

ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT

Jemez Canyon Dam Recreation Area Closure
Sandoval County, New Mexico



**US Army Corps of Engineers
Albuquerque District
4101 Jefferson Plaza NE
Albuquerque, New Mexico, 87109**

March 2021

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U.S. ARMY CORPS OF ENGINEERS
ALBUQUERQUE DISTRICT
FINDING OF NO SIGNIFICANT IMPACT
JEMEZ CANYON DAM RECREATION AREA CLOSURE
SANDOVAL COUNTY, NEW MEXICO

The U.S. Army Corps of Engineers, Albuquerque District (Corps) has conducted an environmental analysis in accordance with the National Environmental Policy Act of 1969, as amended. The final Environmental Assessment dated [date to be added when final] for the Jemez Canyon Dam Recreation Area Closure addresses the permanent closure of the Jemez Canyon Dam Overlook Recreation Area, with transfer of the recreation facilities and management of the area back to the underlying landowner, the Pueblo of Santa Ana. The proposed action would take place within the Corps' operations and management area at the Jemez Canyon Dam and Reservoir Project on Pueblo of Santa Ana Reservation lands in Sandoval County, New Mexico. The final recommendation is contained in Section 5 of the Environmental Assessment.

The final Environmental Assessment, incorporated herein by reference, evaluated various alternatives that would either have the Corps retain or return the area in question to Pueblo management. The recommended alternative would return the recreation area "as is" with donation of the existing recreation facilities to the Pueblo of Santa Ana. The recreation facilities would be transferred to the Pueblo through a real estate disposal action. Facilities would be transferred "as is" without repair or improvement. The Corps would no longer be responsible for operation and maintenance. Facilities that the Pueblo declines to take ownership of would be removed.

In addition to a "no action" alternative, in which the Corps would retain management of the area and continue the existing suspension of recreation, an alternative that would allow public recreation to resume and the preferred alternative of transferring management and recreation facilities to the Pueblo were evaluated. Alternatives that were considered to transfer management to the Pueblo included donating the recreation facilities or removing the recreation facilities.

For all alternatives, the potential effects were evaluated, as appropriate. A summary assessment of the potential effects of the recommended plan are listed in Table 1:

Table 1: Summary of Potential Effects of the Recommended Plan

Resource	Insignificant effects	Insignificant effects as a result of mitigation	Resource unaffected by action
Aesthetics	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Air quality	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aquatic resources/wetlands	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Invasive species	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Fish and wildlife habitat	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wildlife and migratory birds	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vegetation and plant communities	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Threatened/Endangered species/critical habitat	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Historic properties	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other cultural resources	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Floodplains	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Hazardous, toxic & radioactive waste	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hydrology	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Land use	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Navigation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Noise levels	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Public infrastructure	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Socio-economics	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Environmental justice	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Resource	Insignificant effects	Insignificant effects as a result of mitigation	Resource unaffected by action
Soils	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tribal trust resources	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Water quality	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Climate change	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Prime and unique farmland	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Recreational resources	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

All practicable and appropriate means to avoid or minimize adverse environmental effects were analyzed and incorporated into the recommended plan. Best management practices (BMPs) as detailed in the Environmental Assessment (Section 4.1.5, 4.1.6 and 4.3.3) would be implemented, if appropriate, to minimize impacts and are listed below:

- Any heavy equipment to be used while removing items would be inspected prior to being mobilized to the site to ensure that there are no leaks or drips. Any equipment in disrepair would be removed from the site immediately.
- Storage, fueling, and lubrication of equipment and motor vehicles would be conducted in a manner that affords the maximum protection against spill and contamination of the environment.
- The management and storage of fuel, lubricants, and oil would be in accordance with all federal, state, regional, and local laws and regulations. All servicing and fueling of equipment would be conducted in a designated area. Emergency spill kits would be placed in the designated fueling area.
- Used lubricants and oil would be stored in marked corrosion-resistant containers and recycled or disposed off-site in accordance with federal, state, and local laws and regulations.
- All equipment would be cleaned before entering and upon leaving the study area to prevent introduction or spread of invasive species.
- All vehicles would have required emission control equipment.

No compensatory mitigation is required as part of the recommended plan.

Public and agency review of the draft Environmental Assessment and FONSI was completed on February 19, 2022. All comments submitted during the public review period have been responded to in the Final Environmental Assessment and FONSI.

Pursuant to section 7 of the Endangered Species Act of 1973, as amended, the U.S. Army Corps of Engineers determined that the recommended plan would have no effect on federally listed species or their designated critical habitat.

Pursuant to section 106 of the National Historic Preservation Act of 1966, as amended, the U.S. Army Corps of Engineers determined that there would be no historic properties affected by the recommended plan. The Pueblo of Santa Ana Tribal Historic Preservation Officer concurred with this determination on 10 November 2021. The Corps received no expression of any Tribal concerns or objections during consultation.

The proposed work does not involve a discharge of dredged or fill material within waters of the U.S. regulated by Section 404 of the Clean Water Act (CWA). Therefore, no permit under Section 404 of the CWA would be needed for this project.

All applicable environmental laws have been considered and coordination with appropriate agencies and officials has been completed. No other issues were raised relative to other environmental laws and/or Executive Orders.

All applicable laws, executive orders, regulations, and local government plans were considered in evaluation of alternatives. Based on this report, the reviews by other Federal, State, and local agencies, Tribes, input of the public, and the review by my staff, it is my determination that the recommended plan would not cause significant adverse effects on the quality of the human environment; therefore, preparation of an Environmental Impact Statement is not warranted, and a Finding of No Significant Impact is appropriate.

13 May 2022

Date

Patrick M. Stevens V.
Lieutenant Colonel, U.S. Army
District Commander

ENVIRONMENTAL ASSESSMENT

Jemez Canyon Dam Recreation Area Closure Sandoval County, New Mexico

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APPENDIX A – Cultural Resources Consultation

LIST OF ACRONYMS USED

APE	Area of Potential Effect
BMPs	Best Management Practices
cfs	Cubic feet per second
Corps	U.S. Army Corps of Engineers
CWA	Clean Water Act
EA	Environmental Assessment
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FONSI	Finding of No Significant Impact
JCD	Jemez Canyon Dam
JCDR	Jemez Canyon Dam and Reservoir
HTRW	Hazardous, Toxic, and Radioactive Waste
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMCRIS	New Mexico Cultural Resource Information System
NMED	New Mexico Environment Department
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
SHPO	State Historic Preservation Officer
THPO	Tribal Historic Preservation Officer
USFWS	U.S. Fish and Wildlife Service

1. BACKGROUND

The U.S. Army Corps of Engineers (Corps), Albuquerque District, Operations Division is planning to transfer management of the recreation area and facilities at Jemez Canyon Dam (JCD) back to the underlying landowner, the Pueblo of Santa Ana, thereby closing the JCD recreation area to public recreation. The recreation area is located at the Corps' Jemez Canyon Dam and Reservoir (JCDR) Project on Pueblo of Santa Ana Reservation lands (Figure 1). The recreation area has been under a temporary closure since November 30, 2015, and the Corps seeks to close the area permanently due to declining visitation and disproportionately increased operation and maintenance costs.

The JCD recreation area was first established in 1953, and facility construction began in 1961. It currently consists of six covered picnic shelters, each containing a concrete picnic table and grill; a vault toilet; an overlook facility; a water tower; and an associated paved access road and parking area. Over the years, visitation to the overlook area has declined, particularly since the draining of the reservoir in 2001. Declining visitation, coupled with the cost of maintaining the aging structures and monitoring the area for vandalism, has led the Corps to believe it is no longer viable or sustainable to maintain a recreation area at the JCDR.

1.1. AUTHORITY

The JCDR Project was authorized by Congress in the Flood Control Acts of 1948 (Pub. L. No. 80-858) and 1950 (Pub. L. No. 81-516). JCDR Project construction began in May 1950. The dam was completed and placed into operation in October 1953. Operation of the JCDR Project, along with the other Corps dams in the Middle Rio Grande basin of New Mexico, is prescribed in the Flood Control Act of 1960 (Pub. L. No. 86-645).

All lands associated with the JCDR Project (about 6,711 acres) are located entirely within the boundaries of the Pueblo of Santa Ana, a federally recognized Native American Tribe. The United States of America, acting through the Department of the Army, Corps of Engineers, and the Pueblo of Santa Ana signed a Memorandum of Understanding (MOU) in 1952, which established a perpetual right and privilege for the construction, operation, and maintenance of the JCDR Project. The Corps is required to protect Santa Ana natural and cultural assets as part of the federal government's Native American Trust responsibilities. Management activities are generally to be performed in cooperation with the Pueblo of Santa Ana per Executive Order and governmental policy.

The Corps currently operates and maintains the JCD and related structures on the property described in the 1952 MOU between the United States of America and the Pueblo of Santa Ana and in Public Land Order 873, dated November 14, 1952. The JCD Overlook Recreation Area is located within the Corps' Operation and Maintenance area in accordance with the MOU.

Jemez Canyon Dam Recreation Area Closure, Sandoval County, NM



Figure 1: Jemez Canyon Dam Overlook Recreation Area Visitor Map



Figure 2: Recreation facilities at Jemez Canyon Dam Overlook Recreation Area

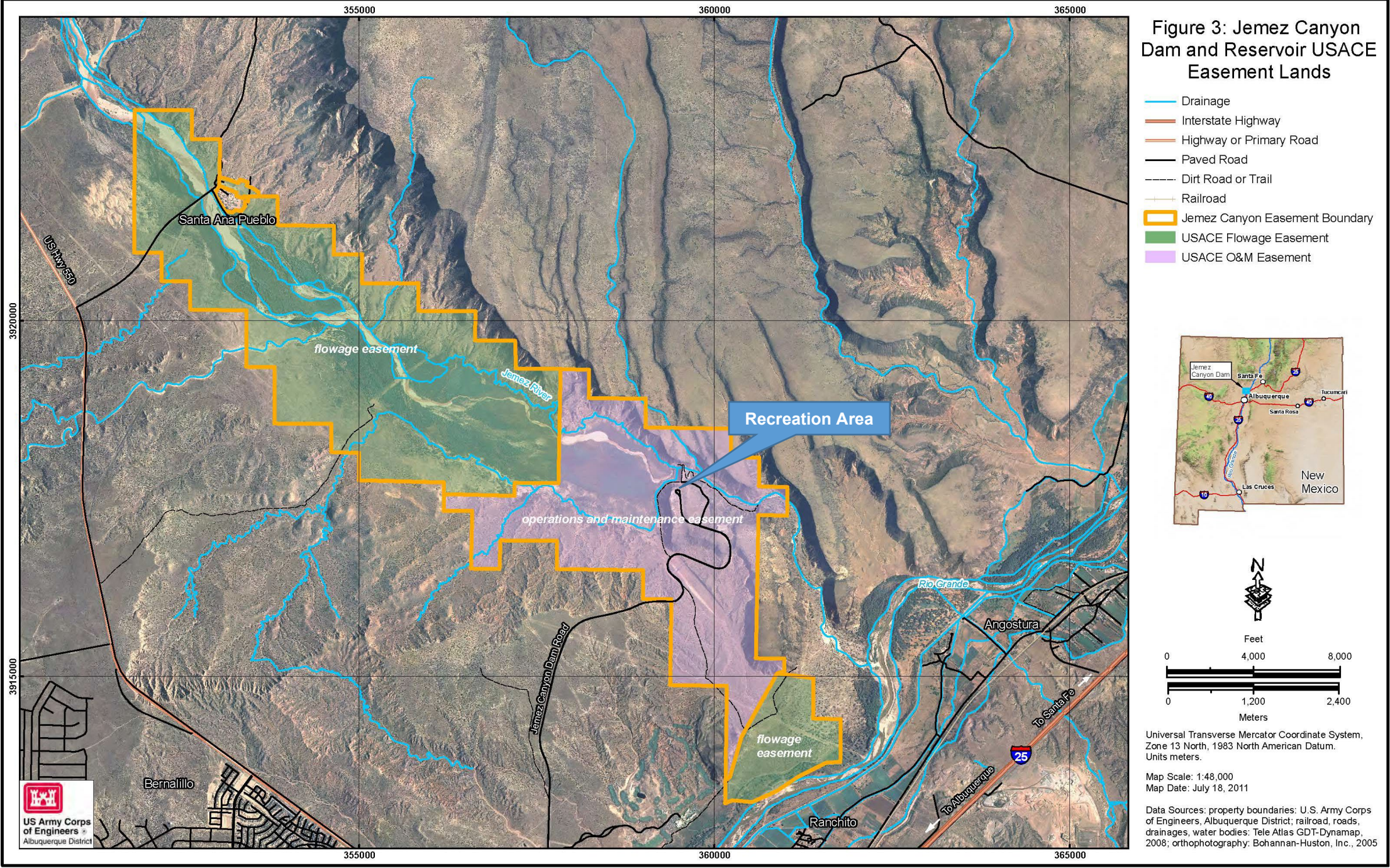


Figure 3: Jemez Canyon Dam and Reservoir location and USACE easement

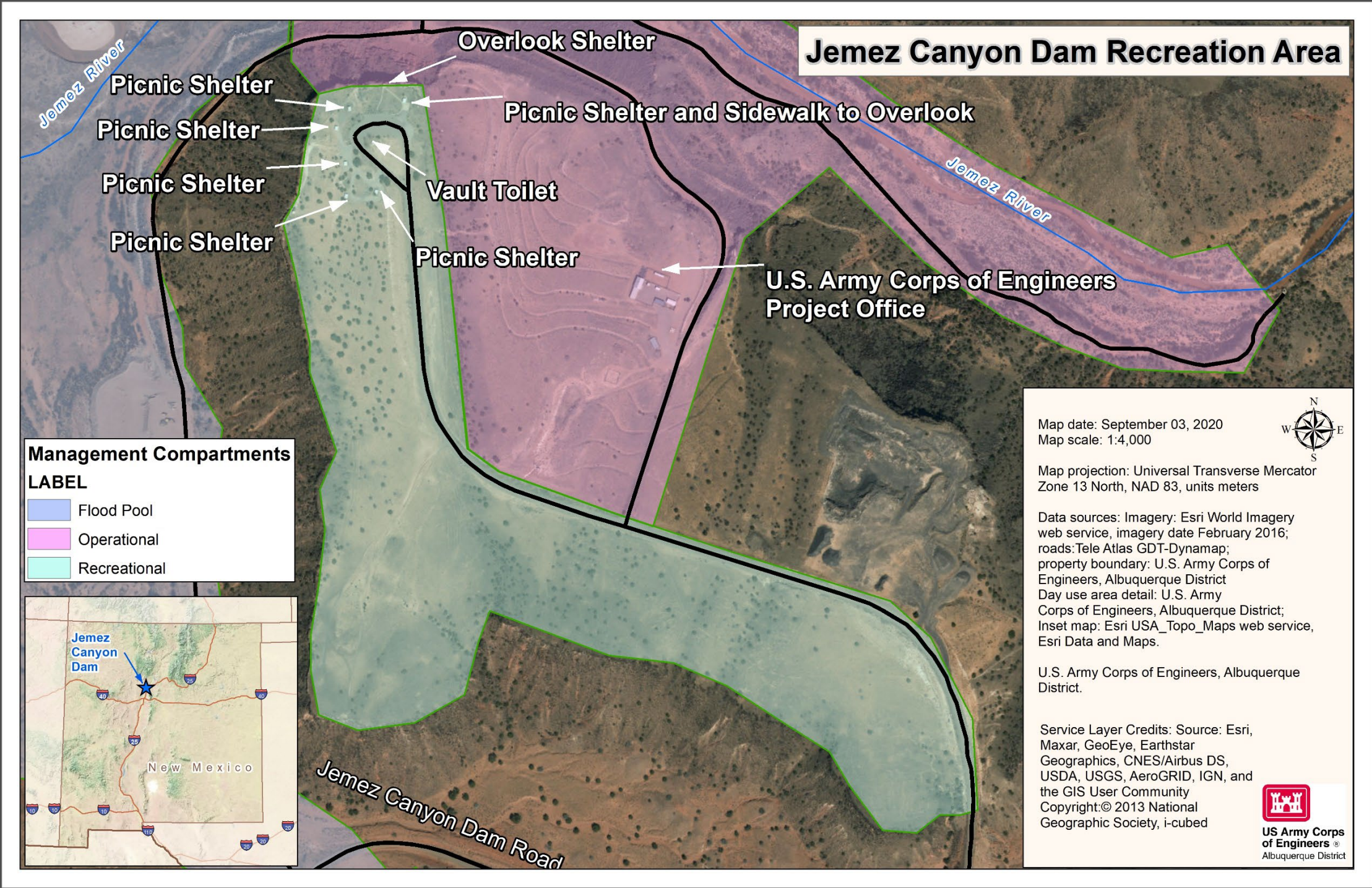


Figure 4: The Recreational management compartment with recreation area structures labeled. Management of the Recreational management compartment would be turned over to the Pueblo of Santa Ana.

*Environmental Assessment
Jemez Canyon Dam Recreation Area Closure, Sandoval County, NM*



Figure 5: Overview photo of the recreation area

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Figure 6: Photos of structures at the recreation area. Top row: the overlook shelter and vandalism. Bottom row: picnic shelters.

1.2. PURPOSE AND NEED FOR ACTION

The JCD overlook recreation area was established in 1953 as part of the original dam and reservoir project, with improvements constructed beginning in 1961. Currently, the 10-acre area consists of six covered picnic shelters, each containing a concrete picnic table and grill; a vault toilet; an overlook facility; a water tower (no longer in use); and an associated paved access road and parking area (see Figure 2 and Figure 4 for maps, and Figure 5 and Figure 6 for photos of the area).

Between August 2000 and October 2001, the Corps, in cooperation with the State of New Mexico, released the pool of water that had been held behind the JCD (see Section 4.5 for further information) (Corps 2000, 2001). Since that time, visitation to the overlook area has declined. The costs associated with operation and maintenance of the day use area have increased disproportionately with visitation. The cost of maintaining the aging structures and monitoring the area for vandalism has led the Corps to believe it is no longer viable or sustainable to maintain a recreation area at the Project. Additionally, the recreation facilities are not fully compliant with the Americans with Disabilities Act (ADA).

The Corps temporarily suspended recreation at the JCD overlook area on November 30, 2015, and the area has remained under temporary closure since then. The purpose of this Environmental Assessment (EA) is to evaluate the environmental impacts of the proposed transfer of management and facilities back to the Pueblo of Santa Ana and permanent closure of the recreation area.

1.3. PROJECT LOCATION

The recreation area is a 10-acre management compartment located within the Corps' Operations and Maintenance area, as described in the 1952 MOU, at the JCDR. Access is from U.S. highway 550 on the west side of Bernalillo via the Jemez Canyon Dam Road (Figure 3 and Figure 4).

2. REGULATORY COMPLIANCE

This Environmental Assessment was prepared by the U.S. Army Corps of Engineers, Albuquerque District, in compliance with all applicable federal statutes, regulations, and Executive Orders, including, but not limited to, the following:

- Americans with Disabilities Act (42 U.S.C. § 12101 *et seq.*)
- Archaeological Resources Protection Act (16 U.S.C. § 470aa *et seq.*)
- Bald and Golden Eagle Protection Act (16 U.S.C. § 668 *et seq.*)
- Clean Air Act (42 U.S.C. § 7401 *et seq.*)
- Clean Water Act (33 U.S.C. § 1251 *et seq.*)
- Endangered Species Act (16 U.S.C. § 1531 *et seq.*)
- Energy Independence and Security Act of 2007 (Pub. L. No. 110-140, Section 438; 121 Stat. 1492, 1620)
- Farmland Protection Policy Act (7 U.S.C. § 4201 *et seq.*)
- Federal Noxious Weed Act (7 U.S.C. § 2814)
- Plant Protection Act of 2000 (7 U.S.C. § 7701 *et seq.*)
- Fish and Wildlife Coordination Act (16 U.S.C. § 661 *et seq.*)
- Migratory Bird Treaty Act (16 U.S.C. § 703 *et seq.*)
- National Environmental Policy Act (42 U.S.C. § 4321 *et seq.*)
- National Historic Preservation Act (54 U.S.C. § 300101 *et seq.*)
- Native American Graves Protection and Repatriation Act (25 U.S.C. § 3001 *et seq.*)
- Occupational Safety and Health Act of 1970 (29 U.S.C. § 651 *et seq.*)
- CEQ Regulations for Implementing the Procedural Provisions of NEPA (40 C.F.R. § 1500 *et seq.*)
- U.S. Army Corps of Engineers' Procedures for Implementing NEPA (33 C.F.R. § 230; Engineer Reg. 200-2-2)
- Executive Order 11593, Protection and Enhancement of the Cultural Environment
- Executive Order 11988, Floodplain Management
- Executive Order 11990, Protection of Wetlands
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations
- Executive Order 13112, Invasive Species
- Executive Order 13751, Safeguarding the Nation from the Impacts of Invasive Species
- Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds
- Executive Order 13834, Efficient Federal Operations

This document and associated analyses have been coordinated with the Pueblo of Santa Ana.

3. DESCRIPTION OF ALTERNATIVES

Alternatives for transferring management of the area back to the Pueblo and disposal of the recreation facilities include:

3.1. ALTERNATIVE A (“NO ACTION” ALTERNATIVE): SUSPEND RECREATION, CORPS RETAINS MANAGEMENT

Under this alternative, the Corps would continue managing the recreation area. There would be no transfer of management or recreation facilities to the Pueblo. The recreation area would remain closed to the public for the foreseeable future. The recreation facilities would remain in place. Should operation of the recreation area become economically viable in the future, it could be reopened.

3.2. ALTERNATIVE B: RESUME RECREATION, CORPS RETAINS MANAGEMENT

Under this alternative, the Corps would continue to manage the recreation area and public recreation would resume. There would be no transfer of management or recreation facilities to the Pueblo. This alternative would require increased maintenance in the near- to long-term future to ensure visitor safety.

The Corps is considering this alternative because when the temporary closure of the recreation area was enacted, alternatives were not evaluated. Nevertheless, at this time, there are insufficient resources to reopen the area safely.

3.3. ALTERNATIVE C: TRANSFER OF MANAGEMENT AND RECREATION FACILITIES (PREFERRED ALTERNATIVE)

Under this alternative, management of the area would be transferred with donation of the existing recreation facilities “as is” to the Pueblo of Santa Ana. The recreation facilities would be transferred to the Pueblo through a real estate disposal action. Facilities would be transferred “as is” without repair or improvement. The Corps would no longer be responsible for operation and maintenance at the recreation area. Facilities that the Pueblo declines to take ownership of would be removed.

The recreation assets at the Corps’ JCD recreation area are all located on Pueblo lands. These assets are tracked in a Corps asset management database. The Pueblo has expressed interest in retaining the picnic shelters, vault toilet, and overlook. All other assets would be removed from Pueblo lands, including dilapidated garbage can holders, grills, and the old water tower. The asset management database would be updated to reflect these disposals.

3.4. ALTERNATIVE D: TRANSFER OF MANAGEMENT WITHOUT FACILITIES

Under this alternative, management of the area would be returned to the Pueblo without the recreation facilities. If the Pueblo has no interest in taking ownership of any of the recreation facilities, the Corps would demolish the structures to remove them as a potential safety hazard before transferring management to the Pueblo. This alternative was dropped from further consideration because the Pueblo would like to retain some of the recreation facilities and is not interested in having them all removed.

4. EXISTING ENVIRONMENT AND FORESEEABLE EFFECTS

4.1. PHYSICAL ENVIRONMENT

4.1.1. Climate and Climate Change

Climate of the Jemez River basin is characterized by hot summers with a large diurnal range in temperature. Winters vary from moderate in the lower basin to severe in the higher mountainous area. The spring and fall transition seasons are usually very short.

Mean annual precipitation in the Jemez River basin varies from 8.35 inches at JCD to more than 30 inches in the high mountainous regions of the basin. About one-third of the annual precipitation occurs during July and August as thunderstorms. Since the installation of the weather station at JCD in 1954, the maximum annual precipitation was 13.88 inches in 1987 and the minimum was 2.40 inches in 1956. The maximum recorded 24-hour rainfall was 2.75 inches on October 17, 1960.

During the winter months, snow is light over the lower basin and seldom stays on the ground more than a few days. The average annual snowfall is about 10 inches at JCD.

Climate change is expected to result in increased temperatures and decreased snowpack, as well as potentially more frequent severe storms. However, even if the frequency of large events were to increase, water would not be stored at JCDR without a new storage agreement.

None of the proposed alternatives would generate significant additional releases of greenhouse gases. If recreation resumes, there would be increased traffic to the recreation area, but it would be predominantly local traffic, with travel to the Jemez Overlook Recreation Area replacing travel to other local destinations. Therefore, there would not be any impact on climate, nor would any alternatives be at risk due to climate change.

4.1.2. Physiography, Geology, and Soils

The JCD is situated in a constricted canyon between the lava-capped Santa Ana Mesa and a separated portion of that mesa. The dam is located across a constriction of a canyon cut by the Jemez River about two miles above its confluence with the Rio Grande. The canyon is about 250 feet wide at stream level and 1,100 feet wide at the crest. The depth of the canyon is about 275 feet at the left abutment and 325 feet at the right abutment. Immediately upstream of the dam, the valley widens considerably.

The dam and spillway sites and reservoir area lie entirely within the extensive outcrop of the Santa Fe formation, a Miocene-Pliocene series of the Tertiary system. The formation is of lacustrine-fluvial origin and is composed principally of sand, silt, clay, gravel, and cobbles, which form sandstones, sandy clays, conglomeritic grits, and gravel in a heterogeneous sequence of lenticular beds that grade rapidly into each other, both laterally and vertically. In the reservoir, the Santa Fe formation has been deformed little except for minor faulting, and the sediments consist largely of sand, silt, clayey sand, and minor amounts of soft shales and sandstones. The reservoir area comprises a very sandy braided river channel and adjacent lowlands, all located generally along the foot of the mesa. The lava of mesa top is black basalt forming a layer about 60 feet thick.

The basic soil material of the area around JCDR is classified as Santa Fe Sandstone overlaid by extruded basalt in the form of lava flows from the Jemez Mountains. Soils of four major associations are found in the area, but only one soil association underlies the recreation area: the Apache-Silver-Rockland association. These soils occur primarily on the mesa tops and are formed in materials of volcanic origin on very old lava flows. In the recreation area, this association is represented by Apache soils, which typically are shallow and stony. The brown granular surface layers contain variable amounts of angular and semi-rounded fragments of basalt.

The no-action alternative and Alternative B, resuming recreation, would not disturb soils and would have no effect on soils or geology. Transfer of management back to the Pueblo, with or without improvements, would have no effect on geology. Any soil disturbance caused by removing unwanted facilities would be very minor and temporary.

There would be no significant impacts to the local physiography, geology, or soils from any of the alternatives.

4.1.3. Water Resources and Water Quality

The Rio Jemez originates in the Jemez Mountains and flows southeasterly for about 65 miles. It is perennial in the upper reach and ephemeral in the lower reach due to infiltration and irrigation diversions. The total area drained by the river is 1,038 square

miles, with 1,034 square miles above the dam. The terrain rises from an elevation of 5,120 feet at the dam to over 11,000 feet in the mountainous region of the headwaters. 60% of the flow occurs in April and May from the winter snowpack accumulation, while the greatest precipitation of 34% occurs as summer thunderstorms in July and August.

Four notable floods have occurred since the dam was completed in 1953 and the JCDR Project began operation:

- June 8, 1958: Elevation 5,213.36 feet (71,220 acre-feet); maximum inflow 3,350 cfs
- May 27, 1973: Elevation 5,189.30 feet (25,830 acre-feet); maximum inflow 2,000 cfs
- May 2, 1979: Elevation 5,186.72 feet (20,460 acre-feet); maximum inflow 1,282 cfs
- June 2, 1987: Elevation 5,220.30 feet (72,254 acre-feet); maximum inflow 1,242 cfs

Section 404 of the Clean Water Act (CWA) protects against impacts associated with discharges of dredged or fill material into waters of the U.S., including wetlands. The proposed action would not result in a discharge of dredged or fill material; therefore, no permit under Section 404 of the CWA is required. Because no permit for Section 404 of the CWA is required, neither is water quality certification under Section 401.

Section 402(p) of the CWA regulates point source discharges of pollutants into waters of the U.S. and specifies that storm-water discharges associated with construction activity be conducted under National Pollutant Discharge Elimination System (NPDES) guidance. Storm-water discharge associated with construction activities (clearing, grading, and excavation) requires a permit when these activities result in disturbance to one or more acres of land. The NPDES permit requirement would not apply to this project because ground-disturbing activities associated with removing any structures or improvements that the Pueblo does not wish to retain would be less than one acre. However, if at any time ground disturbance is equal to or greater than one acre, a Notice of Intent would be filed and a Storm Water Pollution Prevention Plan for the project would be developed and kept on file at the site in accordance with the 2022 Construction General Permit.

None of the proposed alternatives would have any impacts on water resources.

4.1.4. Floodplains and Wetlands

Executive Order 11990 (Protection of Wetlands) requires the avoidance, to the extent possible, of long- and short-term adverse impacts associated with the destruction, modification, or other disturbance of wetland habitats.

Wetlands are not present within the project area; therefore, E.O. 11990 does not apply to this project site.

Executive Order 11988 (Floodplain Management) provides federal guidance for activities within the floodplains of inland and coastal waters. Preservation of the natural values of floodplains is of critical importance to the nation and the State of New Mexico. Each federal agency is required “to ensure that its planning programs and budget request reflect consideration of flood hazards and floodplain management.”

None of the alternatives would affect the Rio Jemez floodplain. The proposed alternatives comply with E.O. 11988.

4.1.5. Hazardous, Toxic, and Radioactive Waste

The Corps Albuquerque District's Environmental Engineering section has reviewed the documentation pertaining to the permanent closure of the recreation area at JCD. The assets to be transferred via donation through real estate process to the Pueblo of Santa Ana are a vault toilet and concrete pad; octagonal overlook structure; and six covered picnic shelters, each containing a concrete picnic table. The dates of construction for these structures range from 1961 to 2006. The vault toilet was built in 2006, the overlook structure was built in 1961, and of the six picnic shelters: five were built in 1961 and one was built in 1971. The water tower that would be removed was built in 1982.

Under Alternatives A and B, there would be no transfer of assets. Should the Corps subsequently plan to remodel or demolish the structures, the Corps would conduct asbestos containing material (ACM) and lead based paint (LBP) investigations. If ACM or LBP are identified, removal and disposal would follow 40 C.F.R. § 61 and 40 C.F.R. § 745 for ACM and LBP, respectively.

Under Alternative C, the Corps would transfer the assets to the Pueblo of Santa Ana in “as is” condition. If the Pueblo of Santa Ana plans on remodeling or demolishing these structures, due to their age, the Corps recommends conducting ACM and LBP investigations. If ACM is identified, the removal and disposal should follow 40 C.F.R. § 61. LBP is present at Jemez in the poles supporting the picnic shade structures, and the overlook water tower (tank body and legs). The LBP is in good condition and does not present a hazard unless disturbed, heated, or made airborne. Maintenance completed where the painted structure is disturbed or made airborne through sanding, cutting, or hot work warrants worker protection. Removal of the LBP is required before work involving any hot work such as welding or torch cutting. Work practices and worker protection from airborne lead should be implemented in accordance with 29 C.F.R. § 1926.62 for hot work, cutting, or action that will release the LBP into the air. Procedures and equipment used to limit occupational exposure and environmental contamination with lead when the work is performed should be in accordance with 29 C.F.R. § 1926.62 or 40 C.F.R. § 745.

Prior to the transfer of the structures to the Pueblo of Santa Ana, the Corps would dispose of grills at the picnic shelters, posts that had previously served to secure trashcans, and metal roofing from the structures that are scattered throughout the site at a Construction and Demolition landfill. The water tank would be removed offsite. If an interested party can be identified, disposal of the water tank will be by donation. Otherwise, it would be removed to a Construction and Demolition landfill or scrap yard.

The following construction Best Management Practices (BMPs) would be in place to protect against hazardous, toxic, and radioactive waste:

- Any heavy equipment to be used while removing items would be inspected prior to being mobilized to the site to ensure that there are no leaks or drips. Any heavy equipment in disrepair would be removed from the site immediately.
- Storage, fueling, and lubrication of equipment and motor vehicles would be conducted in a manner that affords the maximum protection against spill and contamination of the environment.
- The management and storage of fuel, lubricants, and oil would be in accordance with all federal, state, regional, and local laws and regulations. All servicing and fueling of equipment would be conducted in a designated area. Emergency spill kits would be placed in the designated fueling area. Used lubricants and oil would be stored in marked corrosion-resistant containers and recycled or disposed off-site in accordance with federal, state, and local laws and regulations.

Due to implementation of the above BMPs, none of the alternatives would have environmental or public health impacts from hazardous or toxic substances.

4.1.6. Air Quality

The New Mexico Environment Department (NMED), Air Quality Bureau maintains an air quality monitoring station at Bernalillo (NMED 2020). Sandoval County is in attainment status for state and federal Ambient Air Quality Standards for criteria pollutants (particulate matter less than 10 microns, sulfur dioxide, nitrogen dioxide, carbon monoxide, ozone, and lead). Seasonally high winds are common and blowing dust may be a problem in the project area.

There are no Class I air quality areas (parks and wilderness areas that receive more stringent protection from air quality deterioration) near the project (NMED 2020).

Under Alternative A, the recreation area would remain closed. Vehicular traffic would be limited to Corps and Pueblo vehicles accessing the area for maintenance, and associated emissions of criteria pollutants would be very minimal.

Under Alternative B, public visitation would resume and vehicular traffic would return to levels that existed prior to the closure. Vehicular traffic would produce emissions, a minimal and long-term impact. **No significant impacts to air quality would occur.**

Under Alternative C, transferring management of the area and associated facilities to the Pueblo would result in vehicular traffic to the recreation area from Pueblo members visiting, but this visitation would be less than prior to the closure. This would not be a significant change from existing conditions.

Prior to transferring management and facilities to the Pueblo, the Corps would remove dilapidated items using vehicles and equipment. All vehicles would have required emission controls to minimize impacts to air quality.

Although seasonally high winds are common and blowing dust may be a problem in the project area, the minor extent of soil disturbance would not produce significant dust impacts. **These short-term impacts to air quality would be minimal. No permanent impacts to air quality would occur.**

4.2. NOISE

Noise levels are measured in A-weighted decibels (dBA). This unit uses a logarithmic scale to weigh sound frequencies. Table 1 shows typical noise levels and corresponding impressions.

Table 1: Typical Noise Levels and Impressions.

Source	Decibel Level	Subjective Impression
Normal breathing	10	Threshold of hearing
Soft whisper	30	---
Library	40	Quiet
Normal conversation	60	---
Television audio	70	Moderately loud
Ringing telephone	80	---
Snowmobile	100	Very loud
Shouting in ear	110	---
Thunder	120	Pain threshold

Ambient noise levels at the project site are typical of undeveloped, rural areas. The major noise sources include vehicles traveling to the area, natural sounds (wind, birds), and occasional people.

Under Alternative A, the area would remain closed and natural sounds would predominate.

Under Alternative B, visitation would resume, and there would be a **minor increase in noise**.

Alternative C would result in minor, temporary noise produced by equipment when old, unwanted items are removed. Over the long term, there would be a slight increase in traffic and human presence due to visitation by Pueblo members, and therefore, **there would be a minor increase in noise**.

4.3. BIOLOGICAL RESOURCES

4.3.1. Vegetation

Existing Environment

Jemez Canyon Reservoir is within the Plains-Mesa Sand Scrub biotic community as defined by Dick-Peddie (1993), and vegetation typical of this community dominates the entire area south of the reservoir. The following grasses and forbs occur in sparse to moderately dense stands throughout the area: black grama (*Bouteloua eriopoda*), New Mexico feathergrass (*Hesperostipa neomexicana*), western wheatgrass (*Elymus smithii*), galleta (*Pleuraphis jamesii*), sand dropseed (*Sporobolus cryptandrus*), and ring muhly (*Muhlenbergia torreyi*). Shrubs commonly found throughout the area include four-wing saltbush (*Atriplex canescens*), sand sagebrush (*Artemisia filifolia*), rabbitbrush (*Ericameria nauseosa*), bush penstemon (*Penstemon ambiguous*), and, occasionally, one-seed juniper (*Juniperus monosperma*).

The alternatives would have minor impacts to vegetation. The no-action alternative would result in no change in visitation and no impacts to vegetation. Alternative B would allow recreation to resume and visitors may trample vegetation that has grown up during the temporary closure. However, this would not be different from the pre-closure environmental baseline. Alternative C would result in minor disturbance to vegetation from the use of equipment to remove old, unwanted structures.

4.3.2. Fish and Wildlife

Existing Environment

Common wildlife species likely to utilize upland areas around the reservoir include Scaled and Gambel's Quail (*Callipepla squamata* and *C. gambelii*), Mourning Dove (*Zenaidura macroura*), coyote (*Canis latrans*), badger (*Taxidea taxus*), cottontail rabbit (*Sylvilagus audubonii*), jackrabbit (*Lepus californicus*), pronghorn (*Antilocapra americana*), ground squirrel (*Xerospermophilus spilosoma*), various songbirds, hawks, and, occasionally, mule deer (*Odocoileus hemionus*) and elk (*Cervus canadensis*). The sparse vegetation at the recreation area supports minimal wildlife and does not

constitute important habitat for any wildlife species. The access road crosses pronghorn habitat.

Alternative A would have no impact on wildlife, as the area would remain closed.

Alternatives B and C would have a minor impact on wildlife. Alternative B would allow public recreation to resume, and Alternative C would result in a lesser amount of visitation by Pueblo members. Although visitors may disturb wildlife, this would not be different from pre-closure environmental conditions. Alternative C would also result in minor, temporary disturbance to wildlife from the use of equipment to remove old, unwanted facilities and structures. Given that wildlife usage of the area is minimal, impacts would not be significant.

4.3.3. Invasive/Exotic Species

Existing Environment

The most notable invasive species at JCDR, tamarisk or saltcedar (*Tamarix sp.*), occurs in the reservoir and floodplain, not in uplands or the recreation area. The recreation area has minor populations of Russian thistle (*Salsola tragus*), kochia (*Bassia scoparia*), and other upland weeds. To prevent introduction or spread of invasive species, all equipment used in removing dilapidated items would be cleaned before entering and upon leaving the area.

None of the alternatives would have a significant impact on invasive species populations.

4.3.4. Special Status Species

Existing Environment

Federally listed threatened and endangered species that could occur in the project area have been reviewed. Habitat for the listed Rio Grande silvery minnow (*Hybognathus amarus*), Southwestern willow flycatcher (*Empidonax traillii extimus*) and Yellow-billed cuckoo, western distinct population segment (*Coccyzus americanus*) exists in the Middle Rio Grande. These are aquatic and riparian species. Habitat for these species does not exist in uplands at the recreation area.

Compliance activities have been conducted to ensure that requirements have been met for the Endangered Species Act of 1973, as amended (16 U.S.C. § 1531 *et seq.*). The lists of federal and state threatened or endangered species, species of concern, and rare plants that occur, or could potentially occur in Sandoval County, New Mexico, have been reviewed. No federal or state threatened or endangered species or critical habitat is known to occur in the proposed project area, nor is preferred habitat present in the project area. Due to the absence of suitable habitat in the work and staging areas and the limited scope of activity, **the proposed alternatives would have no effect on federal or state threatened or endangered species, candidate or proposed species, or their habitats.**

4.4. CULTURAL RESOURCES

Existing Environment

The area of potential effect (APE) for this project includes the recreation area proper with all its attendant constructed facilities, and the road to the recreation area to the west of the intersection with the road leading to the Corps Project Office (Figure 1). The footprint of the recreation area management compartment is larger, but because the land already belongs to the Pueblo of Santa Ana and ceding control over the area changes nothing regarding original ownership, the only real potential for adverse effect as a result of the transfer lies within the recreation area itself and its associated buildings, and the road leading to the recreation area, should it be permanently closed. Constructed in 1961, the recreation area includes an octagonal, open-sided concrete slab structure with benches on the interior that overlooks the valley below the mesa, six day-use picnic areas measuring approximately 12 feet by 24 feet, and a more recent vault toilet installed in 2006.

A pre-field online records check of the New Mexico Office of Cultural Affairs, Historic Preservation Division, New Mexico Cultural Resource Information System was conducted on June 8, 2020. At the time of this records check, there was no previous cultural resource survey and no known archaeological sites or historic properties within the boundaries of the proposed management transfer. In 2011, Statistical Research, Inc. (SRI) conducted a comprehensive, Class III cultural resource inventory of the maximum flood pool of the reservoir (2,050 acres). This survey resulted in the documentation of 100 sites, 80 new and 20 revisited. The mesa top location of the recreation area was not included in this survey, and none of the sites documented by SRI fall into the APE of the management transfer.

Without the proposed project, any historic properties within the proposed project's APE would be expected to remain in their approximate current condition, or to continue to degrade slowly over time should the recreation area remain closed to the public. **The**

no-action alternative and Alternative B would result in no historic properties affected.

Alternative C:

The transfer of ownership or control of land by the federal government is considered an adverse effect to historic properties if it is conducted without adequate conditions or restrictions regarding the preservation, maintenance, or use of historic properties. Since the recreation area has not been surveyed for cultural resources in the past, it was necessary to inventory the area to determine whether any cultural resources or historic properties could be adversely affected by the recreation area management transfer.

On June 10, 2020, a Corps archaeologist visited the JCD recreation area. A 100% coverage survey was conducted along 15-meter transects throughout the recreation area and along the road between the recreation area and the Corps Project Office. Nineteen isolated occurrences were documented during the course of this survey, consisting of recent petroglyphs and pictographs, prehistoric lithic toolmaking debris, including seven flakes and one core, and recent metal refuse including cans and lids. The purpose of the survey was also to determine whether any of the structures at the recreation area, most of which were built in 1961, would be considered eligible to the National Register of Historic Places (NRHP). The survey found that none of the structures, which include the octagonal overlook and six day-use picnic area sites, as well as a comfort station toilet installed in 2006, meet the criteria for inclusion on the NRHP. Therefore, it is the Corps' determination that **the transfer of recreational facilities out of federal control will result in no historic properties affected.**

In order to comply with Section 106 of the National Historic Preservation Act (NHPA), federal agencies must consult on the effects of their undertakings on historic properties with the State Historic Preservation Officer (SHPO), Native American Tribes, other stakeholders, and the public. In the case of undertakings on tribal lands of Tribes that have assumed the role of the SHPO pursuant to Section 302702 of the NHPA, the Tribal Historic Preservation Officer (THPO) for that Tribe will be consulted. The cultural resources survey was conducted on lands owned exclusively by the Pueblo of Santa Ana, which has a designated THPO. The Pueblo of Santa Ana THPO was sent a report detailing the results of the survey on September 10, 2020. Further consultation was conducted with the THPO during the month of November 2021. The Santa Ana THPO concurred on November 10, 2021, with the determination that the project would result in no historic properties affected.

4.5. RECREATION

Existing Environment

Historic recreational use was relatively high when there was water in the reservoir. Shortly after the dam was closed, spring snowmelt runoff in May-June 1958 filled the reservoir. The peak elevation reached 5,213.36 feet (71,220 acre-feet of storage) on June 8, 1958 (Figure 7). Corps photos show visitors and cars lined up along the water (Figure 8).

In the spring of 1979, a sediment retention pool of about 2,000 acre-feet was established at JCDR by the New Mexico Interstate Stream Commission (NMISC). The objective was to decrease aggradation in the Rio Grande channel and thereby maintain or improve channel conveyance for Rio Grande Compact deliveries. The sediment retention pool was increased to 3,000 acre-ft in October 1984. In January 1986, the Corps and NMISC signed an MOU to maintain this pool through December 31, 2000. When this storage MOU was scheduled to expire on December 31, 2000, the NMISC decided not to extend the agreement, citing significantly increased demands on available water in the region, its increasing cost, and the need for increased sediment loading to the currently degrading Rio Grande channel. Although additional water was briefly stored under a Conservation Water Agreement, this storage ended in October 2001. Since that time, the JCD has operated as a dry flood-control reservoir.

As the reservoir is now dry, the area is less attractive to visitors. At the same time, the age of the structures and the need for renovations to accommodate ADA accessibility make operation and maintenance of the area increasingly expensive.

Under the no-action alternative, the JCD recreation area would remain closed to the public. The Corps would retain the facilities and management of the recreation area. In the future, if conditions and the availability of resources change, it may be possible to reopen the area.

Under the Alternative B, the public would continue to have access to the JCD recreation area. This would have a minor beneficial effect on public recreation. Although expenses are expected to increase, the Corps would continue to maintain the area and would attempt to control vandalism. Also, the access road has experienced deterioration and increased maintenance would be required to ensure visitor safety. ADA compliance, if required, would be a significant expense.

Under Alternative C (transferring the recreation area to the Pueblo) there would be an adverse impact to public recreation that would continue indefinitely into the future. Given that visitation had been low since the reservoir was drained, this is considered a minor impact. Pueblo members would be able to continue using the area. The Pueblo would manage the area and would be responsible for decisions and management related to future recreation.

Historical photos of the Jemez Canyon Dam Project and the Overlook Recreation Area



Figure 7: Jemez Canyon Reservoir filled with snowmelt runoff in May 1958. The overlook recreation area is on the left.



Figure 8: Visitors and their cars lined up at the water's edge in May 1958.

Jemez Canyon Reservoir, New Mexico. Picture by L. E. Reynolds,
24 September 1969

A group of 54 students from Cuba High School on the bridge to
intake tower after a tour.



Figure 9: A group of students from Cuba High School at the dam in 1969.

Jemez Canyon Reservoir, New Mexico, picture taken by L. E.
Reynolds, 4 October 1968.

Group of 90 students from Del Norte High School.



Figure 10: Students from Del Norte High School arriving at the overlook in October 1968.

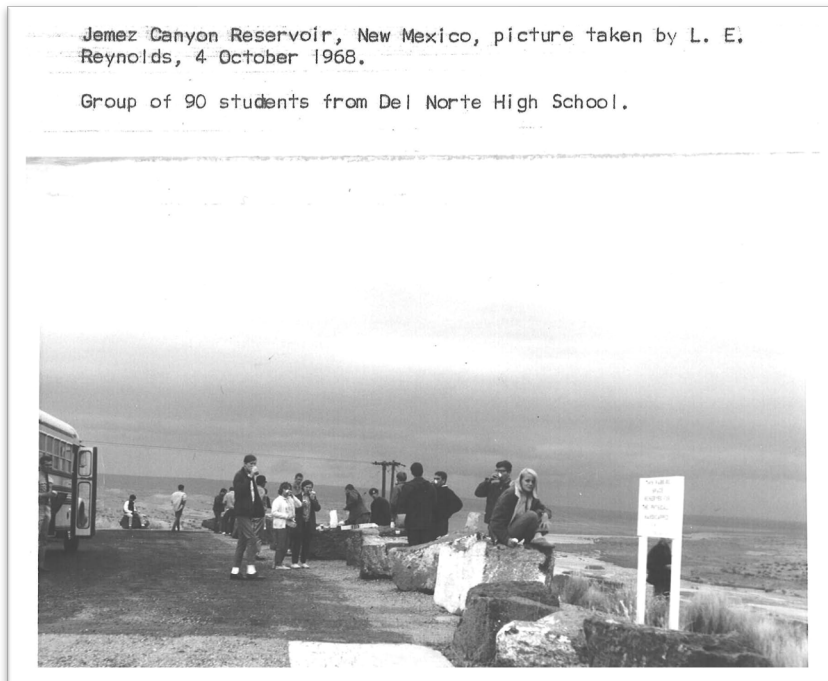


Figure 11: Students from Del Norte High School enjoy the view at the overlook in October 1968.

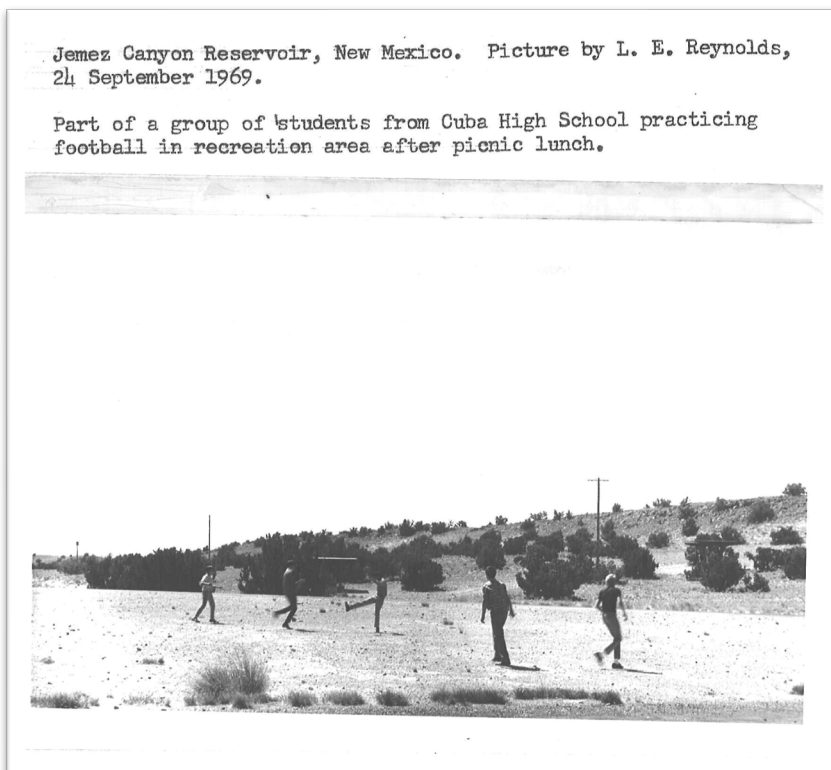


Figure 12: Students playing football after a picnic lunch at the overlook in September 1969.

4.6. SOCIOECONOMIC CONSIDERATIONS

4.6.1. Socioeconomics

Sandoval County has an estimated population of 140,769 (U.S. Census Bureau, 2020). Approximately 14.3% of the population live at or below the poverty line, and in July of 2020, the unemployment rate was 13.9% (New Mexico Department of Workforce Solutions, 2020). Demographic and socioeconomic information for Sandoval County and Santa Ana Pueblo are reported in Table 2 and Table 3.

Table 2: 2018 American Community Survey 5-Year Estimates of Race (US Census Bureau, 2020a, b, c).

	Sandoval County		Santa Ana Pueblo	
Race and Ethnicity	Number of People	% of Population	Number of People	% of Population
Total	140,769		602	
White alone		71.3% %		3.5%
Black or African American alone		2.2%		0.0%
American Indian and Alaska Native		12.5%		94.7%
Asian alone		1.4%		0.2%
Native Hawaiian and Other Pacific Islander alone		0.2%		0.7%
Some other race alone		8.4%		0.7%
Two or more races		3.9%		0.3%
Hispanic or Latino (regardless of race)		38.4%		5.6%

Table 3: Median household income and poverty status of Sandoval County and Santa Ana Pueblo residents (US Census Bureau, 2020a, b)

	Sandoval County	Santa Ana Pueblo
Median household income (in 2018 dollars), 2014-2018	\$59,420	\$43,000
Education: High school graduate or higher, percent	89.7%	88.4%
Disabled population, percent	13.2%	12.6%
Employment rate	54.4%	47.3%
Unemployment rate	13.9%	18.4%
Persons in poverty, percent	14.3%	19.6%

Most Sandoval County residents are employed in the “education, health care, and social assistance; arts, entertainment, recreation, and accommodation and food services” sector; retail trade; and professional, scientific, and management and administrative services (US Census Bureau 2020c). Employment within the Pueblo is similar to the county’s, with “arts, entertainment, recreation, and accommodation and food services” being the primary employment sector, followed by education, health care and social assistance; or public administration (US Census Bureau 2020c).

None of the alternatives would have socioeconomic impacts. The JCDR recreation area does not attract visitors from other regions and does not generate significant economic return.

4.6.2. Environmental Justice and Protection of Children

The goal of environmental justice is to ensure that all Americans are afforded the same degree of protection from environmental and health hazards and have equal access to the decision-making process to maintain a healthy environment in which to live, learn, and work. Executive Order 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations) directs federal agencies to make environmental justice part of their mission to the greatest extent practicable and permitted by law.

Executive Order 13045 (Protection of Children from Environmental Health Risks and Safety Risks) recognizes a growing body of scientific knowledge that demonstrates that children may suffer disproportionately from environmental health risks and safety risks. These risks arise because children’s bodily systems are not fully developed; because children eat, drink, and breathe more in proportion to their body weight; and because their behavior patterns may make them more susceptible to accidents. Based on these factors, E.O. 13045 directs each federal agency to make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children. E.O. 13045 also directs each federal agency to ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks.

None of the proposed alternatives would disproportionately affect children’s safety or environmental health risks to children or adults, including minority or low-income residents.

5. RECOMMENDED ALTERNATIVE

The Corps proposes to implement Alternative C, transferring management of the recreation area and donating the recreation facilities to the Pueblo of Santa Ana. Facilities that are dilapidated or in poor condition would be removed prior to transfer of management and donation of facilities. The Pueblo would assume responsibility for maintenance and management of the area.

5.1. SUMMARY OF ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION

Table 4: Summary of Findings and Impacts to Resources.		
Resources	Alternative C - (Preferred Alternative)	No-Action Alternative
Physical Landscape		
<i>Climate and Climate Change</i>	No Impacts	No Impacts
<i>Physiography, Geology, and Soils</i>	No Impacts	No Impacts
<i>Water Resources and Water Quality</i>	No Impacts	No Impacts
<i>Floodplains and Wetlands</i>	No Impacts	No Impacts
<i>HTRW</i>	No Impacts	No Impacts
Air Quality	Minor Impacts	No Impacts
Noise	Minor Impacts	No Impacts
Biological Resources		
<i>Vegetation</i>	Minor Impacts	No Impacts
<i>Fish and Wildlife</i>	Minor Impacts	No Impacts
<i>Invasive/Exotic Species</i>	No Impacts	No Impacts
<i>Special Status Species</i>	No Effect	No Effect
Cultural Resources	No Effect	No Effect
Recreation	Minor Impacts	No Impacts
Socioeconomic Considerations		
<i>Socioeconomics</i>	No Impacts	No Impacts
<i>Environmental Justice and Protection of Children</i>	No Impacts	No Impacts

6. CONSULTATION AND COORDINATION

Coordination with the public and federal, tribal, and state agencies is ongoing. Agencies and entities contacted formally or informally in preparation of this Environmental Assessment (EA) include:

- Pueblo of Santa Ana
- U.S. Fish and Wildlife Service, New Mexico Ecological Services Field Office, Albuquerque, NM
- U.S. Environmental Protection Agency

6.1. PUBLIC REVIEW

The public was provided a 30-day review period of the DEA from January 20, 2022, until February 19, 2022. Letters inviting review of the DEA were sent to tribes with interest in Sandoval County, NM and Sandoval and Bernalillo County Commissioners. The DEA was posted on the Corps Albuquerque District website. A Notice of Availability of the DEA was published in the Albuquerque Journal on January 20, 2022. Availability of the DEA was also posted on the Albuquerque District Facebook page. In response to these outreach efforts, Corps received a comment from the U.S. Environmental Protection Agency and no comments from the general public.

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6.3. COMMENTS AND RESPONSES

The U.S. Environmental Protection Agency commented that the 2017 Construction General Permit has been updated, and the current permit is dated 2022. The EA was corrected to reference the 2022 Construction General Permit. No other comments were received.

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