetlands/Wetlands-Mapper.html> accessed June 11, 2013



US Army Corps of Engineers

Irrigation Exemption Summary

Sacramento District
1325 J Street
Sacramento, CA 95814-2922

FARM OR STOCK POND OR IRRIGATION DITCH CONSTRUCTION OR MAINTENANCE

Pursuant to Section 404 of the Clean Water Act (33 USC 1344) and Federal Regulations (33 CFR 323.4(a)(3)), certain discharges for the construction or maintenance of farm or stock ponds or irrigation ditches have been exempted from requiring a Section 404 permit. Included in the exemption are the construction or maintenance of farm or stock ponds or irrigation ditches, or the maintenance (but not the construction) of drainage ditches. Discharges associated with siphons, pumps, headgates, wingwalls, weirs, diversion structures, and such other facilities as are appurtenant and functionally related to irrigation ditches are included in this exemption.

A Section 404 permit is required if either of the following occurs:

- (1) Any discharge of dredged or fill material resulting from the above activities which contains any toxic pollutant listed under Section 307 of the Clean Water Act shall be subject to any applicable toxic effluent standard or prohibition, and shall require a permit.
- (2) Any discharge of dredged or fill material into waters of the United States incidental to the above activities must have a permit if it is part of an activity whose purpose is to convert an area of the waters of the United States into a use to which it was not previously subject, where the flow or circulation of waters of the United States may be impaired or the reach of such waters reduced. Where the proposed discharge will result in significant discernible alterations to flow or circulation, the presumption is that flow or circulation may be impaired by such alteration. For example, a permit will be required for the conversion of a wetland from silvicultural to agricultural use when there is a discharge of dredged or fill material into waters of the United States in conjunction with construction of dikes, drainage ditches, or other works or structures used to effect such conversion. A discharge which elevates the bottom of waters of the United States without converting it to dry land does not thereby reduce the reach of, but may alter the flow or circulation of, waters of the United States.

If the proposed discharge satisfies all of the above restrictions, it is automatically exempted and no further permit action from the Corps of Engineers is required. If any of the restrictions of this exemption will not be complied with, a permit is required and should be requested using ENG Form 4345 (Application for a Department of the Army permit). A nationwide permit authorized by the Clean Water Act may be available for the proposed work. State or local approval of the work may also be required.

For general information on the Corps' Regulatory Program please check our web site at www.spk.army.mil/regulatory. For additional information or for a written determination regarding a specific project, please contact the Corps at the following addresses:

Sacramento Main Office-1325 J Street, Room 1480, Sacramento, CA 95814	(916) 557-5250
Redding Field Office-152 Hartnell, Redding, CA 96002	(530) 223-9534
Reno Office-300 Booth Street, Room 2103, Reno, NV 89509	(775) 784-5304
Intermountain Region Main Office-533 West 2600 South, Suite 150, Bountiful, UT 84010	(801) 295-8380
Colorado/Gunnison Basin Office-402 Rood Ave., Room 142, Grand Junction, CO 81501	(970) 243-1199
Durango Office-278 Sawyer Dr., Unit #1, Durango, CO 81301	(970) 375-9506
Frisco Office-301 W Main, Suite 202, P.O. Box 607, Frisco, CO 80443	(970) 668-9676
St. George Office-321 North Mall Drive, Suite L-101, St. George, UT 84790	(435) 986-3979



**US Army Corps
of Engineers**

REGULATORY GUIDANCE LETTER

No. 07-02

Date: July 4, 2007

SUBJECT: Exemptions for Construction or Maintenance of Irrigation Ditches and Maintenance of Drainage Ditches Under Section 404 of Clean Water Act

1. Purpose and Applicability.

The purpose of this Regulatory Guidance Letter (“RGL” or “guidance”) is to provide a reasonable and predictable national approach for conducting exemption determinations for the construction and maintenance of irrigation ditches and the maintenance of drainage ditches consistent with Section 404(f) of the Clean Water Act (CWA) (also known as the Federal Water Pollution Control Act or FWPCA) Pub. L. 92-500, as amended by Pub. L. 95-217, Pub. L. 100-4, Pub. L. 104-66, 33 U.S.C. § 1251, et seq., and with associated regulations (33 C.F.R. 320-330, 40 C.F.R. Part 232). This guidance is intended to clarify when 404(f) exempts from permitting requirements discharges of dredged or fill material into waters of the U.S. associated with the construction and maintenance of irrigation ditches and maintenance of drainage ditches. This RGL was developed and is endorsed by the U.S. Army Corps of Engineers (Corps) and the Environmental Protection Agency (EPA). EPA has the ultimate authority for interpreting the scope of exemptions under CWA Section 404(f).

This document supercedes RGL 87-07, which addresses the Section 404(f)(1)(C) Statutory Exemption for Drainage Ditch Maintenance. Other documents, such as the 1989 MOA addressing 404(f) coordination, are unaffected. As indicated above, this RGL addresses statutory exemptions for both irrigation and drainage ditches. In this effort to provide greater clarity, the following terms are defined for purposes of Subsection 404(f): irrigation ditch, drainage ditch, construction, and maintenance. This document also provides a framework for determining the applicability of the exemptions and the recapture provision. (See Figure 1). While providing greater clarity, both the framework and the definitions are consistent with the agencies’ current practice in interpreting the Section 404(f) exemption.

2. Background.

a. Under Section 404(f)(1)(C) of the CWA (see also 33 CFR 323.4(a)(3) and 40 CFR 232.3(c)(3)), discharges of dredged or fill material associated with construction or maintenance of irrigation ditches, or the maintenance (but not construction) of drainage ditches, are not prohibited by or otherwise subject to regulation under Section 404 of the CWA (i.e., these activities are exempt from the need to obtain a Section 404 permit from the Department of the

Army (DA)). Discharges of dredged or fill material associated with siphons, pumps, headgates, wingwalls, weirs, diversion structures, and such other facilities as are appurtenant to and functionally related to irrigation ditches are included in the exemption for irrigation ditches.

b. Section 404(f)(2) of the CWA states that “[a]ny discharge of dredged or fill material into the navigable waters incidental to any activity having as its purpose bringing an area of navigable waters into a use to which it was not previously subject, where the flow or circulation of navigable waters may be impaired or the reach of such waters be reduced, shall be required to have a permit under this section.” This is commonly referred to as the “recapture provision.” See Section c, below.

c. Under 33 CFR 323.4(c) and 40 CFR 232.3(b), exemptions under 33 CFR 323.4(a)(1-6) and 40 CFR 232.3(c)(1-6) do not apply if the discharge into a water of the U.S. “is part of an activity whose purpose is to convert an area of the waters of the U.S. into a use to which it was not previously subject, where the flow or circulation of waters of the U.S. may be impaired or the reach of such waters reduced. Where the proposed discharge will result in significant discernable alterations to flow or circulation, the presumption is that flow or circulation may be impaired by such alteration.”

d. Under 33 CFR 323.4(a)(1)(iii)(C)(I)(i), “[c]onstruction and maintenance of upland (dryland) facilities such as ditching and tiling, incidental to the planting, cultivating, protecting, or harvesting of crops, involve no discharge of dredged or fill material into waters of the U.S., and as such never require a section 404 permit.”

The CWA Subsection 404(f)(1)(A) exemption for “minor drainage” covers “(t)he discharge of dredged or fill material incidental to connecting upland drainage facilities to waters of the U.S., adequate to effect the removal of excess soil moisture from upland crops.” (See 33 CFR 323.4(a)(1)(iii)(C) (I)(i))

e. The construction and maintenance of irrigation ditches and maintenance of drainage ditches may require the construction and/or maintenance of a farm road. In those circumstances, the Subsection 404(f)(1)(E) exemption for discharges of dredged or fill material associated with the construction or maintenance of farm roads applies where such related farm roads are constructed and maintained in accordance with best management practices (BMPs), 33 CFR 323.4(a)(6) and 40 CFR 232.3(c)(6), to assure that flow and circulation patterns and chemical and biological characteristics of waters of the U.S. are not impaired, that the reach of the waters of the U.S. is not reduced, and that any adverse effect on the aquatic environment will be otherwise minimized. All of the limitations and conditions mandated by the current Section 404(f) regulations relating to farm roads apply.

3. Guidance for Ditches.

General Guidance: Before carrying out ditch maintenance or construction activities, the following issues should be analyzed:

a. Is there a discharge of dredged or fill material into a water of the U.S.? To make that determination, the statute, regulations, and guidance provided by the Corps and EPA regarding what areas constitute “waters of the United States” subject to CWA jurisdiction must be consulted and followed. Corps and EPA guidance on the extent of CWA geographic jurisdiction define certain categories of “upland ditches” and “upland swales” that generally are not subject to CWA jurisdiction. Discharges of dredged or fill material into those defined categories of upland ditches and upland swales are not subject to either CWA permitting requirements or the subsection 404(f) exemptions.

b. Identify the type of ditch and activity, and whether the activity is eligible for the exemptions at Subsection 404(f)(1). An analysis of the CWA statute and existing EPA and Corps regulations indicates that there are differences between irrigation ditches and drainage ditches for purposes of applying the Subsection 404(f)(1)(C) exemption. The Subsection 404(f)(1)(C) exemption applies to the *construction* and *maintenance* of irrigation ditches, but it applies only to the *maintenance* of drainage ditches.

For purposes of this RGL, wetlands include all wetlands that meet the definition in 33 CFR 328.3. Guidance for applying the regulation is contained in the 1987 Wetland Delineation Manual, and the regional supplements and supplemental guidance, as appropriate, except where the wetland plants were established as a result of the irrigation process. Wetlands established solely due to the presence of irrigation water, irrigated fields, or irrigation ditches do not qualify as wetlands for purposes of applying the 404(f) exemption for construction and maintenance of irrigation ditches and for maintenance of drainage ditches.¹ Where sufficient information is not available to determine the hydrological contribution of irrigation waters to a particular wetlands (i.e., whether the wetland existed at the location prior to the presence of irrigation activities), such wetlands are not removed from consideration as wetlands or waters of the U.S.

For purposes of this RGL, the following definitions apply:

Definition of “Irrigation Ditch:” For purposes of this RGL, an irrigation ditch is a man-made feature and/or an upland swale that either conveys water to an ultimate irrigation use or place of use, or that moves and/or conveys irrigation water (e.g., “run-off” from irrigation) away from irrigated lands. Irrigation ditches may include the distribution system or parts thereof, consisting of manmade canals, laterals, ditches, siphons, and/or pipes, or pump systems. If a ditch carries only irrigation water, irrigation return flows, and overland flow (precipitation and/or snowmelt) that moves from an irrigated field either to or away from an area subject to irrigated agriculture (e.g., an irrigated field), that ditch would be considered an irrigation ditch, not a drainage ditch.

Where a natural or man-altered water body is used as part of an irrigation ditch system, such as where the water body is used to transport irrigation water between manmade ditches, that segment generally is not considered an irrigation ditch for purposes of this exemption, except

¹As stated in the preamble to the Corps’ Final Rule of November 13, 1986: “. . . we generally do not consider the following waters to be ‘Waters of the United States’ . . . (b) Artificially irrigated areas which would revert to upland if the irrigation ceased.” 51 Federal Register 41217, November 13, 1986. Thus, waters, including wetlands, created as a result of irrigation would not be considered waters of the US even when augmented on occasion by precipitation.

where the Section 404(f)(1) exemption has been determined to apply based on a case-by-case evaluation. Following a case-by-case evaluation, such a natural or man-altered water body may be considered an irrigation ditch eligible for this exemption if it has characteristics suggesting a limited functional role in the broader aquatic ecosystem, such as infrequent or low volume flow, minimal habitat value, or small channel size.

Definition of “Drainage Ditch:” For purposes of this RGL, a drainage ditch is a ditch that conveys water (other than irrigation related flows) from one place to another. Where a ditch would have the effect of more than minor drainage² of wetlands (other than wetlands established due to the presence of irrigation water), the ditch would be considered a drainage ditch, not an irrigation ditch, even if used for irrigation. However, a ditch that diverts water from an open body of water (e.g., stream, lake, or reservoir) for irrigation purposes is an irrigation ditch, even if a substantial portion of the flow or volume is diverted.

A ditch determined to be either an irrigation ditch or a drainage ditch would then need to be evaluated on a case-by-case basis to determine if the recapture provision of Section 404(f)(2) applies (see below).

Definition of “Construction:” For purposes of this RGL, construction includes new work or work that results in an extension or expansion of an existing structure. Ditch construction generally includes, but is not limited to, activities such as:

- Ditch relocation.
- Ditch conversion into pipe.
- Lining, which means placing impervious material such as concrete, clay, or geotextile within the flow perimeter of an open canal, lateral, or ditch with the intent of reducing seepage losses and improving conveyance efficiency. All new lining of ditches, where the ditch had not previously been lined, is considered construction.
- Placement of new control structures.

Definition of “Maintenance:” For purposes of this RGL, maintenance includes a repair to an existing structure or feature to keep the ditch in its existing state or proper condition, or to preserve it from failure or decline.³ Maintenance generally includes, but is not limited to, activities such as:

- Excavation of accumulated sediments back to original contours.
- Re-shaping of the side-slopes.

²See 33 CFR 323.4(a)(1)(iii)(C)(1) and (C)(2).

³Maintenance means the physical preservation of the original, as-built configuration of the ditch and appurtenant structures, to restore the original function and the approximate capacity of the ditch. In many cases, accurate historical records are not available to determine the exact “as-built” specifications of the original ditch. In these cases, districts should work closely with the project proponent to establish an appropriate maintenance depth to restore the ditch’s original function and approximate capacity, while meeting the spirit of the exemption and ensuring adequate protection of aquatic resources. Districts should allow maintenance of ditches to be performed to the level of current engineering standards where more graduated side-slopes result in greater stability, so long as those modifications of the ditch will not result in the drainage, degradation, or destruction of additional natural wetlands or other waters of the U.S., as referenced above. Removal of material and re-contouring of the ditch should be in accordance with the historical design and function of that ditch (i.e., the ditch must not be substantially deepened so as to drain additional areas).

- Bank stabilization to prevent erosion where reasonably necessary using best management practices. For maintenance of drainage ditches as defined in this guidance, materials used for stabilization should be compatible with existing bank materials.
- Armoring, lining and/or piping. These activities qualify as maintenance only where a previously armored, lined, or piped section is being repaired and all work occurs within the footprint of the previous work.
- Replacement of existing control structures, where the original function is not changed and original approximate capacity is not increased.

Maintenance is generally viewed as involving activities that keep something in its existing state or proper condition or preserve it from failure or decline. If a drainage ditch has not been serving a drainage function for an extended period of time, drainage ditch re-establishment would be considered construction, not maintenance, and would thus be ineligible for the exemption. However, a ditch that has not been regularly maintained should not automatically be considered ineligible for the ditch maintenance exemption. Some ditches require little or no periodic maintenance to remain functional. Lack of periodic maintenance in these situations does not preclude the ditch from being maintained under the exemption.

c. The third step is to determine if the Recapture Provision applies:

Part 1: Is the discharge part of an activity whose purpose is to convert an area of the waters of the U.S. into a use to which it was not previously subject?

The regulations guiding implementation of CWA Section 404(f) specify that a change in use occurs when there is a "conversion of a section 404 wetland to a non-wetland" and in addition "a permit will be required for the conversion of a cypress swamp to some other use or the conversion of a wetland from silvicultural to agricultural use when there is a discharge of dredged or fill material into waters of the United States in conjunction with construction of dikes, drainage ditches or other works or structures used to effect such conversion." 33 C.F.R. 323.4(c).

Part 1 of the test is met if there would be a change of use. For example, any time an irrigation ditch would cut through (or across) a natural or man-altered water body, including wetlands, this would qualify as a change in use and Part 1 of the Section 404(f)(2) test is met.

Part 2: If Part 1 of the test is met, may the activity also impair the flow or circulation of waters of the U.S. or reduce the reach of such waters?

The regulations guiding implementation of the CWA Section 404(f) specify that "(w)here the proposed discharge will result in significant discernible alterations to flow or circulation, the presumption is that flow or circulation may be impaired by such alteration." "A discharge which elevates the bottom of waters of the United States without converting it to dry land does not thereby reduce the reach of, but may alter the flow or circulation of, waters of the United States." 33 C.F.R. 323.4(c).

The determination as to whether construction or maintenance of an irrigation ditch, or maintenance of a drainage ditch, would result in a significant discernible alteration in flow or circulation, or a reduction in reach, of waters of the U.S. should be made on a case-by-case basis using the factors such as the following: (1) whether the proposed construction or maintenance of the ditch would harmfully sever or fragment the wetland or water body; (2) whether the proposed construction or maintenance of the ditch would significantly and discernibly alter flow or circulation or reduce reach through sidecasting into the wetland or waterbody; (3) whether the proposed construction or maintenance of the ditch would harm the wetland or water body by substantially increasing or decreasing water levels; (4) the relative size of the ditch compared to the wetland or water body; and (5) whether the proposed construction or maintenance employs techniques and best management practices designed to minimize impacts and ensure that there is not significant discernible alteration of flow or circulation or reduction of reach.

Because the Section 404(f)(1) exemption for maintenance of irrigation or drainage ditches applies only to maintenance activities that would maintain existing capacity and functionality (not to construction activities), it is unlikely that the recapture provision in Section 404(f)(2) would apply to ditch maintenance activities as defined above. However, if a question arises as to whether ditch maintenance activities would trigger the Section 404(f)(2) recapture provision (e.g., if the maintenance is “incidental” to a larger activity that triggers the provision – see footnote 4 below), this should be evaluated on a case-by-case basis using the factors such as those listed above.

This recapture provision is a two-part test. If the answers to both parts are “yes,” a (DA) permit is required for the activity. If one part of the test is not satisfied and that activity qualifies for an exemption under 404(f)(1), it is not “recaptured” under 404(f)(2).⁴

In situations where the potential eligibility of a proposed discharge of dredged or fill material for an exemption under Section 404(f)(1)(C) has been raised to the district, and where the district cannot make a determination due to a lack of pertinent factual information, it is incumbent on those seeking exemption to provide the documentation necessary to establish the facts on a case-by-case basis.

If the proposed activity is not exempt under Section 404(f)(1), the work may be authorized under one or more Nationwide General Permits (NWPs), or under a Regional General Permit (RGP), or pursuant to a Standard Individual Permit. The NWPs can be found at: <http://www.usace.army.mil/cw/cecw/reg/> and the RGPs can be found on the local Corps District regulatory web pages. Additional guidance on the NWPs/RGPs may be obtained from the local Corps District office.

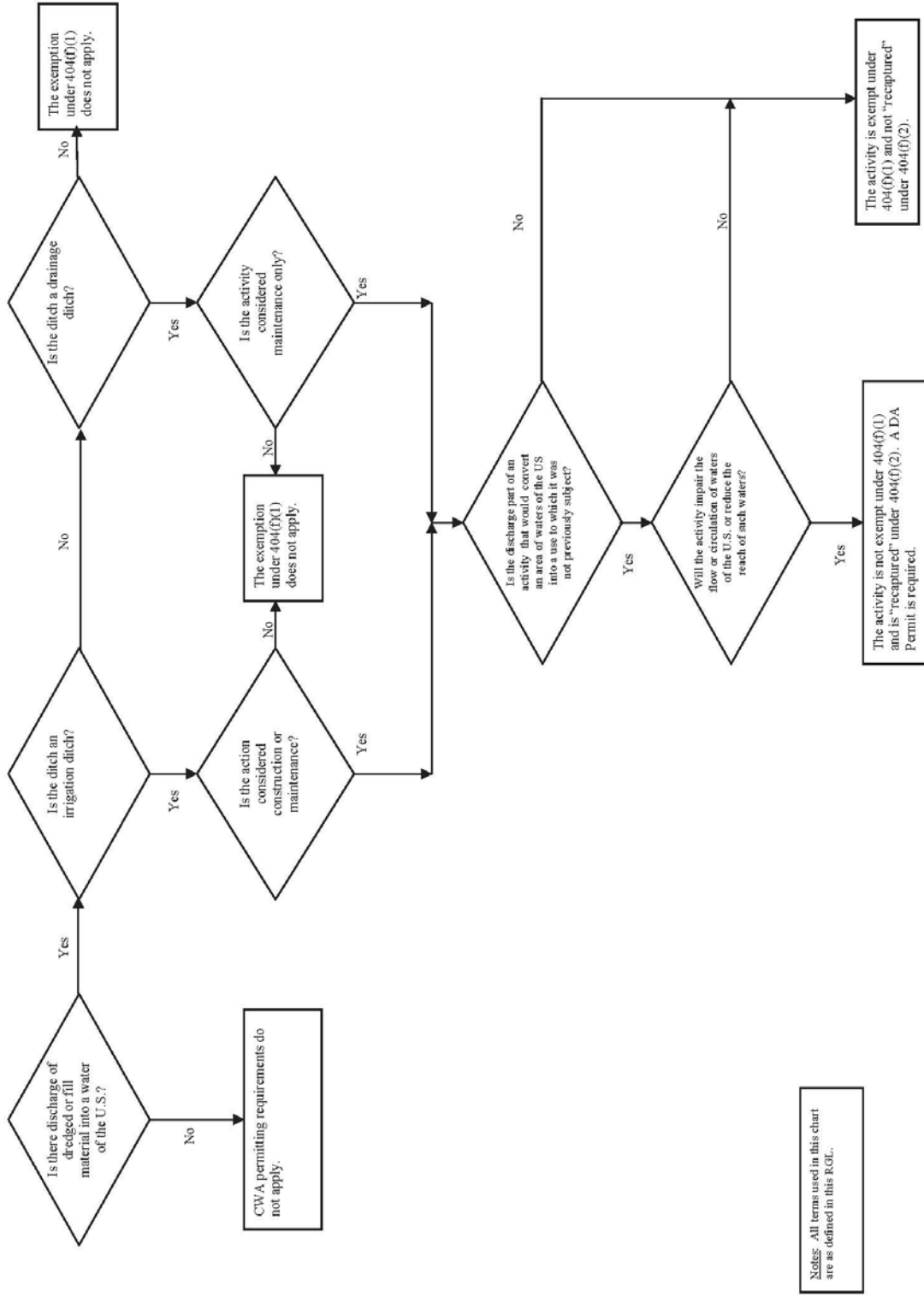
⁴The discharge of dredged or fill material itself does not need to be the sole cause of the destruction of the waters of the United States (e.g., wetlands) or other change in use or the sole cause of the reduction in or impairment of, reach flow, or circulation of such waters. The discharge need only be “incidental to” or “part of” an activity that is intended to or will foreseeably bring about that result.

4. **Duration.** This guidance rescinds and supersedes RGL 87-7. This guidance remains in effect unless revised or rescinded. Additional guidance may be issued in the near future to further define irrigation ditch, drainage ditch, construction, and maintenance.



DON T. RILEY
Major General, US Army
Director of Civil Works

FIGURE 1: FLOWCHART FOR PROCESSING EXEMPTIONS UNDER 404(F)(1) AND 404(F)(2)



Notes: All terms used in this chart are as defined in this RGL.

ATTACHMENT D

**Reclamation Letter to the City of Grand Junction dated
August 13, 2013**



United States Department of the Interior

BUREAU OF RECLAMATION
Upper Colorado Region
Western Colorado Area Office
2764 Compass Drive, Suite 106
Grand Junction, CO 81506

IN REPLY REFER TO:

WCG-ASchroeder
LND-6.00

AUG 13 2013

Mr. Christian Reece
Chairman
Planning Commission
City of Grand Junction
250 N. 5th Street
Grand Junction, CO 81501

Subject: 2013 Draft Grand Valley Trails Master Plan (Grand Valley Project, Colorado)

Dear Mr. Reece:

This letter and the enclosed comments serve as the Bureau of Reclamation's remarks regarding the 2013 Draft Grand Valley Trails Master Plan (Plan) as currently on the Mesa County Regional Transportation Planning Office website (8/6/13). It also serves to provide you with the criteria Reclamation will use in determining whether or not a detached path is allowed along Reclamation facilities.

The Plan, as currently written, could affect several features associated with Reclamation's Grand Valley Project, including but not necessarily limited to the Government Highline Canal, and the Orchard Mesa Irrigation District Canals 1 and 2, associated drains, laterals, and operation and maintenance (O&M) roads. Reclamation's comments are enclosed.

As you may know, the Grand Valley Project is a Federal irrigation project authorized and constructed by the United States and under the jurisdiction of Reclamation. The Grand Valley Project is operated and maintained under contract by two managing entities. The Grand Valley Water Users Association (Association) operates the Government Highline Canal system and the Orchard Mesa Irrigation District (District) operates the Orchard Mesa system.

The United States holds a mixture of fee simple and easement right-of-way land interests for the Grand Valley Project and its associated facilities.

The use of Reclamation's O&M roads by anyone other than Reclamation and its managing entities may be considered a trespass. This measure is necessary for the long-term safety of the facilities, to protect the public, and to minimize liability for the United States and its managing entities.

However, Reclamation is open to trail development on or near Reclamation project lands if such development does not interfere with the operation and maintenance of the water project and does not increase liability to its managing entities and the United States. In addition, Reclamation will require

the concurrence of the Association and the District before we will consider a trail on any Reclamation O&M road.

For Reclamation to consider providing public access on any O&M road associated with any of its water projects, the following provisions must be addressed by the entity requesting the access:

1. There must be an established, legal entity that assumes all responsibility and liability for the trail and all associated maintenance costs.
2. The trail entity must carry liability insurance to protect against damages and lawsuits and must agree to indemnify and hold harmless the United States, the Association, and the District.
3. The trail entity must provide plans and specifications, including necessary signs and trail head parking facilities. The plans must be approved in advance by Reclamation, the Association, and the District.
4. The trail entity must provide law enforcement.
5. The trail entity needs to obtain written consent from underlying land owners when the United States holds an easement or right-of-way for the O&M road.
6. As part of the proposal, the trail entity will need to conduct a public review process and complete any associated National Environmental Policy Act requirements that may be necessary for Reclamation to consider the request. All costs associated with these activities will be paid for by the trail entity. In addition, Reclamation's administrative expenses associated with the proposal will need to be reimbursed and a land use fee may be imposed. Payment of said costs and expenses does not guarantee approval of the request.
7. If the proposal is accepted by all parties involved, a license agreement will need to be executed between the United States and the trail entity.
8. Other provisions may include, but are not limited to, the following: Water related activities will not be allowed and all trail use shall be non-motorized. All other uses not authorized shall be prohibited.

Please contact Kathleen Ozga at 970-248-0649 or Alan Schroeder at 970-248-0692 if you have questions or need additional information.

Sincerely,



Ed Warner
Area Manager

Enclosure

cc: Mr. John Justman
Mesa County Commissioners
Department 5010
PO Box 20,000
Grand Junction, CO 81502-5001

Mr. Steve Acquafresca
Mesa County Commissioners
Department 5010
PO Box 20,000
Grand Junction, CO 81502-5001

Ms. Rose Pugilese
Mesa County Commissioners
Department 5010
PO Box 20,000
Grand Junction, CO 81502-5001

Ms. Phyllis Norris
Grand Junction City Council
City Hall,
250 N. 5th Street
Grand Junction, CO 81501

Mr. Sam Susuras
Grand Junction City Council
City Hall,
250 N. 5th Street
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Mr. Bennett Boeschstein
Grand Junction City Council
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Mr. Duncan McArthur
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Mr. Jim Doody
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Ms. Diane Schwenke
President/CEO
Grand Junction Chamber of Commerce
360 Grand Avenue
Grand Junction, CO 81501

Ms. Jody Kliska
Transportation Engineer
City of Grand Junction
250 N. 5th Street
Grand Junction, CO 81501

Mr. Mark Harris
Manager
Grand Valley Water Users Association
1147 24 Road
Grand Junction, CO 81505-9639

Mr. Max Schmidt
Manager
Orchard Mesa Irrigation District
668 38 Road
Palisade, CO 81526

Mr. Marty Chazen
Grand Junction City Council
City Hall
250 N. 5th Street
Grand Junction, CO 81501(ea w/ encl)

Comments on the 2013 Draft Grand Valley Trails Master Plan
Western Colorado Area Office
Bureau of Reclamation
August 7, 2013

1. The Plan, as presented on the Mesa County Regional Transportation Planning Office website (8/6/13), appears to be little more than a description of the types of trails and existing or proposed routes being considered. There is no implementation plan or priorities for implementation. There is very little information on right-of-way acquisition and concurrence processes and, what there is, is incomplete. There is no clear indication of who will construct, operate or maintain the facilities identified in the Plan. There is no clear indication of the links or relationships of the Plan to Mesa County's Master Development Plan and its various Community Development Plans or the City of Grand Junction's Comprehensive Plan. There is no identified link or other reference to the required dedication of rights-of-way or construction by developers for furtherance of adopted plans, such as this one, pursuant to the Mesa County Development Code and the City of Grand Junction Municipal code. There was no indication of the process by which Mesa County, the Town of Palisade, and the City of Grand would adopt the Plan.
2. Although Plan text in several places, indicates that the proposed trails or detached path alignments (as shown on the maps) are general or are conceptual only, many of them follow the exact alignments of canal or irrigation drain rights-of-way, including some of Reclamation's. Also, in the table on page 4, nearly 190 miles of proposed canal paths are identified. Those facts suggest that those alignments are not merely conceptual.
3. Reclamation's lands were not identified on the maps.
4. No criteria for development of detached paths along irrigation or drainage facilities is identified. We had commented on the draft Plan presented at the June 4th Open House regarding a statement of the criteria to be met for trails/paths along Grand Valley Drainage District (GVDD) drains. Our comment was that there were no similar statements for the various canal and irrigation companies, even though several irrigation company canals and drains are shown as proposed trail routes. We also provided the criteria by which Reclamation would consider trails on our irrigation project operation and maintenance roads. Our intent was not that the GVDD criteria be removed, but that criteria for the various canal and irrigation companies and ours be added.
5. There was no indication of the issues or concerns regarding trails along irrigation canals and drains or the attempts or procedures to resolve them in a manner satisfactory to all stakeholders.

ATTACHMENT E

**Contract
between
the United States of America
and
Orchard Mesa Irrigation District
for the Operation and Maintenance
of the
Orchard Mesa Canal Automation Improvements**

Contract No. 12-WC-40-445

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
GRAND VALLEY PROJECT

CONTRACT
BETWEEN
THE UNITED STATES OF AMERICA
AND
ORCHARD MESA IRRIGATION DISTRICT

FOR THE OPERATION AND MAINTENANCE
OF THE
ORCHARD MESA CANAL AUTOMATION IMPROVEMENTS

ATTACHMENT E

**Contract
between
the United States of America
and
Orchard Mesa Irrigation District
for the Operation and Maintenance
of the
Orchard Mesa Canal Automation Improvements**

Contract No. 12-WC-40-445

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
GRAND VALLEY PROJECT

CONTRACT
BETWEEN
THE UNITED STATES OF AMERICA
AND
ORCHARD MESA IRRIGATION DISTRICT

FOR THE OPERATION AND MAINTENANCE
OF THE
ORCHARD MESA CANAL AUTOMATION IMPROVEMENTS

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THIS CONTRACT, is made this ____ day of _____, 2012, pursuant to the Reclamation Act of June 17, 1902 (32 Stat. 388), and acts amendatory thereof or supplementary thereto, and particularly the Endangered Species Act 16 U.S.C. 1531 et seq., Section 2 of the Fish and Wildlife Coordination Act (16 U.S.C. 661-667); Sections 2(c)(2), 4(f), 6, and 7 of the Endangered Species Act (16 U.S.C. 1531 et seq.); and the Act to Authorize the Bureau of Reclamation to Provide Cost Sharing for the Endangered Fish Recovery Implementation Programs for the Upper Colorado and San Juan River Basins, Act of October 30, 2000 (114 Stat. 1602, Public Law 106-392), and acts amendatory thereof or supplementary thereto, between the UNITED STATES BUREAU OF RECLAMATION, hereinafter referred to as Reclamation, and the ORCHARD MESA IRRIGATION DISTRICT, hereinafter referred to as the District or Contractor, a Colorado nonprofit corporation, hereinafter referred to each individually as a "Party" or jointly as the "Parties".

WITNESSETH, that:

1. RECITALS

- A. WHEREAS, the Grand Valley Project was reported upon in accordance with the act of June 25, 1910 (36 Stat. 835), approved by the President on January 5, 1911 and constructed pursuant to the Act of Congress dated June 17, 1902 (32 Stat. 388), as amended; and
- B. WHEREAS, the Reclamation Service (Reclamation) was authorized by the Secretary of the Interior on September 23, 1912, to begin construction within the Grand Valley Project; and
- C. WHEREAS, the Orchard Mesa Division (as defined herein), was included in the Grand Valley Project through the Interior Department Appropriation Act for 1923 (42 Stat. 584) authorizing federal money for the reconstruction of the Orchard Mesa Division; and
- D. WHEREAS, a contract was entered into between the United States, the Grand Valley Water Users Association and the District for the reconstruction of the Orchard Mesa Division, Contract No. Ilr-472, dated February 18, 1922, which was amended and

superseded by Contact No. 14-06-400-326, dated October 4, 1955 and again under the same amendatory contract number on June 19, 1990; and

- E. WHEREAS, the District has fulfilled its repayment obligation under Contract No. 14-06-400-326 for the construction and reconstruction of water delivery facilities connected with the Grand Valley Project; and
- F. WHEREAS, the District and Reclamation desire to improve and increase the efficiency of the Orchard Mesa Division irrigation system through the implementation of a comprehensive improvements program; and
- G. WHEREAS, portions of the Colorado River have been designated critical habitat for four endangered fish species (Colorado pikeminnow, humpback chub, bonytail and razorback sucker); and
- H. WHEREAS, the Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin (Recovery Program as defined herein) is implemented by a "Cooperative Agreement for Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin," (2001 Cooperative Agreement, as amended) signed in January of 1988 and amended December 6, 2001, by the Secretary of the Department of the Interior, the Governors of the States of Colorado, Utah, and Wyoming, and the Administrator of the Western Area Power Administration with the goal of the Recovery Program to recover the four species of endangered fish while allowing water development to proceed consistent with state water law and in compliance with the Federal Endangered Species Act in the Upper Basin states of Colorado, Utah, and Wyoming; and
- I. WHEREAS, Reclamation is entering into this Contract as a participant of the Recovery Program pursuant to the 2001 Cooperative Agreement, as amended, for the Upper Colorado River Basin Recovery Implementation Program and Public Law 106-392; and
- J. WHEREAS, Public Law 106-392 authorizes Reclamation to, among other things, provide cost sharing for capital construction projects under the Recovery Program and to use power revenues to provide up to \$4 million per federal Fiscal Year in perpetuity to fund recovery monitoring, operation and maintenance; and
- K. WHEREAS, the Recovery Program desires to take actions to supplement the flow in the Colorado River to improve the habitat for the endangered fish species and, as the Improvements (as defined herein) allow the District to better match the water demands of its water users to the amount of water diverted into the Canals (as defined herein), the District will be able to assist in the recovery of the endangered fish by increasing the efficiency of the Orchard Mesa Division irrigation system which, at certain times, will result in additional water in the Colorado River; therefore, the committee that manages the Recovery Program approved the construction of the Improvements during its meeting on June 4, 2009.

NOW, THEREFORE, for the covenants set forth herein, and other good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, the Parties hereto agree as follows:

2. SCOPE OF CONTRACT

The purpose of this Contract is to identify the District's Operation, Maintenance, and Modification responsibilities and the roles and responsibilities of the District and Reclamation during the planning, design and construction of the Improvements. A schedule of action dates for the activities identified in this Contract is attached as Exhibit A.

3. DEFINITIONS

When used in this Contract (including the Recitals):

- A. "Canals" means the main Orchard Mesa Canals Nos. 1 and 2.
- B. "Contracting Officer" means the Reclamation employee authorized to oversee this Contract.
- C. "District's Electrical Power Costs" means the electrical power costs incurred by the District to Operate the Improvements.
- D. "Emergency Work" means work resulting from the unexpected occurrence to or condition of the Improvements that is necessary to minimize or prevent injury or damage to persons and/or property (including the Improvements), and/or to restore the Improvements to an operable condition.
- E. "Fiscal Year" means the United States fiscal year from October 1 through September 30.
- F. "Improvements" means those facilities constructed as part of the Orchard Mesa Canal Automation Improvements. The major components of the current configuration of the Improvements are outlined in a report entitled, Water Resources Conservation Plan for Orchard Mesa Irrigation District, January 2008, prepared by the Irrigation Training and Research Center or as modified by mutual agreement of the Parties.
- G. "Interested Parties" include the Colorado River Water Conservation District and the Colorado Water Conservation Board.
- H. "Modification" or "Modify" means any approved major change, alteration, or addition to or removal of the Improvements.
- I. "Operate and Maintain" or "Operation and Maintenance" (sometimes abbreviated herein as "O&M") means the day-to-day control, handling and use of a facility or structure necessary to ensure that such facility or structure functions as intended and designed; the reasonable and necessary care and repair, including unanticipated, extraordinary or emergency care of a facility or structure; repairs that are necessary to keep a facility or structure in good and efficient condition and which allow long-term control, handling and use for the purposes which the facility or structure was constructed; and all replacement, reconstruction or rehabilitation of a facility or structure that has served its useful life.
- J. "O&M Funding Agreements" shall mean the agreements between the District and the State of Colorado and between the District and the Colorado River Water Conservation District, or between the District and any other entity providing funding for the Improvements.
- K. "Orchard Mesa Division" means the portion of the Grand Valley Project consisting of the system beginning at the Orchard Mesa Siphon, which conveys water from the Government Highline Canal under the Colorado River through the Orchard Mesa

Power Canal to the Grand Valley Powerplant, the Orchard Mesa Pumping Plant, the Canals (as previously defined) and the Mutual Mesa Lateral. The Orchard Mesa Pumping Plant lifts water from the Orchard Mesa Power Canal to the Canals. Canal No. 1 conveys the water to the Mutual Mesa Lateral as well as privately owned and operated laterals. Under the management of the District, irrigation water is distributed to the Canals and the Mutual Mesa Lateral.

- L. "Recovery Program" means the Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin, as authorized by Public Law 106-392 and as defined in the 2001 Cooperative Agreement, as amended. The Recovery Program is managed by the Recovery Program Management Committee. However, in the event the Recovery Program ceases to exist, Reclamation will perform the actions of the Recovery Program in this Contract.
- M. "State" means the State of Colorado.
- N. "Transferred Works" as they pertain to this contract, shall mean the facilities completed as part of the Orchard Mesa Canal Automation Improvements and transferred to O&M status pursuant to Article 6.B. herein.
- O. "Year" means a calendar year, unless specifically stated otherwise.

4. RESPONSIBILITIES OF THE DISTRICT DURING PLANNING, DESIGN AND CONSTRUCTION OF THE IMPROVEMENTS

The District's knowledge and experience Operating and Maintaining the Orchard Mesa Division system is critical to the planning, design, and construction processes and eventual proper and efficient O&M of the Improvements.

- A. The District shall, at its own expense, share its knowledge and experience to coordinate and assist Reclamation with the planning, design and construction process for the Improvements as follows:
 - 1) The District will assist Reclamation with establishing current, and developing new, improved and desired, operational system requirements.
 - 2) The District will assist Reclamation with providing and gathering required design data, including, but not limited to: technical and operational information and details for existing equipment, structures and facilities.
 - 3) Per Article 6.B. herein, the District will assist Reclamation with the following:
 - (a) Participate in the final construction inspection and development of a "punch list" of items not completed in accordance with the specified requirements of the construction contract(s).
 - (b) Following construction: Identify and justify potential Modifications for the proper and efficient O&M of the Improvements.
 - 4) Per Article 7.E. herein, the District will work with Reclamation to refine plans and review designs.
 - 5) Per Articles 10 and 11 herein, the District will provide reasonable access.

B. The District, at its sole discretion, may assist and be reimbursed by Reclamation, acting on behalf of the Recovery Program, for the District's assistance in the acquisition of rights-of-way and/or other construction activities relating to the Improvements, (hereinafter described as "reimbursable District work"), as follows:

1) All proposed reimbursable District work, and associated estimated costs, must be submitted in writing and approved by Reclamation before commencement of any work and expenditures. Prior to approving any reimbursable District work, Reclamation, acting on behalf of the Recovery Program, shall ensure, to the extent possible, that the necessary funds are available to timely reimburse the District for reimbursable District work.

2) After completion of reimbursable District work, and subsequent approval of the work by Reclamation, the District will submit an invoice with detailed actual cost and expenditures to Reclamation, as set forth in Article 9.B. herein.

3) Reclamation, acting on behalf of the Recovery Program, will reimburse the District for reimbursable District work performed as set forth in Article 13.C.1. herein.

5. OPERATION AND MAINTENANCE OF IMPROVEMENTS PRIOR TO TRANSFER OF IMPROVEMENTS FROM CONSTRUCTION STATUS TO OPERATION AND MAINTENANCE STATUS

After completion of construction of all or any component of the Improvements, but prior to the transfer of the Improvements to Operation and Maintenance status pursuant to Article 6 herein, the District may, with Reclamation's written approval, O&M all or any portion of the completed Improvements that are beneficial to District operations. Furthermore, the District shall perform necessary O&M activities on, and Modification of, all or any portion of the completed Improvements prior to transfer to O&M status, pursuant to the initial work plan prepared and approved pursuant to Article 7.B. herein.

6. TRANSFER OF IMPROVEMENTS FROM CONSTRUCTION STATUS TO OPERATION AND MAINTENANCE STATUS

A. The following shall occur prior to the transfer of responsibility for the O&M of the Improvements to the District:

1) Prior to the completion of a contract for the construction of, or Modification to, any component of the Improvements, the Parties shall inspect the work and jointly prepare a punch list of items not completed in accordance with the construction contract(s).

2) If, at any time prior to transfer of O&M responsibilities, the Parties identify desired Modifications, beyond the scope of the original construction plans and specifications that are required for the proper and efficient O&M of the Improvements:

(a) The Parties shall prepare a justification and estimated costs for Modifications. Modifications within the Recovery Program budget that are approved during the Annual Work Plan process will be funded, provided that funds are available. If the Modifications cannot be completed within prior Recovery Program budget approval, the justification and estimates for the Modifications must be submitted in writing to the Recovery Program for approval and funding before proceeding with any work and expenditures for Modifications.

(b) Once approved and funded, Modifications can be constructed pursuant to amendment to the existing construction contract(s), new construction contract(s) or by reimbursable District work in accordance with Article 4.B. herein.

3) Upon completion of construction, including punch list items and the additional items above, Reclamation will provide to the District a Designer's Operating Criteria, final construction report, all applicable manufacturer's literature and construction as-built drawings for the Improvements.

B. Upon completion of the procedures set forth in Article 6.A. herein for the Improvements:

1) Reclamation shall transfer to the District, and the District shall accept without repayment obligation, the responsibility for the O&M of the Improvements. Such transfer of responsibility shall be evidenced in writing, signed by Reclamation and the District concurring that the transfer to O&M has been finalized.

2) When the transfer to O&M has been finalized, the Improvements will be considered facilities of the Orchard Mesa Division.

3) Pursuant to the terms of this Contract, the District shall Operate, Maintain, and Modify the Improvements after the transfer of the responsibility for the O&M of the Improvements to the District.

4) Upon transfer of the responsibility for the O&M of the Improvements to the District, the title to the Improvements shall remain in the name of the United States, unless otherwise provided by the Congress of the United States.

7. ADDITIONAL RIGHTS AND OBLIGATIONS OF THE DISTRICT

The District shall, in addition to its other rights and obligations under this Contract, have the following rights and obligations:

A. The District shall establish and be responsible for the administration and management of one or more interest bearing accounts, collectively referred to in this Contract as the "Improvements Account." The Improvements Account will only be used to pay or reimburse the District for allowable expenses, identified in Article 8 herein, that have been approved through the initial work plan as defined in Article 7.B. herein or an Annual Work Plan, as defined in Article 7.C.1) herein. Federal funds shall not be deposited in the Improvements Account. The Improvements Account shall be administered and managed pursuant to the following terms and conditions:

- 1) The District shall deposit the following funds into the Improvements Account:
 - (a) All funds provided through the O&M Funding Agreement(s);
 - (b) Any other funds which by the terms of this Contract are required to be deposited into the Improvements Account;
 - (c) Any other funds contributed by or to the District which Reclamation and the District mutually agree should be deposited into the Improvements Account; and
 - (d) All interest that accrues on funds in the Improvements Account.

2) Funds in the Improvements Account shall be invested or deposited only in investments and depositories that are allowed for public funds under Part 6 of Article 75 of Title 24, C.R.S., as it may be amended from time to time, and all principal and accrued interest in the Improvements Account shall be considered to be public funds as defined in said statute. In addition, all principal and accrued interest in the Improvements Account shall be considered to be public deposits as defined in the Colorado Public Deposit Protection Act (Article 10.5 of Title 11, C.R.S., as amended), and shall be subject to the protection of said Act.

3) The primary goals for the investment of the Improvements Account funds shall be to ensure (i) the safety and preservation of the Improvements Account principal; (ii) the earning of interest sufficient to pay the anticipated allowable expenditures pursuant to Article 8. herein; and (iii) the liquidity of a sufficient portion of the Improvements Account principal to pay the anticipated allowable expenditures pursuant to Article 8. herein, as incurred, if the interest is not sufficient to do so. To the extent consistent with these primary goals, the District shall use reasonable efforts to manage the Improvements Account principal in a manner to maximize the return on the invested funds.

4) In order to provide adequate liquidity to pay for current expenses while still earning a satisfactory rate of return, the District shall be entitled to establish more than one interest bearing account within the Improvements Account, one being a liquid, demand account, such as a checking account, to pay current expenses and one or more being longer term, less liquid account(s) on which a higher rate of return would be expected.

5) The District shall prepare and keep accounting and management records for the Improvements Account. Such records shall be open to inspection by Reclamation at any time during normal business hours, and copies of such records shall be provided to Reclamation upon request.

6) The Improvements Account will be managed by the District and shall be subject to an annual audit, conducted by a qualified Certified Public Accountant, who is sufficiently independent from the Parties associated with this Contract, using generally accepted accounting principles.

7) If Reclamation and the District jointly determine that, in their judgment, the funds in the Improvements Account and any other funds available are sufficient to provide for the payment of the District's Electrical Power Costs and any other expenses allowed in an approved Annual Work Plan, as defined in Article 7.C. herein, any amount in the Improvements Account in excess of the amounts needed for such costs and expenses may be used by the District for O&M of, or to make modifications to, the Orchard Mesa Division. Any modifications proposed by the District for which such excess funds will be used shall be included in the District's Annual Work Plan.

8) The District shall only spend funds in the Improvements Account for allowable expenditures as described in Article 8 herein.

9) The Parties acknowledge and agree that the Improvements Account shall function as the "emergency reserve fund" required by Article 19.C. herein and that no additional reserve fund shall be required to be established or maintained.

B. It is anticipated that Reclamation will construct the Improvements by awarding two or more construction contracts. Upon award of the first construction contract for the Improvements, Reclamation and the District shall prepare an initial work plan to cover the District's short-term expenses for any O&M or Modifications of the Improvements until the District's first Annual Work Plan has been submitted and approved pursuant to Article 7.C. herein. After Reclamation approves the initial work plan, Reclamation will promptly submit it to the Recovery Program for approval.

C. The District shall plan and report on its O&M activities as follows:

1) On or before December 31 of each Year after the execution of this Contract, the District shall prepare a budget and an annual work plan (collectively, the "Annual Work Plan") for the next budget year. For purposes of this Contract, the "next budget year" is the current year plus two years. For example, if the current year is 2012, the next budget year would be 2014. The Annual Work Plan shall include the District's budget for the next budget year, which will include proposed O&M activities for the facilities of the Orchard Mesa Division, including the Improvements; expenses to be paid from the Improvements Account during the next budget year; any Modifications proposed pursuant to Article 7.A.7. herein for the next budget year; and the Recovery Program's anticipated reimbursement (see Articles 9.B. and 14.A. herein) for the next

budget year. The Annual Work Plan shall also include any Modifications the District believes would enhance the performance of the Improvements or that otherwise would be beneficial for the O&M of the Improvements. The time for preparing and submitting the initial work plan shall be as set forth in Article 7.B. herein.

2) On or before December 31 of each Year after the execution of this Contract, the District shall submit the Annual Work Plan to Reclamation and the State. Reclamation shall confer with the State regarding the Annual Work Plan. Reclamation will review and approve the Annual Work Plan pursuant to Article 13.B. herein. After approval of the Annual Work Plan by Reclamation, the District shall coordinate with Reclamation to submit the Annual Work Plan to the Recovery Program for its approval of the expenses that are to be paid from the Improvements Account as proposed in the Annual Work Plan and the Recovery Program's anticipated reimbursement. An Annual Work Plan in which such expenses and contribution have been approved by the Recovery Program shall be referred to in this Contract as an "approved Annual Work Plan."

3) After the Recovery Program has approved its Annual Work Plan pursuant to Article 7.C.2), herein, the District is authorized pay or reimburse the District from the Improvements Account or to invoice Reclamation, acting on behalf of the Recovery Program, for reimbursement of expenses incurred under the approved Work Plan.

4) The District shall O&M the Improvements in accordance with the approved Annual Work Plan and in accordance with this Contract. The District also shall perform Emergency Work not included in the approved Annual Work Plan on the Improvements.

5) The District shall pay for the O&M of the Improvements and provide accounting and reporting for the District's Electrical Power Costs. The electrical service for the components of the Improvements that require electrical power to operate shall be metered separately from other portions of the Orchard Mesa Division so that the District's Electrical Power Costs can be accurately determined.

6) The District shall establish and maintain accounts and other books and records so that financial transactions of the Improvements Account are separate from other District expenses.

7) The District shall prepare any reports detailing the amounts of water pumped from the District's pumping plant to the Canals that are required by the Division Engineer for Water Division 5 or other official of the State responsible for the administration of water rights.

8) On or before January 31 of each Year after the execution of this Contract, the District shall prepare and submit to Reclamation and the Interested Parties an annual report ("Annual Report") for the preceding Year. The Annual Report shall provide an accounting of all funds paid or to be paid from the Improvements Account and the total amount invoiced and submitted for reimbursement from the Recovery Program Annual

Funds, in accordance with the approved Annual Work Plan for the preceding Year. The Annual Report shall also provide a monthly summary of the information provided to the State pursuant to Article 7.C.7) herein.

9) After the District submits the Annual Report to Reclamation and the Interested Parties, Reclamation shall solicit comments on the Annual Report from the Interested Parties. If Reclamation or the Interested Parties dispute or question any expenditure made by the District, Reclamation shall submit to the District a written request for clarification no later than the last day of February of the Year in which the Annual Report was submitted. If Reclamation determines that the questions or disputes are not satisfactorily resolved by March 31 of the Year in which the Annual Report was submitted, the Parties agree that resolution shall occur through the dispute resolution procedures specified in Article 15 herein. If the dispute resolution results in an agreement or determination that the District was incorrect in its billing, the District shall, within thirty days after the date of such determination or agreement, reimburse the Improvements Account for the amount withdrawn to pay the disputed bill, plus interest at the same average rate the Improvements Account accrues interest for the period commencing when the District received the disputed money, until repaid. If a written request for clarification is timely submitted to the District, all expenditures in the Annual Report that have not been questioned or disputed shall be deemed approved. If Reclamation does not submit to the District a timely written request for clarification of an expenditure, all expenditures in the Annual Report shall be deemed approved.

- D. The District shall be entitled to convey water in the full decreed amount of its water rights through its system as required by the demands of the District's landowners and the operational necessities of the District, whenever deemed necessary by the District in its sole discretion.
- E. The District shall work with Reclamation to refine the planned Improvements and review and comment on the design of the Improvements in connection with Reclamation's activities under Article 13.A. herein.

8. ALLOWABLE EXPENDITURES

Activities in this Contract are funded by four sources. Those sources are 1) the Improvements Account; 2) Recovery Program annual funding; 3) District's in-kind services; and 4) federal appropriated funding.

A. Allowable expenditures from the Improvements Account include the following expenses:

- 1) The District's Electrical Power Costs.
- 2) Maintenance of, or modification to, the Orchard Mesa Division as allowed under Article 7.A.7) herein.

3) Any expenses incurred by the District in connection with the resolution of disputes under this Contract pursuant to Article 15. herein including without limitation consultant fees, attorneys' fees, filing fees and travel expenses, if and only if the outcome of the dispute resolution procedure is an agreement or determination that the District was substantially justified in its position.

4) Reasonable costs associated with accounting modifications to the District's accounting system to implement the provisions of this Contract, provided that such costs are included in an Annual Work Plan.

5) The cost of the annual audit required by Article 7.A.6) herein.

6) Any other expenses proposed by the District in connection with an initial work plan that has been approved by the Recovery Program or an approved Annual Work Plan.

7) Any Emergency Work on the Improvements.

B. Recovery Program annual funds (Annual Funds) will be used only for O&M activities. Annual Funds will be used to reimburse the District for the costs of non-replacement O&M activities that have been approved in the initial work plan or in an approved Annual Work Plan.

C. This Contract places no limitation on the District's in-kind services, except that in-kind services shall not be used to Modify the Improvements without Reclamation approval.

D. Federal appropriated funding will be used to fund pre-construction activities and construction of the Improvements, and may be used for Modification of the Improvements.

9. REIMBURSEMENT OF THE DISTRICT'S ACTIVITIES

A. After written notification to the District by the Recovery Program or Reclamation of its approval of the District's initial work plan pursuant to Article 7.B. herein or approval of an Annual Work Plan pursuant to Article 7.C.2) herein, the District shall be entitled to draw upon the Improvements Account to pay or reimburse the District for expenditures allowed pursuant to Article 8.A. herein. The District must draw upon the Improvements Account for reimbursement or payment of these costs within twelve (12) months of incurring the costs. Any of the District's allowable costs older than twelve months will not be reimbursed or paid and all such costs will be borne by the District.

B. After written notification to the District by the Recovery Program or Reclamation of its approval of the District's initial work plan pursuant to Article 7.B. herein or approval of an Annual Work Plan pursuant to Article 7.C.2) herein, and after incurring the expense for the approved work, the District shall be entitled to invoice Reclamation for reimbursement of expenditures allowed pursuant to Article 8.B. herein. The District must invoice Reclamation at least 30 days prior to the end of the Fiscal Year in which

the costs were incurred. Any invoices submitted after this deadline will not be reimbursed or paid and the costs of such work will be borne by the District. The District must invoice at least quarterly but not more than monthly.

- C. All funds provided to the District by Reclamation under this agreement will only be provided as reimbursement for work completed by the District pursuant the approved initial work plan described in Paragraph 7.A. herein or an approved Annual Work Plan.

10. RIGHT OF REASONABLE ACCESS FOR THE CONSTRUCTION OF IMPROVEMENTS

The District hereby grants to Reclamation, its representatives, employees, contractors, agents, successors, and/or assigns, the right of reasonable ingress and egress to all facilities related to the Improvements for the purpose of construction and inspection of the Improvements.

11. PERPETUAL RIGHT OF REASONABLE ACCESS

The District hereby grants in perpetuity to Reclamation, its representatives, employees, contractors, agents, successors, and/or assigns, the right of reasonable ingress and egress to Orchard Mesa Division facilities for the purpose of inspection of the Orchard Mesa Division facilities.

12. PROTECTION OF WATER RIGHTS

Neither the Improvements nor this Contract are intended to alter, compromise or otherwise adversely affect the water rights of the District or the United States. Nothing in this Contract shall be interpreted as evidence of any intent to abandon the water rights of the District or the United States, or any portion thereof.

13. RECLAMATION'S RESPONSIBILITIES

Reclamation will have the following obligations, in addition to its other obligations under this Contract; all of which will be performed by Reclamation at its own expense:

A. Obligations to design and construct the Improvements:

- 1) Reclamation will work with the District to refine the planned Improvements as soon as reasonably possible after the effective date of this Contract. The purpose of this work is to determine a final configuration for the Improvements so that design of the Improvements can proceed.
- 2) Promptly after the final configuration of the Improvements has been determined, Reclamation will design the Improvements. The design shall be completed as soon as reasonably possible. Reclamation will coordinate with the District on the design of the Improvements, keep the District informed regarding the status of the design activities,

and allow the District to review all interim and final designs of the Improvements. If, during the design of the Improvements, changes to the configuration are deemed appropriate, Reclamation will work with the District to Modify the configuration and the design of the Improvements.

3) Promptly upon completion of the design of the Improvements, Reclamation will prepare the contract(s) for the construction of the Improvements for award. After the contract(s) have been awarded, Reclamation will be responsible for overseeing and completing the construction of the Improvements.

4) If Reclamation and the District agree, some of the construction work may be performed by the District. Any such work shall be considered work performed pursuant to Article 4 herein, and shall be approved and reimbursed pursuant to the procedures set forth in Article 4 herein.

B. Obligations relating to approval of Annual Work Plans:

1) As set forth in Article 7.C.2) herein, the District shall submit a proposed Annual Work Plan to Reclamation by December 31 of each Year after the execution of this Contract; that Annual Work Plan is for the 'next budget year', as defined and set forth in Article 7.C.1) herein. All of the dates set forth in this Article 13.B. are in the first Year after the Year in which the District submits a proposed Annual Work Plan to Reclamation.

2) On or before January 21 of each Year after an Annual Work Plan has been submitted, Reclamation will review and provide the District with a written response indicating Reclamation's approval or disapproval of the Annual Work Plan. If January 21 is not a working day, the deadline for the response shall be the next working day after January 21.

3) Prior to April 1, Reclamation will work with the District to resolve, any issues on an Annual Work Plan which it has disapproved. Upon resolution of any such issues, Reclamation will approve the Annual Work Plan in writing.

4) On or before April 1 of each Year after the execution of this Contract, Reclamation will submit the Annual Work Plan that it has approved to the Recovery Program for inclusion into the Recovery Program annual work plan process.

5) On or before October 1 of each Year after the execution of this Contract, Reclamation, working with the Recovery Program, will provide a written response to the District regarding the action taken by the Recovery Program on the Annual Work Plan. If the District does not receive a written response by October 1, the Annual Work Plan for that Year shall be deemed approved by the Recovery Program, and any right of Reclamation to object thereto will be deemed waived. However, absent express Recovery Program approval, the District may not receive the Recovery Program Annual Funds reimbursement.

C. Other obligations:

- 1) As soon as possible but no later than thirty (30) days after its receipt of the bill for the Recovery Program's reimbursement, as identified in Article 9.B. herein, Reclamation, acting on behalf of the Recovery Program, and as an exception to Article 19.A.(b) herein, will reimburse the District's allowable expenditures pursuant to Article 8.B. herein. Since such payments are reimbursements of costs previously incurred by the District, they are not required to be deposited into the Improvements Account.
- 2) Reclamation, as a Federal agency participating in the Recovery Program, will work on behalf of the Recovery Program to implement this Contract.
- 3) Reclamation will accrue necessary Annual Funding for any approved work that may occur during the period from a previous reimbursement invoice in a Fiscal Year through the end of that Fiscal Year. Such accrual shall only be used for approved work in the Fiscal Year it was originally approved. Carry-over to fund approved activities for the next Fiscal Year is not allowed unless approved in writing by Reclamation.

14. FUNDING

- A. Funding for the O&M of the Improvements is set forth in this Contract. This Contract provides the mechanism to provide Recovery Program funding, along with other funds in the Improvements Account, to pay or reimburse the District for expenditures made to accomplish work approved in the initial work plan and in Annual Work Plans. The District shall be entitled to request and obtain reimbursement from the Recovery Program's Annual Funds for the work approved in the initial work plan and in Annual Work Plans. It is anticipated that the Recovery Program Annual Funds shall be \$100,000 per Year, indexed to inflation based on yearly changes to the Consumer Price Index for All Urban Consumers (CPI-U); if that index is no longer available, the parties will agree on a reasonable similar index. The \$100,000 amount is based upon the anticipated annual savings of 17,000 acre-feet of water. If the anticipated savings are less than 17,000 acre-feet, or if the actual savings are less than 17,000 acre-feet, the Recovery Program, at its discretion may decrease the amount of Annual Funds. If the Recovery Program Annual Funds and interest on the funds in the Improvements Account are not adequate to cover the District's expenditures made to accomplish work approved in an Annual Work Plan, the District shall be entitled to draw against the principal in the Improvements Account to pay any allowable expenditures pursuant to Article 8. herein, which have been included in an approved initial work plan or Annual Work Plan.
- B. Funding for Reclamation's duties and obligations in this contract including, but not limited to, the planning, design and construction of the Improvements will be provided through Federal appropriations.

- C. Request for funding for Modification of Improvements must be submitted and approved by the Recovery Program as part of an Annual Work Plan, as outlined in Article 7. herein. Funding for approved Modifications will be identified and approved during the development of the Annual Work Plan.
- D. The performance by the District of its duties and obligations for activities funded by and through Recovery Program Annual Funds and the Improvements Account under this Contract shall be contingent upon funding from the Recovery Program, the Improvements Account or other available sources and upon those funds being made available to the District as provided in this Contract. If a duty or obligation of the District is only partially funded, the District shall be obligated to perform the duty or obligation only to the extent of the available funds. If funds are not adequate to pay or reimburse all of the District's expenditures allowed under Article 8, the District shall be entitled to discontinue some or all activities relating to the Improvements until funding has been restored.
- E. If the Recovery Program fails to make Annual Funds available as set forth in Article 14.A. herein for two or more consecutive Years, or if the Recovery Program fails to approve Annual Work Plans for two or more consecutive Years, the District shall be entitled to cease O&M of the Improvements until the funding is restored or work plans are approved. The District's rights set forth in this Article 14.E. are in addition to the rights that the District has under Article 14.D herein.
- F. Notwithstanding the other provisions of Article 14 herein, the District, at its own expense, shall be entitled (but not obligated) to utilize, O&M and Modify all or any part of the Improvements, regardless of whether it receives adequate funding under this Contract to do so and regardless of whether its Annual Work Plans are approved by the Recovery Program. Any Modifications to the Improvements must be submitted to and approved by Reclamation in writing prior to the initiation of such work.

15. DISPUTE RESOLUTION PROCEDURES

In the event of disagreement between the Parties involving the application or interpretation of any provisions of this Contract, payment of bills associated with this Contract, exercise of any rights under this Contract, or performance of any duties or obligations under this Contract, the matters involved in the disagreement shall, upon demand of either of the Parties, be discussed at a meeting between the Parties to be held within forty-five (45) days of the date the demand is made. Attempted resolution of the disagreement through such a meeting shall be a condition precedent to either Party's effort to have the disagreement resolved through alternative dispute resolution or other proceedings. In the event the Parties are unable to resolve their disagreement following such meeting or meetings, either Party may request that the matter be submitted to alternative dispute resolution or seek resolution by any means legally available. Each Party shall bear its own costs and expenses incurred in this process, subject to the provisions of Article 8.A.3. herein.

16. DEFAULT AND TERMINATION

A. Any of the following events shall constitute default under this Contract:

- 1) Failure or refusal to pay, when due, any sum required by this Contract.
- 2) Failure or refusal of the District to Operate and Maintain the Improvements in a manner which reduces the amount of water delivered to the Canals, consistent with the manner in which the Improvements are designed and intended to be Operated and Maintained, subject, however, to the District's rights in Article 7.D. herein.
- 3) Failure of a Party to meet any other obligation of that Party under this Contract.

B. A Party not in default may give notice to the defaulting Party and the defaulting Party shall then have sixty (60) days to correct the default condition.

C. Subject to this Article 16, this Contract may be terminated:

- 1) by mutual consent of the Parties to this Contract;
- 2) by either Party in the event the Improvements Account has been fully depleted for a two-Year period; or
- 3) by a non-Defaulting Party in the event that the defaulting Party fails to correct the default condition within 60 days provided in Article 16.B herein.
- 4) in the event the Recovery Program provides a written determination that the Improvements are no longer needed. The District may elect to keep the Improvements in place with the option to remove or make adjustments to the Improvements, with written approval of Reclamation, as deemed necessary by the District.

D. Upon termination of this Contract, title to the Improvements shall remain in the name of the United States.

E. Upon termination of this Contract for any reason, the District may, at its option, continue or discontinue its use and O&M of all or any part of the Improvements.

F. Upon termination, any funds in the Improvements Account are governed by other contracts.

17. TERM OF CONTRACT

A. This Contract shall be effective upon execution by the last of the Parties to sign it and shall remain in effect for a period of forty (40) years from such date unless earlier terminated in writing by mutual agreement of the Parties or as otherwise provided for in Article 16 herein.

- B. Prior to the expiration of its term, this Contract may be renewed, or amended and renewed, for an additional period of up to 40 years. Renewal and/or amendment shall be upon written agreement by both of the Parties, subject to the applicable policies and laws in effect at that time.

18. AMENDMENTS

This Contract may not be amended, altered, or modified except in writing and such amendment must be signed by both Parties.

19. STANDARD ARTICLES

The standard articles applicable to this Contract are listed below. The full text of these standard articles is attached hereto as Addendum "A" and by this reference made a part thereof. If there is a conflict between any of the standard articles attached as Addendum A and any of the provisions of Articles 1 through 18 herein, the provisions of Articles 1 through 18 shall control.

- A. OPERATION AND MAINTENANCE OF TRANSFERRED WORKS
- B. EXAMINATION, INSPECTION, AND AUDIT OF PROJECT WORKS, RECORDS, AND REPORTS FOR DETERMINING ADEQUACY OF OPERATION AND MAINTENANCE
- C. EMERGENCY RESERVE FUND
- D. NOTICES
- E. CONTINGENT UPON APPROPRIATION OR ALLOCATION OF FUNDS
- F. OFFICIALS NOT TO BENEFIT
- G. CHANGES IN CONTRACTION'S ORGANIZATION
- H. ASSIGNMENTS LIMITED-SUCCESSORS AND ASSIGNS OBLIGATED
- I. BOOKS, RECORDS, AND REPORTS
- J. ADMINISTRATION OF FEDERAL PROJECT LANDS
- K. PROTECTION OF WATER AND AIR QUALITY
- L. CONTAMINATION OR POLLUTION OF FEDERAL PROPERTY
- M. CLEAN AIR AND WATER
- N. EQUAL EMPLOYMENT OPPORTUNITY
- O. COMPLIANCE WITH CIVIL RIGHTS LAWS AND REGULATIONS
- P. CERTIFICATION OF NONSEGREGATED FACILITIES
- Q. RELOCATION ASSISTANCE AND REAL PROPERTY ACQUISITION
- R. PEST MANAGEMENT
- S. CONTRACT DRAFTING CONSIDERATIONS

IN WITNESS WHEREOF, the Parties hereto have caused this Assignment to be duly executed as the day and year first written above.

APPROVED

DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

Office of the Regional Solicitor
Intermountain Region

By: _____
Regional Director

ATTEST:

ORCHARD MESA IRRIGATION DISTRICT

Secretary

By: _____
President

ADDENDUM "A"

A. Operation and Maintenance of Transferred Works

- 1) Upon substantial completion of the Improvements, or as otherwise determined by the Contracting Officer in accordance with Article 6 herein, the care, operation, and maintenance of any and all of the Improvements will be transferred to the Contractor as provided in Article 6 herein. Title to the Improvements (referred to in this Article 20.C. herein as the "transferred works") will remain in the name of the United States, unless otherwise provided by the Congress of the United States.
- 2) The Contractor, without expense to the United States except as otherwise set forth in Articles 1 through 19 of this Contract, shall care for, operate, and maintain the transferred works in full compliance with the terms of this Contract and in a manner that the transferred works remain in good and efficient condition.
- 3) Necessary repairs of the transferred works shall be made promptly by the Contractor. In case of unusual conditions or serious deficiencies in the care, operation, and maintenance of the transferred works threatening or causing interruption of water service, the Contracting Officer may issue to the Contractor a special written notice of those necessary repairs. Except in the case of an emergency, the Contractor will be given 60 days to either make the necessary repairs or submit a plan for accomplishing the repairs acceptable to the Contracting Officer. In the case of an emergency, or if the Contractor fails to either make the necessary repairs or submit a plan for accomplishing the repairs acceptable to the Contracting Officer within 60 days of receipt of the notice, the Contracting Officer may cause the repairs to be made, and the cost of those repairs shall be paid by the Contractor as directed by the Contracting Officer.
- 4) The Contractor shall not make any substantial changes in the transferred works without first obtaining written consent of the Contracting Officer. The Contractor shall ensure that no unauthorized encroachment occurs on project land and rights-of-way.
- 5) The Contractor agrees to indemnify the United States for, and hold the United States and all of its representatives harmless from, all damages resulting from suits, actions, or claims of any character brought on account of any injury to any person or property arising out of any act, omission, neglect, or misconduct in the manner or method of performing any construction, care, operation, maintenance, supervision, examination, inspection, or other duties of the Contractor or the United States on transferred works required under this Contract, regardless of who performs those duties. The Contractor does not agree to indemnify the United States for any damages arising from intentional torts or malicious actions committed by employees of the United States.

6) In the event the Contractor is found to be operating, the transferred works or any part thereof in violation of this Contract or the Contractor is found to be failing any financial commitments or other commitments to the United States under the terms and conditions of this Contract, then upon the election of the Contracting Officer, the United States may take over from the Contractor the care, operation, and maintenance of the transferred works by giving written notice to the Contractor of such election and the effective date thereof. Thereafter, during the period of operation by the United States, upon notification by the Contracting Officer the Contractor shall pay to the United States, annually in advance, the cost of operation and maintenance of the works as determined by the Contracting Officer. In such case, the United States shall use funds from the Improvements Account to pay for the District's Electrical Power Costs to Operate the Improvements, and the Contractor shall not be required to pay the United States for such costs. Following written notification from the Contracting Officer the care, operation, and maintenance of the works may be transferred back to the Contractor.

7) In addition to all other payments to be made by the Contractor under this Contract, the Contractor shall reimburse to the United States, following the receipt of a statement from the Contracting Officer, all miscellaneous costs incurred by the United States for any work involved in the administration and supervision of this Contract, except as otherwise set forth in Articles 1 through 18 herein.

B. Examination, Inspection, and Audit of Projects Works, Records, and Reports for Determining Adequacy of Operation and Maintenance

1) The Contracting Officer may from time to time, examine the following: the Contractor's books, records, and reports; the project works being operated by the Contractor; the adequacy of the operation and maintenance program; and the reserve fund. Notwithstanding title ownership, where the United States retains a financial, physical, or liability interest in facilities either constructed by the United States or with funds provided by the United States, the Contracting Officer may examine any or all of the project works providing such interest to the United States.

2) The Contracting Officer may, or the Contractor may ask the Contracting Officer to, conduct special inspections of any project works being operated by the Contractor and special audits of the Contractor's books and records to ascertain the extent of any operation and maintenance deficiencies to determine the remedial measures required for their correction and to assist the Contractor in solving specific problems. Except in an emergency, any special inspection or audit shall be made only after written notice thereof has been delivered to the Contractor by the Contracting Officer.

3) The Contractor shall provide access to the project works, operate any mechanical or electrical equipment, and be available to assist in the examination, inspection, or audit.

4) The Contracting Officer shall prepare reports based on the examinations, inspections, or audits and furnish copies of such reports and any recommendations to the Contractor.

5) The costs incurred by the United States in conducting operation and maintenance examinations, inspections, and audits and preparing associated reports and recommendations related to high- and significant hazard dams and associated facilities shall be nonreimbursable. Associated facilities include carriage, distribution, and drainage systems; pumping and pump-generating plants; powerplant structures; tunnels/pipelines; diversion and storage dams (low hazard); Type 2 bridges which are Reclamation-owned bridges not located on a public road; regulating reservoirs (low hazard); fish passage and protective facilities, including hatcheries; river channelization features; rural/municipal water systems; desalting and other water treatment plants; maintenance buildings and service yards; facilities constructed under Federal loan programs (until paid out); and recreation facilities (reserved works only); and any other facilities as determined by the Contracting Officer.

6) Expenses incurred by the Contractor, as applicable, in participating in the operation and maintenance site examination will be borne by the Contractor.

7) Requests by the Contractor for consultations, design services, or modification reviews, and the completion of any operation and maintenance activities identified in the formal recommendations resulting from the examination (unless otherwise noted) are to be funded as project operation and maintenance and are reimbursable by the Contractor to the extent of current project operation and maintenance allocations.

8) Site visit special inspections that are beyond the regularly scheduled operation and maintenance examinations conducted to evaluate a particular concern(s) or problem(s) and provide assistance relative to any corrective action (either as a follow up to an operation and maintenance examination or when requested by the Contractor) shall be nonreimbursable.

9) The Contracting Officer may provide the State(s) an opportunity to observe and participate in, at their own expense, the examinations and inspections. The State(s) may be provided copies of reports and any recommendations relating to such examinations and inspections.

C. Emergency Reserve Fund

1) Commencing on the date of execution of this Contract the Contractor shall establish and maintain a reserve fund or demonstrate to the satisfaction of the Contracting Officer that other funds are available for use as an emergency reserve fund. The Contractor shall establish and maintain that emergency reserve fund to meet costs incurred during periods of special stress caused by damaging droughts, storms, earthquakes, floods, or other emergencies threatening or causing interruption of water service.

2) The Contractor shall accumulate the reserve fund with a one-time deposit or investment of not less than \$50,000 in a Federally insured, interest- or dividend-bearing account or in securities guaranteed by the Federal Government: *Provided, That* money in the reserve fund, including accrued interest, shall be available within a reasonable time to

meet expenses for such purposes as those identified in paragraph (d) herein. Following an emergency expenditure from the fund, annual deposits of \$10,000 shall continue from the year following the emergency expenditure until the previous balance is restored. After the previous balance is restored, the annual deposits may be discontinued and the interest earnings shall continue to accumulate and be retained as part of the reserve fund.

3) Upon mutual agreement between the Contractor and the Contracting Officer, the accumulated reserve fund may be adjusted to account for risk and uncertainty stemming from the size and complexity of the project; the size of the annual operation and maintenance budget; additions to, deletions from, or changes in project works; and operation and maintenance costs not contemplated when this Contract was executed.

4) The Contractor may make expenditures from the reserve fund only for meeting usual operation and maintenance costs incurred during periods of special stress, as described in paragraph (a) herein; for meeting unforeseen extraordinary operation and maintenance costs; or for meeting unusual or extraordinary repair or replacement costs; or for meeting betterment costs (in situations where recurrence of severe problems can be eliminated) during periods of special stress. Proposed expenditures from the fund shall be submitted to the Contracting Officer in writing for review and written approval prior to disbursement. Whenever the reserve fund is reduced below the current balance by expenditures therefrom, the Contractor shall restore that balance by annual deposits as specified in Article 19.N. (b) herein.

5) During any period in which any of the project works are operated and maintained by the United States, the Contractor agrees the reserve fund shall be available for like use by the United States.

6) On or before November 30 of each Year after the execution of this Contract, the Contractor shall provide a current statement of the principal and accumulated interest of the reserve fund account to the Contracting Officer.

D. Notices

Under this Contract communications shall be in writing, and shall be personally delivered, sent by facsimile telecommunication, or sent by certified mail, postage prepaid, return receipt requested, addressed to the Parties at their respective addresses set forth below. Such notice or other communication shall be deemed given (i) upon receipt if personally delivered, (ii) upon sending if delivered by facsimile telecommunication, so long as the sending party is able to provide facsimile machine-generated confirmation of completion of transmission, or (iii) upon delivery to the address of the intended recipient if by certified mail, as evidenced by the delivery date shown on the return receipt card:

Bureau of Reclamation
2764 Compass Drive, Suite #106
Grand Junction CO 81506
Attention: Area Manager

Orchard Mesa Irrigation District
668 38 Road
Palisade CO 81526
Attention: Manager

Interested Parties

Colorado Water Conservation Board
1313 Sherman Street, Room 721
Denver CO 80203
Attention: Director

Colorado River Water Conservation District
P.O. Box 1120
Glenwood Springs CO 81602
Attention: General Manager

E. Contingent Upon Appropriation or Allotment of Funds

The expenditure or advance of any money or the performance of any obligation of the United States under this Contract shall be contingent upon appropriation or allotment of funds. Absence of appropriation or allotment of funds shall not relieve the Contractor from any obligations under this Contract. No liability shall accrue to the United States in case funds are not appropriated or allotted.

F. Officials Not to Benefit

No Member of or Delegate to the Congress, Resident Commissioner, or official of the Contractor shall benefit from this Contract other than as a water user or landowner in the same manner as other water users or landowners.

G. Changes in Contractor's Organization

While this Contract is in effect, no change may be made in the Contractor's organization, by inclusion or exclusion of lands or by any other changes which may affect the respective rights, obligations, privileges, and duties of either the United States or the Contractor under this Contract including, but not limited to, dissolution, consolidation, or merger, except upon the Contracting Officer's written consent.

H. Assignment Limited-Successors and Assigns Obligated

The provisions of this Contract shall apply to and bind the successors and assigns of the Parties hereto, but no assignment or transfer of this Contract or any right or interest therein shall be valid until approved in writing by the United States.

I. Books, Records, and Reports

The Contractor shall establish and maintain accounts and other books and records pertaining to administration of the terms and conditions of this Contract, including to the extent required by Articles 1 through 18 of this Contract, the Contractor's financial transactions; water supply data; project operation, maintenance, and replacement logs; project land and rights-of-way use agreements; the water users' land-use, land-ownership, land-leasing, and water-use data; and other matters that the Contracting Officer may require in accordance with this Contract. Reports shall be furnished to the Contracting Officer in such form and on such date or dates as the Contracting Officer may require. Subject to applicable Federal laws and regulations, each Party to this Contract shall have the right during office hours to examine and make copies of the other party's books and records relating to matters covered by this Contract.

J. Administration of Federal Project Lands

The lands and interests in lands acquired, withdrawn, or reserved and needed by the United States for the purposes of care, operation, and maintenance of Improvements may be used by the Contractor for such purposes. The Contractor shall ensure that no unauthorized encroachment occurs on Federal project lands and rights-of-way. The Contractor does not have the authority to issue any land-use agreement or grant that conveys an interest in Federal real property, nor to lease or dispose of any interest of the United States.

K. Protection of Water and Air Quality

1) Project facilities used to make available and deliver water to the Contractor shall be operated and maintained in the most practical manner to maintain the quality of the water at the highest level reasonably possible as determined by the Contracting Officer: *Provided, That* the United States does not warrant the quality of the water delivered to the Contractor and is under no obligation to furnish or construct water treatment facilities to maintain or improve the quality of water delivered to the Contractor.

2) The Contractor shall comply with all applicable water and air pollution laws and regulations of the United States and the State of Colorado; and shall obtain all required permits or licenses from the appropriate Federal, State, or local authorities necessary for the delivery of water by the Contractor; and shall be responsible for compliance with all Federal, State, and local water quality standards applicable to surface and subsurface drainage and/or discharges generated through the use of Federal or the Contractor facilities or project water provided by the Contractor within their project Water Service Area.

3) This article shall not affect or alter any legal obligations of the Secretary to provide drainage or other discharge services.

L. Contamination or Pollution of Federal Property

- 1) The Contractor shall not allow contamination or pollution of Federal project lands, project waters, or project works of the United States or administered by the United States and for which the Contractor have the responsibility for care, operation, and maintenance by its employees or agents. The Contractor shall also take reasonable precautions to prevent such contamination or pollution by third parties.
- 2) The Contractor shall comply with all applicable Federal, State and local laws and regulations and Reclamation policies and instructions existing, or hereafter enacted or promulgated, concerning any hazardous material that will be used, produced, transported, stored, released, or disposed of on or in Federal project lands, project waters, or project works.
- 3) Hazardous Materials means (1) any substance defined as hazardous, a pollutant, or a contaminant under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. § 9601 (14) and (33); (2) oil as defined by the Clean Water Act, 33 U.S.C. § 1321 (a) and the Oil Pollution Act, 33 U.S.C. § 2701 (23); (3) thermal pollution, refuse, garbage, sewage effluent, industrial waste, mine or mill tailings, mineral salts, pesticides, and other solid waste, and (4) any other substance regulated as hazardous or toxic under Federal, State, local or Tribal law.
- 4) Upon discovery of any event which may or does result in contamination or pollution of Federal project lands, project water, or project works, the Contractor shall immediately undertake all measures necessary to protect public health and the environment, including measures necessary to contain or abate any such contamination or pollution and shall report such discovery with full details of the actions taken to the Contracting Officer. Reporting shall be within a reasonable time period but shall not exceed 24 hours from the time of discovery if it is an emergency and the first working day following discovery in the event of a non-emergency.
- 5) If violation of the provisions of Article 19.H. herein occurs and the Contractor does not take immediate corrective action, as determined by the Contracting Officer, the Contractor may be subject to remedies imposed by the Contracting Officer, which may include termination of this Contract.
- 6) The Contractor shall be liable for any response action or corrective measure necessary to protect public health and the environment or to restore Federal project lands, project waters, or project works that are adversely affected as a result of such violation, and for all costs, penalties or other sanctions that are imposed for violation of any Federal, State, local or Tribal laws and regulations concerning hazardous material. At the discretion of the Contracting Officer, the United States may also terminate this Contract as a result of such violation.

7) The Contractor shall defend, indemnify, protect and save the United States harmless from and against any costs, expenses, claims, damages, demands, or other liability arising from or relating to Contractor's violation of Article 19.H. herein.

8) Reclamation agrees to provide information necessary for the Contractor, using reasonable diligence, to comply with the provisions of this Article 19.H. herein.

M. Clean Air and Water

1) The Contractor agrees as follows:

(a) To comply with all the requirements of Section 114 of the Clean Air Act, as amended (42 U.S.C. 7414), and Section 308 of the Federal Water Pollution Control Act, as amended by Public Law 92-500 (33 U.S.C. 1318), respectively, relating to inspection, monitoring, entry, reports, and information, as well as other requirements specified in those sections, and all regulations and guidelines issued thereunder.

(b) That no portion of the work required by this Contract will be performed in a facility listed on the Environmental Protection Agency List of Violating Facilities on the date when this Contract was executed unless and until the Environmental Protection Agency eliminates the name of such facility or facilities from such listing.

(c) To use its best efforts to comply with clean air standards and clean water standards at the facility where the contract work is being performed.

(d) To insert the substance of the provisions of this article into any nonexempt subcontract, including this article.

2) The following definitions apply for purposes of this article:

(a) The term "Clean Air Act" means the Act enacted by Pub. L. 88-206 of Dec. 17, 1963, and amendments thereto, as codified at 42 U.S.C. § 7401, et seq.

(b) The term "Clean Water Act" means the Act enacted by Pub. L. 92- 500 of Oct. 18, 1972, and amendments thereto, as codified at 33 U.S.C. § 1251, et seq.

(c) The term "clean air standards" refers to all enforceable rules, regulations, guidelines, standards, limitations, orders, controls, prohibitions, and other requirements which are contained in, issued under, or otherwise adopted pursuant to the Clean Air Act or Executive Order 11738, an applicable implementation plan as described in section 110 of the Clean Air Act (42 U.S.C. § 7410), an approved implementation procedure or plan under subsection 111(c) or subsection 111(d) of the Clean Air Act (42 U.S.C. § 7411(c) or (d)), or an approved implementation procedure under subsection 112(d) of the Clean Air Act (42 U.S.C. § 7412(d)).

(d) The term "clean water standards" refers to all enforceable limitations, controls, conditions, prohibitions, standards, and other requirements which are promulgated pursuant to the Clean Water Act or contained in a permit issued to a discharger by the Environmental Protection Agency or by a state under an approved program, as authorized by section 402 of the Clean Water Act (33 U.S.C. § 1342), or by local government to ensure compliance with pretreatment regulations as required by section 307 of the Clean Water Act (33 U.S.C. § 1317).

(e) The term "comply" refers to compliance with clean air or water standards. It also refers to compliance with a schedule or plan ordered or approved by a court of

competent jurisdiction, the Environmental Protection Agency, or an air or water pollution control agency in accordance with the requirements of the Clean Air Act or Clean Water Act and regulations issued pursuant thereto.

(f) The term “facility” means any building, plant, installation, structure, mine, vessel or other floating craft, location, or site of operations owned, leased, or supervised by a contractor or subcontractor to be utilized in the performance of a contract or subcontract. Where a location or site of operations contains or includes more than one building, plant, installation, or structure, the entire location or site shall be deemed to be a facility except where the Director, Office of Federal Activities, Environmental Protection Agency, determines that independent facilities are collocated in one geographical area.

N. Equal Employment Opportunity

1) During the performance of this Contract, the Contractor agrees as follows:

(a) The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, disability, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, disability, or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Contracting Officer setting forth the provisions of this nondiscrimination clause.

(b) The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, disability, or national origin.

(c) The Contractor will send to each labor union or representative of workers with which it has a collective bargaining agreement or another contract or understanding, a notice, to be provided by the Contracting Officer, advising the labor union or workers' representative of the Contractor's commitments under section 202 of Executive Order 11246 of September 24, 1965, as amended (EO 11246), and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(d) The Contractor will comply with all provisions of EO 11246, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(e) The Contractor will furnish all information and reports required by EO 11246, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the Contracting Agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(f) In the event of the Contractor's noncompliance with the nondiscrimination clauses of this Contract or with any of such rules, regulations, or orders, this Contract may be canceled, terminated or suspended, in whole or in part, and the Contractor may be declared ineligible for further Government contracts in accordance with procedures

authorized in EO 11246, and such other sanctions may be imposed and remedies invoked as provided in EO 11246, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(g) The Contractor will include this clause (a), including all provisions of paragraphs (1) through (7), in every subcontract or purchase order unless exempted by the rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of EO 11246, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as may be directed by the Secretary of Labor as a means of enforcing such provisions, including sanctions for noncompliance: *Provided, however*, that in the event the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, the Contractor may request that the United States enter into such litigation to protect the interests of the United States.

2) The Contractor hereby agrees to incorporate, or cause to be incorporated, clause (a) as it appears above, including paragraphs numbered (1) through (7), into any contract for construction work, or modification thereof, as defined in the regulations of the Secretary of Labor at 41 C.F.R., Chapter 60, which is paid for in whole or in part with funds obtained from the Federal Government or borrowed on the credit of the Federal Government pursuant to grant, contract, loan, insurance, or guarantee or undertaken pursuant to any Federal program involving such grant, contract, loan, insurance, or guarantee.

3) The Contractor will be bound by clause (a) with respect to its own employment practices when it *participates* in federally assisted construction work: *Provided, That* if the Contractor so participating is a state or local government, clause (a) is not applicable to any agency, instrumentality, or subdivision of such government which does not participate in work on or under the contract.

4) The Contractor will assist and cooperate actively with the Contracting Officer and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with this article and the rules, regulations, and relevant orders of the Secretary of Labor; that it will furnish the Contracting Officer and the Secretary of Labor such information as they may require for the supervision of such compliance; and that it will otherwise assist the Contracting Officer in the discharge of his or her primary responsibility for securing compliance.

5) The Contractor will refrain from entering into any contract or contract modification subject to EO 11246 with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to EO 11246 and will carry out such sanctions and penalties for violation of this article as may be imposed upon contractors and subcontractors by the Contracting Officer or the Secretary of Labor pursuant to Part II, Subpart D, of EO 11246. In addition, the Contractor agrees that if it fails or refuses to comply with these undertakings, the Contracting Officer may take any or all of the following actions: cancel, terminate, or suspend, in whole or in part, this Contract; refrain from extending any further assistance

to the Contractor under the program with respect to which its failure or refusal occurred until satisfactory assurance of future compliance has been received from the contractor; refer the case to the Department of Justice for appropriate legal proceedings.

O. Compliance with Civil Rights Laws and Regulations

1) The Contractor shall comply with Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d), Section 504 of the Rehabilitation Act of 1973 (P.L. 93-112, as amended), the Age Discrimination Act of 1975 (42 U.S.C. 6101, *et seq.*), Title III of the Americans with Disabilities Act of 1990 if the entity is a State or local government entity and any other applicable civil rights laws, as well as with their respective implementing regulations and guidelines imposed by the U.S. Department of the Interior and/or Bureau of Reclamation.

2) These statutes require that no person in the United States shall be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity receiving financial assistance from the Bureau of Reclamation on the grounds of race, color, national origin, disability, or age. By executing this Contract, the Contractor agrees to immediately take any measures necessary to implement this obligation, including permitting officials of the United States to inspect premises, programs, and documents.

3) The Contractor makes this agreement in consideration of and for the purpose of obtaining any and all Federal grants, loans, contracts, property discounts, or other Federal financial assistance extended after the date hereof to the Contractor by the Bureau of Reclamation, including installment payments after such date on account of arrangements for Federal financial assistance which were approved before such date. The Contractor recognizes and agrees that such Federal assistance will be extended in reliance on the representations and agreements made in this article and that the United States reserves the right to seek judicial enforcement thereof.

4) Complaints of discrimination against the Contractor shall be investigated by the Contracting Officer's Office of Civil Rights.

P. Certification of Nonsegregated Facilities

The Contractor hereby certifies that it does not maintain or provide for its employees any segregated facilities at any of its establishments and that it does not permit its employees to perform their services at any location under its control where segregated facilities are maintained. It certifies further that it will not maintain or provide for its employees any segregated facilities at any of its establishments and that it will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. The Contractor agrees that a breach of this certification is a violation of the Equal Employment Opportunity clause in this Contract. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or

dressings areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, creed, color, or national origin, because of habit, local custom, disability, or otherwise. The Contractor further agrees that (except where it has obtained identical certifications from proposed subcontractors for specific time periods) it will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding \$10,000 which are not exempt from the provisions of the Equal Employment Opportunity clause; that it will retain such certifications in its files; and that it will forward the following notice to such proposed subcontractors (except where the proposed subcontractors have submitted identical certifications for specific time periods):

**NOTICE TO PROSPECTIVE SUBCONTRACTORS OF REQUIREMENT FOR
CERTIFICATIONS OF NONSEGREGATED FACILITIES**

A Certification of Nonsegregated Facilities must be submitted prior to the award of a subcontract exceeding \$10,000 which is not exempt from the provisions of the Equal Employment Opportunity clause. The certification may be submitted either for each subcontract or for all subcontracts during a period (i.e., quarterly, semiannually, or annually). Note: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.

Q. Relocation Assistance and Real Property Acquisition

When acquiring land or an interest in land and relocating persons or personal property in connection with the construction, operation, and maintenance of project facilities, the Contractor shall comply with the provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Pub. L. 91-646; 84 Stat. 1894; 42 U.S.C. § 4601, et seq.) and Department of Transportation regulations at 49 C.F.R. part 24.

R. Pest Management

- 1) The Contractor is responsible for complying with applicable Federal, State, and local laws, rules, and regulations related to pest management in performing its responsibilities under this Contract.

- 2) The Contractor is responsible for effectively avoiding the introduction and spread of, and for otherwise controlling, undesirable plants and animals, as defined by the Contracting Officer, on or in Federal project lands, Federal project waters, and Federal project works for which and to the extent that the Contractor has operation and maintenance responsibility. The Contractor is responsible for exercising the level of precaution necessary in meeting this responsibility, including if appropriate inspecting its vehicles and equipment for reproductive and vegetative parts, foreign soil, mud or other debris that may cause the spread of weeds, invasive species and other pests, and removing such materials before moving its vehicles and equipment onto any Federal land or out of any area on Federal project land where work is performed.

3) Where decontamination is required prior to entering Federal project land, it shall be performed at the point of prior use, or at an approved offsite facility able to process generated cleaning wastes. Upon the completion of work, the Contractor will perform any required decontamination within the work area before moving the vehicles and equipment from Federal project lands.

4) Programs for the control of undesirable plants and animals on Federal project lands, and in Federal project waters and Federal project works for which the Contractor has operation and maintenance responsibility will incorporate Integrated Pest Management (IPM) concepts and practices. IPM refers to a systematic and environmentally compatible program to maintain pest populations within economically and environmentally tolerable levels. In implementing an IPM program, the Contractor will adhere to applicable Federal and State laws and regulations and Department of the Interior and Bureau of Reclamation policies, directives, guidelines, and manuals, including but not limited to, the Department of the Interior Manual, Part 609 Weed Control Program, the Plant Protection Act of June 20, 2000 (Pub. L. 106-224), and Executive Order 13112 of February 3, 1999.

S. Contract Drafting Considerations

This Contract has been, negotiated and reviewed by the parties hereto, each of whom is sophisticated in the matters to which this Contract pertains. Articles 2-19 herein have been drafted, negotiated, and reviewed by the parties, and no one party shall be considered to have drafted the stated articles.