

Environmental Assessment
for the
Cimarron River-Lower Uncompahgre Watershed Project

Cimarron River-Lower Uncompahgre Watershed
NRCS Watershed Program
Gunnison & Montrose Counties, Colorado

PREPARED BY
USDA Natural Resources Conservation Service

IN COOPERATION WITH

Bostwick Park Water Conservancy District
USDA Forest Service
USDOI Bureau of Land Management
USDOI National Park Service
USDOI Bureau of Reclamation

Gunnison & Montrose Counties, Colorado
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- 1.0 Introduction and Overview:** This EA provides analysis of the proposed action (preferred alternative) described by the watershed plan, which is incorporated by reference.

Two other alternatives were considered and are described in detail in the Watershed Plan. These alternatives were eliminated from further analysis, for the reasons explained below in Section 2.0.

Information about the Proposed Action subject to NRCS PL 83-566 authority is provided in the Summary (OMB Fact Sheet), (page i of xxxv). The planning start for the watershed project was authorized by the Chief of NRCS on May 28, 2020. Development of the Cimarron River-Lower Uncompahgre Watershed Project Plan is authorized under Public Law (PL) 83-566 Stat. 666 (16 U.S.C. Section 10001 et. Seq.), as amended.

Further summary information about the activity including administrative history of actions taken during project evaluation is attached and incorporated in this EA.

- 1.1 Project Name:** Cimarron River-Lower Uncompahgre Watershed Project
- 1.2 Project location:** The proposed project area is located between Montrose and Cimarron, Colorado. The project area includes the Bostwick Park Water Conservancy District (BPWCD) Cimarron Canal, Vernal Mesa Canal, and East and West Laterals, the Uncompahgre Water Users Association (UUVUA) M&D Canal, and the Cimarron River. The Proposed Project is within the Cimarron River and Lower Uncompahgre Watersheds within the Uncompahgre Subbasin (HUC 14020006) and the Upper Gunnison Subbasin (HUC 14020002). The project area is contained within Township 46 North, Range 6 West, Sections 5 and 8; Township 47 North, Range 6 West, Section 6; Township 47 North, Range 7 West, Sections 1 and 12; Township 48 North, Range 6 West, Section 28; Township 48 North, Range 7 West, Sections 4, 5, 9, 15, and 16; Township 48 North, Range 9 West, Sections 6, 7, 8, 17 and 18; Township 49 North, Range 8 West, Sections 2, 3, 4, 10, 11, 13, 14, and 15; Township 50 North, Range 8 West, Section 34, New Mexico Meridian.,
- 1.3 Planning Area:** Map of Cimarron River-Lower Uncompahgre Watershed Project Area and associated watersheds Figure 1 below.

Figure 1. Map of Cimarron River-Lower Uncompahgre Watershed Project Area.

Figure 2. Location of Cimarron River-Lower Uncompahgre Watershed Project Measures.

- 1.4 **Existing conditions and project history:** The project area encompasses 247,616 acres and is made up of eleven 6th order subwatersheds, as shown in Figure 1. Agricultural uses represent the majority of water use within the Cimarron River and Lower Uncompahgre Watersheds. The systems of the UVWUA and the BPWCD account for most of the agricultural water use within the watershed.

The BPWCD system provides irrigation water to over 4,000 acres of land east of Montrose County. The Cimarron Canal, West Lateral, East Lateral, and Vernal Mesa Canal are within the BPWCD service area.

The Cimarron Canal is the primary conveyance canal within the BPWCD system. The canal is approximately 23.5 miles long and has water rights that total 185 cubic feet per second (cfs). The canal begins at its diversion on the Cimarron River and terminates at a division box near the top of Cerro Summit where it splits into the Vernal Mesa Canal and the Hairpin Canal. While there are turnouts along the canal, its primary function is to convey water to smaller canals and laterals, which take the diverted irrigation water closer to the irrigated acreage.

The Vernal Mesa Canal begins at its split from the Cimarron Canal and conveys irrigation water from the Cerro Summit area to smaller laterals that irrigate the lands of Bostwick Park. The Vernal Mesa Canal terminates at the split between the Bostwick Park East Lateral and West Lateral.

The East and West Laterals irrigate 3,411 acres of grass pasture in Bostwick Park. The East Lateral is an unlined, earthen ditch approximately 4.3 miles long. It has 16 headgates distributed throughout its length; tailwater not used by the final headgate flows to Red Rock Canyon. The West Lateral consists of 4.0 miles of unlined earthen ditch with 13 headgates. Tailwater from the West Lateral also discharges into Red Rock Canyon if not used for irrigation.

The UVWUA manages the Federal Uncompahgre Project, which supplies water to approximately 76,000 acres of fertile land in Montrose and Delta Counties. The largest canal on the west side of the Uncompahgre River is the M&D Canal. The M&D Canal diverts approximately 627 cfs from the Uncompahgre River and irrigates over 20,000 acres spanning from Montrose, Colorado to Delta, Colorado.

- 1.5 **Agency Authority:** The USDA NRCS has prepared this EA in compliance with the NEPA of 1969 as amended (42 U.S.C. 4321 et seq.), CEQ regulations that guide the implementation of NEPA (40 CFR § 1500-1508), the NRCS Watershed Program Manual, and other relevant federal and state laws and regulations and EOs.

Watershed planning is authorized under the Watershed Protection and Flood Prevention Act of 1954, as amended, and the Flood Control Act of 1944. NRCS

regulations regarding watershed projects and compliance with NEPA can be located at 7 CFR 622 and 7 CFR 650, respectively.

- 1.6 **Purpose and Need:** The purpose is to accomplish agricultural water management practices that within improve water supply security and irrigation efficiency within the BPWCD and UVWUA systems. The proposed action is needed to address canal breaches that impair water delivery (water security), water losses associated with irrigation seepage (irrigation efficiency), salinity and selenium loading to downstream surface waters, and to protect fish habitat and recreational opportunities affected by agricultural water management in the project area.

Table 1. The table below, provides documentation that the project is eligible for federal assistance and will meet statutory requirements.

The Proposed Project is within the Cimarron River and Lower Uncompahgre Watersheds within the Uncompahgre Subbasin (HUC 14020006) and the Upper Gunnison Subbasin (HUC 14020002). This assistance is authorized under Pub. L. 83-566. The Bostwick Park Water Conservancy District (BPWCD) is the sponsor for this watershed planning project. The Conservancy District meets the Pub. L. 83-566 criteria for being a sponsor. Agricultural Water Management (Irrigation) is the Pub. L. 83-566 Authorized Purpose of the project.		
Will the project area exceed 250,000 acres in size? ^{1,2} (Cimarron River-Lower Uncompahgre Watershed Project Plan Section 1.4.)	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
If over 250,000 acres, will it be divided into sub-watersheds in one plan?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
Proposed Action Potential Project Area Size: 247,616 acres (386.9 square miles)		
Will any single structure provide more than 12,500 acre-feet of floodwater detention capacity, or have 25,000 acre-feet of total capacity?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
How many recreational developments will be included in the project area?	None	
<ul style="list-style-type: none"> One development in a project area less than 75,000 acres 	<input type="checkbox"/> YES	<input type="checkbox"/> NO
<ul style="list-style-type: none"> Two developments in a project area between 75,000 and 150,000 acres 	<input type="checkbox"/> YES	<input type="checkbox"/> NO
<ul style="list-style-type: none"> Three developments in a project area greater than 150,000 acres 	<input type="checkbox"/> YES	<input type="checkbox"/> NO
Which authorized purposes will the project address? (Indicate only one purpose as primary):		
	Primary	Other

• Flood Prevention	<input type="checkbox"/>	<input type="checkbox"/>	
• Watershed Protection	<input type="checkbox"/>	<input type="checkbox"/>	
• Public Recreation	<input type="checkbox"/>	<input type="checkbox"/>	
• Public Fish and Wildlife	<input type="checkbox"/>	<input type="checkbox"/>	
• Agricultural Water Management	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
• Municipal or Industrial Water Supply	<input type="checkbox"/>	<input type="checkbox"/>	
• Water Quality Management	<input type="checkbox"/>	<input type="checkbox"/>	
Potential for 20% Agricultural (Rural) Benefits	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	
Will the project produce substantial benefits to the general public, to communities, and to groups of landowners?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	
Can the project be installed by individual or collective landowners under alternative cost-sharing assistance?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	
Will the project have strong local citizen and sponsor support through agreements to obtain land rights, permits, contribute the local cost of construction, and carry out operation and maintenance.	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	
Is this project funded by the Infrastructure Investment and Jobs Act (IIJA), most commonly known as the Bipartisan Infrastructure Bill?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	
Will the project take place in a Special Designated Area? (If yes, check applicable area below.)	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	
Appalachia <input type="checkbox"/>	Delaware River Basin <input type="checkbox"/>	Susquehanna River Basin <input type="checkbox"/>	Tennessee Valley <input type="checkbox"/>

2.0 Alternatives (40CFR 1502.14). NEPA requires discussion of a reasonable range of alternatives. During the planning stage several alternatives were considered and eliminated from consideration based on analysis of criteria defined in section 2.1. See Chapter 4 of Cimarron River and Lower Uncompahgre Watershed Plan for comprehensive analysis. This EA includes Alternative 1-No Action Alternative and Alternative 2-Proposed Action (Preferred Alternative).

2.1 Site selection and screening criteria: An alternative must be available, achieve the overall project purpose, and be feasible when considering cost, logistics and existing technology. Criteria for evaluating alternatives determined by the NRCS: The criteria for alternatives for this project were as follows: 1) alternative had to meet the purpose and need of the project which was to increase irrigation water security or irrigation efficiency. 2) The proposed action is needed to be Economically Feasible and have Ecological and Social Benefits.

2.2 Description of alternatives:

2.2.1 Alternative 1-No Action Alternative: The No Action alternative is a projection of future conditions and serves as a baseline for the evaluation and comparison of effects of the action alternatives. It can be presented in two ways (CEQ, 1986):

- For Federal actions where a dam is already in place, the No Action is the projection of future conditions with current Operation and Maintenance (O&M) carried out until the point of dam failure with no major repairs or rehabilitation. This is applicable even if there is a legal obligation to intervene prior to dam failure; such an obligation would be considered an action if considered under a separate action alternative.
- For Federal actions where no dam or watershed plan are in place, the No Action is the projection of future conditions with no project to be implemented.

There is no existing dam in the Cimarron River and Lower Uncompahgre Project; therefore, the No Action is the projection of future conditions with no project to be implemented. The future conditions in the watershed are projected in Chapter 3 of the EA.

2.2.2 Alternative 2-Proposed Action (Preferred Alternative): The proposed action alternative would include project improvements at seven separate sites within the BPWCD and UVWUA service areas: Wells Basin and Coal Hill, Slide Point, East Lateral, West Lateral, M&D Canal, and a temperature sensor site on the Cimarron River. The following list describes the specific elements of the Proposed Action, and a detailed description is presented in Appendix D of the Plan-EA.

Project Measures	Description*
Cimarron Canal - Wells Basin Piping	Replace approximately 8,590 feet of the Cimarron Canal's open channel with solid wall HDPE pipe, and appurtenant structures.
Cimarron Canal - Coal Hill Piping	Replace approximately 6,180 feet of the Cimarron Canal's open channel with 63-inch solid wall HDPE pipe, and appurtenant structures.
Vernal Mesa Canal - Slide Point Piping	Partial removal and replacement of pipe. Approximately 4,900 feet in total of HDPE pipe and appurtenant structures would be installed.

Project Measures	Description*
East Lateral Piping	Replace approximately 22,500 feet of open, unlined ditch with HDPE pipe, and appurtenant structures.
West Lateral Piping	Replace approximately 21,000 feet of open, unlined ditch with HDPE pipe, and appurtenant structures.
M&D Canal Lining & Hillside Stabilization	Line approximately 394,979 square feet of the M&D Canal and stabilize the hillside by removing approximately 200,000 CY of material.
Cimarron River Temperature Sensor	Install one temperature sensor and associated electrical enclosure on the Cimarron River (situated on USFS land).

Table 2. Selected alternatives for the Cimarron River-Lower Uncompahgre Watershed

Resource Area	Alternative 1 No Action	Alternative 2 Proposed Action
Soils & Geology		
Upland Erosion & Sedimentation	Landslide frequency would remain the same under the FWOFI. The FWOFI would not address current issues with erosion and hillside sloughing. Under existing conditions, approximately 28,788 acres of agricultural lands in the BPWCD and UVWUA service areas are damaged from canal breaching. The BPWCD and UVWUA incur \$86,800 in average annual emergency repairs associated with canal breach and an average of \$450,923 of crop yields are damaged annually. Given that no construction would occur under the FWOFI, there would be no impacts to soil in the project area and a CDPS General Permit and associated SWMP would not be required.	<p>Under the FWFI, landslide frequency may decrease in areas below the canal prism, as canal seepage would no longer occur, and saturated soils are more prone to landslide occurrence. Landslides that come from the above the canal prism would likely not decrease in frequency, but their impact on irrigation water supply, however, would be reduced by enclosing the canals.</p> <p>The FWFI would mitigate damages to approximately 28,788 acres of agricultural lands in the BPWCD and UVWUA service areas from canal breaching. Furthermore, the FWFI would improve agricultural water management by improving efficiency and conserving water in the project area. The FWFI would provide \$140,316 in additional farm net income from conserved water, reduce emergency repair cost by \$84,674, and reduce income loss by \$439,745. The FWFI would provide \$966,236 in regulating ecosystem services.</p> <p>Piping and lining the canals would improve water quality by reducing salt loading (2,247 tons per year) and selenium loading in the watershed. The FWFI would reduce salinity control costs by \$441,817.</p> <p>Under the FWFI, direct impacts to soil would include temporary and permanent ground disturbance from construction. Major soil disturbance would occur for the earthwork to install irrigation pipe and stabilize the hillside at the M&D Canal. Best Management Practices (BMPs), such as the installation of Temporary</p>

Resource Area	Alternative 1 No Action	Alternative 2 Proposed Action
		Erosion Controls (TECs) and reseeding disturbed areas to encourage the establishment of native vegetation, would avoid and minimize construction related erosion and sediment transport. A complete list of BMPs is included in Appendix E. A CDPS General Permit and associated SWMP and SPCC Plan would be required before construction of the FWFI.
Prime & Unique Farmland	Portions of the project area are designated farmland of statewide importance. Given that no ground disturbance would occur under the FWOFI and that prime and unique farmlands would not be converted to a different use under the FWOFI, the FWOFI would not impact prime and unique farmlands.	Portions of the project area, specifically lands along the Coal Hill (0.02 acres), East Lateral (16.5 acres), and West Lateral (39.3 acres) and project components are designated farmland of statewide importance. Active farmlands are located adjacent to the East and West Laterals. Under the FWFI, temporary and permanent soil disturbance would be primarily focused within the previously disturbed canal prisms, the FWFI would not disturb existing agricultural lands that are considered farmland of statewide importance, and the FWFI would not alter the land use of designated farmlands. No farmlands of statewide importance would be converted from agricultural uses to other uses because of the FWFI. Therefore, the FWFI is not anticipated to impact prime and unique farmlands in the project area and complies with the FPPA.
Water Resources		
Surface & Groundwater Quantity & Quality	Water lost to seepage and evaporation (approximately 2,698 ac-ft annually) would continue; however, groundwater recharge would continue to occur in the project area through deep percolation. The FWOFI would have no direct impact on the goals of the Gunnison BIP. Furthermore, under the FWOFI the project area would continue to contribute approximately 2,247 tons of salt and selenium to the watershed annually, and water quality of Red Rock Creek would not change as West Lateral would not be fully enclosed. Under the FWOFI, water quality would not be temporarily impacted, as construction would not occur, and a CDPS General Permit would not be required.	<p>The FWFI would directly improve water quality and quantity in the project area. The proposed canal piping and lining would conserve 2,698 ac-ft of water by eliminating water lost to seepage and reducing water lost to evaporation. Water conserved by the FWFI would remain in the Cimarron River during the early irrigation season, until water is needed. Efficiency gains by the new system would maintain early season flows in the Cimarron River and allow water storage in the Silver Jack Reservoir to last longer. The economic analysis estimates that the FWFI would provide \$140,316 in provisioning ecosystem services from additional farm net income from conserved water.</p> <p>Seepage likely influences groundwater recharge in the project area through deep percolation. Though the extent to which seepage influences groundwater recharge is unknown, because there is no current data in</p>

Resource Area	Alternative 1 No Action	Alternative 2 Proposed Action
		<p>the project area evaluating direct groundwater recharge sources and volumes.</p> <p>The piping and lining improvements would also eliminate vertical transport of salts (2,247 tons per year) and agricultural fertilizers in the watershed. Reclamation found that water conservation projects focusing on irrigation on saline soils, such as the FWFI, is the single most effective salinity control measure found in the past 30 years of investigations (Reclamation 2017). A potential loss of groundwater recharge could occur from the proposed activities. However, the reduction in salinity from seepage and infiltration would improve overall water quality in the project area.</p> <p>The FWFI would conserve water lost to seepage and evaporation, provide for efficient delivery of agricultural water, and improve water quality by reducing selenium and salinity loading, thereby addressing the primary goal of the Gunnison BIP. Section 5.2.4 describes how the FWFI is consistent with the Gunnison BIP.</p> <p>The FWFI would also improve water quality by reducing salt loading (2,247 tons per year) and selenium loading in the watershed, thereby helping to meet the area's TMDL goals. The FWFI would reduce salinity control costs by \$441,817 annually.</p> <p>Piping approximately 4 miles of the West Lateral would reduce <i>E. coli</i> contamination in Red Rock Creek by preventing livestock contamination.</p> <p>The FWFI may temporarily impact surface water quality during construction. BMPs would be implemented during construction at all locations where surface disturbance occurs to protect water quality and to prevent water pollution from runoff, spills, leaks, and leaching.</p> <p>A CDPS General Permit and associated SWMP and SPCC Plan would be required before construction.</p>
Clean Water Act / Waters of the U.S., including Wetlands	The FWOFI would have no direct impacts on resources protected under the CWA. The canals in the BPWCD and UVWUA systems would continue to lose water to seepage that provide hydrology to adjacent downslope wetlands, including jurisdictional wetlands.	Construction activities would be primarily contained to the previously disturbed canal prism, though temporary and permanent ground disturbing activities would directly impact 0.05 acres of wetlands within the project area. BMPs are in place to ensure CWA water quality standards would be met, which include implementation of TECs, SPCC Plan, and

Resource Area	Alternative 1 No Action	Alternative 2 Proposed Action
	<p>The FWOFI would also have negative, indirect impacts on WOTUS, such as the Cimarron River, by reducing available water flow via continued water lost to seepage.</p>	<p>SWMP, and following the requirements of the CDPS General Permit. A complete list of BMPs is included in Appendix E.</p> <p>The FWFI would have indirect effects on wetlands by eliminating seepage from the canal that contributes hydrology to the 5.69 acres of wetlands within and adjacent to the project area.</p> <p>However, the Proposed Project would conserve 2,698 ac-ft of water annually, which could indirectly benefit WOTUS by maintaining early season flows in the Cimarron River and allowing water storage in the Silver Jack Reservoir to last longer.</p> <p>The portion of the FWFI that would pipe Vernal Mesa Canal, West Lateral, and Cimarron Canal may be permitted under USACE RGP 5—Ditch Related Activities in the State of Colorado (USACE 2021). However, a Section 401 permit from CDPHE (Water Quality Certification) may also be required. Coordination with the USACE regarding RGP 5 is ongoing (Appendix A. USACE Consultation).</p>
Wetlands	<p>The FWOFI would have no direct impact on wetlands, as no construction would occur. Indirectly, the FWOFI would benefit wetlands in and adjacent to the project area, as the canals in the BPWCD and UVWUA systems would continue to lose water to seepage that provide hydrology to adjacent downslope wetlands.</p>	<p>Temporary ground disturbing construction activities may directly impact 0.05 acres of wetlands within the project area. Impacts to wetlands would be avoided and minimized by containing construction to the previously disturbed canal prism and by implementing BMPs, such as revegetation of disturbed areas with native vegetation and prevention of noxious weed transport, as described in the Environmental Consequences chapter and Appendix E.</p> <p>Indirectly, the FWFI would eliminate seepage from the canal that contributes hydrology to 5.69 acres of wetlands within and adjacent to the project area. However, the FWFI would result in 2,698 ac-ft of water savings that would be available for irrigation or would stay within the watershed, benefiting downstream ecosystems.</p>
Regional Water Management Plan	<p>The FWOFI would have no direct impact on regional water management plans. No investment in water infrastructure would occur, therefore seepage losses and salinity and selenium loading would continue.</p>	<p>The FWFI aligns with seven of the nine goals listed in the Gunnison BIP: Goals 1, 2, 3, 5, 6, 7, and 8.</p> <p>The FWFI addresses Goals 1, 3, and 6 by conserving 2,698 ac-ft of water lost to seepage and evaporation, providing for efficient delivery of agricultural water and increasing net farm</p>

Resource Area	Alternative 1 No Action	Alternative 2 Proposed Action
		<p>income by \$140,316, and improving water quality by reducing selenium and salinity loading by 2,247 tons and reducing salinity control costs by \$441,817 annually.</p> <p>The FWFI would not convert existing prime and unique farmlands; therefore, the Preferred Alternative aligns with Goal 2.</p> <p>The FWFI protects existing environmental and recreational uses (Goal 5) and encourages relationships among agricultural and environmental recreational water uses (Goal 7) by indirectly benefiting the Black Canyon of the Gunnison National Park and Silver Jack Reservoir. Water conserved by the FWFI would also allow water to be held in the Silver Jack Reservoir for a longer period, thereby allowing for more recreation user days. Furthermore, the installation of a temperature sensor in the Cimarron River would enable the timed release of conserved water to lower high summer water temperatures in the river, thereby improving fish habitat in the Cimarron River and increasing the number of recreational visitors to the project area.</p> <p>The improvements to the BPWCD and UVWUA water infrastructure would align with Goal 8 of the Gunnison BIP.</p>
Floodplain Management	If the FWOFI were implemented, no development would occur in the 100-year floodplain of the Cimarron River or near Happy Canyon Creek.	<p>Proposed activities would occur in the 100-year floodplain of the Cimarron River and near floodplains associated with Happy Canyon Creek. The Cimarron River temperature sensor would be installed on an existing bridge abutment, and the associated small steel electrical enclosure cabinet would be either attached to the existing bridge, or to a metal post.</p> <p>Construction activities would occur within the existing infrastructure of the M&D Canal in a previously disturbed area. Changes to the grade along M&D Canal would be constrained to the canal prism, the embankment, and the hillside to the west of the canal. The toe of the embankment on the east side of the canal, which overlaps with the 100-year floodplain, would not be modified.</p> <p>Because no surface disturbance to the 100-year floodplain would occur with the installation of the temperature sensor or the lining of M&D Canal,</p>

Resource Area	Alternative 1 No Action	Alternative 2 Proposed Action
		and no additional occupancy or modification of the floodplain would occur, the FWFI would avoid adverse effects to the floodplain and is therefore consistent with E.O. 11988. Construction of the Cimarron River temperature sensor may require a floodplain development permit and if required, should be obtained prior to construction.
Wild and Scenic Rivers	The FWOFI would have no direct impacts on wild and scenic rivers, or rivers listed on the NRI. If the FWOFI were implemented, no improvements would be made to the West Lateral and contaminated tailwaters would continue to flow into Red Rock Creek, ultimately reaching the NRI-listed Gunnison River.	The FWFI would have no direct impact on wild and scenic rivers, or rivers listed on the NRI. The FWFI would indirectly benefit the Gunnison River, an NRI listed water. Water quality data for Red Rock Creek illustrates elevated levels of <i>E. coli</i> during the irrigation season; the elevated levels of <i>E. coli</i> in Red Rock Creek are likely attributed to livestock waste entering and contaminating the water. Piping the West Lateral would reduce <i>E. coli</i> by preventing livestock contamination, ultimately improving tailwater that flows into the Gunnison River via Red Rock Creek, thus benefitting the Gunnison River.
Air Quality		
Clean Air Act / National Ambient Air Quality Standards	No short-term impacts from construction would occur, therefore, no effect to air quality would occur.	Short-term increases in nitrogen oxide (NOX), carbon monoxide (CO), and particulate matter (PM _{2.5} and PM ₁₀) emissions during construction would be minor, localized and temporary, and would not interfere with the area achieving NAAQS requirements. Additionally, BMPs would be implemented to minimize air quality impacts. Emission rates for NOX, CO, and PM are not expected to increase in the long-term.
Climate Change & Greenhouse Gases	No short-term impacts from construction would occur, therefore, no effect to air quality would occur.	<p>Short-term increases in GHG emissions during construction would be minor, localized, and temporary, and would not interfere with the area achieving NAAQS requirements or statewide GHG goals. BMPs would be implemented to minimize air quality impacts. Emission rates for GHG are not expected to increase in the long-term.</p> <p>By improving agricultural water management, encouraging watershed protection, and enhancing fish and wildlife habitat in the project area, the FWFI would make the project area and the irrigation system more resilient to climate stress, especially in the uncertain increases in</p>

Resource Area	Alternative 1 No Action	Alternative 2 Proposed Action
		variability of temporal and spatial patterns of precipitation, evaporation, and water availability which could challenge water resource systems.
Plants		
Forest Resources	Under the FWOI, no construction activities would occur on USFS land, and no forest resources would be impacted.	<p>Under the FWFI, a temperature sensor and associated electrical enclosure would be located on USFS land within the GMUG National Forest. Although construction activities would occur on USFS land (approximately 0.1 acres), the sensor would be located on an existing bridge abutment and the steel cabinet electrical enclosure would either be placed on the existing bridge or a metal post. The temperature sensor and electrical enclosure would not require tree removal.</p> <p>The FWFI would manage surface use to maintain water quality standards, increase water supply, and protect water quality, consistent with the GMUG Land and RMP. Additionally, the FWFI would not conflict with the three objectives of the Region 2 Watershed Conservation Practices Handbook: hydrologic function, soil quality, and aquatic systems. The FWFI's improvements on USFS land would not influence hydrologic function or soil quality but would indirectly benefit aquatic systems by sustaining water quality and aquatic habitat through the installation of the temperature sensor. Given that the installation of the temperature sensor would require only minor disturbance of 0.1 acres of USFS land, that no tree removal would be required, and that the FWFI would manage surface use to maintain water quality standards, increase water supply, and protect water quality and follow the Region 2 Watershed Conservation Practices Handbook, the FWFI is consistent with the GMUG Land and RMP.</p>
Noxious Weeds & Invasive Plants	The BPWCD, CC&RC, and UVWUA actively implement invasive species controls to adequately manage and prevent their introduction and establishment. The FWOI would not alter current invasive species and noxious weed control practices; therefore, the FWOI	Current practices to control and prevent the introduction and establishment of noxious weeds and invasive species would continue. In addition, BMPs would be implemented to control and prevent the introduction and spread of any invasive species or noxious weeds. A complete list of BMPs is included in Appendix E. Given the implementation of BMPs described in Appendix E, the FWFI would not cause or

Resource Area	Alternative 1 No Action	Alternative 2 Proposed Action
	would have no effect on noxious weeds and invasive plants.	promote the introduction or spread of invasive species and therefore follows E.O. 13112.
Riparian Areas & Ecologically Critical Areas	Under the FWOI, no direct or indirect alteration of riparian areas would occur. Approximately 82 acres of seepage-induced riparian vegetation would continue to exist in the project area. Therefore, the FWOI would result in no effect to riparian areas.	<p>Construction practices would remove large overstory trees and shrubs along portions of the canal alignments and would temporarily disturb the herb layer in riparian areas directly associated with the canal prisms. To protect healthy and functioning riparian areas, as outlined in Goal 1 of the CNHP WPP, direct impacts to riparian areas would be minimized by implementing BMPs, such as revegetation of disturbed areas with native drought-tolerant vegetation and prevention of noxious weed transport, as described in the Environmental Consequences chapter and Appendix E.</p> <p>An indirect effect of the canal piping and lining involves the eventual loss of trees and vegetation within the canal prisms that may have received supplemental hydrology from canal seepage. Under existing conditions, the open, unlined canals have an average of 50 feet of riparian vegetation established across the width of their prism along the approximate 13.5 miles of canals involved in this Proposed Project. These 82 acres of seepage-induced riparian vegetation would eventually be lost across the total project area when the canals are piped and lined. However, the total length of the Cimarron Canal, Vernal Mesa Canal, East and West Laterals, and M&D Canal in the irrigation system is 72 miles, representing 436 acres of riparian vegetation. The 13.5 miles represent 19% of the total length.</p> <p>Additionally, though hydrophytic vegetation exists along the canals, the composition of native and non-native understory species and the lack of a natural source of water, makes the riparian habitat poor-quality and lacking diversity and complexity in structure. Furthermore, despite the potential loss of this poor-quality riparian habitat, as described in Section 5.2.1, the project is designed to improve overall water quantity and quality in the project area, making the entire basin more resilient to future increases in water use, to drought conditions, or other potential consequences of a changing climate, consistent with the WPP.</p>

Resource Area	Alternative 1 No Action	Alternative 2 Proposed Action
Animals		
Wildlife & Wildlife Habitat	<p>The FWOFI would have no direct effects on wildlife and adjacent wildlife habitat in the project area. Indirectly, the FWOFI would impact fish and wildlife habitat in the Cimarron River by not addressing water losses and selenium and salt loading in the project area. Continued water loss would directly impact habitat for aquatic species that depend on year-round water flows within the Cimarron River and would impact wildlife that use the river for drinking water, hunting, and which utilize the adjacent riparian vegetation along the river for forage and cover. Increased concentrations of selenium can result in bioaccumulation in organisms and can impact aquatic species by causing reproductive issues and mortality of juvenile fish and invertebrates (EPA 2022a). Increased salt concentrations in aquatic environments create toxic conditions, increase fish mortality, and impact fish hatchling size (EPA 2023). Impacts to populations of native fish within the Cimarron River would indirectly impact wildlife which consume fish species. In addition, the temperature sensor would not be installed to monitor the health of fish habitat in the Cimarron River.</p>	<p>Potential disturbance to wildlife and adjacent wildlife habitat would occur during construction. Piping the canals is anticipated to permanently remove a source of water for wildlife that utilize the area. Big game species, such as mule deer and elk, and other wildlife, may seasonally utilize the open water sources to drink. However, this water source is not perennially available due to controlled flows. When the water surface drops and flows cease, wildlife cannot easily access water within the canals. No fish habitat is present in the canals, so piping the canals would not impact brown, brook, or rainbow trout species.</p> <p>Although the FWFI would permanently remove approximately 19.9 acres, or 11.2 miles of open water that wildlife use in the project area, other water sources are available in the vicinity. For example, in addition to the M&D Canal remaining open, most of the Cimarron Canal and Vernal Mesa Canal would remain open. Other natural sources of water are also present throughout the vicinity, such as over 20 natural drainages and the Silver Jack Reservoir and the Cerro Summit Reservoir.</p> <p>Wildlife, especially big game, may be temporarily displaced during construction due to noise and would likely choose to move to alternate locations while construction activities are present, but also may choose not to return to the area if habitat is lost. Construction would be limited to daylight hours, which would reduce impacts to nocturnal wildlife species.</p> <p>The FWFI and would remove approximately 82 acres of riparian vegetation and 5.69 acres of wetlands that receives supplemental hydrology from canal seepage and that wildlife, such as big game, small mammals, waterfowl, and avian species, may use for forage, shelter, and stopover habitat. The loss of this vegetation may impact ungulates and other foraging wildlife; however, the canal prisms are heavily managed with herbicide to minimize the presence of noxious weeds and to moderate vegetative growth, reducing the amount of existing forage and cover available for wildlife. Additionally, higher quality forage is present below the canal prisms.</p>

Resource Area	Alternative 1 No Action	Alternative 2 Proposed Action
		<p>The project area overlaps with winter ranges and severe winter ranges for mule deer and elk. However, less than one percent of the winter ranges and severe winter ranges for both species are overlapped by the project area. Both mule deer and elk have ample adjacent winter and severe winter range habitat available in the vicinity of the project area. The FWFI would be constructed outside of the irrigation season, from October 15th to April 1st, which would overlap with winter use for big game. Mule deer and elk populations within the vicinity of the project area would likely move to other suitable areas to avoid disturbances from temporary construction activities. However, mule deer and elk habitat are abundant surrounding the project area, and population-level impacts are unlikely; therefore, overall impacts would be minor.</p> <p>The FWFI would improve the quality and duration of water in natural waterbodies within the project area by reducing salt and selenium loading, and by improving irrigation efficiency in the watershed. This would benefit habitat for fish species and provide drinking water for big game and small mammals. Indirectly, vegetation surrounding waterbodies where flows improve may benefit from increased hydrology from increased surface water and could provide an increase in available forage and cover for wildlife species.</p> <p>BMPs such as spill prevention, TECs, prevention of noxious weed transport, revegetation of disturbed areas, and bird surveys, as described in the Environmental Consequences chapter, would be implemented along the entire alignment to minimize impacts to wildlife species and habitat surrounding the canal prism.</p> <p>The installation of a temperature sensor in the Cimarron River would enable the timed release of conserved water to lower high summer water temperatures in the river, thereby improving fish habitat in the Cimarron River. No in-water work would be required for implementation of the FWFI, therefore spawning and rearing periods for wild brown and rainbow trout would not be impacted by construction of the FWFI.</p>

Resource Area	Alternative 1 No Action	Alternative 2 Proposed Action
Special Status Animal Species	Suitable habitat is present in the project area for ESA-listed species. However, the FWOI would not involve any construction. Therefore, the FWOI would have no effect on special status animal species.	Based on the lack of suitable habitat in the project area for ESA-listed species; the BA identified a No Effect for yellow-billed cuckoo, Mexican spotted owl, Canada lynx, gray wolf, tri-colored bat, monarch butterfly, Great Basin silverspot butterfly, the four Colorado River fish species, and state sensitive species. While project activities would not directly impact sagebrush and wet meadow habitat within the project area where construction would occur, because of the proximity to critical habitat for the Gunnison sage-grouse and the potential to cause indirect disturbance to this habitat, the FWOI May Affect but is Not Likely to Adversely Affect the Gunnison sage-grouse and Gunnison sage-grouse critical habitat. Section 5.5.2 discusses the biological analysis and determination. The BA is included in Appendix E, and the USFWS concurrence letter is included in Appendix A.
Migratory Birds / Bald and Golden Eagles	No vegetation would be removed and temporary disturbances from construction would not displace birds utilizing the canal corridors. The FWOI would have no direct or indirect effect on migratory birds and bald and golden eagles; therefore, the FWOI would have no effect on migratory birds and bald and golden eagles.	Though field investigations found no active nests belonging to eagles, raptors or migratory bird species, the project area and surrounding area could provide varying degrees of nesting and foraging habitat for migratory birds or raptors. Therefore, protected avian species have the potential to be present within the project area, or in the vicinity of project area. Construction noise may result in the temporary displacement of nesting bird species within the project area. To protect migratory birds or raptors from project effects, temporary construction disturbance would be avoided by scheduling work outside of nesting bird season. Because construction would be timed outside of the irrigation season (October – April), most construction activities would also occur outside of bird migration, breeding, and nesting seasons, except for bald and golden eagles. The project area would be surveyed for any migratory bird or eagle nests no less than 7 days prior to vegetation removal and construction. If an active migratory bird or raptor nest were identified within the project area, construction and vegetation clearing would pause and the NRCS Biologist and USFWS would be notified immediately to discuss the appropriate course of action. Any active migratory raptor or eagle nest discovered in the project area or within 0.5 miles of construction activities would be protected with the CPW Recommended Buffer

Resource Area	Alternative 1 No Action	Alternative 2 Proposed Action
		<p>Zones and Seasonal Restrictions for Colorado Raptors, including a 0.25-mile buffer for eagles, a 0.3-mile buffer for red-tailed hawks and a 0.5-mile buffer for peregrine falcons (CPW 2020c).</p> <p>Piping the canals would permanently remove approximately 11.2 miles of open water, amounting to the removal of approximately 19.9 acres of an open water source for avian species; however, the M&D Canal would remain an open feature. The piping and lining of the canals would also eliminate seepage water for vegetation along the canal alignments, which would result in the eventual loss of 82 acres of riparian vegetation and 5.69 acres of wetlands associated with the canals, including mature trees and shrubs, which likely provide habitat for resident or migratory birds. Most mature trees in the project area occur along the M&D Canal.</p> <p>Abundant alternative and high-quality riparian habitat are available within the vicinity of the project area and along the Cimarron River corridor. The loss of 82 acres of riparian areas would not significantly affect habitat availability at the landscape scale and the indirect effects on migratory birds and raptors from riparian habitat loss along the ditch would be minor, and the FWFI would not have population-level effects.</p> <p>The FWFI would also indirectly improve habitat within natural waterbodies in the project area by reducing selenium and salinity loading and improving overall habitat for fish species. These activities would benefit raptors, eagles and other migratory species that use fish as a food source.</p> <p>Impacts to avian habitat would be minimized by construction occurring outside of nesting bird season, implementing BMPs and by indirectly improving fish habitat within the Cimarron River in the project area. A complete list of BMPs is included in Appendix E.</p>
Human Environment		
Socioeconomics	Under the FWOFI, no local match funds would be required as no construction would occur. No temporary jobs would be created under the FWOFI. The project area experiences an average annual	Direct impacts of the FWFI include the use of approximately \$5,538,287 in local match funds to construct the Proposed Project. In addition, the FWFI would temporarily create approximately 1.4 direct jobs, 1.6 indirect jobs,

Resource Area	Alternative 1 No Action	Alternative 2 Proposed Action
	<p>value loss of \$537,723 from infrastructure damages (\$86,800) and income losses (\$450,923). Furthermore, water losses contribute to an annual loss of \$140,316 in potential farm net income.</p>	<p>and 0.7 induced jobs within the project area during construction (see Appendix E).</p> <p>The PR&G state that federal investments in water resources should strive to maximize public benefits, with appropriate consideration of costs (USDA 2017). The average annual cost of the FWFI is \$738,942 and the FWFI is anticipated to result in \$1,114,264 in average annual economic benefits; over half of the economic benefits are derived from agricultural-related reduced damages and benefits. Therefore, the benefit to cost ratio of the FWFI is 1.5.</p>
Cultural, Historic & Paleontological Resources	<p>The FWOFI is anticipated to result in No Historic Properties Affected in the project area because no construction would take place. The FWOFI would have no impact on paleontological resources as no construction would occur.</p>	<p>The Cultural Resource Report recommended that the FWFI would have an adverse effect on the six eligible canal segments within the project area: Cimarron Canal (5GN.6371.1, 5MN.4808.5, 5MN.4808.6), M&D Canal (5MN.1855.9), Vernal Mesa Ditch (5MN.7708.3), and East Lateral/Vernal Mesa Ditch (5MN.10323.2). SHPO concurred with the eligibility and determination of effects (Appendix A).</p> <p>NRCS submitted consultation letters to the Southern Ute Tribe, the Ute Mountain Ute Tribe, and the Ute Indian Tribe – Uintah & Ouray Reservation, Comanche Nation, Apache Tribe of Oklahoma, Fort Belknap Indian Community, Navajo Nation, Montrose and Gunnison County Commissioners, Gunnison County Historic Preservation Commission, and the Montrose Historical Society and Museum for concurrence and compliance with Section 106 requirements. Only the Southern Ute Indian Tribe responded to the request for comments, requesting consideration of subsurface archaeological deposits. Tribal consultation letters are included in Appendix A.</p> <p>In accordance with 36 CFR Part 800.6, NRCS would mitigate the adverse effects to the NRHP-eligible canal segments through the development of a Memorandum of Agreement (MOA) designed to conserve the value of the eligible cultural resources. The MOA was developed in consultation with the Colorado SHPO. The MOA specifies measures to minimize and mitigate the effects to the historic sites and would be implemented pursuant to compliance with Section 106 of the NHPA.</p>

Resource Area	Alternative 1 No Action	Alternative 2 Proposed Action
		<p>A Post-Review Discovery Plan has been prepared and is included in Appendix B of the MOA. The MOA is included in Appendix A of this Plan-EA. If construction activities uncover any materials of cultural or historic significance (i.e., bone fragments, pottery, stone tools, burial features, etc.), construction would halt and coordination with the SHPO, the THPO, and Montrose County and Gunnison County Sheriffs would occur.</p> <p>According to the BLM PFYC, there is low to moderate potential to uncover fossils in much of the project area, however the East Lateral has high to very high PFYC. Given the high PFYC of the East Lateral, a paleontological resource survey was completed for the project area. No fossil localities were documented during the survey. A paleontological monitor was recommended by BLM to oversee the earthwork and document any fossil discoveries. An Unanticipated Discovery Plan for paleontological resources would be implemented under the FWFI.</p>
Hazardous Materials	The FWOFI would have no direct or indirect impact on hazardous materials in the project area because no construction would take place.	<p>A solid waste facility and two RCRA facilities are located within a mile of the project area; however, the three sites were more than 0.5 miles outside the project area. Given the distance between the facilities and the proposed construction activities, the FWFI would not impact hazardous facilities near the project area. Furthermore, no hazardous materials would be generated by the FWFI.</p> <p>To limit the introduction of hazardous materials into the project area from construction, the contractor would be required to apply for a CDPS General Permit prior to construction commencement. As part of this permit, the contractor would also be required to follow an approved SWMP and SPCC Plan.</p>
Public Health & Safety	Without the agricultural water management improvements proposed under FWFI, M&D Canal and the Cimarron Canal would continue to experience risk of canal breach, and associated property and infrastructure damage. Therefore, the FWOFI would	The purpose of the FWFI is to provide improved agricultural water management by stabilizing the hillside above the M&D Canal and piping the various canals and laterals throughout the project area. The project area has a history of, and is prone to, landslides which have contributed to canals overtopping, breaching, and flooding adjacent areas. The FWFI would

Resource Area	Alternative 1 No Action	Alternative 2 Proposed Action
	continue to have a negative effect on public health and safety.	reduce the risk of canal breach and potential damages from a breach.
Recreation	No direct or indirect impacts would occur to recreation under the FWOFI because no construction would take place.	<p>The FWFI would support the objectives of the Forest Plan for the GMUG National Forest, specifically watershed and aquatic resources restoration and recreational management. Water conserved by the FWFI would allow water to be held in the Silver Jack Reservoir for a longer period, thereby allowing for more recreation user days. Therefore, the FWFI would have an indirect beneficial impact on recreation in the Silver Jack Reservoir. The FWFI would provide \$7,712 in increased recreational consumer surplus.</p> <p>The installation of a temperature sensor in the Cimarron River would enable the timed release of conserved water to decrease high summer water temperatures in the river, thereby improving fish habitat in the Cimarron River and increasing the number of recreational visitors to the project area.</p>
Land Use	The FWOFI would not alter existing conditions and would therefore not interfere with the Montrose County Master Plan or the Gunnison County Land Use Resolution. No direct or indirect impacts would occur to land use under the FWOFI because no construction would take place.	<p>The FWFI supports the goals of the Montrose County Master Plan and Gunnison County Land Use Resolution; specifically, protecting agricultural lands, providing an adequate water supply, and promoting the health, safety, and general welfare of the environment. The FWFI would conserve a total of 2,698 ac-ft of water lost to seepage and evaporation, provide for efficient delivery of agricultural water, and improve water quality by reducing selenium and salinity loading by 2,247 tons. The FWFI would not convert existing prime and unique farmlands and would improve agricultural water supplies.</p> <p>Under the FWFI, construction activities associated with East Lateral would occur on BLM land. To account for the piping of East Lateral on BLM lands, BLM would acknowledge the historic ROW. In addition, Reclamation owns the M&D Canal as a component of the Federal Uncompahgre Project. Therefore, a MOA was established between Reclamation and NRCS, which will guide the engineering review process for the 30% and 100% design of the M&D Canal. Reclamation will approve the full design prior to construction commencing. Temporary easements would be required for staging during construction of the FWFI.</p>

Resource Area	Alternative 1 No Action	Alternative 2 Proposed Action
Visual Resources & Scenic Beauty	No direct or indirect impacts would occur to visual resources and scenic beauty under the FWOI because no construction would take place.	<p>The FWFI would have a direct effect on visual resources by eliminating open water in the East and West Laterals, Vernal Mesa Canal, and Cimarron Canal, and by removing mature trees and shrubs, and disturbing herb layer vegetation along all the canals in the project area. There would be temporary, minor impacts to visual resources from the presence of construction equipment and construction crews. Native vegetation would be reestablished in areas disturbed by construction thereby reducing construction-related visual resource impacts. Although the FWFI would not result in long-term impacts to scenic beauty in the general area, there would likely be visual impacts directly along the canal alignments from the removal of open water features, construction-related vegetation disturbance, and the permanent loss of vegetation dependent on the current canal seepage.</p> <p>To mitigate for the loss of vegetation, the canals would be revegetated with native, drought-tolerant vegetation. The visual effects of piping and lining the canals would resemble the current condition of the linear canal feature and be strikingly similar to other linear features, such as ditch, power, and fence lines in this rural, agricultural setting, and after reclamation and vegetation establishment, the change would be unnoticeable.</p>
Parklands	The FWOI would not alter existing conditions; therefore, the FWOI would not interfere with the Black Canyon of the Gunnison General Management Plan. The FWOI would have no direct or indirect impact on parklands in the project area because no construction would take place.	The FWFI would indirectly benefit the Black Canyon of the Gunnison National Park, including the wilderness area, by conserving 2,698 ac-ft of water and by reducing salinity and selenium loading to the Gunnison River. The FWFI supports the goals the Black Canyon of the Gunnison General Management Plan, specifically the protection of water resources. Current discharge flows from the West Lateral that reach the Black Canyon of the Gunnison National Park would not be reduced under the FWFI. Indirect effects of the FWFI would be a water savings of approximately 239 ac-ft per year from the piping of the West Lateral project element. Piping the West Lateral would eliminate livestock contamination in the lateral, which currently flows into the National Park via Red Rock Creek. This outcome would ultimately improve water flow to nearby parklands due to a reduction of livestock contamination and reduction of water loss during transport.

Resource Area	Alternative 1 No Action	Alternative 2 Proposed Action
		<p>Additionally, the piping would reduce selenium and salinity loading by 2,247 tons per year, addressing the TMDL for Red Rock Creek. Therefore, the FWFI would have a beneficial impact on parklands and wilderness areas. The proposed activities would not affect the wilderness area's ability to remain natural, undeveloped, and untrammled, while providing solitude, protecting scenic and cultural resources, and sustaining ecological integrity. No effects to the Uncompahgre Wilderness Area would occur because the project activities are located outside and downstream of the wilderness area boundary.</p>
Transportation & Infrastructure	<p>If the FWOFI were implemented, the canal infrastructure would not be improved and the existing seepage, inefficiency, and water losses would remain the same. The BPWCD and UVWUA systems experience canal breaches, which damages the systems and requires emergency repair. The average annual costs of emergency repairs to the BPWCD and UVWUA irrigation distribution systems under the existing conditions were estimated at \$86,800 (Appendix D).</p>	<p>The FWFI would improve the existing BPWCD and UVWUA systems' infrastructure. The FWFI aligns with the priorities identified by the BPWCD and UVWUA planning efforts (see Section 4.2). The FWFI would directly improve irrigation infrastructure, and indirectly protect infrastructure in the project area. The FWFI would reduce emergency repair costs to BPWCD and UVWUA systems by \$84,674. Additionally, the FWFI would also provide \$966,236 in regulating ecosystem services, of which, \$84,674 represents reduced infrastructure damages.</p> <p>Under the FWFI, three road crossings would be required. The BPWCD and co-sponsors would work with the CDOT to obtain all necessary permits to establish easements, work within the designated State and local ROW, and implement appropriate traffic control measures during construction to minimize disturbance and reduce impacts to local traffic.</p>
Noise	<p>Background noise levels are associated with existing traffic and agricultural noise. The FWOFI would have no impact on noise levels in the project area.</p>	<p>Temporary increases in noise related to the use of construction equipment and vehicles would result from implementation of the FWFI. However, noise mitigation measures would be implemented during construction to minimize temporary noise impacts. No permanent noise impacts are expected from the FWFI. Because the FWFI has multiple mitigation measures designed to reduce noise, and the effects are temporary, noise effects would be minor.</p>
Scientific Resources	<p>The FWOFI would have no direct or indirect impact on scientific resources in the project area.</p>	<p>Project elements would contribute to the scientific resources in the project area by</p>

Resource Area	Alternative 1 No Action	Alternative 2 Proposed Action
	Scientific resources in the project area would remain the same and existing paleontological resources would not be impacted, as no construction would occur.	installing one temperature sensor in the Cimarron River. Piping and lining portions of canals in the BPWCD and UVWUA systems is unlikely to negatively impact paleontological scientific resources that may occur in the project area. Given the high PFYC of the East Lateral, a paleontological monitor was recommended by BLM to oversee the earthwork and document any fossil discoveries. An Unanticipated Discovery Plan for paleontological resources would be implemented under the FWFI.

3.0 Environmental Consequences

3.1 Affected Environment: Details for the Affected Environment can be found in Section 3.0 of the Cimarron River-Lower Uncompahgre Watershed Plan. The current condition for biological, ecological, economic, and social resources identified in the project area are used to determine effects and to conduct alternatives analysis as specified at 40 CFR 1502.15 & 16.

Table 3. Listed Resources Considered for Proposed Action.

Concern	Relevant to the Proposed Project?		Rationale
	Yes	No	
Soils & Geology			
Upland Erosion & Sedimentation	X		<p>The hillside above the M&D Canal is eroding and sloughing into the canal, which poses a risk of canal breach. Two discrete sections of the Cimarron Canal, Wells Basin and Coal Hill, have notable breach potential due to a relatively higher risk of landslides along their lengths. Seepage from the Vernal Mesa Canal has decreased the canal stability which caused the canal to breach. A portion of Vernal Mesa Canal, known as Slide Point, breached in the 1960s and caused significant damage to U.S. Hwy 50. Canal breach at the M&D Canal, Cimarron Canal, and Vernal Mesa Canal have the potential to flood over 28,788 acres of farmland in the project area.</p> <p>Construction activities have the potential to temporarily increase erosion and sediment transport.</p>

Concern	Relevant to the Proposed Project?		Rationale
	Yes	No	
Prime & Unique Farmland	X		Portions of the project area (i.e., Coal Hill and East and West Laterals) contain lands designated farmland of statewide importance (NRCS 2022a).
Water Resources			
Surface & Ground Water Quality & Quantity	X		<p>Piping and or lining the canals would reduce water loss due to seepage and improve downstream water quality.</p> <p>The East Lateral, West Lateral, and M&D Canal are within an alluvial aquifer managed aquifer recharge (MAR) potential area and a sedimentary bedrock MAR potential area (CGS 2022). A report by the United States Geological Survey (USGS) and BLM in Eastern Utah and Western Colorado demonstrates that seepage influences groundwater recharge (Masbruch and Shope 2014). Seepage likely influences groundwater recharge in the project area through deep percolation, though the extent to which seepage influences groundwater recharge is unknown because there is no current data in the project area evaluating direct groundwater recharge sources and volumes.</p> <p>Piping and or lining the canals would eliminate vertical transport of salts and agricultural fertilizers via seepage and infiltration. Salinity and selenium loading would be reduced in the watershed, thereby improving water quality.</p>
Clean Water Act & Waters of the U.S., including Wetlands	X		Jurisdictional waters in the project area include the Cimarron River, Happy Canyon Creek, West Lateral, Vernal Mesa Canal, and Cimarron Canal. Twelve wetlands totaling 5.69 acres occur within and adjacent to the project area; approximately 0.05 acres were identified within the project area. Some of these wetlands adjacent to the project area are connected to jurisdictional waters (Appendix E).
Wetlands	X		Twelve wetlands totaling 5.69 acres occur within and adjacent to the project area; approximately 0.05 acres were identified within the project area.
Regional Water Management Plans & Coastal Zone Management Areas	X		The project area is managed under the Colorado Water Plan, specifically the Gunnison Basin Implementation Plan (BIP) (CDNR CWCB 2021). There are no coastal zone management areas within the project area.

Concern	Relevant to the Proposed Project?		Rationale
	Yes	No	
Floodplain Management	X		Portions of the project area are within the designated 100-year floodplain associated with the Cimarron River and near floodplains associated with Happy Canyon Creek (FEMA 2012; FEMA 2013).
Wild & Scenic Rivers	X		No wild or scenic rivers are in or near the project area according to the National Wild and Scenic Rivers System Map (Wild and Scenic Rivers 2016). However, the Gunnison River in the Black Canyon of the Gunnison National Park is listed on the Nationwide Rivers Inventory (NRI) for outstandingly remarkable geologic, scenic, and other values (NPS 2022).
Sole Source Aquifer		X	No sole source aquifers are in or near the project area (U.S. Environmental Protection Agency [EPA] 2021a).
Air Quality			
Clean Air Act/National Ambient Air Quality Standards	X		Currently, Montrose and Gunnison Counties comply with all NAAQS requirements.
Climate Change & Greenhouse Gases	X		Greenhouse gases are introduced into the atmosphere in the project area by a variety of sources, including agriculture.
Plants			
Special Status Plant Species		X	The USFWS Information for Planning and Consultation (IPaC) report did not identify any special status plant species as having the potential to occur in the project area (USFWS 2022).
Forest Resources	X		Several national forests are in the vicinity of the project area, including the Uncompahgre National Forest, San Juan National Forest, Rio Grande National Forest, and Grand Mesa, Uncompahgre, and Gunnison (GMUG) National Forest (USFS 2021). A temperature sensor would be located on USFS land.
Noxious Weeds & Invasive Plants	X		Construction disturbances increase the risk of introduction and establishment of noxious weeds and invasive plant species.
Natural Areas		X	The project area is located near, but outside, the Fairview Natural Area and the Wacker Ranch Natural

Concern	Relevant to the Proposed Project?		Rationale
	Yes	No	
			Area (CNAP 2021), which are within 5 miles of the project area.
Riparian Areas & Ecologically Critical Areas	X		The project area contains irrigation canals with a controlled water regime that support a narrow strip of riparian vegetation along its immediate edges. Piping the canal would permanently remove a source of water, likely resulting in the loss of riparian vegetation, including trees, along the canal. There are no riparian areas with special designations located within the project area.
Animals			
Essential Fish Habitat		X	There is no essential fish habitat located in or near the project area (National Oceanic and Atmospheric Administration [NOAA] 2017).
Wildlife & Wildlife Habitat	X		<p>The project area is within mapped winter range for elk (<i>Cervus canadensis nelsoni</i>) and mule deer (<i>Odocoileus hemionus</i>) and supports high densities of wintering elk and mule deer (CPW 2021a).</p> <p>Potential disturbance to wildlife and adjacent wildlife habitat is anticipated during construction. The Cerro Summit State Wildlife Area is situated approximately 200 feet west of the proposed staging area, and 0.5 miles southwest of the Slide Point project element (CPW 2021a).</p>
Coral Reefs		X	There are no coral reefs in or near the project area.
Special Status Animal Species	X		The USFWS IPaC identified nine Endangered Species Act (ESA)-listed animal species as potentially occurring within the project area: monarch butterfly (<i>Danaus plexippus</i>), Great Basin silverspot butterfly (<i>Great Basin silverspot butterfly</i>), tri-colored bat (<i>Pipistrellus subflavus</i>), Canada lynx (<i>Lynx canadensis</i>), gray wolf (<i>Canis lupus</i>), Gunnison sage-grouse (<i>Centrocercus minimus</i>), Mexican spotted owl (<i>Strix occidentalis</i>), yellow-billed cuckoo (<i>Coccyzus americanus</i>), bonytail (<i>Gila elegans</i>), Colorado pikeminnow (<i>Ptychocheilus lucius</i>), humpback chub (<i>Gila cypha</i>), and razorback sucker (<i>Xyrauchen texanus</i>) (USFWS 2022).
Invasive Animal Species		X	No potential for introduction of invasive animal species.

Concern	Relevant to the Proposed Project?		Rationale
	Yes	No	
Migratory Birds & Bald and Golden Eagles	X		There is potential for migratory birds and eagles to be present in the project area.
Human Environment			
Socioeconomics	X		Project elements would require the use of local match funds and would reduce the risk of canal breach and subsequent damage to crops and infrastructure.
Cultural, Historic & Paleontological Resources	X		<p>Cultural and historic resources are present in the project area. A cultural resources survey identified six canal segments as contributing to the eligibility of their associated sites for inclusion in the National Register of Historic Places (NRHP).</p> <p>Paleontological resources may be present in the project area. The East Lateral has a high potential fossil yield class (PFYC). A paleontological resource survey was completed for the project area; no fossil localities were documented during the survey.</p>
Hazardous Materials	X		Mechanical equipment and associated fuels and lubricants would be stored in the appropriate location and used on site during construction.
Public Health & Safety	X		The project elements would reduce the risk of canal and lateral breach.
Recreation	X		The Cerro Summit State Wildlife Area is adjacent to the project area and is open to the public for hunting and fishing (CPW 2021a). The Cimarron River is within the project area and provides recreational opportunities, including fishing and swimming. The Silver Jack Reservoir Recreation Area lies upstream of the Cimarron Diversion. Current year-round recreational uses in the Silver Jack Reservoir Recreation Area include boating, camping, fishing, picnicking, hiking, and wildlife viewing.
Land Use	X		Portions of the project area are on BLM, Reclamation, and USFS lands. BLM would be required to acknowledge the historic right-of-way (ROW).
sVisual Resources & Scenic Beauty	X		Temporary visual impacts from construction equipment (active and parked) and ground disturbance in the project area during construction. Permanent visual impacts from piping the canals, and the direct and indirect removal of riparian vegetation.

Concern	Relevant to the Proposed Project?		Rationale
	Yes	No	
Parklands, National Parks, Monuments, & Historical Sites	X		The Black Canyon of the Gunnison National Park boundary is approximately 0.9 miles north of the project area. The West Lateral flows into Red Rock Creek, which flows through the National Park. The Black Canyon of the Gunnison Wilderness Area is a part of the National Park. No national monuments or historical sites are in or immediately near the project area based on the National Natural Landmarks Map (NPS 2021).
Transportation & Infrastructure	X		Project elements would protect existing transportation and infrastructure from future flood damage. The existing canal infrastructure would be improved.
Noise	X		Temporary construction noise would impact residential areas. The project would be implemented in compliance with all applicable noise ordinance laws.
Scientific Resources	X		Project elements would install a temperature sensor in the Cimarron River to monitor the condition of fish habitat. Projects would occur in areas with potential for significant geological and paleontological scientific resources.

In accordance with CEQ regulations 1500.1(b), 1500.2(b), and other sections, NRCS eliminated the following resource categories from further analysis because the Proposed Project would result in negligible or no impact to these resources.

- Coastal Zone Management Areas
- Sole Source Aquifer
- Special Status Plant Species
- Essential Fish Habitat
- Coral Reefs
- Invasive Species – Animals
- Natural Areas

3.2 Determination of scope of analysis for National Environmental Policy Act (NEPA): The proposed action scoping area is the portion of the Cimarron River-Lower Uncompahgre Watershed that encompasses six HUC 12 sub-watersheds that include all areas necessary for the implementation of potential measures, including temporary access, borrow sites, spoil sites, and laydown areas necessary for construction. Those watersheds are (refer to watershed # shown in Figure 1. Map of Cimarron River-Lower Uncompahgre Watershed Project Area):

<u>#</u>	<u>Name</u>	<u>Acres</u>
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3	Happy Canyon Creek	38,456
6	Long Gulch-Gunnison River	32,045
7	Hairpin Creek-Cedar Creek	21,513
8	Lower Cimarron River	16,937
9	Middle Cimarron River	26,188
10	Upper Cimarron River	18,973
Total		154,112

The study area encompasses both the direct and indirect effects.

- 3.3 Determination of the Scoping area for Section 7 of the Endangered Species Act (ESA):** United States Fish and Wildlife Service (USFWS) concurs with the NRCS Proposed Action scoping area. (See Appendix A of Cimarron River-Lower Uncompahgre Watershed Plan)

Additionally, Colorado has accepted the Section 7 Scoping Area for analysis of State listed species. (See Appendix A of Cimarron River-Lower Uncompahgre Watershed Plan)

- 3.4 Determination of scoping area for Section 106 of the National Historic Preservation Act (NHPA):** The initial scoping area consists of 465 acres. NRCS consulted with the SHPO, Tribes, and other consulting parties to determine & define the Area of Potential Effects (APE). The APE includes all areas of cultural concern, potential ground disturbance, staging areas, ingress & egress routes within the scoping area and accounts for indirect effects to, and the viewshed of, historic properties (See Appendix A of Cimarron River-Lower Uncompahgre Watershed Plan).

The SHPO, federally recognized Tribes, and other Section 106 consulting parties concur with the NRCS defined APE. (See Appendix A of Cimarron River-Lower Uncompahgre Watershed Plan).

- 3.5 Potential impacts on the living communities and human uses.**

- 3.5.1** Potential impacts on the biological characteristics associated with fish and wildlife: (7 CFR 650.22, PL 116-188). Table 4a indicates Federally listed species and Table 4b lists the State special status species. For a detailed description of the resource, refer to Section 3.5.2 of Cimarron River-Lower Uncompahgre Watershed Plan.

Table 4a. Determination of Effects for USFWS ESA-Listed Animal Species

Wildlife TES	Known/ Suspected to be Present?	Suitable Habitat Present?	Designated Critical Habitat Present or Could be Affected?	Effects Analysis Rationale	Effects Analysis
Gunnison sage-grouse (<i>Centrocercus minimus</i>)	Yes	Yes	Yes	Suitable Habitat and Critical Habitat for this species was identified by USFWS to occur within the project area, but not within the boundaries of the Proposed Project. Disturbance from project activities could deter the Gunnison sage-grouse from occupying nearby suitable habitat. However, timing of the Proposed Project avoids potential impacts to this species.	MANLAA
Tri-colored bat (<i>Pipistrellus subflavus</i>)	No	No	No	No suitable cave or forest habitat exists within the project area to support roosting and breeding tri-colored bats.	No Effect
Yellow-billed cuckoo (<i>Coccyzus americanus</i>)	No	No	No	The yellow-billed cuckoo occurs in dense riparian habitat with cottonwood overstory. Riparian habitat is present in the vicinity of the project area. However, no suitable riparian habitat for the yellow-billed cuckoo occurs within the project area.	No Effect
Mexican spotted owl (<i>Strix occidentalis lucida</i>)	No	No	No	Cliff habitat for the Mexican spotted owl is present nearby the project area, in the Gunnison River canyon. However, no suitable habitat for the Mexican spotted owl occurs within the project area.	No Effect
Canada lynx (<i>Lynx canadensis</i>)	No	No	No	Habitat near the vicinity of the project area may be suitable habitat and is at the correct elevation for the Canada lynx to occur. However, no suitable habitat occurs within the project area.	No Effect
Gray Wolf (<i>Canis lupus</i>)	No	No	No	Although lone and dispersing wolves may occur throughout this part of Colorado, no suitable habitat is present within the project area and no predator management program	No Effect

Wildlife TES	Known/ Suspected to be Present?	Suitable Habitat Present?	Designated Critical Habitat Present or Could be Affected?	Effects Analysis Rationale	Effects Analysis
				is included under the Proposed Project.	
Monarch butterfly (<i>Danaus plexippus</i>)	Yes	No	N/A	Although considered a breeding zone, Colorado is not included in the two migratory populations of the monarch butterfly. No suitable habitat, including milkweed, the larval food source for the monarch, nor an abundance of nectarous plants were identified within the project area.	No Effect
Great Basin silverspot (<i>Speyeria nokomis nokomis</i>)	No	No	No	The specific habitat needs for this subspecies, including the presence of the Northern bog violet and an abundance of nectarous plants, are not met by habitat conditions within the project area.	No Effect
Bonytail (<i>Gila elegans</i>)	No	No	No	Although the Gunnison River corridor occurs nearby the project area, no suitable habitat for the Colorado fishes exists within the canal systems.	No Effect
Colorado pikeminnow (<i>Ptychocheilus lucius</i>)	No	No	No	Although the Gunnison River corridor occurs nearby the project area, no suitable habitat for the Colorado fishes exists within the canal systems.	No Effect
Humpback chub (<i>Gila cypha</i>)	No	No	No	Although the Gunnison River corridor occurs nearby the project area, no suitable habitat for the Colorado fishes exists within the canal systems.	No Effect
Razorback sucker (<i>Xyrauchen texanus</i>)	No	No	No	Although the Gunnison River corridor occurs nearby the project area, no suitable habitat for the Colorado fishes exists within the canal systems.	No Effect

Table 4b. Summary Analysis of Colorado Listed Species & Species of Concern with potential to occur in the Project Area

Species	G Ranking	S Ranking	CO Status	Suitable Habitat Present?	Effects Analysis
Northern Leopard Frog (<i>Lithobates pipiens</i>)	G5, S3	S3	SC	Yes	At the Coal Hill and the Wells Basin elements, within the project area, suitable wet meadow and riparian habitat exists along the edges of the canal alignments in some locations. However, it is unlikely that this species overwinters within the project area because flows through the canal alignments are seasonal and because the species requires deep water that will not freeze to survive the winter season. Proposed Project work would be performed outside of irrigation season, which would create a temporal avoidance of this species since water will not be present at the time. Based on these factors, the Proposed Project would not impact the Northern leopard frog.
American Peregrine Falcon (<i>Falco peregrinus anatum</i>)	G4T4	S2B	SC	No	Open high cliff and bluff habitat is absent within all Proposed Project elements, and absent within 0.5 miles of all elements. Furthermore, with the exception of the canal segments, which do not support sustained fish habitat, there is no quality open water for foraging present within 0.5 miles of the project area, near any element. If a nest were to be identified at any time within the project area, the Recommended Buffer Zones and Seasonal Restrictions for Colorado Raptors, set forth by CPW (CPW 2020c) would be followed to observe the appropriate buffers and timing to avoid disturbance to the species. No impacts to breeding habitat or populations of the American peregrine falcon would occur because of the Proposed Project.
Mountain Sucker (<i>Catostomus platyrhynchus</i>)	G5	S2	SC	No	Fish habitat is not present within the canal segments in the project area. Because suitable habitat for the mountain sucker is absent, the Proposed Project would not impact this species.

Discussion (Federal): on May 2, 2023, a consultation response was received from the USFWS concerning the potential for presence of the Gunnison Sage Grouse (GUSG) within the project area. NRCS has made a “May effect, not likely to adversely affect” determination for the GUSG in the Slide Point, Coal Hill and Wells Basin project areas, and USFWS concurs. (See Appendix A of the Cimarron River-Lower Uncompahgre Watershed Plan for USFWS consultation letter).

3.5.2 Potential impacts on special aquatic sites, (PL 99–198, Title XII, The Food Security Act of 1985). See Table 5:

Table 5 – Potential Impacts on Special Aquatic Sites and Highly Erodible Land						
Special Aquatic Sites	N/A	No Effect	Negligible Effect	Minor Effect (Short Term)	Minor Effect (Long Term)	Major Effect
Sanctuaries and refuges	X					
Wetlands					X	
Mud flats	X					
Vegetated shallows	X					
Coral reefs	X					
Riffle pool complexes		X				
Highly Erodible Land	X					

Discussion: Temporary ground disturbing construction activities may directly impact 0.05 acres of wetlands within the project area. Containing construction to the previously disturbed canal prism would minimize the destruction, loss, or degradation as required in E.O. 11990.

Indirectly, the FWFI would eliminate seepage from the canal that contributes hydrology to 5.69 acres of wetlands within and adjacent to the project area. This effect would be offset by the 2,698 ac-ft of water savings that would be available for irrigation or would stay within the watershed.

Installation of the temperature sensor in Cimarron Creek will have no effect on the stream’s riffle pool morphology.

3.5.3 Potential Impacts on Water Flow Characteristics 40 CFR 1506.6 Methodology and Scientific Accuracy. See Table 6.

Table 6 – Potential Impacts on Water Flow Characteristics 40 CFR 1506.6 Methodology and Scientific Accuracy						
Water Flow Characteristics	N/A	No Effect	Negligible Effect	Minor Effect (Short Term)	Minor Effect (Long Term)	Major Effect
Substrate		X				
Suspended particulates/ turbidity		X				
Water		X				
Current patterns and water circulation		X				
Normal water fluctuations					X	
Salinity gradients					X	

Discussion: There is no affect to substrate, suspended particulates/turbidity, Water, and current patterns and circulation from installation of the temperature sensor in Cimarron Creek. Changes to the timing and amount of flow releases using data from the temperature sensor will have minor long term effects on the normal fluctuations of Cimarron Creek. . Reduced seepage from piping or lining canals will have a minor long term reduction to the salinity gradient of the Gunnison and Colorado Rivers.

3.5.4 Potential impacts on human environment (7 CFR 650.1 (e) See Table 7):

Table 7 – Potential Effects on Human Environment						
Human Use Characteristics	N/A	No Effect	Negligible Effect	Minor Effect (Short Term)	Minor Effect (Long Term)	Major Effect
Municipal and private water supplies						X
Recreational and commercial fisheries					X	
Water-related recreation					X	
Aesthetics			X			
Parks, national and historical monuments, historic landmarks, national historical landmark district, national seashores, wilderness areas, research		X				

Table 7 – Potential Effects on Human Environment						
Human Use Characteristics	N/A	No Effect	Negligible Effect	Minor Effect (Short Term)	Minor Effect (Long Term)	Major Effect
sites, USFWS Refuges, and similar preserves						

Discussion: Negligible effect to aesthetics are expected. The project benefits, NRCS design and construction standards, and implementation of BMP's offset any negligible effects. The proposed project will have a major effect on irrigation water supply making 2,698 ac-ft of water savings from reduced canal seepage available for irrigation. The proposed project will result in minor long term improvements to fish habitat and recreational opportunities on Cimarron Creek.

3.6 RESOURCES OF CONCERN: (Affected Environment is Section 3.0 of Plan following P&N.) The decision whether to proceed will be based on policies as described in NWPM 4th edition (April 2014) and an evaluation of the probable impacts, including cumulative impacts, of the proposed activity. The benefits reasonably expected to accrue from the proposal are balanced against its reasonably foreseeable detriments. All relevant resource concerns are detailed in Section 3.6.1, and all relevant ecosystem services are detailed in Section 3.2.2 of the Cimarron River-Lower Uncompahgre Watershed Plan.

All resources of concern have been reviewed and those that are relevant to the action are considered and discussed in additional detail in the Cimarron River-Lower Uncompahgre Watershed Plan, Section 3.1, Ecosystem Services and Resource Concerns, and associated Table 1.

3.6.1 Climate Change: Climate change poses a source of uncertainty to the success of the project. Although climate models and their associated projections of temperature change and intensification of extreme weather events consistently project deterioration of natural conditions, the localized magnitude of impacts of climate change upon relatively small geographic areas is difficult to project given the large resolution of underlying data. Similarly, the complexity of inputs, uncertain future rate of renewable energy adoption or limitation of greenhouse gas (GHG) emissions affecting climate change, and associated uncertainty of the model outputs make fine-scaled inference subject to deviation from actual future conditions. However, projections of future conditions based on changing climate conditions have been published by NOAA and are incorporated into the Cimarron River-Lower Uncompahgre Watershed Plan Sections 3.3.2 and 4.2.

- 3.6.2 **Unresolved Conflicts:** If there are unresolved conflicts as to resource use, explain how the practicability of using reasonable alternative locations and methods to accomplish the objective of the proposed structure or work was considered.

Discussion: There were no unresolved conflicts identified as to resource use.

3.7 Mitigation (40 CFR 1502.14, 1508.1(y)), (36 CFR 800.6)

- 3.7.1 **Avoidance and Minimization:** Avoidance and minimization measures are described in Section 7.4 of the Cimarron River-Lower Uncompahgre Watershed Plan.

- 3.7.2 Is compensatory mitigation required to offset losses resulting from proposed unavoidable impacts? No

- 3.8 **Cumulative Effects:** *ORM File Number**District abbreviation (e.g. RD, O-R)*[Click here to enter text.](#) (40 CFR 1508 (i)(3)) Cumulative effects, which are effects on the environment that result from the incremental effects of the action when added to the effects of other past, present, and reasonably foreseeable actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative effects can result from actions with individually minor but collectively significant effects taking place over a period of time. Cumulative effects, analysis, and determinations are discussed in detail in Section 5 of the Cimarron River-Lower Uncompahgre Watershed Plan.

- 4.0 **Consultation and Coordination:** The results of coordinating the proposal on Public Notice (PN) and public meeting are identified below, including a summary of issues raised, and the NRCS evaluation of concerns.

Were comments received in response to the coordination effort? Yes (See Appendix A of Cimarron River-Lower Uncompahgre Watershed Plan)

Was a public hearing requested and, if so, was one conducted? No

Were additional issues raised by the NRCS including any as a result of coordination with other NRCS offices? No

Were comments raised that do not require further discussion because they address activities and/or effects outside of the NRCS purview? No

4.1 Compliance with Other Laws, Policies, and Requirements

- 4.2 **Section 7(a)(2) of the Endangered Species Act (ESA):** Refer to Section 2.2 for description of the NRCS Proposed Action for Section 7.

- 4.2.1 Has another federal agency been identified as the lead agency for complying with Section 7 of the ESA with the NRCS designated as a cooperating agency and has that consultation been completed? No

4.2.2 Are listed species or designated critical habitat present or in the vicinity of the NRCS project area? Yes.

Effect determination(s), including no effect, for all known species/habitat, and basis for determination(s): Twelve threatened and endangered species potentially occur within the project boundaries (See table 4a). NRCS has determined the project will have no effect on eleven T&E species due to the lack of suitable habitat within the project area. NRCS determined that the project may affect but is not likely to adversely affect the Gunnison Sage Grouse (GUSG). The USFWS stated in their May 2, 2023, letter that they concur with the NRCS determination stating ...”After evaluating the proposed action and its likely effects, the Service concurs with NRCS’ determination that the proposed action may affect, but is not likely to adversely affect, GUSG and its critical habitat..”

4.2.3 Consultation with the U.S. Fish and Wildlife Service and/or the National Marine Fisheries Service was initiated and completed as required. NRCS has determined that it has fulfilled its responsibilities under Section 7(a)(2) of the ESA. The consultation letter is incorporated by reference (See Appendix A of the Cimarron River-Lower Uncompahgre Watershed Plan for USFWS consultation letter).

4.3 Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), Essential Fish Habitat (EFH): N/A

4.4 **Section 106 of the National Historic Preservation Act (Section 106):** Refer to Section 2.3 for APE. The NRCS in consultation with the Section 106 consulting parties determined that the undertaking would have adverse effects to the NRHP-eligible canals. SHPO and the Tribes concurred with the NRCS’s findings and determinations in letters dated January & February 2022 (See Appendix A). Accordance with 36 CFR 800.6, NRCS in consultation with SHPO, Tribes, the ACHP, and other the consulting parties developed a Memorandum of Agreement (MOA) to resolve the adverse effects. The NRCS has notified the Advisory Council on

Historic Preservation (ACHP) of its adverse effect determination providing the specified documentation, and the ACHP has chosen not to participate in the consultation pursuant to 36 CFR 800.6(a)(1)(iii). The MOA was executed and filed with the ACHP. An executed copy of the MOA dated July 28, 2023, is in Appendix A of Cimarron River-Lower Uncompahgre Watershed Plan.

4.4.1 Has another federal agency been identified as the lead federal agency for complying with Section 106 of the National Historic Preservation Act with the NRCS designated as a cooperating agency and has that consultation been completed? NO

- 4.4.2 Consultation was initiated and completed with the appropriate agencies, tribes and/or other parties for any determinations other than “no potential to cause effects” (see the attached Appendix E for consultation type, begin date, end date and closure method of the consultation).
- 4.5 **Native American Graves Protection and Repatriation Act (NAGRA) PL 101-601; 25 U.S.C. 3001-3013; 104 Stat. 3048-3058.** N/A This project is not located on Federal lands.
- 4.6 **American Indian Religious Freedom Act (AIRFA) PL 95-341:** No objection from consultation efforts.
- 4.7 **Archaeological Resources Protection Act (ARPA) PL 96-95:** N/A, this action is not located on Federal or Indian Lands.
- 4.8 **Tribal Trust Responsibilities**
- 4.8.1 Was government-to-government consultation conducted with Federally recognized Tribe(s)? The NRCS completed consultation with 3 Federally recognized Tribes as part of their Environmental Assessment. Of these 3 Tribes 1 responded with statements of not likely to affect or had no objections. No response was received from the remaining 2 federally recognized Tribes after multiple attempts to engage in consultation. The NRCS has determined that it has fulfilled its tribal trust responsibilities.
- 4.9 **Coastal Zone Management Act (CZMA): N/A**
- 4.10 **Wild and Scenic Rivers Act:** The proposed project would have no direct impact on wild and scenic rivers, or rivers listed on the NRI. The proposed project would indirectly benefit the Gunnison River, an NRI listed water. Refer to Section 5.2.6.2 of the Cimarron River-Lower Uncompahgre Watershed Plan
- 4.11 **Effects on US Army Corps of Engineers (USACE) Civil Works Projects (33 USC 408): N/A**
- 4.12 **NRCS Wetland and Highly Erodible Land Policy (PL 99–198, Title XII, The Food Security Act of 1985).**
- 4.12.1 Will the project propose to impact wetlands and or Highly Erodible Land? YES
Reference section 5.3.2. of the Cimarron River-Lower Uncompahgre Watershed Plan for Wetlands as defined by WOTUS.
- 4.13 **NRCS Wetland Mitigation.** Does the Proposed Action area contain areas identified as mitigation for the NRCS for wetland compliance or USACE Clean Water Act, conservation banking, mitigation banking, in-lieu fee program, or other Federal, State, or Local resource? NO
- 4.14 **~~Other (as needed):~~ N/A Pub. L. 83-566 Section 12 Fish and Wildlife Coordination Act:** Section 12 consultation occurred with USFWS on January

25, 2024. NRCS-CO Section 12 correspondence can be found in Appendix A.

- 4.15 **Compliance Statement:** The NRCS has determined that it has fulfilled its responsibilities under the following laws, regulations, policies, and guidance shown in Table 8:

Table 8 – Compliance with Federal Laws and Responsibilities		
Laws, Regulations, Policies, and Executive Orders	Yes	N/A
Section 7(a)(2) of the ESA, PL 93-205, ESA	X	
PL 94-265 provisions of the Magnuson-Stevens Act, EFH		X
Section 12 and Fish and Wildlife Coordination Act Pub. L. 83-566 Section 12 Fish and Wildlife Coordination Act	X	
Section 106 of the NHPA	X	
Tribal Interests: PL 89-655, NHPA; PL 95-341, AIRFA; PL 101-601, NAGPRA; PL 103-344, AIRFA Amendments of 1994; PL 92-203, Alaska Native Claim Settlement Act; PL 93- 638, Indian Self-Determination and Education Assistance Act; EOs 13007 and 13175; Secretarial Orders 3206 and 3403; OSTP/CEQ Joint Memoranda, Indigenous Knowledge; PM, Government-to- Government Relations; PM, Uniform Standards; 230- GM, Part 403, Special Emphasis Programs; 410-GM, Part 405, American Indians and Alaska Natives; 190- NI, Part 315, TALC; DR 1350-001, Tribal Consultation; DR 1340-007, Policies on American Indians and Alaska Natives	X	
CZMA– PL 92-583, Coastal Zone Management Act		X
Wild and Scenic Rivers Act, PL 90-542	X	
Section 408 - 33 USC 408		X
PL 99–198, Title XII, The Food Security Act of 1985	X	
Prime and Unique Farmland, Farmland of Statewide or Local Importance: Farmland Protection Policy Act, PL 97-98, FPPA	X	
Waters of the United States, including Wetlands: PL 112-328, Federal Water Pollution Control Act, (a.k.a. Clean Water Act)	X	
Water Quality: PL 112-328	X	
NRCS Wetland and Highly Erodible Land Policy (PL 99–198, Title XII, The Food Security Act of 1985), HEL	X	
Other:		

5.0 Special Conditions: N/A

6.0 Findings and Determinations

- 6.1 Section 176(c) of the Clean Air Act General Conformity Rule Review: The proposed action has been analyzed for conformity applicability pursuant to regulations implementing Section 176(c) of the Clean Air Act. The activities proposed will not exceed the minimal levels of direct or indirect emissions of a criteria, pollutant, or its precursors and are exempted by 40 CFR Part 93.153. Any later indirect emissions are generally not within NRCS' continuing program responsibility and generally cannot be practicably controlled by the NRCS. For these reasons a conformity determination is not required for this action.
- 6.2 Presidential Executive Orders (EO)
- 6.2.1 EO 13175, Consultation with Indian Tribes, Alaska Natives, and Native Hawaiians: This action has no substantial effect on one or more Indian tribes, Alaska or Hawaiian natives.
- 6.2.2 EO 13007 Indian Sacred Sites: No Indian Sacred Sites identified.
- 6.2.3 EO 11988, Floodplain Management: This action is not located in a floodplain.
- 6.2.4 EO 12898, Environmental Justice: No longer a requirement under NRCS policy for environmental evaluation.
- 6.2.4.1 Screening and mapping tools: No longer a requirement under NRCS policy for environmental evaluation.
- 6.2.4.2 Have disadvantaged communities been identified within the vicinity of the proposed project? No longer a requirement under NRCS policy for environmental evaluation.
- 6.2.4.3 NRCS Involvement: No longer a requirement under NRCS policy for environmental evaluation.
- 6.2.4.4 Describe if resource impacts are high and adverse: No longer a requirement under NRCS policy for environmental evaluation.
- 6.2.4.5 Do the impacts fall disproportionately on disadvantaged communities? No longer a requirement under NRCS policy for environmental evaluation.
- 6.2.5 EO 13112, EO 13751 Invasive Species: . With implementation of BMPs described in Appendix E of the Cimarron River-Lower Uncompahgre Watershed Plan, the proposed project would not cause or promote the introduction or spread of invasive species
- 6.2.6 EO 13212 and EO 13302, Energy Supply and Availability: The proposal is not one that will increase the production, transmission, or conservation of energy, or strengthen pipeline safety.
- 7.0 Finding of No Significant Impact:** Having reviewed the information provided by the Cimarron River-Lower Uncompahgre Watershed Plan Watershed Plan and all interested parties and an assessment of the environmental impacts, NRCS finds

that this action will not have a significant impact on the quality of the human environment. Therefore, an environmental impact statement will not be required.

See associated NRCS FONSI document from the Cimarron River-Lower Uncompahgre Watershed Plan Watershed Plan.

USDA-NATURAL RESOURCES CONSERVATION SERVICE

Approved by:

Date: _____

Clinton Evans, State Conservationist
Natural Resources Conservation Service
Denver Federal Center, Bldg. 56, Rm. 2400
P.O. Box 25426
Denver, CO 80225-0426

8.0 PREPARED BY:

Table 9. List of Preparers

Name	Title (Years)	Agency/Firm	Education	Licenses/ Certifications
Blongshia Cha	Watershed Program Specialist (8 years)	USDA-NRCS	B.S. Agricultural Science	
John Andrews	Watershed Program Engineer (44 years)	USDA-NRCS	B.S. Agricultural Science B.S. Agricultural Engineering M.S. Environmental Engineering	P.E. (CO & IL) CPESC
Craig Dengel	Colorado State Cultural Resources Specialist (15 Years)	USDA-NRCS	B.A. Sociology and Anthropology M.S. Geography Ph.D. ABD. Anthropology	
Autumn Foushee Davies	Senior Biologist (18 years)	J-U-B ENGINEERS, Inc.	M.S. Botany B.S. Natural Resources Conservation and Management – Forest Ecology B.S. Journalism – Environmental Journalism	
Lexie Conley	Lead Environmental Scientist (6 years)	J-U-B ENGINEERS, Inc.	M.S. Environmental Studies B.A. Biology B.A. Environmental Studies	
Rebecca Hendricks Miller	Biologist (12 years)	J-U-B ENGINEERS, Inc.	M.S. Organismal Biology B.A. Environmental Studies and Biology	
Luke Gingerich	Project Manager (16 years)	J-U-B ENGINEERS, Inc.	B.S. Civil Engineering	P.E. (CO, NM, UT)
Nicholas Emmendorfer	Lead Project Engineer (11 years)	J-U-B ENGINEERS, Inc.	B.S. Civil Engineering	P.E. (CO)
Michael Verdone	Director (14 years)	BBC Research & Consulting	Ph.D. Economics M.A. Economics B.A. Economics	
Matthew Landt	Principal Investigator (26 years)	Alpine Archaeological Consultants, LLC	M.A. Anthropology	RPA #15334