

APPENDIX G:

Letter to State Historic Preservation Officer Initiating Consultation



United States Department of the Interior



BUREAU OF LAND MANAGEMENT

Needles Field Office

1303 S. Highway 95

Needles, CA 92363

www.blm.gov/office/needles-field-office

In Reply Refer To:

1780(P)/2800 CAD090

CA-D090-2025-0018-EA

Julianne Polanco
State Historic Preservation Officer
Office of Historic Preservation
1725 23rd Street, Suite 100
Sacramento, CA 95816

Dear Ms. Polanco:

The Bureau of Land Management (BLM), Needles Field Office (NFO) received an application from Fenner Gap Mutual Water Company (FGMWC) requesting a Right-of-Way (ROW) for the Northern Pipeline, converting use from the existing BLM ROW grant under Section 28 of the Mineral Leasing Act of 1920 ("MLA ROW Grant") for transporting natural gas to a ROW under the Federal Land Policy and Management Act (FLPMA) authorizing use of the pipeline for water conveyance across federal lands. The conversion of the ROW would require several upgrades and appurtenant facilities, as reflected in the application and described below. The BLM NFO has determined that authorization of the ROW conversion meets the definition of a Federal undertaking subject to review under Section 106 of the National Historic Preservation Act (NHPA) (54 U.S.C. § 306108) and the implementing regulations at 36 CFR Part 800. The purpose of this correspondence is to notify you about the Project and to initiate formal consultation consistent with Stipulation 8.1(D) of the Statewide Protocol Agreement.¹ Additionally, this letter serves to notify you of the BLM's intention to follow the steps of the Section 106 process in the regulations and to request your review and comment on the delineation of the Area of Potential Effect (APE) for the undertaking within 30 days of receipt of this letter.

The BLM is preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA), 42 U.S.C. § 4321 *et seq.*, to analyze the environmental impacts of the application to convert the MLA ROW and determine whether the proposal has the potential to

¹ *State Protocol Agreement Among the California State Director of the Bureau of Land Management and the California State Historic Preservation Officer, and the Nevada State Historic Preservation Officer, Regarding the Manner in Which the Bureau of Land Management will meet its Responsibilities Under the National Historic Preservation Act and the National Programmatic Agreement Among the BLM, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers (2014).*

significantly affect the quality of the human environment. The BLM will concurrently analyze the potential for this undertaking to affect historic properties as required by Section 106 of the NHPA.

In addition to lands administered by the BLM, the pipeline also transects private, state lands, and other federal lands administered by Edwards Airforce Base (EAFB). The BLM has, through cooperative agreement, been designated the lead federal agency responsible for fulfilling the collective obligations of involved federal agencies for compliance with Section 106 of the NHPA pursuant to 36 CFR 800.2(a)(2).

Undertaking

The Northern Pipeline—an extant steel pipeline 30 inches in diameter buried at an average depth of 5 to 6 feet (ft)—is the subject of an existing MLA ROW Grant. The 217-mile underground pipeline traverses portions of the Mojave Desert and Antelope Valley from Cadiz, California to Wheeler Ridge, California; often proximal to an active railroad easement and existing travel routes, including ungraded native surface, dirt roads, and paved highways. The existing Northern Pipeline ROW transects the administrative boundaries of three BLM field office territories: Needles Field Office, Barstow Field Office, and the Bakersfield Field Office. However, the portion of the current ROW proposed for conversion from natural gas to water conveyance does not include Bakersfield Field office lands and lies entirely within the BLM's California Desert District.

FGMWC is seeking to convert a portion of the Northern Pipeline for use as a water pipeline in support of a separate, previously approved long-term groundwater management program for the closed groundwater basin underlying Cadiz Real Estate property in San Bernardino County. Of the 217-mile Northern Pipeline, only the approximately 162 miles spanning from Cadiz to Mojave would be converted to convey water. The remaining 56 miles of the pipeline that continues to Wheeler Ridge would not be part of the conversion (see *Enclosures 1 and 2* for Project location map figure and legal location descriptions for the undertaking, respectively). The conversion from carrying natural gas to carrying water requires approval from the BLM to issue a new ROW grant under FLPMA and terminate the MLA ROW Grant for those 162 miles.

To upgrade a portion of the Northern Pipeline to transport water, it will require repairs, installation of appurtenances (e.g. air and vacuum relief valves, blow-off facilities, and access manholes), and construction of pump stations. These activities are directly related to the ROW conversion and are considered part of the federal undertaking. Most of these activities will occur within the ROW and within previously disturbed areas. The main exception is the construction of up to seven (7) pump stations along the route, each occupying a space of up to 2 acres, for a total of 14 acres of new ground disturbance. Additionally, the conversion of the pipeline will require overland access routes or short, shallowly graded roads for access, constituting less than 25 acres of new ground disturbance. Most appurtenances and any pipeline repairs will be installed within the 4 ft wide by 8 ft deep trench that was excavated for the original pipeline installation in 1985. Some areas will require excavation of infiltration ponds within the ROW. The surface in these areas is generally previously disturbed, but these ponds will be excavated up to 10 ft and potentially constitute up to 20 acres of new ground disturbance. Overall, the associated activities are anticipated to include less than 60 acres of new ground disturbance along the 162-mile length of the pipeline. (see *Enclosure 3* for a detailed description of the undertaking).

Area of Potential Effects

This APE consists primarily of the 50 ft. wide pipeline ROW across BLM land, Edwards Airforce Base (EAFB) land, as well as State and private lands. Additionally, the APE includes locations that may be subject to ground disturbing activities involved in the pipeline conversion, such as the construction of appurtenant facilities or access routes. The pipeline would require rehabilitation and upgrades, including 16 miles of pipeline replacement, construction of up to seven pump stations, and installation of air valves and/or blow-off valves at approximately half-mile intervals along the pipeline route.

The overall APE constitutes approximately 2,028 acres distributed over 162 miles across San Bernardino and Kern counties. This includes approximately 65 miles of ROW across BLM lands that, when combined with the access road and lateral access routes, the construction areas for the pump station facilities and appurtenances, total 862 acres of BLM land. The 18 miles of ROW across EAFB amounts to 197 acres. The APE also crosses 1.2 miles of land administered by the California State Lands Commission. Finally, the APE includes the 78 miles of ROW across non-federal land and the access roads and lateral access routes, the construction areas for the pump station facilities, and construction areas for the appurtenances, totaling 952.4 acres.

As part of the approval of the assignment of the MLA ROW in 2023, the BLM indicated that the conversion of the Northern Pipeline to transport water would require consideration of the impacts to environmental and historic resources associated with the extraction of water. However, the BLM has reassessed that previous position and determined that the scope of analysis of the reasonably foreseeable effects of the proposed Project appropriately excludes consideration of the extraction of groundwater that FGMWC may transport through the existing pipeline. In particular, the BLM has determined that FGMWC's groundwater extraction is beyond the BLM's jurisdiction. In other words, the BLM has no ability to control or regulate the groundwater extraction and therefore no ability to impose conditions to address potential impacts to historic properties under Section 106 of the NHPA.

Even though the conversion of the existing pipeline would authorize a new use, i.e., the transport of water, the water source for the pipeline would be from groundwater extraction on private lands, which is a permitted overlying rights use regulated by California state law. In this case, the Project proponent has already received permits from San Bernardino County to utilize these rights for commercial purposes, which includes a Groundwater Management, Monitoring, and Mitigation Plan. As part of the permit approval process, San Bernardino County analyzed and documented the effects of the Project proponent groundwater pumping action consistent with California's state environmental review process (CEQA). Consequently, the BLM has reasonably determined that the impacts of groundwater withdrawal associated with the Project proponent's groundwater extraction project are outside the scope of analysis for this undertaking and such analysis is unnecessary for the BLM to make a reasoned decision on the issuance of a FLPMA ROW for the existing pipeline (see *Enclosures 4 and 5* for a detailed discussion on BLM's delineation of the APE and a Google Earth KMZ File depicting same, respectively).

Tribal Consultation

Section 106 of the NHPA requires the BLM to consult with Indian Tribes that attach religious or cultural significance to historic properties that may be affected by an undertaking. Eleven federally recognized Indian Tribes meeting these criteria have been identified, including: Colorado River Indian Tribes (CRIT), Chemehuevi Indian Tribe, Morongo Band of Mission Indians, Tejon Indian Tribe, Fort Independence Paiute Tribe, Fort Mojave Indian Tribe, Yuhaaviatam of San Manuel Nation, Timbisha Shoshone Tribe, 29 Palms Band of Mission Indians, Agua Caliente Band of Cahuilla Indians, and Soboba Band of Luiseno Indians. In addition to federally recognized Indian Tribes, the BLM notified and invited Kern Valley Indian Community, a non-federally recognized Tribal community or organization, to participate in consultation.

The BLM initiated consultation with the Tribal groups on August 18, 2025. As a result of this initial round of consultation, several Tribes have expressed an interest in continuing consultation for the Project and providing Tribal monitors for survey and construction work. The BLM is aware of and continues to evaluate Tribal concerns regarding the APE, specifically what plans the BLM has to “*..., conduct intensive environmental studies of the potential impacts associated with the transport of water, including the FGMWC extraction of water from the underground aquifer, to the surrounding federal lands,*” mentioning “*..., Mojave National Preserve and Mojave Trails National Monument, and other specially designated lands with fragile ecosystems,*” and cited the BLM’s December 2023 letter to Tribes among others regarding this issue “*..., the BLM would not issue a Title V right-of-way or otherwise allow for non-MLA uses without fully analyzing the environmental and historic resource impacts associated with a new use, e.g., the transport of water, consistent with..., Section 106 of the National Historic Preservation Act.*” Furthermore, one Tribe expressed concern that “*...the APE does not include the source of water...*” and contending that “*...the ancient artesian waters for [the Tribe] are a gift from our creator and removing that gift is a desecration of our sacred spiritual places.*” Finally, a Tribe expressed concern for “*...the project impacting ‘Salt Song Trail’ where [Tribes] still practice today,*” representing “*...Traditional Ecological Knowledge of the ‘Cry Landscape Song’*” commemorating a Tribal member’s passing. Tribal consultation remains ongoing, and the BLM anticipates continued Tribal engagement.

Again, the purpose of this correspondence is to notify you about the Project, initiate formal consultation pursuant to the Section 106 regulations, and request your review and comment on the delineation of the APE. The BLM’s ongoing efforts for the present undertaking include Class III inventory and consultation with identified Indian tribes. The BLM will continue formal consultation with the SHPO and other consulting parties on the results of identification efforts, Determinations of Eligibility for identified resources, and Finding of Effect at a later date.

We appreciate your attention to our request and look forward to consulting on the proposed undertaking. If we can provide any information or address any questions regarding the undertaking, please contact Michael Holt, BLM Project Manager/Support Archaeologist at (931) 426-8672 or mholt@blm.gov, or John Fogerty, BLM Deputy Preservation Officer at (916) 978-4306 or jfogerty@blm.gov. We look forward to your response.

Sincerely,
**RONALD
NUCKLES**
Ronald O. Nuckles
Field Manager

 Digitally signed by RONALD
NUCKLES
Date: 2025.11.20 11:56:32 -07'00'

Cc: Brendon Greenaway, CA SHPO Senior State Archaeologist, Section 106 Review and Compliance
Joseph R. Stout, CA BLM State Director
Brandon G. Anderson, BLM CA Desert District Manager
Elizabeth A. Meyer-Shields, CA BLM Deputy State Director
Jeremiah M. Karuzas, CA BLM Deputy State Director
John A. Fogerty, CA BLM Deputy Preservation Officer
Michael J. Holt, Central CA District Office Project Manager

Enclosures (5):

- 1 Project Location and APE Maps
- 2 Combined Legal Descriptions and USGS Quadrangles
- 3 Project Description Memorandum
- 4 Area of Potential Effects Memorandum
- 5 Northern Pipeline Area of Potential Effects Google Earth KMZ File

ENCLOSURE 1: UPDATED Area of Potential Effects Memorandum

Note that the following Area of Potential Effects Memorandum included the following specific updates to account for relatively minor adjustments and correct minor mapping errors:

- Within the *Right-of-Way Conversion* section, the mileage within EAFB has changed from 17 miles to 18 miles, to correct for a mileage rounding discrepancy.
- The identification of Marine Corps Logistics Base Barstow (MCLBB) has been removed as an overlying landowner, has been removed. BLM has determined that a parcel originally thought to be as owned/administered by MCLBB is a BLM parcel.
- The mileage of state of California lands has been changed from 1.2 miles to 1.1 miles. BLM has determined that a small segment of a parcel originally listed as being state lands is not crossed by the easement.
- The total acreage of the APE involving BLM land is changed from 940 acres to 983 acres. The original 940 acres was included in error.
- Within the *Pipeline Replacement* section the miles of land within BLM is changed from 12.5 miles to 11 miles. As design has advanced, the pipeline replacement locations have been refined: 11 miles on BLM land and 5 miles on private lands.
- Within the *Summary* section, the number of miles on privately held land is changed from 76 to 78 miles. The 76 miles within the summary was an error.

Area of Potential Effects

As the ROW conversion is considered an undertaking under Section 106, the Project must have a defined area of potential effects (APE). This APE primarily consists of the pipeline ROW across BLM land, Edwards Airforce Base (EAFB) land, state and private land. Additionally, the APE includes locations potentially subject to ground disturbing activities involved in the conversion, such as the construction of appurtenant facilities or access routes. The pipeline would require rehabilitation and upgrades including 16 miles of pipeline replacement, construction of up to seven pump stations, and installation of air valves and/or blow-off valves at approximately half-mile intervals along the pipeline route.

Right-of-Way Conversion

The ROW for the Northern Pipeline consists of a 25-ft buffer on either side of the pipeline centerline and to the depth of the pipeline along its route across federally managed lands. This ROW extends approximately 65 miles across BLM property and 18 miles across EAFB property. In many locations this ROW lies adjacent to or between other pipeline ROWs. While the ROW conversion does not include any portions of the pipeline outside of federally managed land, as a connected corridor, the APE is extended to include the route of the pipeline across non-federal land, including both ROWs and private property possessed by FGMWC or its affiliates. The horizontal APE for the ROW conversion extends approximately 162 miles, including 65 miles across BLM property, 18 miles across EAFB property, and 1.1 mile across State of California property, with the remaining 78 miles on privately held land. This ROW is generally 50 ft in width and, separate from other areas of the APE, combines to approximately 983 acres. The APE also includes access roads that comprise an additional 1,045 acres, bringing the total APE acreage to 2,028 acres. The BLM has included the pipeline access roads in the ROW application to account for operations and maintenance activities and this is continued on non-federal land. At times these roads are within the existing 50-ft ROW and other times they diverge and constitute a separate 20-ft

corridor. The vertical APE for the ROW conversion does not extend above the ground surface and extends no more than 10 ft below the ground to the maximum depth of the base for the existing pipeline.

Initial Inspection

To prepare the Northern Pipeline for water conveyance, a thorough inspection would be required to detect whether portions of the underground pipeline are in need of repair or rehabilitation. To complete the inspection, inspection points would be established approximately every 20-30 miles. The pipeline would access these points from the surface with an excavator. The inspectors will cut into the pipe and install cameras and other inspection equipment inside the pipeline to assess condition and integrity. If damage is identified, rehabilitation may consist of lining the pipeline, repairing sections of the pipeline, or replacing sections of the pipeline, as required. Each temporary access point would include an area of disturbance approximately 6 feet by 15 feet along the pipeline alignment, within the existing easement. After the inspection and completion of the identified necessary pipeline improvements, the pipeline would be re-buried, and the ground surface would be returned to existing grade. All the work, including equipment staging, would be conducted within the 50-foot-wide right-of-way currently held by FGMWC and within soils previously disturbed by the original pipeline installation.

The APE for this portion of the undertaking would not extend farther than that of the ROW conversion. It would take place within the ROW and would only extend approximately 6 ft to access the pipeline.

Pipeline Replacement

Based on the most recent assessments of the condition of the Northern Pipeline, it is anticipated that up to approximately 16 miles of pipeline may require replacement. This includes approximately 11 miles of BLM land and approximately 5 miles of non-federal land. To install new pipeline segments, construction crews would excavate up to 10 ft below the ground surface exposing the damaged pipeline segments and then those segments would be cut into manageable pieces and removed by truck. Alternatively, the damaged pipeline segments may be left in place, with the new pipeline installed side-by-side in the excavated trench. Excavated material would be stockpiled onsite, while the new pipeline segments are delivered to the sites via the existing access road and installed within the open trench. The pipe trench would be backfilled with the stockpiled material and graded to match the surrounding topography. All pipeline replacement work is anticipated to be conducted within the 50 ft ROW.

Construction of Pump Stations

The construction of the seven pump stations supporting the pipeline would involve approximately two acres of land each, within 300 ft. of the existing pipeline. The activities at the pump stations would include grading to construct a masonry block building housing the controls and instrumentation and to install a forebay tank, surge tanks, six vertical turbine pumps or horizontal pumps, natural gas generators, and electrical transformers. In addition, there would be a new natural gas pipeline connecting each pump station with an existing pipeline, of no more than 1,000 ft in length. Construction will include site preparation, mechanical, structural and electrical facilities, installation of underground pipelines to connect to the existing buried pipeline, and installation of reinforced concrete support pads for pumps, valves, tanks, and other infrastructure. Each pump station site will be paved with concrete surface, fence or wall will be constructed around the perimeter with access gates. The natural gas-powered generators would be installed on pads within the pump station fenceline.

The horizontal APE at these locations would include the adjacent 50-ft wide pipeline ROW and any access road, the 2-acre pump station area and a 25 ft buffer, any space between the pumpstation area and the ROW, and a 50 by 50 ft area on one side of the pump station area to accommodate any necessary natural gas connection. The vertical APE would extend up to 15 ft above the ground surface to accommodate the new structures and up to 10 ft below the ground surface to accommodate the installation of concrete support pads and the connection to the existing pipeline.

Installation of Air Release/Air Vacuum Valves and Blow Off Valves

To convey water, the pipeline requires new appurtenances on the surface, including air and vacuum relief valves (AR/AVs), blow-off facilities (BOs), and access manholes. In total, there will be up to 140 AR/AVs and up to 140 new BOs, often in the same locations. To install these appurtenances, excavation would be required to access the existing buried pipeline. All of the work would be conducted within the 50-foot-wide right-of-way currently held by FGMWC. The area of excavation is estimated to be 20 ft long by 10 ft wide at each location to the maximum depth of the pipeline. The surface area typically needed for an AR/AV assembly is approximately 36 to 50 square ft, and 16 to 25 square ft for a BO unit. The AR/AV assembly would be mounted at grade in a 24-inch diameter enclosure that is approximately 4 ft tall. AR/AVs can also be installed belowground in precast vaults with a 3 to 4-inch vent pipe extending approximately 36 inches above grade, which can be painted to blend with surrounding environment. The BO unit can be an aboveground riser pipe with a cap, or an underground camouflaged unit. Each BO would be equipped with an infiltration area sufficient to disperse the water released from the pipeline during infrequent maintenance or malfunction. A subsurface infiltration gallery would be constructed within the ROW that would vary in size but generally be less than 250 by 24 feet in size (or approximately 6,000 sf). The area would be excavated three to five feet and a perforated pipeline gallery would be installed. The soil would be backfilled, and the site graded to its original contour. The appurtenance construction locations would be connected to existing access roads or other established road by a short lateral access route, consisting either of a graded dirt road or an established overland travel route.

To accommodate the construction and installation activities, an area will be established surrounding each estimated appurtenance location that measures at least 100 ft along the pipeline on either side of the location and the breadth of the 50-ft ROW plus an additional 30 ft on either side. Additionally, APE will extend 100 ft on either side for any need access route, from the existing road to the pipeline. This area allows for variation in the installation location of the appurtenance and any access route, as well as for avoidance of any identified cultural resources within the planned construction area. The vertical portion of the APE in these locations would extend 4 ft above the ground surface to include the height of the AR/AVs and would extend up to 10 ft below the ground surface to include the excavation to the base of the pipeline and the depth of excavation for the BO holding ponds. The APE would extend only 2 ft vertically below the ground to accommodate locations where a new road would need to be graded rather than just an overland travel route.

Groundwater Extraction

As the federal lead agency, BLM has identified the undertaking as the potential authorization of a ROW and easement permitting conversion of an existing pipeline for the transportation of water and defined the

ENCLOSURE 1: UPDATED Area of Potential Effects Memorandum

APE as the ROW and easements along with additional areas of potential ground disturbance or maintenance activities. The undertaking does not include the extraction of groundwater that may be conveyed in the pipeline since this extraction can occur regardless of whether the proposed ROW and easement are granted. Therefore, the APE does not include the groundwater basin or other water sources in the area. The source of water conveyed in the Northern Pipeline is expected to be groundwater withdrawn on private lands in Cadiz, California as part of the Mojave Groundwater Bank, a separate project without a federal nexus. Groundwater extraction is regulated pursuant to California state and local law and would occur on private lands outside of the BLM's and DoD's direct and indirect jurisdiction.

As part of the approval of the assignment of the MLA ROW in 2023, the BLM indicated the conversion of the Northern Pipeline to transport water would require consideration of the impacts to environmental and historic resources associated with the extraction of water. The BLM's change in position follows a reassessment as to whether the BLM has an ability to control activities beyond the BLM's jurisdiction. Because the BLM, as noted below, cannot control Cadiz's drawdown of its aquifer, any consideration of Cadiz's activity under Section 106 of the NHPA would be inappropriate.

In response to initial consultation with Tribes, the BLM considered whether the undertaking, by authorizing conversion and use of a pipeline to convey water from Cadiz, may directly or indirectly cause alterations in the character or use of historic properties due to groundwater extraction on private lands, such that those areas should be included in the APE. The BLM determined that it is not appropriate to include areas associated with the groundwater project for several reasons, as follows:

Reviewing the record of approval for the separate groundwater project, the BLM found that groundwater extraction may occur regardless of whether the proposed ROW and easement are granted and thus any unforeseen effects of groundwater withdrawal would not be directly or indirectly caused by this undertaking. The groundwater project, whose operation is governed by a Groundwater Management, Monitoring, and Mitigation Plan (GMMMP), was authorized by San Bernardino County under the County of San Bernardino's Desert Groundwater Management Ordinance (County Ordinance 33.06551 et. sec), which limits groundwater extraction to safe yield. This followed analysis of the impacts of those activities, including the impacts of groundwater pumping, under the California Environmental Quality Act (CEQA). The CEQA findings were litigated and upheld in California state court.

The GMMMP includes requirements designed to manage groundwater resources and monitor and mitigate any physical effects of the groundwater project through the life of the project and established a Technical Review Panel to review groundwater monitoring data and propose changes to groundwater extraction operations, if needed, to ensure that there are no significant adverse impacts to groundwater resources.

Numerous studies have evaluated and considered potential impacts of groundwater pumping on natural springs in the Mojave Desert. Past studies and analyses have examined groundwater in the Cadiz Valley and determined that the groundwater project would not significantly impact natural springs. Several studies have examined the subsurface hydrology of spring flow in the Mojave Desert and the Cadiz Valley specifically. The previous analyses of regional springs have considered: Bonanza Spring, Burnt Spring, Hummingbird Spring in the Clipper Mountains, and Vernandyles Spring and Theresa Spring in the Marble Mountains (Brown et al. 2019; Kenney and Foreman 2018; Love and Zdon 2018; Zdon et al.

2018). These analyses have focused on whether there may be any hydrological connection between Bonanza Spring and the Cadiz groundwater basin, as other springs are much farther away and therefore less likely to have any connection with the Cadiz groundwater basin (Brown et al. 2019; Kenney and Foreman 2018; Love and Zdon 2018; Zdon et al. 2018). The source of Bonanza Spring has been evaluated in several studies using different methods, including radiocarbon dating of the water (Love and Zdon 2018; Kreamer 2023), an examination of the geological makeup of the region (Brown et al. 2019; Kenney and Foreman 2018), and assessment of any correlation between spring flows and climatic events (Brown et al. 2019). Analyses presented in the 2012 FEIR and 2019 EIR Addendum concluded, based on project-specific analysis and evidence presented in scientific papers, that groundwater pumping is not anticipated to impact any springs. Nonetheless, the GMMMP includes precautionary monitoring and mitigation measures related to natural springs. As part of the groundwater project, an independently vetted monitoring program will be set up for Bonanza, Whiskey, and Vontrigger springs to monitor any hydrologic changes to the springs. This includes visual observation and flow measurements in accordance with guidance prepared by Desert Research Institute. If a reduction in annual or seasonal flow is correlated to groundwater pumping by the groundwater project, it would result in a curtailment or cessation of groundwater pumping (Brown et al. 2019).

Based on the above analysis, the BLM concluded a) groundwater extraction is not a part of the undertaking or reliant on the undertaking for it to proceed, and b) that the groundwater extraction will not directly or indirectly affect the character or use of historic properties related to water resources. Therefore, the APE does not include areas related to the groundwater project.

Summary

In total, the APE includes 2028 acres distributed over 162 miles across San Bernardino and Kern counties. This includes approximately 65 miles of ROW across BLM lands that, when combined with the access road and lateral access routes, the construction areas for the pump station facilities and appurtenances totals 983 acres of BLM land. The 18 miles of ROW across EAFB totals 108 acres. The APE also crosses 1.1 miles of land administered by the California State Lands Commission. Finally, the APE includes the 78 miles of ROW across non-federal land and the access roads and lateral access routes, the construction areas for the pump station facilities, and construction areas for the appurtenances, totaling 983 acres. The APE also includes access roads that comprise an additional 1,045 acres, bringing the total APE acreage to 2,028 acres.

References Cited

Andy Zdon & Associates

2016 *Mojave Desert Springs and Waterholes: Results of the 2015-16 Mojave Desert Spring Survey Inyo, Kern, San Bernardino and Los Angeles Counties, California*. Prepared for Transition Habitat Conservancy, the Bureau of Land Management, and The Nature Conservancy.

Brown, Anthony, Mark Wildermuth, Dave Romero, and Tim Parker

ENCLOSURE 1: UPDATED Area of Potential Effects Memorandum

2019 *Report of the Independent Peer Review Panel for the Groundwater Management, Monitoring, and Mitigation Plan (GMMMP) for the Cadiz Valley Groundwater Conservation, Recovery and Storage Project.* Three Valleys Municipal Water District (TVMWD).

Fenner Valley Water Authority

2019 Cadiz Valley Water Conservation, Recovery, and Storage Project, Addendum to the 2012 Environmental Impact Report

Kenney, Miles D., and Terry L. Foreman

2018 *Updated Assessment of Cadiz Water Project's Potential Impacts to Bonanza Springs.* Prepared by Kenney GeoScience and TLF Consulting, LLC for Cadiz, Inc., Oceanside and Camarillo, CA.

Love, Adam H., and Andy Zdon

2018 Use of Radiocarbon Ages to Narrow Groundwater Recharge Estimates in the Southeastern Mojave Desert, USA. *Hydrology* 5(3):51.

Plog, Fred, Kenneth C. Tapman, and David Carlson

1989 *Cultural Resources Report for the All American Pipeline Project: Santa Barbara, California to McCarney, Texas and Additional Areas to the East Along the Central Pipeline Route in Texas.* New Mexico State University for Continuum Corporation and All American Pipeline Company.

Santa Margarita Water District

2012 CEQA Findings: Facts and Findings Related to the Environmental Impact Report for the Cadiz Valley Water Conservation, Recovery and Storage Project, adopted by San Bernardino County Board of Supervisors Resolution No. 2012-176.

2012 Groundwater Management, Monitoring, and Mitigation Plan (GMMMP) for the Cadiz Valley Groundwater Conservation, Recovery and Storage Project

Zdon, Andy, M. Lee Davisson, and Adam H. Love

2018 Understanding the Source of Water for Selected Springs within Mojave Trails National Monument, California. *Environmental Forensics* 19(2):99–111.

Combined Legal Descriptions and USGS Quadrangle

- Sec. 20, 21, 22, and 23 of T. 11N, R. 12W, depicted on the Mojave, Calif. 7.5-minute quadrangle
- Sec. 22, and 23, and 24 of T. 11N, R. 12W, and Sec. 19, 25, 26, 27, 28, 29, and 30 of T. 11N, R. 11W, depicted on the Sanborn, Calif. 7.5-minute quadrangle
- Sec. 25 of T. 11N, R. 11W; Sec. 28, 29, 30, 32, 33, 34, 35, and 36 of T. 11N, R. 10W; and Sec. 31, of T. 11N, R. 9W, depicted on the California City South, Calif. 7.5-minute quadrangle
- Sec. 31, 32, 33, 34,35, and 36 of T. 11N, R. 9W; and Sec. 31, and 32 of T. 11N, R. 8W
- Sec. 32 of T. 11N, R. 8W, depicted on the North Edwards, Calif. 7.5-minute quadrangle
- Sec. 32 of T. 11N, R. 8W; and Sec. 5 of T. 10N, R. 8W, depicted on the Rogers Lake North, Calif. 7.5-minute quadrangle
- Sec. 32 of T. 11N, R. 8W; Sec. 1, 2, 3, 4, and 5 of T. 10N, R. 8W; and Sec. 4, 5, and 6 of T. 10N, R. 7W, depicted on the Leuhman Ridge, Calif. 7.5-minute quadrangle
- Sec. 1, 2, 3, and 4 of T. 10N, R. 7W; Sec. 4, 5, 6, 9, and 10 of T. 10N, R. 6W, depicted on the Kramer Junction, Calif. 7.5-minute quadrangle
- Sec. 10, 11, 12, and 13 of T. 10N, R. 6W; Sec. 17, 18, 20, 21, 22, 23, 26, and 27 of T. 10N, R. 5W, depicted on the Kramer Hills, Calif. 7.5-minute quadrangle
- Sec. 28, 29, 30, 33, 34, 35, and 36 of T. 10N, R. 4W, depicted on the Twelve Gauge Lake, Calif. 7.5-minute quadrangle
- Sec. 36 of T. 10N, R. 4W; Sec. 31, 32, and 33 of T. 10N, R. 3W; and Sec. 1, 2,3, and 4 of T. 9N, R. 3W; and Sec. 6 of T. 9N, R. 2W, depicted on the Hinkley, Calif. 7.5-minute quadrangle
- Sec. 6 of T. 9N, R. 2W; Sec. 36 of T. 10N, R. 2W; Sec. 31, and 32 of T. 10N, R. 1W; and Sec. 5 of T. 9N, R. 1W, depicted on the Barstow , Calif. 7.5-minute quadrangle
- Sec. 32 and 33 of T. 10N, R. 1W; and Sec. 4, 5, 9, 10, 11, 12, and 13 of T. 9N, R. 1W, depicted on the Nebo, Calif. 7.5-minute quadrangle
- Sec.12 and 13 of T. 9N, R. 1W; and Sec. 18, 19, 20, and 21 of T. 9N, R. 1E, depicted on the Daggett, Calif. 7.5-minute quadrangle
- Sec. 21, 22, 23, 25, 26, and 27 of T. 9N, R. 1E; and Sec. 27, 28, 29, and 30 of T. 9N, R. 2E, depicted on the Minneola, Calif. 7.5-minute quadrangle
- Sec. 25, 26, and 36 of T. 9N, R. 2E; and Sec. 30, 31, 32, 33, 34, 55, and 36 of T. 9N, R. 3E, depicted on the Newberry Springs, Calif. 7.5-minute quadrangle
- Sec. 36 of T. 9N, R. 3E; Sec. 31 of T. 9N, R. 4E; Sec. 12, 1, 2, 3, 4, 5, and 6 of T. 8N, R. 4E; and Sec. 7 of T. 8N, R. 5E, depicted on the Troy Lake, Calif. 7.5-minute quadrangle

- Sec. 7, 8, 9, 10, 13, 14, and 15 of T. 8N, R. 5E; and Sec. 17, 18, 19, and 20 of T. 8N, R. 6E, depicted on the Hector, Calif. 7.5-minute quadrangle
- Sec. 17, 20, 21, 22, 26 of T. 8N, R. 6E, depicted on the Sleeping Beauty, Calif. 7.5-minute quadrangle
- Sec. 25, 26, and 36 of T. 8N, R. 6E; Sec. 31 and 32 of T. 8N, R. 7E; and Sec. 4, 5, 6, and 9 of T. 7N, R. 7E, depicted on the Lavic Lake, Calif. 7.5-minute quadrangle
- Sec. 4, 9, 10, 11, 13, and 14 of T. 7N, R. 7E; and Sec. 18, 19, 20, 21, 27, 28, 29, and 34 of T. 7N, R. 8E, depicted on the Ludlow, Calif. 7.5-minute quadrangle
- Sec. 35, and 36 of T. 7N, R. 8E; Sec. 1 of T. 6N, R. 8E; and Sec. 5, 6, 8, 9, and 10 of T. 6N, R. 9E, depicted on the Ash Hill, Calif. 7.5-minute quadrangle
- Sec. 10, 11, 13, and 14 of T. 6N, R. 9E, depicted on the Ludlow SE, Calif. 7.5-minute quadrangle
- Sec. 13 of T. 6N, R. 9E; Sec. 17, 18, 21, 22, 23, 25, and 26 of T. 6N, R. 10E; Sec. 30 of T. 6N, R. 11E, depicted on the Bagdad SW, Calif. 7.5-minute quadrangle
- Sec. 28, 29, 30, 33, 34, 35, and 36 of T. 6N, R. 11E; Sec. 31 of T. 6N, R. 12E; and Sec. 5 and 6 of T. 5N, R. 12E, depicted on the Amboy Crater, Calif. 7.5-minute quadrangle
- Sec. 2, 3, 4, 5, 10, 11, and 12 of T. 5N, R. 12E; Sec. 7, 8, 9, 16, and 17 of T. 5N, R. 13E, depicted on the Amboy, Calif. 7.5-minute quadrangle
- Sec. 13, 14, 15, and 16 of T. 5N, R. 13E; Sec. 15, 16, 17, 18, 21, and 22, of T. 5N, R. 14E, depicted on the Cadiz, Calif. 7.5-minute quadrangle
- Sec. 22, 23, 25, 26, and 36, of T. 5N, R. 14E, depicted on the Cadiz Summit, Calif. 7.5-minute quadrangle
- Sec. 25, 26, 27 and 36, of T. 5N, R. 14E; Sec. 31 of T. 5N, R. 15E; and Sec. 6 of T. 4N, R. 15E, depicted on the Cadiz Lake NW, Calif. 7.5-minute quadrangle

USGS 7.5-minute Topographic Quadrangles

- | | | |
|-------------------------|--------------------|-----------------|
| • Mojave | • Barstow | • Ash Hill |
| • Sanborn | • Nebo | • Ludlow SE |
| • California City South | • Daggett | • Bagdad SW |
| • North Edwards | • Minneola | • Amboy Crater |
| • Rogers Lake North | • Newberry Springs | • Amboy |
| • Leuhman Ridge | • Troy Lake | • Cadiz |
| • Kramer Junction | • Hector | • Cadiz Summit |
| • Kramer Hills | • Sleeping Beauty | • Cadiz Lake NW |
| • Twelve Gauge Lake | • Lavic Lake | |
| • Hinkley | • Ludlow | |

Legal Description (Public Land Survey System)

- Sec. 20, 21, 22, 23, and 24 of T. 11N, R. 12W
- Sec. 19, 25, 26, 27, 28, 29, and 30 of T. 11N, R. 11W
- Sec. 28, 29, 30, 32, 33, 34, 35, and 36 of T. 11N, R. 10W
- Sec. 31, 32, 33, 34, 35, and 36 of T. 11N, R. 9W
- Sec. 31, and 32 of T. 11N, R. 8W
- Sec. 1, 2, 3, 4, and 5 of T. 10N, R. 8W
- Sec. 1, 2, 3, 4, 5, and 6 of T. 10N, R. 7W
- Sec. 4, 5, 6, 9, 10, 11, 12, and 13 of T. 10N, R. 6W
- Sec. 17, 18, 20, 21, 22, 23, 25, 26, and 27 of T. 10N, R. 5W
- Sec. 28, 29, 30, 33, 34, 35, and 36 of T. 10N, R. 4W
- Sec. 31, 32, and 33 of T. 10N, R. 3W
- Sec. 1, 2, 3, and 4 of T. 9N, R. 3W
- Sec. 1, 2, 3, 4, 5, and 6 of T. 9N, R. 2W
- Sec. 36 of T. 10N, R. 2W
- Sec. 31, 32, and 33 of T. 10N, R. 1W
- Sec. 4, 5, 9, 10, 11, 12, and 13 of T. 9N, R. 1W
- Sec. 18, 19, 20, 21, 22, 23, 25, 26, and 27 of T. 9N, R. 1E
- Sec. 25, 26, 27, 28, 29, 30, and 36 of T. 9N, R. 2E
- Sec. 30, 31, 32, 33, 34, 35, and 36 of T. 9N, R. 3E
- Sec. 31 of T. 9N, R. 4E
- Sec. 12, 1, 2, 3, 4, 5, and 6 of T. 8N, R. 4E
- Sec. 7, 8, 9, 10, 13, 14, and 15 of T. 8N, R. 5E
- Sec. 17, 18, 19, 20, 21, 22, 25, 26, 27, and 36 of T. 8N, R. 6E
- Sec. 31 and 32 of T. 8N, R. 7E
- Sec. 4, 5, 6, 9, 10, 13, and 14 of T. 7N, R. 7E
- Sec. 18, 19, 20, 21, 27, 28, 29, 34, 35, and 36 of T. 7N, R. 8E
- Sec. 1 of T. 6N, R. 8E
- Sec. 5, 6, 8, 9, 10, 11, 13, and 14 of T. 6N, R. 9E
- Sec. 17, 18, 21, 22, 23, 25, and 26 of T. 6N, R. 10E
- Sec. 27, 28, 29, 30, 33, 34, 35, and 36 of T. 6N, R. 11E
- Sec. 31 of T. 6N, R. 12E
- Sec. 2, 3, 4, 5, 6, 10, 11, and 12 of T. 5N, R. 12E
- Sec. 7, 8, 9, 13, 14, 15, 16, and 17 of T. 5N, R. 13E
- Sec. 15, 16, 17, 18, 21, 22, 23, 25, 26, and 36 of T. 5N, R. 14E
- Sec. 31 of T. 5N, R. 15E
- Sec. 6 of T. 4N, R. 15E

MEMORANDUM OF UNDERSTANDING

BETWEEN

THE DEPARTMENT OF THE AIR FORCE
AIR FORCE MATERIEL COMMAND
EDWARDS AIR FORCE BASE

AND

THE UNITED STATES DEPARTMENT OF THE INTERIOR (DOI)
BUREAU OF LAND MANAGEMENT (BLM)

REGARDING

FENNER GAP MUTUAL WATER COMPANY PIPELINE RIGHT OF WAY

I. Introduction

This Memorandum of Understanding (MOU) establishes a cooperating agency relationship between the Bureau of Land Management's (BLM's) Needles Field Office (NFO) and the Department of the Air Force (DAF), Air Force Materiel Command (AFMC), Edwards Air Force Base (AFB), ("Cooperating Agency" or "Cooperator") for the purpose of preparing the Fenner Gap Mutual Water Company (FGMWC) Pipeline Right of Way (ROW) Environmental Assessment (EA). The BLM is the Lead Agency for development of the EA to comply with the National Environmental Policy Act (NEPA), Section 106 of the National Historic Preservation Act (NHPA), among others. The BLM acknowledges that the Cooperating Agency has jurisdiction by law and/or special expertise applicable to the ROW EA effort.

Cooperating agency means any Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved in a proposal (or a reasonable alternative) for legislation or other major Federal action significantly affecting the quality of the human environment.

This MOU describes responsibilities and procedures as agreed by the Cooperating Agency and the BLM ("the Parties").

The Cooperating Agency relationship established through this MOU shall be governed by all applicable statutes, regulations, and policies in compliance with the NEPA, as amended by Public Law 118-5 (42 U.S.C. Sections 4321 et seq.), the DoD NEPA Implementing Procedures, Parts 0 through 7, the BLM's planning regulations (43 CFR Part 1600), and the Department of the Interior's NEPA Regulations (43 CFR Part 46). Moreover, the applicable statutes, regulations and policies governing compliance with the NHPA Section 106 (16 U.S.C. 470f) through CA BLM's State Protocol Agreement, Archaeological Resources Protection Act (ARPA) (16 U.S.C. 470aa-mm), Native American Graves Protection and Repatriation Act (NAGPRA) (25 U.S.C. 32), among others.

II. Purposes

The purposes of this MOU are:

- A. To designate AFMC as a Cooperating Agency in the ROW EA and NHPA processes.
- B. To provide a framework for cooperation and coordination between the BLM and the Cooperator that will ensure successful completion of the ROW EA and NHPA obligations in a timely, efficient, and thorough manner.
- C. To recognize that the BLM is the Lead Agency with responsibility for the completion of the ROW EA, NHPA Section 106, Finding of No Significant Impact (FONSI), and the BLM decision document.

- D. To recognize and provide guidance for the development of a mutually respectful and effective Cooperating Agency relationship between the Parties, which reflects their unique working relationship as it relates to the tasks at hand.
- E. To describe the responsibilities, jurisdictional authority, and expertise of each Party in the NEPA and NHPA processes, among others.

III. Authorities for the MOU

- A. The authorities of the BLM to enter this MOU and engage in the activities described herein include, but are not limited to:
 - 1. National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.).
 - 2. National Historic Preservation Act of 1966 (NHPA) (U.S.C. 470f).
 - 3. Federal Land Policy and Management Act (FLPMA) of 1976 (43 U.S.C. 1701 et seq.).
 - 4. Archaeological Resources Protection Act of 1979 (16 U.S.C. 470aa–mm).
 - 5. Native American Graves Protection and Repatriation Act of 1990 (25 U.S.C. 32).
 - 6. Biological and Cultural notifications and/or Section 7 and/or NHPA Section 106 Consultations.
 - 7.
- B. Regulations implementing the above authorities, as applicable:
 - 1. DoD NEPA Implementing Procedures
 - 2. Department of the Interior NEPA regulations (40 CFR Part 46)
 - 3. Department of the Interior NHPA Section 106 regulations (36 CFR Part 800)
 - 4. NAGPRA regulations (43 CFR Part 10)
 - 5. ARPA regulations (43 CFR Part 7)
 - 6. Bureau of Land Management planning regulations (43 CFR Part 1601 et seq.)

C. The authorities of the Cooperating Agency to enter this MOU include, but are not limited to:

1. National Environmental Policy Act, as amended by Fiscal Responsibility Act, Public Law 118-5, Sec. 107(a)(3) Cooperating Agency
2. DoD NEPA Implementing Procedures, Part 1.7, Lead and Cooperating Agencies

IV. Roles and Responsibilities

A. BLM Responsibilities:

1. As Lead Agency, the BLM retains final responsibility for the content of all NEPA and NHPA documents, which includes any Drafts, Supplements, and the FONSI. The BLM's responsibilities include determining the purpose of and need for the Pipeline ROW EA, selecting alternatives for analysis, describing the environmental setting, identifying effects of the proposed alternatives, selecting the preferred alternative, and determining appropriate mitigation measures. In completing these responsibilities, the BLM will meaningfully, as appropriate, involve the Cooperator throughout the NEPA and NHPA processes including but not limited to: identifying issues to be addressed; arranging for the collection and/or assembly of necessary resource, environmental, social, economic, and institutional data; determining the purpose and need; consultation on a project schedule (in compliance with the agency timeframes established by regulation or policy); Government-to-government consultation with affiliated Tribal Nations, and formal consultation with California State Historic Preservation Office; development of the alternatives; evaluating alternatives and estimating the effects of implementing each alternative; and carrying out any other task necessary for the development of the environmental analysis and documentation.
2. To the maximum extent practicable, and consistent with the BLM's responsibilities as Lead Agency, the BLM will seek early and consistent involvement with the Cooperator and consider topics for which the Cooperator is acknowledged to possess jurisdiction by law or special expertise, the comments, recommendations, data, and/or analyses provided by the Cooperator in the ROW EA process.
3. To the fullest extent practicable, the BLM will timely provide the Cooperator with copies of documents underlying the ROW EA relevant to the Cooperator's responsibilities, including technical reports, data, analyses, comments received, working drafts related to environmental reviews, and draft versions of the ROW EA.
4. Meet with the Cooperator at its request.

5. Develop a schedule, setting milestones for all environmental and NHPA reviews, in consultation with all Cooperating Agencies.

B. Cooperating Agency Responsibilities:

1. AFMC, through Edwards AFB, is recognized to have jurisdiction by law and/or special expertise on all subject matters for which it has statutory responsibility, including but not limited to:
 - a. Natural Resources
 - b. Cultural Resources
 - c. Edwards Land Use/Mission Restrictions
2. The Cooperator will limit the information, comments, and technical expertise it provides to the BLM to those elements of the ROW EA, and the data and analyses supporting them, in which it has jurisdiction by law or special expertise or for which the BLM requests its assistance. In particular, the Cooperator will provide information on the following topics:
 - a. Natural Resources
 - b. Cultural Resources
 - c. Edwards Land Use/Mission Restrictions
3. Within the areas of their jurisdiction or special expertise, the Cooperator may participate in the activities identified in Attachment A. These activities include, but are not limited to: identifying issues to be addressed; arranging for the collection and/or assembly of necessary resource, environmental, social, economic, and institutional data; determining the purpose and need; consultation on a project schedule (in compliance with the agency timeframes established by regulation or policy); Government-to-government consultation with affiliated Tribal Nations, and formal consultation with California State Historic Preservation Office; development of the alternatives; evaluating alternatives and estimating the effects of implementing each alternative; and carrying out any other task necessary for the development of the environmental analysis and documentation. The Cooperator will meet the BLM's schedule and elevate, as soon as practicable, to the senior agency official of the DOI any issues relating to purpose and need, alternatives, or other issues that may affect its ability to meet the schedule. (See also Section C.1).
4. The Cooperator will have one representative, also known as its Point of Contact, and an alternate, appointed to represent its interests and work to the BLM.
5. The Cooperator will make a good faith effort to report the costs it incurs in the development of the ROW EA and fulfillment of NHPA obligations to the BLM or notify the BLM when it is not practicable to do so.

C. Responsibilities of both Parties:

1. The Parties agree to participate in this NEPA and NHPA processes in good faith and make all reasonable efforts to resolve disagreements. Where procedural or substantive disagreement may impede effective and timely completion of the ROW EA, the Parties agree to utilize the conflict resolution procedures described below (see Section V.6). Participation as a Cooperating Agency does not negate the Cooperator's responsibility to comment on the analysis or to protest or appeal the BLM's decision; nor does it diminish or restrict the Cooperator's ability to coordinate with the BLM under the FLPMA requirements (43 U.S.C. 1712(c)(9)).
2. The Parties will seek to meet the schedule provided as Attachment B, which includes dates for EA milestones and timeframes for the Cooperator's reviews and submissions.
3. The Parties agree BLM shall lead compliance of NHPA Section 106, including SHPO and Tribal Nation consultation, through the *"State Protocol Agreement Among the California State Director of the Bureau of Land Management and the California State Historic Preservation Officer and the Nevada State Historic Preservation Officer Regarding the Manner in which the Bureau of Land Management Will Meet Its Responsibilities Under the National Historic Preservation Act and the National Programmatic Agreement Among the BLM, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers."*
4. Each Party agrees to fund its own expenses associated with the ROW EA and NHPA processes, except and unless the BLM and Cooperator enter into a separate contract or agreement for technical studies within the Cooperator's jurisdiction by law and/or special expertise.

V. Other Provisions:

1. Authorities not altered. Nothing in this MOU alters, limits, or supersedes the authorities and responsibilities of any Party on any matter within its respective jurisdiction. Nothing in this MOU shall require either of the Parties to perform beyond its respective authority.
2. Financial obligations. Nothing in this MOU shall require either of the Parties to assume any obligation or expend any sum in excess of authorization and appropriations available.
3. Immunity and Defenses Retained. This MOU does not create any substantive or procedural right that is enforceable at law or in equity against the United States or its officers, agents, or employees. This MOU is not a contract, and it is not enforceable

in a court of law. This MOU does not affect the exercise of any applicable immunity, defense, or legal recourse available to either party under law.

4. Conflict of interest. The Parties agree any individual or organization used for purposes of plan development, environmental analysis, or Cooperator representation, including officials, employees, or third-party contractors, must submit a disclosure statement to the BLM that specifies any financial or other interest in the outcome of the ROW EA. Questions regarding potential conflicts of interest will be referred to BLM Headquarters (HQ), BLM Ethics Counselors, or the Cooperating Agency's ethics personnel for resolution.
5. Management of information. The Cooperator acknowledges all supporting materials, and draft documents may become part of the BLM's administrative record and may be subject to public disclosure, consistent with the requirements of the Freedom of Information Act (FOIA) (5 U.S.C. 552). The Cooperator agrees not to release or disclose the contents of these materials to individuals or entities other than the Parties to this MOU and their contractors unless required by law.
6. Conflict Resolution:
 - a. It is the goal of the Parties to resolve any disputes they may have through earnest and good faith discussions between the designated points of contact. The Parties agree to make reasonable efforts to resolve procedural or substantive conflicts. The Parties acknowledge BLM retains final responsibility for the content of the ROW EA, NHPA Section 106, and the FONSI.
 - b. Either party may request discussions orally or in writing to resolve a dispute. The Parties agree to hold discussions within 10 calendar days of a request for discussions, and to allow 14 calendar days from the first discussion for ongoing efforts to continue toward a resolution.
 - c. If discussions between the points of contact do not resolve the dispute, the BLM Field Manager and the respective California State Office Staff (CASO) will meet within 10 calendar days of the last staff discussion.
7. Coordination with the FGMWC contractor through the BLM (as applicable). Environmental Science Associates (ESA) currently serves as the BLM's contractor for public involvement, data collection, environmental analysis, and ROW EA preparation. The Cooperator may communicate with the contractor through BLM's representative, provide information and comments directly to the contractor (with copies to BLM), or collaborate with the contractor's technical staff and subcontractors on matters within the Cooperator's jurisdiction by law and/or special expertise. The Cooperator acknowledges the BLM retains the exclusive responsibility to authorize modifications to the contract with FGMWC/ESA, and

that the Cooperator is not authorized to provide technical or policy direction regarding the performance of the BLM's EA with ESA.

8. Coordination with Cooperating Agency's Contractor. The Cooperator will provide the BLM a Contractor Coordination Letter describing the nature of the relationship between the Cooperator and its contractor (if any) and the authority given to the contractor, and clearly state the following: 1) contractor will represent the Cooperator; 2) the Cooperator has verified that its contractor has submitted a disclosure to the BLM that specifies any financial or other interest in the outcome of the project; and 3) the Cooperator has contractually required its contractor to comply with a non-disclosure clause consistent with the Cooperator's obligations under Section V. 5, above. The contractor serves to help fulfill Cooperating Agency responsibilities outlined in Section IV.B, above, and will be allowed to attend meetings between the Parties to this MOU. When two or more cooperating agencies utilize the same contractor, each Cooperator must have a separate contract in place, and each must submit a Contractor Coordination Letter to the BLM.

VI. Agency Representatives

Each Party will designate a representative and alternate representative, also known as its Point of Contact, as described in Attachment C, to ensure coordination between the Cooperators and the BLM during the NEPA and NHPA processes, among others. Each Party may change its representative by providing written notice to the other Party.

VII. Administration of the MOU

1. Approval. This MOU becomes effective upon signature by the authorized officials of the BLM and the Cooperator.
2. Amendment. This MOU may be amended through written agreement of all signatories.
3. Termination. If not terminated earlier, this MOU will end when the FONSI for the ROW EA is approved by the BLM Authorized Officer. Any Party may end its participation in this MOU by providing written notice to the other Party.
4. Notwithstanding any provision in this MOU, all provisions which by themselves or their nature are reasonably expected to be performed after the expiration or termination of this MOU shall survive the expiration or termination of this MOU.
5. Press inquiries on the NEPA and NHPA preparation will be referred to and addressed by the BLM. Press inquiries on Cooperator's role in the process will be addressed by Cooperator's officials.

VIII. Signatures

The Parties hereto have executed this MOU on the dates shown below.

THE DEPARTMENT OF AIR FORCE, AIR FORCE MATERIEL COMMAND, EDWARDS
AIR FORCE BASE, by and through:

 Digitally signed by
ONDERKO. RONALD.J.12302018
26
Date: 2025.12.17 12:33:25 -05'00'

12/17/25

RONALD J. ONDERKO, P.E. NH-04, DAF
Command Senior Civil Engineer
Logistics, Civil Engineering, Force Protection
and Nuclear Integration

Date

BUREAU OF LAND MANAGEMENT, by and through:

RONALD NUCKLES  Digitally signed by
RONALD NUCKLES
Date: 2026.01.05
08:52:03 -07'00'

1/5/26

Ron Nuckles, Needles Field Manager

Date

Attachment A

Cooperating Agency Participation in the ROW EA

	EA	Potential Activities of Cooperating Agencies (CAs) within their acknowledged jurisdiction by law and/or special expertise.
1	Conduct scoping and identify issues	Provide input on coordination requirements based on CA plans; identify significant issues; identify relevant local and regional organizations and interest groups; provide non-financial sponsorship of public forums with the BLM; collaborate in assessing scoping comments; identify connected, similar, and cumulative actions; identify other relevant agencies.
2	Develop project schedule	Consult on the development of the project schedule. The decision to select the final project schedule is reserved to BLM, and the schedule must comply with the BLM's applicable regulatory and/or policy requirements.
3	Develop purpose and need	Consult on the development of the purpose and need. The decision to select the final purpose and need is reserved for BLM.
4	Develop planning criteria	Provide advice on proposed planning criteria (for BLM Land Use Plan amendments or revisions, only). The decision to select the final planning criteria is reserved for BLM.
5	Collect inventory data	Identify data needs; provide data and technical analyses within the CA's expertise.
6	Formulate alternatives	Collaborate with the BLM in developing alternatives. Suggest land allocations or management actions to resolve issues. The decision to select alternatives for analysis is reserved for the BLM.
7	Estimate effects of alternatives	Provide effects analysis within the CA's jurisdiction by law and/or special expertise; identify effects within the CA's jurisdiction by law and/or special expertise; suggest mitigation measures for adverse effects within the CA's jurisdiction by law and/or special expertise.
8	Select the preferred alternative; issue Draft MMP/EA	Collaborate with the BLM in evaluating alternatives and in developing criteria for selecting the preferred alternative; provide input on Draft MMP/EA. The CAs may provide written, public comments on draft if desired. The decision to select a preferred alternative and to issue a draft is reserved for BLM.
9	Respond to comments	As appropriate, review comments within the CA's jurisdiction by law and/or special expertise and aid in preparing BLM's responses.
10	Sign FONSI	A signature line will be provided for both CA's.

Attachment B

Schedule

ID	Task Name	Duration	Start	Finish
1	Project Description	40 days	5/12/25	7/4/25
2	Prepare Draft EA Project Description	6 weeks	5/12/25	6/20/25
3	BLM Review EA PD	2 weeks	6/23/25	7/4/25
4	Cultural Technical Studies	85 days	6/2/25	9/26/25
5	Obtain Work Authorization	3 weeks	6/2/25	6/20/25
6	Records Search	4 weeks	6/23/25	7/18/25
7	Conduct Field Work	2 weeks	7/21/25	8/1/25
8	Prepare Draft Report	2 weeks	8/4/25	8/15/25
9	BLM Review Draft Report	2 weeks	8/18/25	8/29/25
10	Prepare Final Report	4 weeks	9/1/25	9/26/25
11	Environmental Assessment	125 days	6/9/25	11/28/25
12	Prepare Draft EA	5 weeks	6/9/25	7/11/25
13	BLM Review Draft EA	2 weeks	7/14/25	7/25/25
14	ESA Incorporate Comments	2 weeks	7/28/25	8/8/25
15	BLM Review #2	2 weeks	8/11/25	8/22/25
16	ESA Final EA Prep	5 weeks	8/25/25	9/26/25
17	BLM Final Review	1 week	9/29/25	10/3/25
18	Public Review Period	30 days	10/3/25	11/2/25
19	ESA Prepare Final EA	2 weeks	11/3/25	11/14/25
20	BLM completes FONSI	2 weeks	11/17/25	11/28/25
21	ESA and SHPO Consultations	100 days	7/14/25	11/28/25
22	ESA Consultation	100 days	7/14/25	11/28/25
23	SHPO Consultation	75 days	8/18/25	11/28/25

Attachment C
Agency Representatives
POINTS OF CONTACT

Bureau of Land Management

Primary Representative: Ronald Nuckles, BLM Needles Field Office Manager
1303 S. Hwy 95
Needles, CA 92363
rnuckles@blm.gov
(760) 326-7001

Backup Representative: Sabrina Jolicoeur, BLM Needles Monument Manager
1303 S. Hwy 95
Needles, CA 92363
sjolicoeur@blm.gov
(760) 326-7006

The DAF, Air Force Materiel Command (AFMC), Edwards AFB

Primary Representative: Ms. Shari Fort, AFMC NEPA Liaison
AFIMSC Det 6
4225 Logistic Ave, Bldg. 266
Wright-Patterson AFB OH 45433
shari.fort@us.af.mil
(937) 902-0679

Primary Edwards Representative: Ms. Reina Juarez, Edwards NEPA Manager
412 CEG/CEVA
120 N. Rosamond Blvd, Suite A
Edwards AFB, CA 93524
reina.juarez.1@us.af.mil
(661) 277-9225

Backup Edwards Representative: James Papin, Chief, Environmental Resources & Planning
412 CEG/CEVA
120 N. Rosamond Blvd, Suite A
Edwards AFB, CA 93524
james.papin@us.af.mil
(661) 277-1868

ENCLOSURE 3: Project Description Memorandum

The Fenner Gap Mutual Water Company (FGMWC) has proposed to convert approximately 162 miles of an existing buried steel pipeline for the transportation of water. This pipeline, referred to as the Northern Pipeline, runs between Cadiz, California and Mojave, California, traversing private parcels, federal lands managed by the Bureau of Land Management (BLM) and United States Department of Defense (DoD), and California state-owned lands managed by the California State Lands Commission. The Northern Pipeline was previously used for the transportation of oil and is authorized through a right-of-way (ROW) under Section 28 of the Mineral Leasing Act of 1920 (MLA). FGMWC has applied for a new ROW under the Federal Land Policy and Management Act (FLPMA) that would authorize the conversion of the pipeline for the transportation of water. In coordination with BLM, FGMWC is also seeking a new easement from DoD for the portions of the Northern Pipeline crossing Edwards Air Force Base (EAFB) that are also authorized under the MLA ROW.

The proposed ROW for the Northern Pipeline consists of a 25-foot buffer on either side of the existing pipeline centerline, for a total ROW width of 50 feet, and to the depth of one foot below the existing bottom of the pipeline. This includes the federal ROW across BLM and DoD property and various easements through the non-federal land and property owned by Cadiz, Inc. The Northern Pipeline crosses approximately 65 miles of public lands managed by the BLM, 18 miles of military lands, 1.17 miles of school lands managed by the California State Lands Commission, and 78 miles of private lands.

Converting the existing pipeline to transport water would require installation of seven pump stations and approximately 280 pipeline appurtenances on the surface, including air and vacuum relief valves (AR/AVs), blow-off facilities (BOs), and access manholes. In total, there would be approximately 140 AR/AVs and 140 new BOs, often in the same locations, distributed over the 162 miles of pipeline. In addition, approximately 16 miles of the existing pipeline is expected to be replaced.

Each new pump station would be constructed on approximately 2-acres of land adjacent to the existing pipeline ROW. Construction would include grading and site preparation, construction of pump housing facilities, installation of underground pipelines to connect to the existing buried pipeline, installation of reinforced concrete support pads for pumps, valves, tanks, and other infrastructure, construction of a perimeter security wall, and installation of pumps on the pump pads. An underground pipeline would be constructed at each new pump station connecting to an adjacent active natural gas pipeline, which will supply fuel to power the pumps. The pump station structures would be less than 32 feet 6 inches high and the concrete support pads and connection to the existing pipeline would not exceed 10 feet in depth.

To install the AR/AV and BO appurtenances, excavation would be required to access the existing buried pipeline. All such excavation would be conducted within the 50-foot-wide ROW. To accommodate the construction and installation activities, a 25-foot buffer within the ROW will be established surrounding each appurtenance location. The AR/AV assembly would be mounted at grade in a 24-inch diameter by 4-foot-high enclosure or installed belowground in a vault with a 3 to 4-inch vent pipe extending 36 inches above grade. The BO unit will be an aboveground riser pipe with a cap, or an underground camouflaged unit. Each BO requires an infiltration area sufficient to disperse released water. This may be either an excavated infiltration pond (250 by 24 feet and up to 10 feet in depth) or a subsurface infiltration gallery, located within the ROW. The construction locations would be connected to existing access roads or other established roads by a short lateral access route, consisting either of a graded dirt road or an established overland travel route. For flexibility of travel and exact placement of AR/AVs and BOs, there will be a

ENCLOSURE 3: Project Description Memorandum

buffer of 100 feet along the alignment of the pipeline on either side of the planned locations. The actual disturbance and work area is expected to occupy a much smaller area within that buffer.

To prepare the existing pipeline for water conveyance, a thorough inspection would be conducted to confirm the portions of the underground pipeline that need repair or rehabilitation. To complete the inspection, inspection points would be located approximately every 3-5 miles. The pipeline would be accessed using an excavator at temporary access points within the existing easement. These would include a disturbance area approximately 20 by 75 feet along the pipeline alignment. If damage is identified, rehabilitation may consist of lining the pipeline, repairing sections of the pipeline, or replacing sections of the pipeline, as required.

Based on the most recent assessments of the condition of the Northern Pipeline, it is anticipated that up to 16 miles of pipeline may require replacement. This includes 12.5 miles on BLM-managed land and 3.5 miles of non-federal land. To install replacement pipeline, construction crews would first excavate up to 10 feet below the ground surface to the bottom of the existing pipeline. Damaged portions of the pipeline would then either be cut into pieces and removed by truck or be left in place, with the replacement pipeline installed parallel to the existing pipeline in the excavated trench within the ROW. Excavated material would be stockpiled onsite, while the replacement pipeline is installed within the open trench. The pipe trench would be backfilled with the stockpiled material and graded to match the surrounding topography. All pipeline replacement work is anticipated to be conducted within the 50-foot ROW.

In addition, as part of the Project, a holding pond for the retention of flushed and hydrostatic testing water would be constructed on private lands intersecting the pipeline alignment near the City of Barstow, near Edwards Air Force Base, and/or within Cadiz property on the eastern end of the pipeline. The exact size and location of this pond has not been determined. Once the pump station and appurtenant facilities are installed, water would be conveyed through the pipeline in either direction. Operation would be managed from Pump Station 1 on private property near Cadiz. Routine maintenance of the pipeline would be conducted similar to existing maintenance activities. The facility operators would be subject to safety procedures and impact minimization standard practices for all work in remote desert areas including when using access roads.

Area of Potential Effects

As the ROW conversion is considered an undertaking under Section 106, the Project must have a defined area of potential effects (APE). The ROW conversion represents a federal undertaking under the direct jurisdiction of the federal agencies (i.e., the federal lands over which the federal agencies have authority to approve the ROW and appurtenant facilities necessary to complete the conversion) and the indirect jurisdiction of the federal agencies (i.e., the non-federal lands crossed by the ROW that the federal agencies lack authority to approve the ROW). The APE for this undertaking primarily consists of the pipeline ROW across BLM land, Edwards Airforce Base (EAFB) land, state and private land. Additionally, the APE includes locations potentially subject to ground disturbing activities involved in the conversion, such as the construction of appurtenant facilities or access routes. The pipeline would require rehabilitation and upgrades including 16 miles of pipeline replacement, construction of up to seven pump stations, and installation of air valves and/or blow-off valves at approximately half-mile intervals along the pipeline route. In sum, the APE for the federal undertaking covers the geographic areas of the ROW, both across federal and non-federal land, plus those geographic areas just outside of the ROW that are necessary to facilitate the conversion of the ROW. Such defined APE is commensurate with the scale and nature of the undertaking, which seeks to repurpose an existing pipeline with limited new disturbance both within the ROW area and just outside of the ROW.

Right-of-Way Conversion

The ROW for the Northern Pipeline consists of a 25-ft buffer on either side of the pipeline centerline and to the depth of the pipeline along its route across federally managed lands. This ROW extends approximately 65 miles across BLM property and 18 miles across EAFB property. In many locations this ROW lies adjacent to or between other pipeline ROWs. While the ROW conversion does not include any portions of the pipeline outside of federally managed land, as a connected corridor, the APE is extended to include the route of the pipeline across non-federal land, including both ROWs and private property possessed by FGMWC or its affiliates. The horizontal APE for the ROW conversion extends approximately 162 miles, including 65 miles across BLM property, 17 miles across EAFB property, 0.6 miles across Marine Corps Logistics Base Barstow (MCLBB) property, and 1.2 mile across State of California property, with the remaining 78 miles on privately held land. This ROW is generally 50 ft in width and, separate from other areas of the APE, combines to approximately 940 acres. The BLM has included the pipeline access roads in the ROW application to account for operations and maintenance activities and this is continued on non-federal land. At times these roads are within the existing 50-ft ROW and other times they diverge and constitute a separate 20-ft corridor. The vertical APE for the ROW conversion does not extend above the ground surface and extends no more than 10 ft below the ground to the maximum depth of the base for the existing pipeline.

Initial Inspection

To prepare the Northern Pipeline for water conveyance, a thorough inspection would be required to detect whether portions of the underground pipeline are in need of repair or rehabilitation. To complete the inspection, inspection points would be established approximately every 3-5 miles. The pipeline would access these points from the surface with an excavator. The inspectors will cut into the pipe and install cameras and other inspection equipment inside the pipeline to assess condition and integrity. If damage is

ENCLOSURE 4: Area of Potential Effects Memorandum

identified, rehabilitation may consist of lining the pipeline, repairing sections of the pipeline, or replacing sections of the pipeline, as required. Each temporary access point would include an area of disturbance approximately 6 feet by 15 feet along the pipeline alignment, within the existing easement. After the inspection and completion of the identified necessary pipeline improvements, the pipeline would be re-buried, and the ground surface would be returned to existing grade. All the work, including equipment staging, would be conducted within the 50-foot-wide right-of-way currently held by FGMWC and within soils previously disturbed by the original pipeline installation.

The APE for this portion of the undertaking would not extend farther than that of the ROW conversion. It would take place within the ROW and would only extend approximately 6 ft to access the pipeline.

Pipeline Replacement

Based on the most recent assessments of the condition of the Northern Pipeline, it is anticipated that up to 16 miles of pipeline may require replacement. This includes 12.5 miles of BLM land and 3.5 miles of non-federal land. To install new pipeline segments, construction crews would excavate up to 10 ft below the ground surface exposing the damaged pipeline segments and then those segments would be cut into manageable pieces and removed by truck. Alternatively, the damaged pipeline segments may be left in place, with the new pipeline installed side-by-side in the excavated trench. Excavated material would be stockpiled onsite, while the new pipeline segments are delivered to the sites via the existing access road and installed within the open trench. The pipe trench would be backfilled with the stockpiled material and graded to match the surrounding topography. All pipeline replacement work is anticipated to be conducted within the 50 ft ROW.

Construction of Pump Stations

The construction of the seven pump stations supporting the pipeline would involve approximately two acres of land each, within 300 ft. of the existing pipeline. The activities at the pump stations would include grading to construct a masonry block building housing the controls and instrumentation and to install a forebay tank, surge tanks, six vertical turbine pumps or horizontal pumps, natural gas generators, and electrical transformers. In addition, there would be a new natural gas pipeline connecting each pump station with an existing pipeline, of no more than 1,000 ft in length. Construction will include site preparation, mechanical, structural and electrical facilities, installation of underground pipelines to connect to the existing buried pipeline, and installation of reinforced concrete support pads for pumps, valves, tanks, and other infrastructure. Each pump station site will be paved with concrete surface, fence or wall will be constructed around the perimeter with access gates. The natural gas-powered generators would be installed on pads within the pump station fenceline.

The horizontal APE at these locations would include the adjacent 50-ft wide pipeline ROW and any access road, the 2-acre pump station area and a 25 ft buffer, any space between the pumpstation area and the ROW, and a 50 by 50 ft area on one side of the pump station area to accommodate any necessary natural gas connection. The vertical APE would extend up to 15 ft above the ground surface to accommodate the new structures and up to 10 ft below the ground surface to accommodate the installation of concrete support pads and the connection to the existing pipeline.

Installation of Air Release/Air Vacuum Valves and Blow Off Valves

To convey water, the pipeline requires new appurtenances on the surface, including air and vacuum relief valves (AR/AVs), blow-off facilities (BOs), and access manholes. In total, there will be 140 AR/AVs and 140 new BOs, often in the same locations. To install these appurtenances, excavation would be required to access the existing buried pipeline. All of the work would be conducted within the 50-foot-wide right-of-way currently held by FGMWC. The area of excavation is estimated to be 20 ft long by 10 ft wide at each location to the maximum depth of the pipeline. The surface area typically needed for an AR/AV assembly is approximately 36 to 50 square ft, and 16 to 25 square ft for a BO unit. The AR/AV assembly would be mounted at grade in a 24-inch diameter enclosure that is approximately 4 ft tall. AR/AVs can also be installed belowground in precast vaults with a 3 to 4-inch vent pipe extending approximately 36 inches above grade, which can be painted to blend with surrounding environment. The BO unit can be an aboveground riser pipe with a cap, or an underground camouflaged unit. Each BO would be equipped with a holding pond area sufficient to contain the water released from the pipeline during maintenance or malfunction. The holding ponds would be unlined, measuring approximately 20 ft by 10 ft in size and no more than 6 ft deep. The appurtenance construction locations would be connected to existing access roads or other established road by a short lateral access route, consisting either of a graded dirt road or an established overland travel route.

To accommodate the construction and installation activities, an area will be established surrounding each estimated appurtenance location that measures at least 100 ft along the pipeline on either side of the location and the breadth of the 50-ft ROW plus an additional 30 ft on either side. Additionally, APE will extend 100 ft on either side for any need access route, from the existing road to the pipeline. This area allows for variation in the installation location of the appurtenance and any access route, as well as for avoidance of any identified cultural resources within the planned construction area. The vertical portion of the APE in these locations would extend 4 ft above the ground surface to include the height of the AR/AVs and would extend up to 10 ft below the ground surface to include the excavation to the base of the pipeline and the depth of excavation for the BO holding ponds. The APE would extend only 2 ft vertically below the ground to accommodate locations where a new road would need to be graded rather than just an overland travel route.

Groundwater Extraction

As the federal lead agency, the BLM has identified the undertaking as the potential authorization of a ROW and easement permitting conversion of an existing pipeline for the transportation of water and defined the APE as the ROW and easements along with additional areas of potential ground disturbance or maintenance activities. The undertaking does not include the extraction of groundwater that may be conveyed in the pipeline since this extraction can occur regardless of whether the proposed ROW and easement are granted. That is, the extraction of groundwater is not reasonably considered within the indirect jurisdiction of the federal agencies, and the BLM has no authority regulate such activities as part of approving the ROW conversion. Therefore, the APE does not include the groundwater basin or other water sources in the area. The source of water conveyed in the Northern Pipeline is expected to be groundwater withdrawn on private lands in Cadiz, California as part of the Mojave Groundwater Bank, a separate project without a federal nexus. Groundwater extraction is regulated pursuant to California state

ENCLOSURE 4: Area of Potential Effects Memorandum

and local law and would occur on private lands outside of the BLM's and DoD's direct and indirect jurisdiction.

As part of the approval of the assignment of the MLA ROW in 2023, the BLM indicated that the conversion of the Northern Pipeline to transport water would require consideration of the impacts to environmental and historic resources associated with the extraction of water. However, the BLM has reassessed that previous position and determined that the scope of analysis of the reasonably foreseeable effects of the proposed Project appropriately excludes consideration of the extraction of groundwater that FGMWC may transport through the existing pipeline. In particular, the BLM has determined that FGMWC's groundwater extraction is beyond the BLM's jurisdiction. In other words, the BLM has no ability to control or regulate the groundwater extraction and therefore no ability to impose conditions to address potential impacts to historic properties under Section 106 of the NHPA.

In response to initial consultation with Tribes, the BLM considered whether the undertaking, by authorizing conversion and use of a pipeline to convey water from Cadiz, may directly or indirectly cause alterations in the character or use of historic properties due to groundwater extraction on private lands, such that those areas should be included in the APE. The BLM determined that it is not appropriate to include areas associated with the groundwater project for the following reasons:

Reviewing the record of approval for the separate groundwater project, the BLM found that groundwater extraction may occur regardless of whether the proposed ROW and easement are granted and thus any unforeseen effects of groundwater withdrawal would not be directly or indirectly caused by this undertaking. The groundwater project, whose operation is governed by a Groundwater Management, Monitoring, and Mitigation Plan (GMMMP), was authorized by San Bernardino County under the County of San Bernardino's Desert Groundwater Management Ordinance (County Ordinance 33.06551 et. sec), which limits groundwater extraction to safe yield. This followed analysis of the impacts of those activities, including the impacts of groundwater pumping, under the California Environmental Quality Act (CEQA). The CEQA findings were litigated and upheld in California state court.

The GMMMP includes requirements designed to manage groundwater resources and monitor and mitigate any physical effects of the groundwater project through the life of the project and established a Technical Review Panel to review groundwater monitoring data and propose changes to groundwater extraction operations, if needed, to ensure that there are no significant adverse impacts to groundwater resources.

Numerous studies have evaluated and considered potential impacts of groundwater pumping on natural springs in the Mojave Desert. Past studies and analyses have examined groundwater in the Cadiz Valley and determined that the groundwater project would not significantly impact natural springs. Several studies have examined the subsurface hydrology of spring flow in the Mojave Desert and the Cadiz Valley specifically. The previous analyses of regional springs have considered: Bonanza Spring, Burnt Spring, Hummingbird Spring in the Clipper Mountains, and Vernandyles Spring and Theresa Spring in the Marble Mountains (Brown et al. 2019; Kenney and Foreman 2018; Love and Zdon 2018; Zdon et al. 2018). These analyses have focused on whether there may be any hydrological connection between Bonanza Spring and the Cadiz groundwater basin, as other springs are much farther away and therefore less likely to have any connection with the Cadiz groundwater basin (Brown et al. 2019; Kenney and

Foreman 2018; Love and Zdon 2018; Zdon et al. 2018). The source of Bonanza Spring has been evaluated in several studies using different methods, including radiocarbon dating of the water (Love and Zdon 2018; Kreamer 2023), an examination of the geological makeup of the region (Brown et al. 2019; Kenney and Foreman 2018), and assessment of any correlation between spring flows and climatic events (Brown et al. 2019). Analyses presented in the 2012 FEIR and 2019 EIR Addendum concluded, based on project-specific analysis and evidence presented in scientific papers, that groundwater pumping is not anticipated to impact any springs. Nonetheless, the GMMMP includes precautionary monitoring and mitigation measures related to natural springs. As part of the groundwater project, an independently vetted monitoring program will be set up for Bonanza, Whiskey, and Vontrigger springs to monitor any hydrologic changes to the springs. This includes visual observation and flow measurements in accordance with guidance prepared by Desert Research Institute. If a reduction in annual or seasonal flow is correlated to groundwater pumping by the groundwater project, it would result in a curtailment or cessation of groundwater pumping (Brown et al. 2019).

Based on the above analysis, the BLM concluded that the groundwater extraction: (a) is not a part of the undertaking or reliant on the undertaking for it to proceed (i.e., it is not within the direct or indirect jurisdiction of the federal agencies, and (b) will not directly or indirectly affect the character or use of historic properties related to water resources. Therefore, the APE does not include areas related to the groundwater project.

Summary

In total, the APE includes 2028 acres distributed over 161 miles across San Bernardino and Kern counties. This includes approximately 65 miles of ROW across BLM lands that, when combined with the access road and lateral access routes, the construction areas for the pump station facilities and appurtenances, totals 862 acres of BLM land. The 18 miles of ROW across EAFB totals 197 acres and a 0.6-mile section across MCLBB adds another almost 5 acres. The APE also crosses 1.2 miles of land administered by the California State Lands Commission. Finally, the APE includes the 76 miles of ROW across non-federal land and the access roads and lateral access routes, the construction areas for the pump station facilities, and construction areas for the appurtenances, totaling 952.4 acres.

References Cited

Andy Zdon & Associates

2016 *Mojave Desert Springs and Waterholes: Results of the 2015-16 Mojave Desert Spring Survey Inyo, Kern, San Bernardino and Los Angeles Counties, California*. Prepared for Transition Habitat Conservancy, the Bureau of Land Management, and The Nature Conservancy.

Brown, Anthony, Mark Wildermuth, Dave Romero, and Tim Parker

2019 *Report of the Independent Peer Review Panel for the Groundwater Management, Monitoring, and Mitigation Plan (GMMMP) for the Cadiz Valley Groundwater Conservation, Recovery and Storage Project*. Three Valleys Municipal Water District (TVMWD).

Fenner Valley Water Authority

ENCLOSURE 4: Area of Potential Effects Memorandum

2019 Cadiz Valley Water Conservation, Recovery, and Storage Project, Addendum to the 2012 Environmental Impact Report

Kenney, Miles D., and Terry L. Foreman

2018 *Updated Assessment of Cadiz Water Project's Potential Impacts to Bonanza Springs*. Prepared by Kenney GeoScience and TLF Consulting, LLC for Cadiz, Inc., Oceanside and Camarillo, CA.

Love, Adam H., and Andy Zdon

2018 Use of Radiocarbon Ages to Narrow Groundwater Recharge Estimates in the Southeastern Mojave Desert, USA. *Hydrology* 5(3):51.

Plog, Fred, Kenneth C. Tapman, and David Carlson

1989 *Cultural Resources Report for the All American Pipeline Project: Santa Barbara, California to McCarney, Texas and Additional Areas to the East Along the Central Pipeline Route in Texas*. New Mexico State University for Continuum Corporation and All American Pipeline Company.

Santa Margarita Water District

2012 CEQA Findings: Facts and Findings Related to the Environmental Impact Report for the Cadiz Valley Water Conservation, Recovery and Storage Project, adopted by San Bernardino County Board of Supervisors Resolution No. 2012-176.

2012 Groundwater Management, Monitoring, and Mitigation Plan (GMMMP) for the Cadiz Valley Groundwater Conservation, Recovery and Storage Project

Zdon, Andy, M. Lee Davisson, and Adam H. Love

2018 Understanding the Source of Water for Selected Springs within Mojave Trails National Monument, California. *Environmental Forensics* 19(2):99–111.



**DEPARTMENT OF PARKS AND RECREATION
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December 19, 2025

VIA EMAIL

In reply refer to: BLM_2025_1120_001

Mr. Ronald Nuckles, Field Manager
United States Department of the Interior
Bureau of Land Management
Needles Field Office
1303 S. Highway 95
Needles, CA 92363

RE: Section 106 Consultation for the Fenner Gap Mutual Water Company Right-of-Way (ROW)
Request for the Northern Pipeline

Dear Mr. Nuckles:

In a November 20, 2025, letter (letter) to the State Historic Preservation Officer (SHPO) the Bureau of Land Management (BLM), Needles Field Office (NFO) initiated consultation for the above referenced undertaking. BLM is consulting with the SHPO under Stipulation 8.1(D) of its revised Statewide Protocol¹. The following documents were enclosed with BLM's letter:

- Project Location and APE Maps (Enclosure 1)
- Combined Legal Descriptions and USGS Quadrangle (Enclosure 2)
- Project Description Memorandum (Enclosure 3)
- Area of Potential Effects Memorandum (Enclosure 4)
- Google Earth APE (Enclosure 5)

As described in BLM's letter, BLM NFO received an application from Fenner Gap Mutual Water Company (FGMWC) requesting a Right-of-Way (ROW) grant for the Northern Pipeline, converting its current use authorized under the existing BLM ROW grant under Section 28 of the Mineral Leasing Act of 1920 ("MLA ROW Grant") for transporting natural gas to a ROW under the Federal Land Policy and Management Act (FLPMA) authorizing use of the pipeline for water conveyance across federal lands (undertaking). BLM is initiating formal consultation under Section 8.1(D) of the Statewide Protocol and based on that Section, is notifying SHPO of its intent to meet the requirements following the procedures pursuant to 36 CFR Part 800, the regulations implementing Section 106 of the National Historic Preservation Act (NHPA) of 1966 (as amended). In its letter, BLM is seeking comments only on the Area of Potential Effects (APE).

BLM defines the proposed undertaking as the modification of approximately 162 miles of the existing 217-mile underground Northern Pipeline gas line that traverses portions of the Mojave Desert and Antelope Valley from Cadiz, CA to Wheeler Ridge, CA. It is an extant steel pipeline, 30-inches in diameter and buried at an average depth of 5 to 6 feet. BLM indicated that the FGMWC is necessary to

¹ 2019 State Protocol Agreement Among the California State Director of the Bureau of Land Management and the California State Historic Preservation Officer and the Nevada State Historic Preservation Officer Regarding the Manner in Which the Bureau of Land Management Will Meet Its Responsibilities Under the National Historic Preservation Act and the National Programmatic Agreement Among the BLM, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers

transport water in support of a long-term groundwater management program that was previously reviewed and approved under the California Environmental Quality Act (CEQA), underlying the Cadiz Real Estate property in San Bernardino County.

BLM lists the following activities as directly related to the undertaking: repairs to the pipeline, replacement of 16 miles of pipeline, installation of appurtenances (e.g. air and vacuum relief valves, blow-off facilities, and access manholes), construction of seven new pump stations and excavation of infiltration ponds. A more detailed description of the undertaking was provided in Enclosure 3.

As described in the body of its letter and in Enclosure 4, BLM has delineated the APE to include approximately 2,028 acres distributed over 162 miles across San Bernardino and Kern Counties, consisting primarily of the 50-foot-wide pipeline ROW across BLM land, Edwards Airforce Base (EAFB) land, land administered by the California State Lands Commission, and private lands.

As part of a previous approval of the assignment of the existing MLA ROW Grant in 2023, BLM indicated that the conversion of the Northern Pipeline from transporting gas to water would require consideration of the impacts to environmental and historic resources associated with the extraction of groundwater. However, in its letter, BLM states that it has since “reassessed that previous position and determined that the scope of analysis of the reasonably foreseeable effects of the proposed Project appropriately excludes consideration of the extraction of groundwater that FGMWC may transport through the existing pipeline.” BLM has concluded that the groundwater extraction is not reliant on the undertaking for the pipeline conversion to proceed and determined that FGMWC’s groundwater extraction is beyond its jurisdiction. BLM states that it does not have the “ability to control or regulate the groundwater extraction and therefore no ability to impose conditions to address potential impacts to historic properties under Section 106 of the NHPA.” BLM further explained that the water extraction will occur on private lands in Cadiz as part of the Mojave Groundwater Bank, which BLM has described as “a separate project without a federal nexus.” Therefore, BLM does not include the groundwater basin or other any other water sources in its APE.

In its letter, BLM provided a list of Indian tribes and other consulting parties that it initiated consultation with on August 18, 2025. The SHPO received copies of letters from the Fort Mojave Indian Tribe (September 29, 2025) and the Chemehuevi Indian Tribe (October 16, 2025) to BLM, responding to BLM’s initial outreach. In these letters, both tribes requested continued consultation and expressed concerns about the effects associated with the extraction and transportation of water from the aquifer and the effects to springs and the surrounding associated landscapes that are sacred to their peoples and cultures.

The SHPO provides the following comments:

1. While Enclosure 1 was received, it is comprised of 65 separate maps, making it difficult to understand the scale and scope of the APE. Please provide:
 - a. APE Map on a 7.5-minute USGS topographic quad.
 - b. Aerial imagery, or another map depicting the APE in appropriate detail and scale.
 - c. Map(s) that clearly outline the APE and depict and all project elements discussed in Enclosures 3 and 4.
2. If the undertaking is to modify the pipeline and change from gas to water conveyance, it stands to reason that the source(s) of the water should also be included as part of the undertaking. Therefore, it is recommended that BLM reconsider and include all sources of water that will be conveyed within the pipeline, potential effects to Tribal cultural resources as a result of the water

drawdown, and any associated elements such as appurtenances within the proposed undertaking description and APE.

3. Please provide a summary of the views conveyed by Indian tribes or other consulting parties likely to have knowledge of, or concerns with historic properties in the APE, and how BLM addressed or will address their concerns within the undertaking documentation.
4. Please provide a copy of the document from Edwards Airforce Base designating BLM as the lead federal agency to satisfy its Section 106 responsibilities.

If you require further information, please contact Senior State Archaeologist Brendon Greenaway at Brendon.Greenaway@parks.ca.gov

Sincerely,



Julianne Polanco
State Historic Preservation Officer



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

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In Reply Refer To:

1780(P)/2800 CAD090

CA-D090-2025-0018-EA

ELECTRONIC SUBMISSION

Julianne Polanco
State Historic Preservation Officer
Office of Historic Preservation
1725 23rd Street, Suite 100
Sacramento, CA 95816

Dear Ms. Polanco:

Thank you for your letter of December 19, 2025, regarding the Bureau of Land Management's (BLM) initiation of consultation for the Fenner Gap Mutual Water Company (FGMWC) Northern Pipeline Right-of-Way (ROW) Conversion Project (SHPO Project No. BLM_2025_1120_001). We appreciate State Historic Preservation Officer's (SHPO) careful review of the submitted materials and the opportunity to clarify and refine the Area of Potential Effects (APE) consistent with 36 CFR 800.4(a)(1). Note that since our last submission on November 20, 2025, the APE has undergone relatively minor adjustments to correct minor mapping errors. These adjustments are captured in an updated APE Memorandum (Enclosure 1).

The intent of this correspondence is to address the comments / requests provided in your letter, re-affirm our current delineation of the APE, and provide rationale justifying this decision. BLM has reviewed SHPO's comments in detail. Our responses are provided below, organized to correspond with the numbered comments in your letter.

Comment 1: APE Mapping Clarity

BLM concurs and appreciates this recommendation. To improve clarity and facilitate review, BLM is providing the following updated mapping products per your request:

- a. Consolidated APE map figures depicted on 7.5-minute USGS topographic quadrangles;
- b. Aerial imagery depicting the APE at an appropriate scale; and
- c. Maps clearly delineating the APE boundaries and depicting all project elements described in the Project Description and APE memoranda.

These revised figures are intended to clearly convey the extent of the APE and all relevant components of the undertaking. Updated map figures are provided in Enclosure 1.

Comment 2: Inclusion of Groundwater Sources in the Undertaking and APE

BLM acknowledges SHPO's concern and the perspectives raised by consulting Tribes regarding groundwater extraction and water-dependent cultural landscapes. BLM has carefully reconsidered the scope of the undertaking and the delineation of the Area of Potential Effects (APE) in light of these comments, consistent with Advisory Council on Historic Preservation (ACHP) guidance that APEs are defined by the undertaking and its reasonably foreseeable effects. BLM reaffirms its determination that inclusion of groundwater extraction areas within the APE is not appropriate under 36 CFR 800.4(a)(1).

As defined under 36 CFR 800.16(y), the federal undertaking subject to Section 106 review is BLM's potential authorization of a right-of-way (ROW) and associated easements to permit conversion of an existing pipeline for water conveyance across federal lands. The undertaking includes physical modification of the pipeline and associated facilities, inspection, repair, replacement, appurtenance installation, pump station construction, and related access and maintenance activities. The undertaking is limited to those actions that BLM has discretion to approve, deny, or condition, and does not extend to activities that are not authorized or regulated by the agency.

Groundwater extraction associated with the Mojave Groundwater Bank is a separate, non-federal project occurring on private lands and may proceed regardless of whether the proposed ROW and easements are granted. BLM has no discretionary authority to authorize, deny, regulate, or condition groundwater pumping and therefore cannot define that activity as part of the federal undertaking or impose Section 106 conditions on groundwater extraction.

While groundwater extraction and water conveyance are functionally related, BLM considered whether the proposed ROW conversion would foreseeably cause direct or indirect effects to historic properties associated with groundwater extraction. BLM determined that the federal action does not enable, increase, or regulate groundwater extraction, nor does it alter the scope, intensity, or location of pumping authorized under state and local law. Accordingly, the relationship does not establish a causal connection sufficient to include groundwater extraction areas within the APE. Expanding the APE to include the groundwater basin would extend the APE beyond the scope of the undertaking and beyond areas where effects would be caused by the federal action, contrary to 36 CFR 800.4(a)(1) and 800.5(a).

As contextual background, BLM notes that groundwater extraction has been separately authorized under California state and local law and subject to environmental review under the California Environmental Quality Act (CEQA), including evaluation of potential effects on springs and groundwater-dependent resources. That review has been upheld in California state court, and the groundwater project is governed by a Groundwater Management, Monitoring, and Mitigation Plan that includes enforceable monitoring and response measures.

For these reasons, and after thorough reconsideration, BLM concludes that groundwater extraction areas and the aquifer are appropriately excluded from the APE for this undertaking. This conclusion does not diminish the importance of Tribal concerns regarding water-dependent cultural landscapes but reflects the regulatory requirement that an APE be defined by the undertaking and its reasonably foreseeable effects.

Comment 3: Summary of Tribal and Consulting Party Views

BLM appreciates this request and recognizes the importance of clearly documented consultation with Indian Tribes that attach religious or cultural significance to historic properties that may be affected by an undertaking, as well as other consulting parties that may have knowledge of, or concerns regarding historic properties that may be present in the APE.

The BLM identified fourteen (14) federally recognized Indian Tribes meeting the above criteria, including: Colorado River Indian Tribes, Chemehuevi Indian Tribe, Morongo Band of Mission Indians, Tejon Indian Tribe, Fort Independence Paiute Tribe, Fort Mojave Indian Tribe, Moapa Band of Paiutes, Yuhaaviatam of San Manuel Nation, Timbisha Shoshone Tribe, 29 Palms Band of Mission Indians, Agua Caliente Band of Cahuilla Indians, Campo Kumeyaay Nation, Las Vegas Tribe of Paiute Indians, and Soboba Band of Luiseno Indians. In addition to federally recognized Indian Tribes, the BLM notified and invited Kern Valley Indian Community, a non-federally recognized Tribal community or organization, to participate in consultation. (Note that in our correspondence dated November 20, 2025, the BLM indicated that the agency had identified eleven [11] Tribal consulting parties. That information was outdated; we regret the error).

To date, the BLM has received responses to consultations regarding project notification and delineation of the APE from the Chemehuevi Indian Tribe, Fort Mojave Indian Tribe, Moapa Band of Paiutes, and 29 Palms Band of Mission Indians. Generally, responding Tribal consulting parties have conveyed substantial concerns regarding the proposed undertaking. Those Tribes emphasized that the project area is part of a broader interconnected cultural landscape that includes sacred springs, aquifers, trails, and places of ongoing religious and cultural practice. Those Tribes also stated that groundwater, springs, and associated desert ecosystems are inseparable from historic properties and are integral to the integrity, setting, feeling, and association of those resources.

Multiple Tribes objected to the BLM's proposed APE, asserting that it is impermissibly narrow and fails to account for direct, indirect, and cumulative effects, particularly those related to groundwater extraction and long-distance water conveyance. Tribes contend that lowering groundwater levels could adversely affect sacred springs, traditional cultural landscapes, and living cultural practices such as the Salt Song Trail, which extends far beyond the physical pipeline corridor. Several Tribes maintain that these effects are reasonably foreseeable and must be considered under Section 106 of the NHPA.

Consulting Tribes also stress the need for robust government-to-government consultation, early and ongoing coordination, and the inclusion of Tribal monitors during ground-disturbing activities. Requests were made for information sharing, including cultural resource inventory reports, detailed maps, visual analyses, and opportunities for site visits, land blessings, and protocols for unanticipated discoveries. Avoidance of impacts on historic properties and culturally significant landscapes was repeatedly identified as the preferred and most appropriate form of mitigation.

Overall, Tribal consulting parties express that, as currently defined, the undertaking poses a risk of adverse effects to historic properties of religious and cultural significance and that further consultation, APE reconsideration, and analysis are necessary to ensure compliance with Section 106 of the NHPA.

BLM has taken these views into account in our delineation of the APE, but as noted above, has concluded that groundwater extraction areas and the water source are appropriately not included within the APE for this undertaking. The BLM remains committed to ongoing consultation with Tribes throughout identification and evaluation of historic properties and consideration of effects within the defined APE. Ongoing efforts include continued government-to-government consultation, including appropriate avoidance, minimization, and treatment measures consistent with the Section 106 process. Should future changes to the project result in changes attributable to the undertaking, the BLM will re-evaluate the APE consistent with 36 CFR 800.4(a)(1).

Comment 4: Lead Federal Agency Documentation

As requested, the documentation designating BLM as the lead federal agency for compliance with Section 106 of the NHPA for the undertaking is included in Enclosure 3.

Conclusion

BLM believes the delineated APE is reasonable, appropriately scaled, and consistent with the requirements of 36 CFR 800.4(a)(1). The APE encompasses all areas where direct or indirect effects from the Northern Pipeline ROW Conversion Project may occur, while appropriately excluding activities and locations that are not caused by, or subject to, the federal undertaking.

While the BLM has determined that inclusion of the source(s) of the water within the APE is not warranted based on the scope of the undertaking, the BLM remains committed to continued consultation with SHPO and consulting parties.

BLM appreciates SHPO's constructive comments and looks forward to continued consultation as we proceed with identification of historic properties and assessment of effects within the defined APE. BLM will continue formal consultation with the SHPO and other consulting parties on the scope of identification efforts and results, Determinations of Eligibility for identified resources, and Finding of Effect when these efforts are completed. Should you have any questions or require additional information, please contact John Fogerty, BLM State Archaeologist, at (279) 202-7035 or mholt@blm.gov, or Ronald Nuckles, Field Manager, at (760) 326-7000.

Sincerely,

RONALD NUCKLES  Digitally signed by
RONALD NUCKLES
Date: 2026.02.10
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Ronald O. Nuckles
Field Manager
Bureau of Land Management, Needles Field Office

Cc: Brendon Greenaway, CA OHP Senior State Archaeologist, Section 106 Review
Jody L. Brown, CA OHP Deputy State Historic Preservation Officer/Tribal Liaison
Daniel Leivas, Chairman, Chemehuevi Indian Tribe
Ron Escobar, Director, Tribal Historic Preservation Office, Chemehuevi Indian Tribe

Timothy Williams, Chairman, Fort Mojave Indian Tribe
Shan Lewis, Vice Chairman, Fort Mojave Indian Tribe
Linda Otero, Director, Aha Makav Cultural Society, Fort Mojave Indian Tribe
Darrell Mike, Chairman, Twenty-Nine Palms Band of Mission Indians
Nicholas Garza, Tribal Historic Preservation Office, Twenty-Nine Palms Band of Mission Indians
Ivan Reel, Chairman, Moapa Band of Paiute Indians
Darren Daboda, Director, Tribal Historic Preservation Office, Moapa Band of Paiute Indians
Octavio Escobedo III, Chairman, Tejon Indian Tribe
Curtis Alcantar, THPO, Natural Resources Manager, Tejon Indian Tribe
Amelia Flores, Chairwoman, Colorado River Indian Tribes (CRIT)
Tashina Harper, Executive Secretary, Colorado River Indian Tribes (CRIT)
Ralph Goff, Chairman, Campo Band of Mission Indians
Daniel E. Tsosie, Cultural Resource Manager, Campo Band of Mission Indians
Carl Dahlberg, Chairman, Fort Independence Community of Paiute Indians
Benny Tso, Chairman, Las Vegas Tribe of Paiute Indians
Charles Martin, Chairman, Morongo Band of Mission Indians
Isaiah Vivanco, Chairman, Soboba Band of Luiseño Indians
Margaret Cortez, Chairwoman, Timbisha Shoshone Tribe
Mandi Campbell, Tribal Historic Preservation Officer, Timbisha Shoshone Tribe
Lynn Valbuena, Chairwoman, Yuhaaviatam of San Manuel Nation
Robert Robinson, Chairman, Kern Valley Indian Community
Bill Marzella, Program Analyst, Advisory Council on Historic Preservation
Victoria Harvey, EAFB Cultural Resources Manager/Archaeologist
Neil Desai, Senior Pacific Region Director, National Parks Conservation Association
Joseph R. Stout, CA BLM State Director
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Elizabeth A. Meyer-Shields, CA BLM Deputy State Director
Jeremiah M. Karuzas, CA BLM Deputy State Director
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Melissa Bleier, CA BLM Supervisory Realty Specialist
John A. Fogerty, CA BLM Deputy Preservation Officer
Michael J. Holt, Central CA District Office Project Manager

Enclosures (3):

1. UPDATED Area of Potential Effects Memorandum
2. Supplemental APE Map Products
3. NHPA Section 106 Lead Agency Designation Documentation

ENCLOSURE 1: UPDATED Area of Potential Effects Memorandum

Note that the following Area of Potential Effects Memorandum included the following specific updates to account for relatively minor adjustments and correct minor mapping errors:

- Within the *Right-of-Way Conversion* section, the mileage within EAFB has changed from 17 miles to 18 miles, to correct for a mileage rounding discrepancy.
- The identification of Marine Corps Logistics Base Barstow (MCLBB) has been removed as an overlying landowner, has been removed. BLM has determined that a parcel originally thought to be as owned/administered by MCLBB is a BLM parcel.
- The mileage of state of California lands has been changed from 1.2 miles to 1.1 miles. BLM has determined that a small segment of a parcel originally listed as being state lands is not crossed by the easement.
- The total acreage of the APE involving BLM land is changed from 940 acres to 983 acres. The original 940 acres was included in error.
- Within the *Pipeline Replacement* section the miles of land within BLM is changed from 12.5 miles to 11 miles. As design has advanced, the pipeline replacement locations have been refined: 11 miles on BLM land and 5 miles on private lands.
- Within the *Summary* section, the number of miles on privately held land is changed from 76 to 78 miles. The 76 miles within the summary was an error.

Area of Potential Effects

As the ROW conversion is considered an undertaking under Section 106, the Project must have a defined area of potential effects (APE). This APE primarily consists of the pipeline ROW across BLM land, Edwards Airforce Base (EAFB) land, state and private land. Additionally, the APE includes locations potentially subject to ground disturbing activities involved in the conversion, such as the construction of appurtenant facilities or access routes. The pipeline would require rehabilitation and upgrades including 16 miles of pipeline replacement, construction of up to seven pump stations, and installation of air valves and/or blow-off valves at approximately half-mile intervals along the pipeline route.

Right-of-Way Conversion

The ROW for the Northern Pipeline consists of a 25-ft buffer on either side of the pipeline centerline and to the depth of the pipeline along its route across federally managed lands. This ROW extends approximately 65 miles across BLM property and 18 miles across EAFB property. In many locations this ROW lies adjacent to or between other pipeline ROWs. While the ROW conversion does not include any portions of the pipeline outside of federally managed land, as a connected corridor, the APE is extended to include the route of the pipeline across non-federal land, including both ROWs and private property possessed by FGMWC or its affiliates. The horizontal APE for the ROW conversion extends approximately 162 miles, including 65 miles across BLM property, 18 miles across EAFB property, and 1.1 mile across State of California property, with the remaining 78 miles on privately held land. This ROW is generally 50 ft in width and, separate from other areas of the APE, combines to approximately 983 acres. The APE also includes access roads that comprise an additional 1,045 acres, bringing the total APE acreage to 2,028 acres. The BLM has included the pipeline access roads in the ROW application to account for operations and maintenance activities and this is continued on non-federal land. At times these roads are within the existing 50-ft ROW and other times they diverge and constitute a separate 20-ft

corridor. The vertical APE for the ROW conversion does not extend above the ground surface and extends no more than 10 ft below the ground to the maximum depth of the base for the existing pipeline.

Initial Inspection

To prepare the Northern Pipeline for water conveyance, a thorough inspection would be required to detect whether portions of the underground pipeline are in need of repair or rehabilitation. To complete the inspection, inspection points would be established approximately every 20-30 miles. The pipeline would access these points from the surface with an excavator. The inspectors will cut into the pipe and install cameras and other inspection equipment inside the pipeline to assess condition and integrity. If damage is identified, rehabilitation may consist of lining the pipeline, repairing sections of the pipeline, or replacing sections of the pipeline, as required. Each temporary access point would include an area of disturbance approximately 6 feet by 15 feet along the pipeline alignment, within the existing easement. After the inspection and completion of the identified necessary pipeline improvements, the pipeline would be re-buried, and the ground surface would be returned to existing grade. All the work, including equipment staging, would be conducted within the 50-foot-wide right-of-way currently held by FGMWC and within soils previously disturbed by the original pipeline installation.

The APE for this portion of the undertaking would not extend farther than that of the ROW conversion. It would take place within the ROW and would only extend approximately 6 ft to access the pipeline.

Pipeline Replacement

Based on the most recent assessments of the condition of the Northern Pipeline, it is anticipated that up to approximately 16 miles of pipeline may require replacement. This includes approximately 11 miles of BLM land and approximately 5 miles of non-federal land. To install new pipeline segments, construction crews would excavate up to 10 ft below the ground surface exposing the damaged pipeline segments and then those segments would be cut into manageable pieces and removed by truck. Alternatively, the damaged pipeline segments may be left in place, with the new pipeline installed side-by-side in the excavated trench. Excavated material would be stockpiled onsite, while the new pipeline segments are delivered to the sites via the existing access road and installed within the open trench. The pipe trench would be backfilled with the stockpiled material and graded to match the surrounding topography. All pipeline replacement work is anticipated to be conducted within the 50 ft ROW.

Construction of Pump Stations

The construction of the seven pump stations supporting the pipeline would involve approximately two acres of land each, within 300 ft. of the existing pipeline. The activities at the pump stations would include grading to construct a masonry block building housing the controls and instrumentation and to install a forebay tank, surge tanks, six vertical turbine pumps or horizontal pumps, natural gas generators, and electrical transformers. In addition, there would be a new natural gas pipeline connecting each pump station with an existing pipeline, of no more than 1,000 ft in length. Construction will include site preparation, mechanical, structural and electrical facilities, installation of underground pipelines to connect to the existing buried pipeline, and installation of reinforced concrete support pads for pumps, valves, tanks, and other infrastructure. Each pump station site will be paved with concrete surface, fence or wall will be constructed around the perimeter with access gates. The natural gas-powered generators would be installed on pads within the pump station fenceline.

The horizontal APE at these locations would include the adjacent 50-ft wide pipeline ROW and any access road, the 2-acre pump station area and a 25 ft buffer, any space between the pumpstation area and the ROW, and a 50 by 50 ft area on one side of the pump station area to accommodate any necessary natural gas connection. The vertical APE would extend up to 15 ft above the ground surface to accommodate the new structures and up to 10 ft below the ground surface to accommodate the installation of concrete support pads and the connection to the existing pipeline.

Installation of Air Release/Air Vacuum Valves and Blow Off Valves

To convey water, the pipeline requires new appurtenances on the surface, including air and vacuum relief valves (AR/AVs), blow-off facilities (BOs), and access manholes. In total, there will be up to 140 AR/AVs and up to 140 new BOs, often in the same locations. To install these appurtenances, excavation would be required to access the existing buried pipeline. All of the work would be conducted within the 50-foot-wide right-of-way currently held by FGMWC. The area of excavation is estimated to be 20 ft long by 10 ft wide at each location to the maximum depth of the pipeline. The surface area typically needed for an AR/AV assembly is approximately 36 to 50 square ft, and 16 to 25 square ft for a BO unit. The AR/AV assembly would be mounted at grade in a 24-inch diameter enclosure that is approximately 4 ft tall. AR/AVs can also be installed belowground in precast vaults with a 3 to 4-inch vent pipe extending approximately 36 inches above grade, which can be painted to blend with surrounding environment. The BO unit can be an aboveground riser pipe with a cap, or an underground camouflaged unit. Each BO would be equipped with an infiltration area sufficient to disperse the water released from the pipeline during infrequent maintenance or malfunction. A subsurface infiltration gallery would be constructed within the ROW that would vary in size but generally be less than 250 by 24 feet in size (or approximately 6,000 sf). The area would be excavated three to five feet and a perforated pipeline gallery would be installed. The soil would be backfilled, and the site graded to its original contour. The appurtenance construction locations would be connected to existing access roads or other established road by a short lateral access route, consisting either of a graded dirt road or an established overland travel route.

To accommodate the construction and installation activities, an area will be established surrounding each estimated appurtenance location that measures at least 100 ft along the pipeline on either side of the location and the breadth of the 50-ft ROW plus an additional 30 ft on either side. Additionally, APE will extend 100 ft on either side for any need access route, from the existing road to the pipeline. This area allows for variation in the installation location of the appurtenance and any access route, as well as for avoidance of any identified cultural resources within the planned construction area. The vertical portion of the APE in these locations would extend 4 ft above the ground surface to include the height of the AR/AVs and would extend up to 10 ft below the ground surface to include the excavation to the base of the pipeline and the depth of excavation for the BO holding ponds. The APE would extend only 2 ft vertically below the ground to accommodate locations where a new road would need to be graded rather than just an overland travel route.

Groundwater Extraction

As the federal lead agency, BLM has identified the undertaking as the potential authorization of a ROW and easement permitting conversion of an existing pipeline for the transportation of water and defined the

ENCLOSURE 1: UPDATED Area of Potential Effects Memorandum

APE as the ROW and easements along with additional areas of potential ground disturbance or maintenance activities. The undertaking does not include the extraction of groundwater that may be conveyed in the pipeline since this extraction can occur regardless of whether the proposed ROW and easement are granted. Therefore, the APE does not include the groundwater basin or other water sources in the area. The source of water conveyed in the Northern Pipeline is expected to be groundwater withdrawn on private lands in Cadiz, California as part of the Mojave Groundwater Bank, a separate project without a federal nexus. Groundwater extraction is regulated pursuant to California state and local law and would occur on private lands outside of the BLM's and DoD's direct and indirect jurisdiction.

As part of the approval of the assignment of the MLA ROW in 2023, the BLM indicated the conversion of the Northern Pipeline to transport water would require consideration of the impacts to environmental and historic resources associated with the extraction of water. The BLM's change in position follows a reassessment as to whether the BLM has an ability to control activities beyond the BLM's jurisdiction. Because the BLM, as noted below, cannot control Cadiz's drawdown of its aquifer, any consideration of Cadiz's activity under Section 106 of the NHPA would be inappropriate.

In response to initial consultation with Tribes, the BLM considered whether the undertaking, by authorizing conversion and use of a pipeline to convey water from Cadiz, may directly or indirectly cause alterations in the character or use of historic properties due to groundwater extraction on private lands, such that those areas should be included in the APE. The BLM determined that it is not appropriate to include areas associated with the groundwater project for several reasons, as follows:

Reviewing the record of approval for the separate groundwater project, the BLM found that groundwater extraction may occur regardless of whether the proposed ROW and easement are granted and thus any unforeseen effects of groundwater withdrawal would not be directly or indirectly caused by this undertaking. The groundwater project, whose operation is governed by a Groundwater Management, Monitoring, and Mitigation Plan (GMMMP), was authorized by San Bernardino County under the County of San Bernardino's Desert Groundwater Management Ordinance (County Ordinance 33.06551 et. sec), which limits groundwater extraction to safe yield. This followed analysis of the impacts of those activities, including the impacts of groundwater pumping, under the California Environmental Quality Act (CEQA). The CEQA findings were litigated and upheld in California state court.

The GMMMP includes requirements designed to manage groundwater resources and monitor and mitigate any physical effects of the groundwater project through the life of the project and established a Technical Review Panel to review groundwater monitoring data and propose changes to groundwater extraction operations, if needed, to ensure that there are no significant adverse impacts to groundwater resources.

Numerous studies have evaluated and considered potential impacts of groundwater pumping on natural springs in the Mojave Desert. Past studies and analyses have examined groundwater in the Cadiz Valley and determined that the groundwater project would not significantly impact natural springs. Several studies have examined the subsurface hydrology of spring flow in the Mojave Desert and the Cadiz Valley specifically. The previous analyses of regional springs have considered: Bonanza Spring, Burnt Spring, Hummingbird Spring in the Clipper Mountains, and Vernandyles Spring and Theresa Spring in the Marble Mountains (Brown et al. 2019; Kenney and Foreman 2018; Love and Zdon 2018; Zdon et al.

2018). These analyses have focused on whether there may be any hydrological connection between Bonanza Spring and the Cadiz groundwater basin, as other springs are much farther away and therefore less likely to have any connection with the Cadiz groundwater basin (Brown et al. 2019; Kenney and Foreman 2018; Love and Zdon 2018; Zdon et al. 2018). The source of Bonanza Spring has been evaluated in several studies using different methods, including radiocarbon dating of the water (Love and Zdon 2018; Kreamer 2023), an examination of the geological makeup of the region (Brown et al. 2019; Kenney and Foreman 2018), and assessment of any correlation between spring flows and climatic events (Brown et al. 2019). Analyses presented in the 2012 FEIR and 2019 EIR Addendum concluded, based on project-specific analysis and evidence presented in scientific papers, that groundwater pumping is not anticipated to impact any springs. Nonetheless, the GMMMP includes precautionary monitoring and mitigation measures related to natural springs. As part of the groundwater project, an independently vetted monitoring program will be set up for Bonanza, Whiskey, and Vontrigger springs to monitor any hydrologic changes to the springs. This includes visual observation and flow measurements in accordance with guidance prepared by Desert Research Institute. If a reduction in annual or seasonal flow is correlated to groundwater pumping by the groundwater project, it would result in a curtailment or cessation of groundwater pumping (Brown et al. 2019).

Based on the above analysis, the BLM concluded a) groundwater extraction is not a part of the undertaking or reliant on the undertaking for it to proceed, and b) that the groundwater extraction will not directly or indirectly affect the character or use of historic properties related to water resources. Therefore, the APE does not include areas related to the groundwater project.

Summary

In total, the APE includes 2028 acres distributed over 162 miles across San Bernardino and Kern counties. This includes approximately 65 miles of ROW across BLM lands that, when combined with the access road and lateral access routes, the construction areas for the pump station facilities and appurtenances totals 983 acres of BLM land. The 18 miles of ROW across EAFB totals 108 acres. The APE also crosses 1.1 miles of land administered by the California State Lands Commission. Finally, the APE includes the 78 miles of ROW across non-federal land and the access roads and lateral access routes, the construction areas for the pump station facilities, and construction areas for the appurtenances, totaling 983 acres. The APE also includes access roads that comprise an additional 1,045 acres, bringing the total APE acreage to 2,028 acres.

References Cited

Andy Zdon & Associates

2016 *Mojave Desert Springs and Waterholes: Results of the 2015-16 Mojave Desert Spring Survey Inyo, Kern, San Bernardino and Los Angeles Counties, California*. Prepared for Transition Habitat Conservancy, the Bureau of Land Management, and The Nature Conservancy.

Brown, Anthony, Mark Wildermuth, Dave Romero, and Tim Parker

ENCLOSURE 1: UPDATED Area of Potential Effects Memorandum

2019 *Report of the Independent Peer Review Panel for the Groundwater Management, Monitoring, and Mitigation Plan (GMMMP) for the Cadiz Valley Groundwater Conservation, Recovery and Storage Project*. Three Valleys Municipal Water District (TVMWD).

Fenner Valley Water Authority

2019 Cadiz Valley Water Conservation, Recovery, and Storage Project, Addendum to the 2012 Environmental Impact Report

Kenney, Miles D., and Terry L. Foreman

2018 *Updated Assessment of Cadiz Water Project's Potential Impacts to Bonanza Springs*. Prepared by Kenney GeoScience and TLF Consulting, LLC for Cadiz, Inc., Oceanside and Camarillo, CA.

Love, Adam H., and Andy Zdon

2018 Use of Radiocarbon Ages to Narrow Groundwater Recharge Estimates in the Southeastern Mojave Desert, USA. *Hydrology* 5(3):51.

Plog, Fred, Kenneth C. Tapman, and David Carlson

1989 *Cultural Resources Report for the All American Pipeline Project: Santa Barbara, California to McCarney, Texas and Additional Areas to the East Along the Central Pipeline Route in Texas*. New Mexico State University for Continuum Corporation and All American Pipeline Company.

Santa Margarita Water District

2012 CEQA Findings: Facts and Findings Related to the Environmental Impact Report for the Cadiz Valley Water Conservation, Recovery and Storage Project, adopted by San Bernardino County Board of Supervisors Resolution No. 2012-176.

2012 Groundwater Management, Monitoring, and Mitigation Plan (GMMMP) for the Cadiz Valley Groundwater Conservation, Recovery and Storage Project

Zdon, Andy, M. Lee Davisson, and Adam H. Love

2018 Understanding the Source of Water for Selected Springs within Mojave Trails National Monument, California. *Environmental Forensics* 19(2):99–111.

MEMORANDUM OF UNDERSTANDING

BETWEEN

THE DEPARTMENT OF THE AIR FORCE
AIR FORCE MATERIEL COMMAND
EDWARDS AIR FORCE BASE

AND

THE UNITED STATES DEPARTMENT OF THE INTERIOR (DOI)
BUREAU OF LAND MANAGEMENT (BLM)

REGARDING

FENNER GAP MUTUAL WATER COMPANY PIPELINE RIGHT OF WAY

I. Introduction

This Memorandum of Understanding (MOU) establishes a cooperating agency relationship between the Bureau of Land Management's (BLM's) Needles Field Office (NFO) and the Department of the Air Force (DAF), Air Force Materiel Command (AFMC), Edwards Air Force Base (AFB), ("Cooperating Agency" or "Cooperator") for the purpose of preparing the Fenner Gap Mutual Water Company (FGMWC) Pipeline Right of Way (ROW) Environmental Assessment (EA). The BLM is the Lead Agency for development of the EA to comply with the National Environmental Policy Act (NEPA), Section 106 of the National Historic Preservation Act (NHPA), among others. The BLM acknowledges that the Cooperating Agency has jurisdiction by law and/or special expertise applicable to the ROW EA effort.

Cooperating agency means any Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved in a proposal (or a reasonable alternative) for legislation or other major Federal action significantly affecting the quality of the human environment.

This MOU describes responsibilities and procedures as agreed by the Cooperating Agency and the BLM ("the Parties").

The Cooperating Agency relationship established through this MOU shall be governed by all applicable statutes, regulations, and policies in compliance with the NEPA, as amended by Public Law 118-5 (42 U.S.C. Sections 4321 et seq.), the DoD NEPA Implementing Procedures, Parts 0 through 7, the BLM's planning regulations (43 CFR Part 1600), and the Department of the Interior's NEPA Regulations (43 CFR Part 46). Moreover, the applicable statutes, regulations and policies governing compliance with the NHPA Section 106 (16 U.S.C. 470f) through CA BLM's State Protocol Agreement, Archaeological Resources Protection Act (ARPA) (16 U.S.C. 470aa-mm), Native American Graves Protection and Repatriation Act (NAGPRA) (25 U.S.C. 32), among others.

II. Purposes

The purposes of this MOU are:

- A. To designate AFMC as a Cooperating Agency in the ROW EA and NHPA processes.
- B. To provide a framework for cooperation and coordination between the BLM and the Cooperator that will ensure successful completion of the ROW EA and NHPA obligations in a timely, efficient, and thorough manner.
- C. To recognize that the BLM is the Lead Agency with responsibility for the completion of the ROW EA, NHPA Section 106, Finding of No Significant Impact (FONSI), and the BLM decision document.

- D. To recognize and provide guidance for the development of a mutually respectful and effective Cooperating Agency relationship between the Parties, which reflects their unique working relationship as it relates to the tasks at hand.
- E. To describe the responsibilities, jurisdictional authority, and expertise of each Party in the NEPA and NHPA processes, among others.

III. Authorities for the MOU

- A. The authorities of the BLM to enter this MOU and engage in the activities described herein include, but are not limited to:
 - 1. National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.).
 - 2. National Historic Preservation Act of 1966 (NHPA) (U.S.C. 470f).
 - 3. Federal Land Policy and Management Act (FLPMA) of 1976 (43 U.S.C. 1701 et seq.).
 - 4. Archaeological Resources Protection Act of 1979 (16 U.S.C. 470aa–mm).
 - 5. Native American Graves Protection and Repatriation Act of 1990 (25 U.S.C. 32).
 - 6. Biological and Cultural notifications and/or Section 7 and/or NHPA Section 106 Consultations.
 - 7.
- B. Regulations implementing the above authorities, as applicable:
 - 1. DoD NEPA Implementing Procedures
 - 2. Department of the Interior NEPA regulations (40 CFR Part 46)
 - 3. Department of the Interior NHPA Section 106 regulations (36 CFR Part 800)
 - 4. NAGPRA regulations (43 CFR Part 10)
 - 5. ARPA regulations (43 CFR Part 7)
 - 6. Bureau of Land Management planning regulations (43 CFR Part 1601 et seq.)

C. The authorities of the Cooperating Agency to enter this MOU include, but are not limited to:

1. National Environmental Policy Act, as amended by Fiscal Responsibility Act, Public Law 118-5, Sec. 107(a)(3) Cooperating Agency
2. DoD NEPA Implementing Procedures, Part 1.7, Lead and Cooperating Agencies

IV. Roles and Responsibilities

A. BLM Responsibilities:

1. As Lead Agency, the BLM retains final responsibility for the content of all NEPA and NHPA documents, which includes any Drafts, Supplements, and the FONSI. The BLM's responsibilities include determining the purpose of and need for the Pipeline ROW EA, selecting alternatives for analysis, describing the environmental setting, identifying effects of the proposed alternatives, selecting the preferred alternative, and determining appropriate mitigation measures. In completing these responsibilities, the BLM will meaningfully, as appropriate, involve the Cooperator throughout the NEPA and NHPA processes including but not limited to: identifying issues to be addressed; arranging for the collection and/or assembly of necessary resource, environmental, social, economic, and institutional data; determining the purpose and need; consultation on a project schedule (in compliance with the agency timeframes established by regulation or policy); Government-to-government consultation with affiliated Tribal Nations, and formal consultation with California State Historic Preservation Office; development of the alternatives; evaluating alternatives and estimating the effects of implementing each alternative; and carrying out any other task necessary for the development of the environmental analysis and documentation.
2. To the maximum extent practicable, and consistent with the BLM's responsibilities as Lead Agency, the BLM will seek early and consistent involvement with the Cooperator and consider topics for which the Cooperator is acknowledged to possess jurisdiction by law or special expertise, the comments, recommendations, data, and/or analyses provided by the Cooperator in the ROW EA process.
3. To the fullest extent practicable, the BLM will timely provide the Cooperator with copies of documents underlying the ROW EA relevant to the Cooperator's responsibilities, including technical reports, data, analyses, comments received, working drafts related to environmental reviews, and draft versions of the ROW EA.
4. Meet with the Cooperator at its request.

5. Develop a schedule, setting milestones for all environmental and NHPA reviews, in consultation with all Cooperating Agencies.

B. Cooperating Agency Responsibilities:

1. AFMC, through Edwards AFB, is recognized to have jurisdiction by law and/or special expertise on all subject matters for which it has statutory responsibility, including but not limited to:
 - a. Natural Resources
 - b. Cultural Resources
 - c. Edwards Land Use/Mission Restrictions
2. The Cooperator will limit the information, comments, and technical expertise it provides to the BLM to those elements of the ROW EA, and the data and analyses supporting them, in which it has jurisdiction by law or special expertise or for which the BLM requests its assistance. In particular, the Cooperator will provide information on the following topics:
 - a. Natural Resources
 - b. Cultural Resources
 - c. Edwards Land Use/Mission Restrictions
3. Within the areas of their jurisdiction or special expertise, the Cooperator may participate in the activities identified in Attachment A. These activities include, but are not limited to: identifying issues to be addressed; arranging for the collection and/or assembly of necessary resource, environmental, social, economic, and institutional data; determining the purpose and need; consultation on a project schedule (in compliance with the agency timeframes established by regulation or policy); Government-to-government consultation with affiliated Tribal Nations, and formal consultation with California State Historic Preservation Office; development of the alternatives; evaluating alternatives and estimating the effects of implementing each alternative; and carrying out any other task necessary for the development of the environmental analysis and documentation. The Cooperator will meet the BLM's schedule and elevate, as soon as practicable, to the senior agency official of the DOI any issues relating to purpose and need, alternatives, or other issues that may affect its ability to meet the schedule. (See also Section C.1).
4. The Cooperator will have one representative, also known as its Point of Contact, and an alternate, appointed to represent its interests and work to the BLM.
5. The Cooperator will make a good faith effort to report the costs it incurs in the development of the ROW EA and fulfillment of NHPA obligations to the BLM or notify the BLM when it is not practicable to do so.

C. Responsibilities of both Parties:

1. The Parties agree to participate in this NEPA and NHPA processes in good faith and make all reasonable efforts to resolve disagreements. Where procedural or substantive disagreement may impede effective and timely completion of the ROW EA, the Parties agree to utilize the conflict resolution procedures described below (see Section V.6). Participation as a Cooperating Agency does not negate the Cooperator's responsibility to comment on the analysis or to protest or appeal the BLM's decision; nor does it diminish or restrict the Cooperator's ability to coordinate with the BLM under the FLPMA requirements (43 U.S.C. 1712(c)(9)).
2. The Parties will seek to meet the schedule provided as Attachment B, which includes dates for EA milestones and timeframes for the Cooperator's reviews and submissions.
3. The Parties agree BLM shall lead compliance of NHPA Section 106, including SHPO and Tribal Nation consultation, through the *"State Protocol Agreement Among the California State Director of the Bureau of Land Management and the California State Historic Preservation Officer and the Nevada State Historic Preservation Officer Regarding the Manner in which the Bureau of Land Management Will Meet Its Responsibilities Under the National Historic Preservation Act and the National Programmatic Agreement Among the BLM, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers."*
4. Each Party agrees to fund its own expenses associated with the ROW EA and NHPA processes, except and unless the BLM and Cooperator enter into a separate contract or agreement for technical studies within the Cooperator's jurisdiction by law and/or special expertise.

V. Other Provisions:

1. Authorities not altered. Nothing in this MOU alters, limits, or supersedes the authorities and responsibilities of any Party on any matter within its respective jurisdiction. Nothing in this MOU shall require either of the Parties to perform beyond its respective authority.
2. Financial obligations. Nothing in this MOU shall require either of the Parties to assume any obligation or expend any sum in excess of authorization and appropriations available.
3. Immunity and Defenses Retained. This MOU does not create any substantive or procedural right that is enforceable at law or in equity against the United States or its officers, agents, or employees. This MOU is not a contract, and it is not enforceable

in a court of law. This MOU does not affect the exercise of any applicable immunity, defense, or legal recourse available to either party under law.

4. Conflict of interest. The Parties agree any individual or organization used for purposes of plan development, environmental analysis, or Cooperator representation, including officials, employees, or third-party contractors, must submit a disclosure statement to the BLM that specifies any financial or other interest in the outcome of the ROW EA. Questions regarding potential conflicts of interest will be referred to BLM Headquarters (HQ), BLM Ethics Counselors, or the Cooperating Agency's ethics personnel for resolution.
5. Management of information. The Cooperator acknowledges all supporting materials, and draft documents may become part of the BLM's administrative record and may be subject to public disclosure, consistent with the requirements of the Freedom of Information Act (FOIA) (5 U.S.C. 552). The Cooperator agrees not to release or disclose the contents of these materials to individuals or entities other than the Parties to this MOU and their contractors unless required by law.
6. Conflict Resolution:
 - a. It is the goal of the Parties to resolve any disputes they may have through earnest and good faith discussions between the designated points of contact. The Parties agree to make reasonable efforts to resolve procedural or substantive conflicts. The Parties acknowledge BLM retains final responsibility for the content of the ROW EA, NHPA Section 106, and the FONSI.
 - b. Either party may request discussions orally or in writing to resolve a dispute. The Parties agree to hold discussions within 10 calendar days of a request for discussions, and to allow 14 calendar days from the first discussion for ongoing efforts to continue toward a resolution.
 - c. If discussions between the points of contact do not resolve the dispute, the BLM Field Manager and the respective California State Office Staff (CASO) will meet within 10 calendar days of the last staff discussion.
7. Coordination with the FGMWC contractor through the BLM (as applicable). Environmental Science Associates (ESA) currently serves as the BLM's contractor for public involvement, data collection, environmental analysis, and ROW EA preparation. The Cooperator may communicate with the contractor through BLM's representative, provide information and comments directly to the contractor (with copies to BLM), or collaborate with the contractor's technical staff and subcontractors on matters within the Cooperator's jurisdiction by law and/or special expertise. The Cooperator acknowledges the BLM retains the exclusive responsibility to authorize modifications to the contract with FGMWC/ESA, and

that the Cooperator is not authorized to provide technical or policy direction regarding the performance of the BLM's EA with ESA.

8. Coordination with Cooperating Agency's Contractor. The Cooperator will provide the BLM a Contractor Coordination Letter describing the nature of the relationship between the Cooperator and its contractor (if any) and the authority given to the contractor, and clearly state the following: 1) contractor will represent the Cooperator; 2) the Cooperator has verified that its contractor has submitted a disclosure to the BLM that specifies any financial or other interest in the outcome of the project; and 3) the Cooperator has contractually required its contractor to comply with a non-disclosure clause consistent with the Cooperator's obligations under Section V. 5, above. The contractor serves to help fulfill Cooperating Agency responsibilities outlined in Section IV.B, above, and will be allowed to attend meetings between the Parties to this MOU. When two or more cooperating agencies utilize the same contractor, each Cooperator must have a separate contract in place, and each must submit a Contractor Coordination Letter to the BLM.

VI. Agency Representatives

Each Party will designate a representative and alternate representative, also known as its Point of Contact, as described in Attachment C, to ensure coordination between the Cooperators and the BLM during the NEPA and NHPA processes, among others. Each Party may change its representative by providing written notice to the other Party.

VII. Administration of the MOU

1. Approval. This MOU becomes effective upon signature by the authorized officials of the BLM and the Cooperator.
2. Amendment. This MOU may be amended through written agreement of all signatories.
3. Termination. If not terminated earlier, this MOU will end when the FONSI for the ROW EA is approved by the BLM Authorized Officer. Any Party may end its participation in this MOU by providing written notice to the other Party.
4. Notwithstanding any provision in this MOU, all provisions which by themselves or their nature are reasonably expected to be performed after the expiration or termination of this MOU shall survive the expiration or termination of this MOU.
5. Press inquiries on the NEPA and NHPA preparation will be referred to and addressed by the BLM. Press inquiries on Cooperator's role in the process will be addressed by Cooperator's officials.

VIII. Signatures

The Parties hereto have executed this MOU on the dates shown below.

THE DEPARTMENT OF AIR FORCE, AIR FORCE MATERIEL COMMAND, EDWARDS
AIR FORCE BASE, by and through:

 Digitally signed by
ONDERKO. RONALD.J.12302018
26
Date: 2025.12.17 12:33:25 -05'00'

12/17/25

RONALD J. ONDERKO, P.E. NH-04, DAF
Command Senior Civil Engineer
Logistics, Civil Engineering, Force Protection
and Nuclear Integration

Date

BUREAU OF LAND MANAGEMENT, by and through:

RONALD NUCKLES  Digitally signed by
RONALD NUCKLES
Date: 2026.01.05
08:52:03 -07'00'

1/5/26

Ron Nuckles, Needles Field Manager

Date

Attachment A

Cooperating Agency Participation in the ROW EA

	EA	Potential Activities of Cooperating Agencies (CAs) within their acknowledged jurisdiction by law and/or special expertise.
1	Conduct scoping and identify issues	Provide input on coordination requirements based on CA plans; identify significant issues; identify relevant local and regional organizations and interest groups; provide non-financial sponsorship of public forums with the BLM; collaborate in assessing scoping comments; identify connected, similar, and cumulative actions; identify other relevant agencies.
2	Develop project schedule	Consult on the development of the project schedule. The decision to select the final project schedule is reserved to BLM, and the schedule must comply with the BLM's applicable regulatory and/or policy requirements.
3	Develop purpose and need	Consult on the development of the purpose and need. The decision to select the final purpose and need is reserved for BLM.
4	Develop planning criteria	Provide advice on proposed planning criteria (for BLM Land Use Plan amendments or revisions, only). The decision to select the final planning criteria is reserved for BLM.
5	Collect inventory data	Identify data needs; provide data and technical analyses within the CA's expertise.
6	Formulate alternatives	Collaborate with the BLM in developing alternatives. Suggest land allocations or management actions to resolve issues. The decision to select alternatives for analysis is reserved for the BLM.
7	Estimate effects of alternatives	Provide effects analysis within the CA's jurisdiction by law and/or special expertise; identify effects within the CA's jurisdiction by law and/or special expertise; suggest mitigation measures for adverse effects within the CA's jurisdiction by law and/or special expertise.
8	Select the preferred alternative; issue Draft MMP/EA	Collaborate with the BLM in evaluating alternatives and in developing criteria for selecting the preferred alternative; provide input on Draft MMP/EA. The CAs may provide written, public comments on draft if desired. The decision to select a preferred alternative and to issue a draft is reserved for BLM.
9	Respond to comments	As appropriate, review comments within the CA's jurisdiction by law and/or special expertise and aid in preparing BLM's responses.
10	Sign FONSI	A signature line will be provided for both CA's.

Attachment B

Schedule

ID	Task Name	Duration	Start	Finish
1	Project Description	40 days	5/12/25	7/4/25
2	Prepare Draft EA Project Description	6 weeks	5/12/25	6/20/25
3	BLM Review EA PD	2 weeks	6/23/25	7/4/25
4	Cultural Technical Studies	85 days	6/2/25	9/26/25
5	Obtain Work Authorization	3 weeks	6/2/25	6/20/25
6	Records Search	4 weeks	6/23/25	7/18/25
7	Conduct Field Work	2 weeks	7/21/25	8/1/25
8	Prepare Draft Report	2 weeks	8/4/25	8/15/25
9	BLM Review Draft Report	2 weeks	8/18/25	8/29/25
10	Prepare Final Report	4 weeks	9/1/25	9/26/25
11	Environmental Assessment	125 days	6/9/25	11/28/25
12	Prepare Draft EA	5 weeks	6/9/25	7/11/25
13	BLM Review Draft EA	2 weeks	7/14/25	7/25/25
14	ESA Incorporate Comments	2 weeks	7/28/25	8/8/25
15	BLM Review #2	2 weeks	8/11/25	8/22/25
16	ESA Final EA Prep	5 weeks	8/25/25	9/26/25
17	BLM Final Review	1 week	9/29/25	10/3/25
18	Public Review Period	30 days	10/3/25	11/2/25
19	ESA Prepare Final EA	2 weeks	11/3/25	11/14/25
20	BLM completes FONSI	2 weeks	11/17/25	11/28/25
21	ESA and SHPO Consultations	100 days	7/14/25	11/28/25
22	ESA Consultation	100 days	7/14/25	11/28/25
23	SHPO Consultation	75 days	8/18/25	11/28/25

Attachment C
Agency Representatives
POINTS OF CONTACT

Bureau of Land Management

Primary Representative: Ronald Nuckles, BLM Needles Field Office Manager
1303 S. Hwy 95
Needles, CA 92363
rnuckles@blm.gov
(760) 326-7001

Backup Representative: Sabrina Jolicoeur, BLM Needles Monument Manager
1303 S. Hwy 95
Needles, CA 92363
sjolicoeur@blm.gov
(760) 326-7006

The DAF, Air Force Materiel Command (AFMC), Edwards AFB

Primary Representative: Ms. Shari Fort, AFMC NEPA Liaison
AFIMSC Det 6
4225 Logistic Ave, Bldg. 266
Wright-Patterson AFB OH 45433
shari.fort@us.af.mil
(937) 902-0679

Primary Edwards Representative: Ms. Reina Juarez, Edwards NEPA Manager
412 CEG/CEVA
120 N. Rosamond Blvd, Suite A
Edwards AFB, CA 93524
reina.juarez.1@us.af.mil
(661) 277-9225

Backup Edwards Representative: James Papin, Chief, Environmental Resources & Planning
412 CEG/CEVA
120 N. Rosamond Blvd, Suite A
Edwards AFB, CA 93524
james.papin@us.af.mil
(661) 277-1868



United States Department of the Interior



BUREAU OF LAND MANAGEMENT
Needles Field Office
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Needles, CA 92363
www.blm.gov/office/needles-field-office

In Reply Refer To:

1780(P)/2800 CAD090
CA-D090-2025-0018-EA

ELECTRONIC DELIVERY

Julianne Polanco
State Historic Preservation Officer
Office of Historic Preservation
1725 23rd Street, Suite 100
Sacramento, CA 95816

Subject: Continuing Section 106 Consultation for the Fenner Gap Mutual Water Company (FGMWC) Northern Pipeline Right-of-Way (ROW) Conversion Project (SHPO Tacking No. BLM_2025_1120_001)

Dear Ms. Polanco:

The Bureau of Land Management (BLM) is continuing consultation with the California State Historic Preservation Officer (SHPO) pursuant to Section 106 of the National Historic Preservation Act (NHPA) (54 U.S.C. § 306108) and its implementing regulations at 36 CFR Part 800 regarding the subject undertaking. The purpose of this correspondence is to describe the identification efforts conducted to identify historic properties within the Area of Potential Effects (APE) in accordance with 36 CFR 800.4(b) and invite SHPO and consulting parties to review and comment on the scope and methodology of those efforts.

Undertaking and APE Context

The undertaking involves BLM consideration of a new right-of-way (ROW) authorization under the Federal Land Policy and Management Act (FLPMA) to allow conversion of an existing oil pipeline for the conveyance of water between Cadiz and Mojave, California.

In accordance with 36 CFR 800.4(a) and per previous correspondence with your office on November 11, 2025 and February 10, 2026, the BLM has delineated and affirmed an APE that encompasses approximately 2,028 acres over approximately 161 miles and includes the existing pipeline ROW, associated access roads and lateral access routes, areas proposed for pipeline replacement, pump station locations, appurtenances, and other locations where effects to historic properties may potentially occur as a result of project implementation.

Identification Methodology

As required by 36 CFR 800.4(b)(1) and as detailed below, the BLM made a reasonable and good faith effort to identify historic properties within the defined APE for this undertaking. The BLM's identification effort considered the nature and scope of the undertaking, the extent of federal involvement, and the potential for historic properties to be present within the APE. This approach also reflected in Advisory Council on Historic Preservation's (ACHP) long-standing guidance that identification efforts should be commensurate with the scale and nature of the undertaking and informed by existing knowledge of the area, and that agencies may rely on existing information where it reasonably supports identification decisions. In particular, the BLM integrated multiple sources of information to ensure that identification efforts were proportionally and professionally adequate.

Consistent with these general guidelines for the identification effort for this undertaking, the BLM designed a strategy to employ a graduated methodology appropriate to varying conditions within the APE, including a combination of Tribal consultation, Class III intensive pedestrian inventory in areas where new ground disturbance may occur, and Class I inventory supported by extensive prior survey coverage in areas of previous disturbance. Such an effort does not require exhaustive or duplicative field investigation where reliable information is already available, nor does Section 106 require agencies to conduct additional fieldwork where previous disturbance or prior survey coverage substantially reduces the likelihood that unidentified historic properties remain. Rather, as allowed by the regulations, the BLM has relied on existing information where it provides a sufficient basis for identifying historic properties within the APE.

Here, there exists an unusually robust body of prior cultural resource information, including multiple previous cultural resource inventories conducted along the existing pipeline corridor, extensive records maintained within the California Historical Resources Information System (CHRIS), BLM's National Cultural Resource Information Management System (NCRIMS), the BLM California Cultural Resources Geodatabase, and Edwards Air Force Base cultural resource databases. Collectively, these data demonstrate that virtually the entire APE has been subject to prior cultural resource inventory, and that previously recorded resources within the corridor are well documented. Because of the well-documented surveys and information covering the APE, the BLM determined that supplemental Class III pedestrian survey should focus on only those parts of the APE where new ground disturbance is likely and intact archaeological deposits may be present. In contrast, areas with substantial prior disturbance, repeated survey coverage, or activities limited to previously disturbed soils within the existing right-of-way can rely on Class I inventory and existing survey data.

Tribal Consultation

Consistent with 36 CFR 800.2(c)(2), the BLM initiated government-to-government consultation with federally recognized Tribes that may attach religious and cultural significance to historic properties within the APE. Fourteen federally recognized Tribes were invited to consult, including the Colorado River Indian Tribes, Chemehuevi Indian Tribe, Morongo Band of Mission Indians, Tejon Indian Tribe, Fort Independence Paiute Tribe, Fort Mojave Indian Tribe, Moapa Band of Paiutes, Yuhaaviatam of San Manuel Nation, Timbisha Shoshone Tribe, 29 Palms Band of Mission Indians, Agua Caliente Band of Cahuilla Indians, Campo Kumeyaay Nation, Las Vegas Tribe of Paiute Indians, and Soboba Band of Luiseno Indians. In addition to federally recognized Indian Tribes, the BLM notified and invited Kern

Valley Indian Community, a non-federally recognized Tribal community or organization, to participate in consultation.

The BLM continues to engage with Tribes regarding identification of historic properties and appropriate avoidance or treatment measures where applicable. To date, no specific resources have been reported within the APE by Tribal consulting parties. However, through ongoing consultations, Tribes have expressed general concerns regarding the broader cultural landscape of the Mojave Desert and emphasized the cultural significance of springs, trails, and other unspecified traditional places associated with Tribal history and ongoing religious practice.

Class I Cultural Resources Inventory

In areas where new ground disturbance is not anticipated or where work will occur entirely within previously disturbed soils, a Class I cultural resources inventory consisting of literature review, records search, and evaluation of existing cultural resource inventory coverage was utilized.

As noted above, records-based identification included searches of the CHRIS at both the Southern San Joaquin Valley and the South Central Coastal Information Centers, BLM's NCRIMS, the BLM California Cultural Resources Geodatabase, and Edwards Air Force Base cultural resource databases. These records demonstrate that nearly the entire APE has been subject to previous cultural resources investigations even though the age and intensity of prior survey efforts vary, e.g., only a limited portion of the APE has been surveyed within the past 5 years with portions of the cultural resources data informing the Class I identification effort deriving from inventories conducted over multiple decades.

The BLM evaluated the adequacy of this information considering the age, intensity, and reliability of previous inventories, the nature of land disturbance within the corridor, and the types of resources historically identified in the region. While some prior surveys predate current recording standards, they nonetheless document the presence and distribution of cultural resources and, when considered collectively with subsequent investigations and current records searches, provide a substantial body of information regarding cultural resource conditions within the APE. Moreover, much of the pipeline alignment occurs within long-standing utility corridors and areas that have experienced repeated ground disturbance and multiple archaeological investigations, substantially reducing the likelihood that intact and previously unidentified archaeological deposits remain.

Given these conditions, additional intensive pedestrian survey would not reasonably be expected to identify intact archaeological deposits beyond those already documented. As a result, the BLM determined that the identification methodology appropriately focused intensive survey in areas where intact resources may occur. Again, reliance on Class I identification was limited to segments of the existing pipeline corridor and established access roads where no new ground disturbance is proposed and where previous pipeline construction, maintenance activities, and co-located infrastructure have resulted in substantial prior disturbance.

Consistent with 36 CFR 800.4(b)(1) and ACHP guidance, the BLM determined that existing survey data—supplemented by targeted Class III inventory in areas of potential new disturbance—provides a

sufficient and reliable basis for identifying historic properties within the APE. This approach avoids unnecessary re-survey where prior surveys already offer adequate coverage.

Class III Cultural Resources Inventory

Field investigations consisted of a Class III intensive pedestrian inventory conducted along parallel transects spaced approximately 15 meters (49 feet) apart, a survey interval commonly employed for intensive cultural resources identification in desert environments where ground surface visibility is generally high. Cultural resource surveys were conducted to systematically examine the ground surface for artifacts, features, anthropogenic soils, and other indicators while documenting previously recorded resources and recording newly identified archaeological sites. The transect spacing and survey methods applied for this undertaking are consistent with standard professional archaeological practices for Class III inventory and are appropriate to the environmental conditions, visibility, and disturbance patterns present within the existing pipeline corridor.

In combination with the extensive archival research and prior survey coverage described above, this field methodology supports the BLM's determination that the identification effort constitutes a reasonable and good-faith effort to identify historic properties within the Area of Potential Effects pursuant to 36 CFR 800.4(b).

Summary of Identification Efforts

Intensive Class III pedestrian survey was conducted across approximately 1,190 acres of the APE in areas where new or expanded ground disturbance is anticipated or reasonably foreseeable, including pipeline replacement segments, pump station sites, appurtenance locations, and associated access routes on BLM-managed lands and non-federal lands. The remaining portions of the APE, totaling approximately 838 acres, were addressed through Class I records-based inventory as noted above. Together, these efforts account for the entire 2,028-acre APE.

Collectively, the identification effort documented within the APE 217 previously recorded resources identified through Class I inventory efforts, and 35 newly identified archaeological sites recorded during the Class III survey. Together, Tribal consultation, the Class I inventory, and targeted Class III survey provided a comprehensive understanding of cultural resources within the project APE.

Conclusion

The BLM's identification of historic properties within the APE represents a reasonable and good-faith effort consistent with 36 CFR 800.4(b). In turn, this effort provides an adequate basis to proceed with determinations of eligibility and effects, subject to consultation with your office. The BLM welcomes the SHPO's review of the identification approach and any comments regarding the adequacy of the identification measures.

Thank you for your continued consultation on this undertaking. The BLM will continue formal consultation with the SHPO and other consulting parties on the detailed results of the identification efforts outlined herein, Determinations of Eligibility for identified resources, and Finding of Effect when these efforts are completed. Should you have any questions or require additional information, please contact

John Fogerty, BLM State Archaeologist, at (279) 202-7035 or jfogerty@blm.gov, or Ronald O. Nuckles, Field Manager, at (530) 224-2102.

Sincerely,

Ronald O. Nuckles
Field Manager
Bureau of Land Management, Needles Field Office

Cc: Brendon Greenaway, CA OHP Senior State Archaeologist, Section 106 Review
Jody L. Brown, CA OHP Deputy State Historic Preservation Officer/Tribal Liaison
Daniel Leivas, Chairman, Chemehuevi Indian Tribe
Ron Escobar, Director, Tribal Historic Preservation Office, Chemehuevi Indian Tribe
Timothy Williams, Chairman, Fort Mojave Indian Tribe
Shan Lewis, Vice Chairman, Fort Mojave Indian Tribe
Linda Otero, Director, Aha Makav Cultural Society, Fort Mojave Indian Tribe
Darrell Mike, Chairman, Twenty-Nine Palms Band of Mission Indians
Nichoas Garza, Tribal Historic Preservation Office, Twenty-Nine Palms Band of Mission Indians
Ivan Reel, Chairman, Moapa Band of Paiute Indians
Darren Daboda, Director, Tribal Historic Preservation Office, Moapa Band of Paiute Indians
Octavio Escobedo III, Chairman, Tejon Indian Tribe
Curtis Alcantar, THPO, Natural Resources Manager, Tejon Indian Tribe
Amelia Flores, Chairwoman, Colorado River Indian Tribes (CRIT)
Tashina Harper, Executive Secretary, Colorado River Indian Tribes (CRIT)
Ralph Goff, Chairman, Campo Band of Mission Indians
Daniel E. Tsosie, Cultural Resource Manager, Campo Band of Mission Indians
Carl Dahlberg, Chairman, Fort Independence Community of Paiute Indians
Benny Tso, Chairman, Las Vegas Tribe of Paiute Indians
Charles Martin, Chairman, Morongo Band of Mission Indians
Isaiah Vivanco, Chairman, Soboba Band of Luiseño Indians
Margaret Cortez, Chairwoman, Timbisha Shoshone Tribe
Mandi Campbell, Tribal Historic Preservation Officer, Timbisha Shoshone Tribe
Lynn Valbuena, Chairwoman, Yuhaaviatam of San Manuel Nation
Robert Robinson, Chairman, Kern Valley Indian Community
Victoria Harvey, EAFB Cultural Resources Manager/Archaeologist
Bill Marzella, Program Analyst, Advisory Council on Historic Preservation
Neil Desai, Senior Pacific Region Director, National Parks Conservation Association
Joseph R. Stout, CA BLM State Director
Jennifer Mata, BLM CA Desert District Manager
Elizabeth A. Meyer-Shields, CA BLM Deputy State Director
Melissa Bleier, CA BLM Supervisory Realty Specialist
John A. Fogerty, CA BLM Deputy Preservation Officer
Michael J. Holt, Central CA District Office Project Manager



**DEPARTMENT OF PARKS AND RECREATION
OFFICE OF HISTORIC PRESERVATION**

Armando Quintero, Director

Julianne Polanco, State Historic Preservation Officer

1725 23rd Street, Suite 100, Sacramento, CA 95816-7100

Telephone: (916) 445-7000 FAX: (916) 445-7053

calshpo.ohp@parks.ca.gov www.ohp.parks.ca.gov

April 8, 2026

VIA EMAIL

In reply refer to: BLM_2025_1120_001

Mr. Ronald Nuckles, Field Manager
United States Department of the Interior
Bureau of Land Management
Needles Field Office
1303 S. Highway 95
Needles, CA 92363

RE: Continuing National Historic Preservation Act Section 106 Consultation for the Fenner Gap Mutual Water Company Right-of-Way (ROW) Request for the Northern Pipeline (1780(P)/2800 CAD090 CA-D090-2025-0018-EA)

Dear Mr. Nuckles:

The State Historic Preservation Officer (SHPO) is in receipt of a letter dated March 11, 2026, from the Bureau of Land Management (BLM), Needles Field Office (NFO), continuing consultation for the above referenced undertaking. BLM is consulting with the SHPO pursuant to 36 CFR Part 800, the regulations implementing Section 106 of the National Historic Preservation Act (NHPA) of 1966 (as amended). Specifically, the BLM seeks SHPO review and comment on the scope and methodology of its efforts to identify historic properties within the undertaking area of potential effects (APE).

The BLM is currently reviewing an application from the Fenner Gap Mutual Water Company (FGMWC) requesting a Right-of-Way (ROW) for the Northern Pipeline, converting use from the existing BLM ROW grant under Section 28 of the Mineral Leasing Action of 1920 (MLA ROW Grant) for transporting natural gas to a ROW under the Federal Land Policy and Management Act (FLPMA) authorizing use of the pipeline for water conveyance across federal lands.

In previous consultation, BLM defined the proposed undertaking as the modification of 162 miles of the existing 217 mile underground Northern Pipeline that traverse portions of the Mojave Desert and Antelope Valley, from Cadiz to Wheeler Ridge. BLM excluded all sources of water to be conveyed via the pipeline from its undertaking definition and from its APE. While the SHPO disagreed and recommended, in its letter of December 19, 2025, that water sources be included and considered, BLM, in its February 10, 2026 letter has chosen to proceed with consultation on the undertaking and APE as originally delineated.

In its March 11th letter, BLM provided an overview of its methods to identify historic properties within the APE. BLM stated that it had engaged with Indian tribes and other consulting parties and conducted a combination of Class I cultural resources inventory (literature review, records search,

and an evaluation of existing inventory coverage of the APE), and a Class III inventory (intensive pedestrian survey). BLM stated that its Class I inventory efforts focused on approximately 838 acres of the APE because it had identified those areas as having been previously surveyed, subjected to substantial prior disturbance, or because proposed undertaking activities are limited to previously disturbed soils within the existing ROW. BLM further stated in its letter that it employed Class III efforts on the approximately 1,190 acres remaining in the APE because those areas would be subject to new or expanded ground disturbance.

BLM summarized its efforts to consult with Indian tribes and other consulting parties and stated that while “general concerns regarding the broader cultural landscape of the Mojave Desert” had been expressed that “emphasized the cultural significance of springs, trails, and other unspecified traditional places associated with Tribal history and ongoing religious practice”, no information to date regarding specific resources in the APE have been provided by consulting parties to BLM.

BLM explained in its letter that within the APE, 217 previously recorded resources and 35 newly recorded archaeological sites were identified through its Class I and Class III inventories, respectively. BLM seeks SHPO review and comment on its efforts to identify historic properties.

For the SHPO to advise and assist BLM in determining whether its level of effort to identify historic properties within the APE is reasonable, the following documents or additional information requested:

- An APE map or maps that depict the location and coverage areas of BLM’s Class I and Class III inventory efforts as well as the locations and boundaries of the 217 previously recorded resources and 35 newly recorded archaeological sites identified within the APE and within a 1.5-mile radius of the APE.
- Reports documenting the results of BLM’s Class I and Class III inventories.
- The SHPO encourages BLM to conduct meaningful consultation with Indian tribes and interested parties as the Section 106 consultation process progresses. Copies or summaries of BLM’s correspondence with consulting parties including the comments and views received by Indian tribes and other interested parties and how the BLM has addressed their concerns in the consultation process to date are requested.

Without the above requested information, the SHPO is unable to comment or advise on the adequacy of the BLM’s identification efforts. As such, the consultation is paused at 36 CFR 800.4(b) until the information is received. If you require further information, please contact Supervisor, Archaeology and Environmental Compliance Unit Brendon Greenaway at brendon.greenaway@parks.ca.gov

Sincerely,



Julianne Polanco
State Historic Preservation Officer



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Needles Field Office
1303 S. Highway 95
Needles, CA 92363

www.blm.gov/office/needles-field-office



INTERIOR REGION 8 • LOWER COLORADO BASIN

ARIZONA, CALIFORNIA*, NEVADA*

* PARTIAL

In Reply Refer To:

1780(P)/2800 CAD090

CA-D090-2025-0018-EA

ELECTRONIC DELIVERY

Julianne Polanco
State Historic Preservation Officer
Office of Historic Preservation
1725 23rd Street, Suite 100
Sacramento, CA 95816

Subject: Continued NHPA Section 106 Consultation for the Fenner Gap Mutual Water Company (FGMWC) Northern Pipeline Right-of-Way (ROW) Conversion Project, Kern and San Bernardino Counties, California (SHPO Tacking No. BLM_2025_1120_001)

Dear Ms. Polanco:

The Bureau of Land Management (BLM) Needles Field Office acknowledges receipt of your April 8, 2026, letter regarding the above-referenced undertaking and appreciates the California State Historic Preservation Officer's (SHPO) continued participation in consultation pursuant to Section 106 of the National Historic Preservation Act (NHPA) (54 U.S.C. § 306108) and its implementing regulations at 36 CFR 800. The BLM understands that pursuant to 36 CFR 800.4(b) you have requested additional information to evaluate the adequacy of identification efforts. This correspondence and enclosed materials fully respond to these requests and are intended to facilitate your review of the identification efforts. This submittal package meets all documentation standards found at 36 CFR 800.11(e), and we are seeking your concurrence on the BLM's determinations of eligibility pursuant to 36 CFR 800.4(c). We are further notifying you and the other Consulting Parties of our finding of **No Adverse Effect** for the undertaking pursuant to 36 CFR 800.5(c).

Response to SHPO Information Requests

APE Maps and Inventory Coverage: The BLM confirms that Area of Potential Effects (APE) maps depicting the undertaking, inventory coverage, and cultural resources were transmitted electronically with the BLM's March 11, 2026, submission. Unfortunately, the BLM learned later that a technical issue prevented SHPO staff from accessing those materials. The BLM regrets this issue and has supplied these

map products under separate cover. Complete map sets are resubmitted with this correspondence as part of the supporting technical report (Enclosure 1) documenting identification efforts. These materials include delineation of the APE consistent with 36 CFR 800.16(d), identification of Class I and Class III inventory coverage areas, and depiction of all previously recorded and newly identified resources.

For purposes of the Class I records search, different search buffers were applied depending on the data source, consistent with standard practice and the structure of available datasets. Records searches conducted through the California Historical Resources Information System (CHRIS) Information Centers applied a 0.25-mile buffer around the APE, as reflected in the records search mapping (Enclosure 1, Appendix B). In contrast, records searches utilizing BLM-administered datasets—including the National Cultural Resources Information Management System (NCRIMS) and the BLM California Cultural Resources Geodatabase—were conducted using a broader search radius (1 mile from the APE) to capture additional resources, surveys, and legacy data that may not be represented in the CHRIS system.

The BLM emphasizes that its internal datasets are typically more comprehensive for federal lands within the project area because they incorporate survey data, site records, and updates that may not yet be transmitted to or fully integrated within the CHRIS system. The combined use of CHRIS and BLM datasets, with differing but complementary search buffers, ensures a robust and conservative identification effort consistent with the “reasonable and good faith effort” standard at 36 CFR 800.4(b)(1), and provides a more complete understanding of cultural resources within and adjacent to the APE.

Class I and Class III Inventory Documentation: With this correspondence, the BLM is providing technical reporting prepared by Environmental Science Associates (ESA) entitled *Class I & Class III Archaeological Inventory for the FGMWC Northern Pipeline Right-of-Way Conversion Project* (Enclosure 1), which documents identification efforts, results, and resource evaluations conducted for the undertaking.

As detailed in this reporting, identification efforts were conducted consistent with BLM policy and the “reasonable and good faith effort” standard at 36 CFR 800.4(b)(1) and included a Class I inventory across 100 percent of the APE, employing comprehensive records searches utilizing the CHRIS, BLM’s NCRIMS, the BLM California Cultural Resources Geodatabase, and Department of Defense datasets, literature reviews, and prior survey coverage analysis. Class III intensive pedestrian survey investigated all areas subject to new or expanded ground disturbance and all federal lands where effects are reasonably foreseeable.

The BLM emphasizes that the use of a tiered identification strategy (Class I in addition to targeted Class III inventory) reflects the scale and nature of the undertaking and is consistent with BLM policy and 36 CFR 800.4(b)(1), which permits identification efforts to be commensurate with the likelihood of effects. Areas subject only to Class I inventory are those where no ground disturbance is planned or reasonably foreseeable; and/or where activities are wholly confined to previously disturbed soils within an existing right-of-way (ROW). This approach ensures that identification efforts are both efficient and legally sufficient, while focusing intensive studies where effects could occur.

Consultation with Tribes and Interested Parties: The BLM confirms that consultation has been conducted in a manner consistent with 36 CFR 800.2(c) and 800.2(d), including government-to-government consultation with federally recognized tribes. Enclosure 2 provides a summary of consultation with Indian tribes and other consulting parties, including summaries of correspondence, a

summary of comments and concerns received, and documentation of how the BLM has considered and addressed those views in the NHPA Section 106 process.

As noted in prior correspondence related to this undertaking and reflected in Enclosure 2, consulting tribes have expressed general concerns regarding the broader cultural landscape of the Mojave Desert, including the cultural significance of springs, trail corridors, and traditional use areas. To date, no specific information has been provided to the BLM that indicates the presence of historic properties within the defined APE that would be affected by the undertaking. The BLM acknowledges that government to government consultation is an ongoing process but at this stage has determined that it has sufficient information necessary to make an informed decision with regard to the requirements of Section 36 CFR 800.

Also as noted in preceding correspondence, the BLM has considered these concerns and evaluated whether such broader landscape features warrant expansion of the undertaking or the APE. Consistent with 36 CFR 800.16(y) and applicable BLM policy and case law, the BLM has determined that 1) the undertaking involves the authorization of a ROW conversion and associated activities; 2) groundwater extraction and other non-federal activities however lack a sufficient federal nexus; and 3) furthermore there is no demonstrated causal relationship between the undertaking and potential impacts to off-site resources such as springs.

Accordingly, the BLM has retained the APE as previously defined, while continuing to consider tribal input throughout the process.

Summary of Identification and Evaluation Results

The BLM's identification efforts, as documented in the enclosed inventory report prepared by ESA (Enclosure 1), were designed and executed to meet the "reasonable and good faith effort" standard set forth at 36 CFR 800.4(b)(1) and to support the documentation requirements of 36 CFR 800.11(e). These efforts included a Class I inventory across 100 percent of the APE and targeted Class III intensive pedestrian survey of all areas subject to ground disturbance or where effects are reasonably foreseeable, informed by a comprehensive review of CHRIS records, BLM cultural resources databases, Department of Defense data, prior survey coverage, and relevant literature. Approximately 1,190 acres (or about 59 percent) of the APE were subjected to Class III intensive pedestrian survey.

As a result of these efforts, the BLM identified 217 previously recorded cultural resources within the APE and documented 35 newly identified archaeological sites during Class III survey. These resources reflect a range of precontact and historic-era properties, including archaeological sites, built environment resources, and linear infrastructure features.

Eligibility determinations and recommendations were developed in accordance with 36 CFR 800.4(c) and yielded the following results:

- 1 historic property listed in the National Register of Historic Places (NRHP);
- 6 historic properties previously determined eligible for the NRHP;
- 6 resources determined eligible (based on current evaluation);
- 9 previously identified resources determined not eligible;
- 60 resources recommended not eligible (based on current evaluations); and

- 135 resources that remain unevaluated or lack sufficient data to support formal eligibility determinations.

As detailed in Enclosure 1, the Class III inventory also resulted in updates to previously recorded resources and the identification of additional properties recommended as eligible under Criterion D, as well as the recognition of a broader lithic landscape that may constitute a potential historic district pending future evaluation.

The BLM has independently reviewed the identification and evaluation documentation provided in Enclosure 1 and concurs with ESA's recommendation that 60 resources are not eligible for listing in the NRHP. These determinations are supported by the available data and reflect application of the NRHP criteria at 36 CFR 60.4, including consideration of integrity and the ability of the resources to yield important information under Criterion D. Based on this review, the BLM finds the recommendations to be reasonable, well-supported, and consistent with applicable professional standards, and is seeking SHPO concurrence on these determinations pursuant to 36 CFR 800.4(c).

In accordance with 36 CFR 800.4(c)(2) and consistent with standard federal practice under 800.5(a)(2), the BLM has treated all unevaluated resources as eligible for the NRHP for purposes of this undertaking only. This conservative approach ensures that the assessment of effects fully accounts for the potential significance of all identified resources and affords them appropriate consideration in the NHPA Section 106 process, without prejudicing future formal eligibility determinations.

Collectively, these results demonstrate that the BLM has identified a robust and representative sample of cultural resources within the APE (Table 1), sufficient to support informed evaluation and effects analysis under 36 CFR 800.4 and 800.5.

Table 1. Summary of NRHP Status for All Resources Identified in the APE (n = 252)

Category	Count	Summary
NRHP Listed or Eligible	13	1 listed + 6 previously determined eligible + 6 newly recommended eligible
NRHP Not Eligible	69	9 previously determined not eligible + 60 recommended not eligible (current study)
Not Formally Evaluated / Assumed Eligible (for this undertaking only)	170	135 previously recorded unevaluated + 35 newly identified resources treated as eligible

Assessment and Finding of Effects

The majority of the ROW conversion area will not be subject to initial or reasonably foreseeable ground-disturbing activities, and where work would occur, it is largely confined to an existing pipeline corridor that has been previously excavated and substantially disturbed. Accordingly, the undertaking will not introduce new disturbance to intact deposits or alter the character-defining features of identified or assumed-eligible historic properties.

In addition, the undertaking incorporates enforceable design features and standard operating procedures that function as avoidance measures, including flexible siting of facilities, establishment of environmentally sensitive areas, and work-area constraints to prevent direct impacts. For areas where activities are not currently planned but may occur in the future, the undertaking requires additional

identification efforts, monitoring, and avoidance measures prior to implementation, ensuring that any such activities remain confined to previously disturbed contexts or are modified to avoid historic properties.

Consideration has also been given to non-physical effects, and the undertaking will not permanently introduce visual, auditory, or atmospheric elements that would diminish the integrity of setting, feeling, or association of NRHP eligible (or treated as eligible) historic properties. Taken together, these factors demonstrate that the undertaking will not alter, directly or indirectly, the characteristics that qualify historic properties for inclusion in the National Register and therefore supports a finding of **No Adverse Effect** pursuant to 36 CFR 800.5(a)(1).

Request for SHPO Review and Concurrence

The BLM respectfully requests that: the SHPO completes the consultation at 36 CFR 800.4(b); concurs with the adequacy of the BLM's identification efforts and the BLM's determinations of eligibility for identified resources pursuant to 36 CFR 800.4(c); and finally, concurs with the BLM's finding of **No Adverse Effect** pursuant to 36 CFR 800.5(c). The BLM requests SHPO's response within 30 calendar days of receipt of this correspondence.

Thank you for your continued consultation on this undertaking. Should you have any questions or require additional information, please contact John Fogerty, BLM State Archaeologist, at (279) 202-7035 or jfogerty@blm.gov, or Ronald Nuckles, Field Manager, at (760) 326-7000.

Sincerely,

(acting for)
Ronald O. Nuckles
Field Manager
Bureau of Land Management, Needles Field Office

Enclosures:

1. Class I & Class III Archaeological Inventory for the FGMWC Northern Pipeline Right-of-Way Conversion Project (ESA, 2026) ([link](#))
2. Comprehensive Summary of Consultation with Tribes and Other Interested Parties ([link](#))

Cc: Brendon Greenaway, CA OHP Senior State Archaeologist, NHPA Section 106 Review
Jody L. Brown, CA OHP Deputy State Historic Preservation Officer/Tribal Liaison
Alicia Perez, CA OHP Associate State Archaeologist
Daniel Leivas, Chairman, Chemehuevi Indian Tribe
Ron Escobar, Director, Tribal Historic Preservation Office, Chemehuevi Indian Tribe
Timothy Williams, Chairman, Fort Mojave Indian Tribe
Shan Lewis, Vice Chairman, Fort Mojave Indian Tribe
Linda Otero, Director, Aha Makav Cultural Society, Fort Mojave Indian Tribe
Darrell Mike, Chairman, Twenty-Nine Palms Band of Mission Indians

Nichoas Garza, Tribal Historic Preservation Office, Twenty-Nine Palms Band of Mission Indians
Ivan Reel, Chairman, Moapa Band of Paiute Indians
Darren Daboda, Director, Tribal Historic Preservation Office, Moapa Band of Paiute Indians
Octavio Escobedo III, Chairman, Tejon Indian Tribe
Curtis Alcantar, THPO, Natural Resources Manager, Tejon Indian Tribe
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Margaret Cortez, Chairwoman, Timbisha Shoshone Tribe
Mandi Campbell, Tribal Historic Preservation Officer, Timbisha Shoshone Tribe
Lynn Valbuena, Chairwoman, Yuhaaviatam of San Manuel Nation
Robert Robinson, Chairman, Kern Valley Indian Community
Neil Desai, Senior Pacific Region Director, National Parks Conservation Association
Bill Marzella, Program Analyst, Advisory Council on Historic Preservation
Victoria Harvey, EAFB Cultural Resources Manager/Archaeologist
Joseph R. Stout, CA BLM State Director
Jennifer Mata, BLM CA Desert District Manager
Elizabeth A. Meyer-Shields, CA BLM Deputy State Director
Melissa Bleier, CA BLM Supervisory Realty Specialist
John A. Fogerty, CA BLM Deputy Preservation Officer
Michael J. Holt, Central CA District Office Project Manager
Courtney Degener, Sr. VP External Affairs, Cadiz, Inc. / Fenner Gap Mutual Water Company



**DEPARTMENT OF PARKS AND RECREATION
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May 22, 2026

VIA EMAIL

In reply refer to: BLM_2025_1120_001

Mr. Ronald Nuckles, Field Manager
United States Department of the Interior
Bureau of Land Management
Needles Field Office
1303 S. Highway 95
Needles, CA 92363

RE: Continuing of National Historic Preservation Act Section 106 Consultation for the Fenner Gap Mutual Water Company Right-of-Way (ROW) Request for the Northern Pipeline (1780(P)/2800 CAD090 CA-D090-2025-0018-EA)

Dear Mr. Nuckles:

On April 27, 2026, the State Historic Preservation Officer (SHPO) received a letter from the Bureau of Land Management (BLM), Needles Field Office (NFO), continuing consultation for the above referenced undertaking. The BLM is consulting with the SHPO pursuant to 36 CFR Part 800, the regulations implementing Section 106 of the National Historic Preservation Act (NHPA) of 1966 (as amended). Specifically, the BLM seeks SHPO comment on the adequacy of its identification efforts, concurrence with its determinations of eligibility for inclusion in the National Register of Historic Places (NRHP), and comment on its finding of no adverse effect for the above referenced undertaking. Previously, on April 8, 2026, SHPO submitted a letter to the BLM requesting additional documentation and information regarding historic property identification efforts. With its current letter, the BLM provides the requested information and encloses the following documents:

- APE maps (Appendix A-X, B-X, C-X, D, E, and Figure 1 Project Location);
- *FGMWC Northern Pipeline Right-of-Way Conversion Project Class III Cultural Resources Inventory* (Environmental Science Associates (ESA), April 2026 (Enclosure 1);
- Summary of BLM's consultation efforts with Indian tribes and other consulting parties (Enclosure 2).

As described by the BLM, efforts to identify historic properties consisted of a tiered strategy. In areas where no ground disturbance is planned or reasonably foreseeable, or where activities are wholly confined to previously disturbed soils within an existing ROW, a BLM Class I inventory (literature review, records search, and an evaluation of existing inventory coverage of the APE) was performed. In project areas that will be subject to ground disturbance, a BLM Class III inventory (intensive pedestrian survey) was performed.

The BLM stated that as a result of its efforts to identify historic properties, 252 resources were identified (217 previously identified and 35 newly identified) that intersect the APE.

The BLM summarizes the NRHP status of all documented resources identified in the APE in Table 1 of its letter:

Table 1. Summary of NRHP Status for All Resources Identified in the APE (n=252)

Category	Count	Summary
NRHP Listed or Eligible	13	1 listed + 6 previously determined eligible + 6 newly recommended eligible
NRHP Not Eligible	69	9 previously determined not eligible + 60 recommended not eligible (current study)
Not Formally Evaluated / Assumed Eligible (for this undertaking only)	170	135 previously recorded unevaluated + 35 newly identified resources treated as eligible

The BLM also describes in its letter that “a broader lithic landscape that may constitute a potential historic district pending future evaluation” was identified.

The BLM requests SHPO concurrence on its determination that 60 of the 252 resources are ineligible for inclusion in the NRHP and further indicates that all remaining unevaluated resources will be assumed to be eligible for inclusion in the NRHP and treated as such for the purposes of the current undertaking only.

Regarding its finding of effect, the BLM stated that much of the APE will not be subject to ground-disturbing activities, and where work would occur, it will largely be confined to the existing pipeline corridor that has been previously excavated and substantially disturbed. The BLM further explains that “enforceable design features and standard operating procedures” will be implemented as avoidance measures. Therefore, the BLM has made a finding of no adverse effect for the undertaking and seeks SHPO comment. Following a review of the documentation provided by the BLM, the following comments are provided:

1. As currently submitted, evaluations for inclusion in the NRHP are based on insufficient methodology, unverified assumptions of prior disturbances, lack of clear and adequate documentation to understand the basis of its findings, incomplete documentation of the views of consulting parties and how the BLM considered them in its analysis, a lack of application of all four National Register criteria, and no consideration of potential historic districts, or some combination of the above:
 - a. Many determinations relied only on archival and background research, or on sensitivity assessments, with no accompanying field verification to inform determinations. When field verification was employed, efforts consisted solely of pedestrian survey without any subsurface testing to evaluate historic significance and integrity or assess the potential for associated buried cultural deposits. For some resources, only the portions of the resources that are within the BLM delineated APE were evaluated for historic significance. Consideration of only portions of a resource does not provide adequate information to understand the resource in its entirety. Without an understanding of the complete resource, it is not possible to determine NRHP eligibility or assess effects. It is recommended that the BLM reassess its determinations to consider the entirety of the resource and provide the updated information to consulting parties for their review and comments. Prior to submitting revised determinations of eligibility, it is

recommended that the BLM conduct up-to-date field observations documenting the existing condition and integrity of the resources for which formal NRHP determinations as well as assumptions of eligibility are being made. Also, given the limitations of pedestrian survey in identifying and evaluating buried cultural deposits within the resource boundaries, it is recommended that the BLM consult with all consulting parties on a plan to conduct subsurface testing to adequately identify potentially buried cultural deposits and assess their integrity to inform its evaluation of the NRHP eligibility of the sites.

- b. It appears that many of the BLM's determinations of ineligibility are based primarily on the assumption that resources located within the previously disturbed pipeline corridor lack integrity. The BLM concludes that even if subsurface deposits are present, they would not retain integrity due to previous ground disturbance. However, without adequate documentation demonstrating the extent, depth, and nature of past construction activities within the resource boundaries, assuming that the portions of the resources within the pipeline corridor were previously destroyed does not meet the requirements under 36 CFR § 800.4(b)(1) or the documentation standards at 36 CFR § 800.11. Archaeological sites often retain intact significant deposits within areas of prior disturbance. For the BLM to demonstrate that it has considered the effects of its undertaking on historic properties, it is advised that the BLM provide documentation—such as past construction plans, grading depths, or geotechnical data that clarify the vertical and horizontal extent of previous ground-disturbing activities within each resource boundary. This analysis should also incorporate any available results from earlier excavations conducted within the resources' boundaries as applicable and views expressed by Indian tribes and consulting parties.
- c. Supporting documentation (Enclosure 1) identified a cultural landscape, the Pisgah Lava Beds Archaeological District that intersects the APE and includes at least fifteen individual sites. The BLM determined that some of the sites suggested to be historic district contributors to be individually ineligible but did not address the NRHP eligibility of the district itself. The BLM's letter references the district only briefly and does not describe how it was considered in the assessment of effects. It is recommended that the BLM provide information regarding how it has taken the Pisgah Lava Beds Archaeological District into account as part of its efforts to identify historic properties and assess effects to them. This information should address how the BLM evaluated the sites on an individual basis and how they may contribute to the significance and integrity of the district as a whole.
- d. It appears that the BLM evaluated the historic significance of resources potentially affected by the undertaking only for their potential to possess data to answer important archaeological research questions (NRHP Criterion D). For the BLM to demonstrate that it has adequately taken into account the effects of the undertaking on historic properties, it is recommended that the BLM apply all four National Register criteria in its determinations of eligibility. Because Indian tribes possess special expertise in assessing the eligibility of historic properties, it is further recommended that the BLM in consultation with Indian tribes and other consulting parties, apply all four National Register criteria in its determinations of eligibility and provide copies or summaries of any views provided by consulting parties. The summary provided in Enclosure 2 only provides a general overview of the BLM's efforts to identify potential historic properties

within the APE, absent is the BLM's efforts to consult with Indian tribes and interested parties to evaluate historic resources identified under all NRHP criteria.

- e. Please provide the basis for NRHP eligibility for the 20 built environment resources for which the BLM is recommending as ineligible for the NRHP that is absent from Enclosure 1.
- f. In Enclosure 1, areas within the APE are briefly discussed as having medium and medium to high buried site sensitivity (Table 9). This document, however, does not include a map or maps illustrating where the areas identified as having subsurface sensitivity are within the APE. Nor does it provide an analysis of areas of subsurface sensitivity in relation to prior documented disturbance areas or the vertical and horizontal extent of construction activities for the present undertaking. Please provide information as to how the BLM considered the areas of the APE identified by ESA as having moderate to moderate-high subsurface sensitivity as part of its efforts to identify historic properties.
- g. Please provide a single, stand-alone table listing all 252 resources, organized by provenience, such as primary number, trinomial, and/or resource name. The table should indicate the 60 resources for which the BLM seeks SHPO concurrence on its determinations of eligibility, resources with prior determinations of eligibility (either ineligible or eligible) with SHPO concurrence, and resources assumed eligible for the undertaking only. For resources with prior determinations of eligibility (either ineligible or eligible), please provide documentation of SHPO's concurrence, and indicate the NRHP criteria of all assumed eligible resources. The SHPO does not generally object to assumptions of eligibility if the resources will be completely avoided. Should any portion of an assumed eligible resource be affected during the course of the undertaking, it is requested that the BLM evaluate the resources in its entirety under all NRHP criteria and consult prior to assessing effects.

For these reasons, **SHPO does not concur with the BLM's determinations of eligibility** because the efforts to evaluate historic significance are incomplete **and is unable to comment on the finding of effect**. At this time, the consultation is considered paused at 36 CFR § 800.4(b).

If you require further information, please contact Associate State Archaeologist Alicia Perez at Alicia.Perez@parks.ca.gov.

Sincerely,



Julianne Polanco
State Historic Preservation Officer



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

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INTERIOR REGION 8 • LOWER COLORADO BASIN

ARIZONA, CALIFORNIA*, NEVADA*

* PARTIAL

In Reply Refer To:

1780(P)/2800 CAD090

CA-D090-2025-0018-EA

ELECTRONIC DELIVERY

Reid Nelson

Director, Office of Federal Agency Programs

Advisory Council on Historic Preservation

401 F Street NW, Suite 308

Washington, DC 20001

Subject: Fenner Gap Mutual Water Company Northern Pipeline Right-of-Way Project – Invocation of the Objection Procedure under 36 CFR 800.5(c)(2)(i) and 800.5(c)(3)(i) –

Dear Mr. Nelson:

Pursuant to 36 CFR 800.5(c)(2)(i) and 800.5(c)(3)(i), the Bureau of Land Management (BLM) seeks to invoke the Advisory Council on Historic Preservation' (ACHP) objection procedure related to the BLM's no adverse effect finding for the Fenner Gap Mutual Water Company (FGMWC) Northern Pipeline Right-of-Way Project (the "undertaking") located in San Bernardino County, California. For the reasons briefly described below, the California State Historic Preservation Office's (SHPO) recent response to the BLM's no adverse effect finding is considered an objection under 36 CFR 800.5(c)(2). Because the BLM does not believe consultation with the SHPO will be productive, it is invoking the objection procedure in 36 CFR 800.5(c)(3).

On May 1, 2025, FGMWC submitted an application to change the use of its existing, buried pipeline along a right-of-way across 83 miles of federal land, including 65 miles across BLM-managed lands, from natural gas to water. The entire Project would cover a total of 162 miles of existing pipeline across federal and private lands and includes appurtenant facilities, e.g., eight pumping stations. Such a change of use across federal lands requires the conversion of the existing right-of-way under the Mineral Leasing Act to a right-of-way under Title V of the Federal Land Policy and Management Act (FLPMA). FGMWC identified several additional facilities along or adjacent to the existing right-of-way that are necessary for the change, which were included in the application. This represents an undertaking for purposes of

Section 106 of the National Historic Preservation Act (NHPA) and the BLM initiated the consultation process on November 20, 2025.

Following initiation, the BLM and FGMWC's contractor defined (and adjusted) the area of potential effects (APE), conducted inventories to identify historic properties within the APE, and evaluated the historic properties. The BLM further conducted an effects analyses. During the steps of the process, the BLM communicated and consulted with Indian Tribes, consulting parties, and the California SHPO as required by the Section 106 regulations. Based upon those efforts, the BLM determined that the undertaking would result in **No Adverse Effect** to historic properties pursuant to 36 CFR 800.5(b) and provided such finding to the California SHPO and other consulting parties on April 24, 2026. The details of these efforts are reflected in the attached documentation consistent with 36 CFR 800.11(e).

On May 22, 2026, the California SHPO transmitted comments expressing general concerns regarding the adequacy of the identification effort, treatment of archaeological landscape complexity, consideration of buried-site sensitivity, application of National Register criteria, and supporting documentation. While the SHPO's comments indicate disagreement with aspects of the BLM's analysis, the SHPO did not identify specific resources for which it disagrees with the BLM's National Register eligibility determinations, identify particular historic properties for which the BLM's finding of No Adverse Effect is believed to be incorrect, or provide resource-specific objections capable of resolution through further consultation.

Additionally, the SHPO inappropriately objected to the BLM's finding as premature and attempted to dictate where the BLM was in the process, i.e., paused at 36 CFR 800.4. Even this attempt to avoid acknowledging the BLM's finding of no adverse effects fails to identify a rational basis for rejecting the BLM's methodology for identifying and evaluating eligibility of historic properties. The BLM respectfully disagrees and believes it has completed a reasonable and good faith effort to identify historic properties pursuant to 36 CFR 800.4(b), appropriately applied the National Register criteria, and developed a sufficient basis upon which to assess effects pursuant to 36 CFR 800.5. Because the SHPO has not identified specific eligibility determinations, resource evaluations, or effects conclusions that it disputes, the BLM has been unable to identify a discrete issue capable of resolution through additional consultation. The BLM is treating the SHPO's May 22, 2026, letter as an objection to the BLM's finding of no adverse effect. Accordingly, the BLM invokes the procedure outlined in the Section 106 regulations at 36 CFR 800.5(c)(2)(i) and 800.5(c)(3)(i), related to the BLM's finding of No Adverse Effect for this undertaking.

Concurrent with this request, the BLM is responding to SHPO's May 22, 2026, comments through supplemental documentation and detailed responses addressing each issue raised. Copies of SHPO's correspondence, the BLM's response, and supporting technical documentation are enclosed. The documentation supporting the BLM's determination reasonably demonstrates that the BLM has identified and evaluated the potential effects of the undertaking using a conservative and protective approach. Where eligibility questions could not be fully resolved, resources were treated as eligible for purposes of the effects analysis. The undertaking incorporates avoidance measures, work restrictions, monitoring provisions, and other protective measures intended to avoid or minimize adverse effects to historic properties. Consequently, even under the most conservative assumptions regarding eligibility, the BLM concludes that the undertaking will not alter the characteristics that qualify historic properties for

inclusion in the National Register of Historic Places and therefore warrants a finding of No Adverse Effect.

In sum, the BLM is invoking the objection procedure for the finding of no adverse effect in accordance with 36 CFR 800.5(c)(2)(i) and 800.5(c)(3)(i). Pursuant to 36 CFR 800.5(c)(3)(i), the BLM acknowledges the fifteen (15)-day period from the receipt of this letter. Please contact John Fogerty, BLM State Archaeologist, at (279) 202-7035 or jfogerty@blm.gov, or Ronald Nuckles, Field Manager, at (760) 326-7000 with any questions.

Sincerely,

Ronald O. Nuckles
Field Manager
Bureau of Land Management, Needles Field Office

Enclosures:

1. Class I & Class III Archaeological Inventory for the FGMWC Northern Pipeline Right-of-Way Conversion Project and Appendices (ESA, 2026) ([link](#))
2. Consolidated Consultation Correspondence ([link](#))
3. Other Consulting Parties Consultation Matrix ([link](#))
4. Tribal Consultation Record Matrix ([link](#))
5. Consolidated Resource Accounting Table ([link](#))
6. Archaeological District Overview Map ([link](#))
7. Archaeological District Map Book ([link](#))

Cc: Jaime Loichinger, Director - Office of Federal Agency Programs, ACHP
Bill Marzella, Program Analyst, ACHP
Brendon Greenaway, CA OHP Senior State Archaeologist, NHPA Section 106 Review
Jody L. Brown, CA OHP Deputy State Historic Preservation Officer/Tribal Liaison
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Subject: The Fenner Gap Mutual Water Company (FGMWC) Northern Pipeline Right-of-Way (ROW) Conversion Project, Kern and San Bernardino Counties, California (SHPO Tracking No. BLM_2025_1120_001) - Response to the California SHPO's May 22, 2026 Letter

Dear Ms. Polanco:

The Bureau of Land Management (BLM) Needles Field Office appreciates the California State Historic Preservation Officer's (SHPO's) continued review and consultation regarding the Fenner Gap Mutual Water Company Northern Pipeline Right-of-Way Project (undertaking or Project) pursuant to Section 106 of the National Historic Preservation Act (NHPA). On April 24, 2026, the BLM notified SHPO, Tribes, and other consulting parties of the results of its Section 106 identification efforts (36 CFR 800.4(b) and (c)) and its finding of No Adverse Effect for the undertaking (36 CFR 800.5(b)). Along with the notification, the BLM provided documentation of these efforts, including details for the 252 cultural resources within the APE, compliant with 36 CFR 800.11(e). The letter requested SHPO concurrence on the BLM's determinations of eligibility pursuant to 36 CFR 800.4(c). Additionally, pursuant to 36 CFR 800.5(c), the BLM invited comment on the finding of effect from the SHPO, Tribes, and consulting parties.

The BLM acknowledges receipt of SHPO's May 22, 2026, correspondence and has carefully reviewed the comments regarding the adequacy of the identification effort, National Register of Historic Places (NRHP) eligibility evaluations, and the BLM's finding of No Adverse Effect for the undertaking. Since receipt of SHPO's comments, the BLM has revisited the underlying inventory documentation, updated Department of Parks and Recreation (DPR) records, mapping products, prior investigations, and associated cultural resource inventory and NRHP evaluation materials prepared by Environmental Science Associates (ESA). The BLM has also reevaluated the undertaking-level analysis in light of the broader administrative record and the archaeological complexity of the Project area.

As outlined below, the BLM continues to conclude that the identification and evaluation efforts conducted for the undertaking satisfy the "reasonable and good faith effort" standard set forth at 36 CFR § 800.4(b)(1), and that the undertaking will result in No Adverse Effect to historic properties. SHPO's May 22, 2026, letter disagreed with BLM's finding of No Adverse Effect. In its letter, SHPO also stated that it "does not concur with the BLM's determinations of eligibility because the efforts to evaluate historic significance are incomplete and is unable to comment on the finding of effect. At this time, the consultation is considered paused at 36 CFR § 800.4(b)." The regulations at 36 CFR 800 do not provide for a "pause" of consultation regarding identification of historic properties. Based on SHPO's letter, the BLM anticipates that continued consultation regarding the No Adverse Effect finding is unlikely to be productive. The BLM interprets the SHPO's comments and the prior comments and actions of the SHPO as a disagreement with the BLM's finding of No Adverse Effect per 36 CFR 800.5(c)(2). The BLM intends to invoke the objection procedure with the Advisory Council on Historic Preservation (ACHP) consistent with 36 CFR 800.5(c)(2)(i) and 800.5(c)(3)(i). The following information is provided to you as a courtesy and will be included in our letter to the ACHP.

Response to SHPO Comment 1: Identification Efforts, Eligibility Evaluations, and Supporting Documentation

Comment Summary: SHPO raises concerns regarding the adequacy of the BLM's identification efforts, eligibility evaluations, and supporting documentation, including the treatment of archaeological landscape complexity, buried-site sensitivity, historic districts, built-environment resources, application of NRHP criteria, and assumptions regarding integrity and eligibility. SHPO requests additional documentation, clarification, mapping, and resource accounting information to support the BLM's determinations and effects analysis.

The BLM appreciates SHPO's review of the identification efforts, eligibility evaluations, and effects analysis conducted for the undertaking and acknowledges concerns regarding archaeological landscape complexity, buried-site sensitivity, application of NRHP criteria, treatment of historic districts and built-environment resources, and the organization and presentation of supporting documentation. Notwithstanding our disagreement with SHPO's comment about the adequacy of the documentation, the BLM revisited the underlying inventory

documentation, updated Department of Parks and Recreation (DPR) records, supporting mapping products, prior investigations, and associated evaluation materials prepared in support of BLM's determinations of NRHP eligibility and finding of No Adverse Effect for the undertaking.

As outlined below, the BLM continues to conclude that the identification and evaluation efforts conducted for the undertaking satisfy the "reasonable and good faith effort" standard set forth at 36 CFR 800.4(b)(1). The administrative record demonstrates that the inventory employed a resource-specific and iterative identification strategy incorporating archival review, intensive pedestrian survey, revisit efforts to previously recorded resources, aerial imagery review, historical map and archival review, geomorphic assessment, and updated documentation procedures. As previously noted in the BLM's April 24, 2026, No Adverse Effect finding, the inventory identified a broad range of archaeological and historic-period resource types and acknowledged unresolved archaeological landscape complexity, buried-site sensitivity, and broader district-scale relationships where appropriate. Where eligibility questions could not be fully resolved within the confines of the current undertaking corridor, resources were conservatively treated as eligible for purposes of effects analysis. The following responses address SHPO's specific comments.

Response to SHPO Comment 1(a): Sufficiency of Identification and Evaluation Efforts

Comment Summary: SHPO asserts that many eligibility determinations relied primarily on archival research, sensitivity modeling, or pedestrian survey without sufficient field verification or subsurface testing to adequately evaluate integrity, buried deposits, or NRHP eligibility. SHPO further contends that evaluating only portions of resources within the Area of Potential Effects (APE) does not provide sufficient understanding of the full resource to support eligibility determinations or effects assessments. SHPO recommends that BLM re-evaluate resources in their entirety, conduct updated field observations documenting current condition and integrity, consult with consulting parties regarding supplementary subsurface testing strategies, and provide revised eligibility information for review and comment.

The BLM respectfully disagrees that the identification and evaluation efforts conducted for the undertaking were insufficient under 36 CFR § 800.4(b)(1). The administrative record demonstrates that almost the entirety of the APE has been subject to past cultural resources field assessments focused on the same right-of-way corridor that makes up the undertaking (ESA 2026:67-68). It also demonstrates that the cultural resource inventory for this undertaking employed a resource-specific and iterative identification strategy that incorporated Class I records review, Class III intensive pedestrian survey on lands managed by BLM, revisitation of previously recorded resources where disturbance is proposed, aerial imagery reviews, geomorphic assessment, updated GPS mapping and updated DPR documentation.

The resulting inventory identified archaeological manifestations across a broad spectrum of scales, densities, and resource classes, including isolated prehistoric artifacts, sparse lithic

scatters, multicomponent archaeological sites, transportation-related resources, utility-related resources, military-associated resources, historic refuse loci, and broader historic landscapes. The field methods employed were sufficiently sensitive to identify and document subtle archaeological manifestations, including isolated flakes, sparse roadside refuse scatters, and low-density archaeological loci. The research design was developed to use such information to arrive at a broad understanding of resource significance (ESA 2026:80-230).

The BLM acknowledges that portions of the inventory and evaluation efforts relied upon existing records, background research, prior investigations, geomorphic assessment, and pedestrian survey without new subsurface excavation. However, the BLM does not agree that Section 106 categorically requires subsurface testing or exhaustive delineation of entire resources—particularly those of landscape scale—in all instances to satisfy the “reasonable and good faith effort” standard under 36 CFR 800.4(b)(1). Rather, the appropriate level of investigation must be proportional to:

- the nature of the undertaking
- the scale and likelihood of anticipated effects
- observed site characteristics
- prior investigations
- existing disturbance conditions
- likelihood that additional investigations would materially alter eligibility or effects determinations

Guidance provided by the Advisory Council on Historic Preservation (ACHP) regarding the “reasonable and good faith effort” states:

identification effort is reasonable when it is logically designed to identify eligible properties that may be affected by the undertaking, without being excessive or inadequate in light of the factors cited above. While it may be appropriate in some circumstances to identify all historic properties in the APE, it is important to note that the regulations do not require identification of all properties (ACHP 2018:2).

The criteria used by ACHP for reasonable effort include documentation of the APE that includes the horizontal and vertical extent that accounts for the direct and indirect effects, explanation of the factors that lead to the intensity of the identification effort, the magnitude of the undertaking and its anticipated effects on any historic properties, a review of existing information regarding the APE, familiarity with regionally used methodologies, and a clear description of the process of the field investigations and final analyses (ACHP 2018:2).

The ACHP also notes what is not required for a reasonable and good faith effort. This includes that it is not required to identify every historic property within the APE, pointing out that “One of

the reasons the ACHP's regulations contain a post-review discovery provision (36 CFR § 800.13) is that a reasonable and good faith effort to identify historic properties may well not be exhaustive and, therefore, some properties might be identified as the project is implemented." (ACHP 2018:2). The guidance also states that identification does not require "Investigations outside of, or below, a properly documented APE. The Section 106 process does not require that the agency search for all historic properties in a given area. Because the APE defines the geographic limits of federal agency responsibility for purposes of Section 106 review, identification efforts are carried out within its boundaries."

Finally, the ACHP states that a reasonable effort does not require "Ground verification of the entire APE" and that identification efforts can target areas where there is a probability of finding historic properties or causing adverse effects to such properties (ACHP 2018:2).

The BLM's investigation appropriately considered these conditions and factors. The inventory report demonstrates that the identification effort did not ignore buried-site potential. To the contrary, the reporting repeatedly and transparently acknowledges areas of moderate buried-site sensitivity, aeolian and alluvial depositional contexts, prior pipeline trenching and utility corridor disturbance, erosional redistribution, and instances where additional buried materials may occur (ESA 2026:77-79). The datasets used to categorize and analyze the geomorphology and buried site sensitivity are up-to-date, reliable, and publicly available and references are provided (Bedrossian et al. 2012; Cyr and Miller 2023; Dibblee and Minch 2008a, 2008b, 2008c; Miller et al. 2020). In addition to the overall analysis of the sensitivity along the APE, each resource description includes a field-based account of the local soil and landscape conditions (ESA 2026:83-164).

Similarly, the inventory report repeatedly acknowledges broader archaeological landscape complexity, including uncertain site boundaries, closely situated lithic scatters, preservation bias, erosional movement, and the possibility that some site relationships may warrant future reassessment (ESA 2026:126; 251-252; 83-164). Accordingly, the reporting does not present the APE as fully resolved archaeologically but rather documents and evaluates the portions of resources intersecting the APE while recognizing broader unresolved regional relationships where appropriate.

The BLM further notes that many resources intersect the APE only marginally or at discrete crossing locations associated with existing utility, transportation, or maintenance corridors. Section 106 does not require exhaustive reevaluation or complete regional delineation of expansive archaeological or transportation landscapes where only limited portions intersect the APE, undertaking effects are geographically confined, and effects to character-defining features are not reasonably foreseeable. Where eligibility questions could not be fully resolved within the confines of the APE, the BLM conservatively treated resources as eligible for purposes of effects analysis.

The BLM’s identification and evaluation efforts were conducted using a conservative, resource-specific, and proportionate approach fully consistent with the “reasonable and good faith effort” standard under 36 CFR 800.4(b)(1).

Response to Comment 1(b): Subsurface Testing and Buried Deposits

Comment Summary: SHPO asserts that many BLM ineligibility determinations improperly assume that prior pipeline construction destroyed archaeological integrity within the corridor without sufficient supporting documentation. SHPO contends that the existence of prior disturbance alone is insufficient to conclude that intact deposits no longer remain, particularly because archaeological sites may retain significant buried deposits within previously disturbed areas. SHPO recommends that BLM provide documentation demonstrating the extent, depth, and nature of prior ground disturbance within resource boundaries—including construction records, grading information, geotechnical data, prior excavation results, and consideration of Tribal and consulting party input—to adequately support conclusions regarding integrity and eligibility under 36 CFR 800.4(b)(1) and 800.11.

The BLM respectfully disagrees that the eligibility determinations for resources intersecting the disturbed corridor were based solely, or primarily, on unsupported assumptions that prior pipeline/utility construction eliminated archaeological integrity within the APE. The report demonstrates that the inventory and evaluation efforts considered a broad range of factors in evaluating integrity, buried-site potential, and archaeological sensitivity within the APE, including:

- geomorphic context (ESA 2026:77-79)
- aeolian and alluvial depositional processes (ESA 2026:77-79)
- prior excavation histories (ESA 2026:67-68)
- prior pipeline trenching and utility construction (ESA 2026:67-68)
- visible surface disturbance (ESA 2026:83-164 [site descriptions])
- roadway and maintenance impacts (ESA 2026:83-164 [site descriptions])
- prior archaeological investigations (ESA 2026:67-68, 83-164 [site descriptions])
- observed site conditions documented during field revisit efforts where disturbance is proposed (ESA 2026:83-164 [site descriptions])

The inventory documentation repeatedly and transparently acknowledges where:

- moderate buried-site potential exists
- additional buried materials may occur
- erosional redistribution may have affected archaeological deposits
- subsurface testing was not conducted (ESA 2026:83-164 [site descriptions])

Accordingly, the BLM does not contend that all portions of the corridor are uniformly disturbed or devoid of archaeological sensitivity. Rather, the inventory demonstrates that archaeological sensitivity, depositional integrity, and buried-site potential vary considerably across the APE and were evaluated proportionate to observed site characteristics, geomorphic setting, previous investigations, prior disturbance histories, and anticipated undertaking effects.

The BLM further acknowledges SHPO's concern that archaeological sites can retain intact buried deposits within previously disturbed settings. The inventory documentation itself recognizes this possibility in several locations and incorporates prior excavation and trenching and other disturbance related data where available. In multiple cases, the report references prior excavation histories, confirmed buried deposits, prior trenching depths, and earlier archaeological investigations within or adjacent to the APE. At the same time, the record also demonstrates that many newly identified manifestations within the corridor consist only of sparse surface deposits, isolated refuse scatters, low-density lithic scatters, disturbed roadside manifestations, or fragmentary archaeological deposits lacking indicators of intact subsurface integrity or substantial information potential, and therefore lacking indicators that may suggest National Register eligibility under applicable criteria.

The BLM does not agree that broad subsurface testing excavation was categorically required across all resource types or all portions of the undertaking corridor to satisfy the "reasonable and good faith effort" standard under 36 CFR § 800.4(b)(1). Rather, the cultural resource inventory employed proportionate investigative methods based on the nature of the undertaking, the scale and likelihood of anticipated effects, observed site conditions, prior investigations, existing disturbance conditions, and the likelihood that additional excavation would materially alter eligibility or effects conclusions.

The BLM also notes that many resources intersect the APE only partially or at discrete crossing locations associated with existing utility, transportation, or maintenance corridors. As a result, the undertaking-level analysis focused on reasonably foreseeable effects within those portions of the resources potentially subject to direct or indirect effects, consistent with 36 CFR §§ 800.5(a), 800.16(d) (definition of "area of potential effects"), 800.16(i) (definition of "effect").

Importantly, the BLM did not rely solely upon generalized assumptions regarding prior disturbance. The BLM notes that the undertaking incorporates enforceable protective measures, including environmentally sensitive area delineations, work-area restrictions, archaeological monitoring where appropriate, flexible siting provisions, and additional review requirements for future disturbance outside previously evaluated contexts. The record reflects that the BLM's integrity assessments and eligibility evaluations were not based upon unsupported assumptions regarding prior disturbance, but rather upon a resource-specific and proportionate evaluation of archaeological sensitivity, geomorphic context, prior investigations, existing disturbance

conditions, and reasonably foreseeable undertaking effects consistent with 36 CFR 800.4(b)(1) and 800.11.

Response to Comment 1(c): Broader Lithic Landscape and Potential District Relationships

Comment Summary: SHPO asserts that the BLM failed to adequately evaluate or assess effects to the Pisgah Lava Beds Archaeological District, a broader cultural landscape identified in the supporting documentation that intersects the APE and includes at least fifteen archaeological sites. SHPO notes that while some potential district contributors were evaluated individually and recommended ineligible, the BLM did not evaluate the NRHP eligibility of the district itself or explain how the district was considered in the effects analysis. SHPO recommends that the BLM clarify how the Pisgah Lava Beds Archaeological District was considered during identification and effects assessment efforts, including how individual sites were evaluated both independently and as potential contributors to the significance and integrity of the broader district.

Contrary to the SHPO's concerns regarding broader lithic landscape relationships and potential district-scale archaeological contexts, the BLM did contemplate those concerns as part of its identification efforts. The inventory documentation repeatedly recognizes the complexity of the regional archaeological landscape and expressly notes closely situated lithic scatters, erosional redistribution, preservation bias, uncertain site boundaries, overlapping archaeological manifestations, and the possibility that some site relationships may warrant future reassessment. The report recommended that the Pisgah Lava Beds Archaeological District meets the criteria for significance under the NHPA and also that the entirety of the resource be recorded to establish the boundaries and to document integrity. However, as almost all of the district's potential area is outside the current APE, this documentation is beyond the scope of the identification effort and therefore the district is being considered eligible for inclusion in the NRHP for the purposes of the undertaking (ESA 2026:189-192). Accordingly, the inventory did not reject the possibility of broader archaeological district relationships. Rather, the report expressly acknowledged analytical uncertainty where present and documented the portions of those broader landscapes intersecting the APE (ESA 2026:189-190, 248-249).

Section 106 identification obligations are necessarily tied to the undertaking and reasonably foreseeable effects. Enclosures 3 and 4 provide focused mapping of the Pisgah Lava Beds Archaeological District, demonstrating that many contributing and/or potentially contributing resources intersect the APE only marginally or at discrete crossing locations associated with existing utility or transportation corridors. The undertaking does not require exhaustive delineation of entire archaeological landscapes where only limited portions intersect the APE, undertaking effects are geographically constrained, and effects to character-defining features are not reasonably foreseeable. This is consistent with the ACHP guidance on the reasonable and good faith effort standard, as described above. That guidance specifically states that a reasonable effort does not require inventory efforts outside of the APE (ACHP 2018:2).

Because the undertaking is geographically confined, largely follows existing infrastructure, and incorporates enforceable avoidance and monitoring measures, after applying the criteria of adverse effect under 36 CFR 800.5(a), the BLM concluded that the undertaking would not alter characteristics that may qualify broader landscape resources for inclusion in the NRHP. Where uncertainty remained regarding district contribution or eligibility, the BLM conservatively treated resources as eligible for purposes of effects analysis.

Response to Comment 1(d): Application of NRHP Criteria

Comment Summary: SHPO asserts that the BLM appears to have evaluated resources primarily under NRHP Criterion D (information potential) without adequately applying Criteria A–C. SHPO recommends that the BLM evaluate resources under all four NRHP criteria, particularly in consultation with Tribes and consulting parties who may possess expertise regarding cultural, historical, or traditional significance. SHPO further states that the consultation summary provided does not adequately document how Tribal and consulting party views regarding eligibility under all NRHP criteria were considered in the BLM’s analysis.

The BLM respectfully disagrees that the inventory evaluated the eligibility of resources solely under Criterion D without consideration of Criteria A through C.

The inventory evaluated resources using the full NRHP framework—pursuant to 36 CFR 800.4(c), 36 CFR Part 63, and applicable guidance documents—including consideration of associative significance, integrity, design characteristics, historical context, transportation history, landscape associations, and information potential (ESA 2026:165-185, 185-231). The BLM also considered information provided through consultation with Tribes and consulting parties regarding broader cultural landscapes, regional archaeological interconnectedness, transportation corridors, and other potential associative values (see Enclosures 1 and 2, Consultation Matrices).

However, because many of the resources identified within the APE consisted of sparse lithic scatters, isolated refuse loci, generalized roadside dumping events, fragmentary infrastructure remnants, low-density archaeological deposits, and ephemeral transportation-related manifestations, Criterion D necessarily became the principal analytical framework for many archaeological sites. The prominence of Criterion D within the evaluations reflects the predominant types of resources encountered within the APE and their apparent archaeological character rather than a failure to consider Criteria A, B, or C.

In numerous instances, no demonstrable association with significant historical events or patterns under Criterion A, no association with significant persons under Criterion B, and no distinctive engineering, architectural, artistic, or construction characteristics under Criterion C could be established nor reasonably anticipated based on the available evidence and observed site conditions. For example, see the Class I/III Cultural Resources Inventory discussion of (Criteria

A, B, and C with regard to National Old Trails Highway and U.S. Route 66 (ESA 2026:181), discussion of Criteria A and C with regard to military resources (ESA 2026:183), discussion of Criteria A, B, and C with regard to ceramic scatters (ESA 2026:190), discussion of Criteria A, B, and C with regard to refuse sites (ESA 2026:190), discussion of Criteria A and C with regard to built environment resources (ESA 2026:230). As a result, evaluation analyses frequently focused on whether identified resources retained sufficient integrity and potential to yield important information beyond that already represented within regional archaeological contexts.

Importantly, the inventory did not apply blanket assumptions regarding significance or eligibility. Rather, the report differentiated among eligible transportation corridors and historic roads, multicomponent archaeological sites, isolated refuse scatters, complex refuse loci, military-associated resources, utility-related resources, and broader historic landscapes with each evaluated proportionate to its observed characteristics, contextual associations, integrity, depositional complexity, and apparent research potential.

The BLM further recognizes that Tribes and consulting parties may possess expertise regarding cultural, historical, and traditional significance beyond strictly archaeological considerations. Tribal and consulting party input informed the BLM's consideration of broader landscape relationships, cultural interconnectedness, transportation associations, and potential district-scale contexts as part of the identification and evaluation process. The BLM confirms that consultation has been conducted consistent with 36 CFR 800.2(c) and 800.2(d), including government-to-government consultation with federally recognized Tribes and consultation with other consulting parties.

Consulting Tribes expressed concerns regarding broader Mojave Desert cultural landscapes, trail systems, groundwater systems, regional cultural interconnectedness, and broader landscape-scale archaeological relationships. The BLM carefully considered these concerns in defining the APE, evaluating indirect effects, considering district-scale archaeological relationships, and assessing broader landscape context.

The inventory itself reflects this broader analytical approach through repeated discussion of complex lithic landscapes, unresolved site boundaries, erosional processes, overlapping archaeological manifestations, and potential interrelationships among closely situated sites and isolates.

To date, however, consulting parties have not identified additional discrete historic properties within the APE beyond those documented in the inventory, nor have they identified undertaking-related effects to off-site historic properties outside the defined APE (Enclosure 1, Tribal Consultation Matrix). The record demonstrates that the BLM's evaluations considered all four NRHP criteria, while appropriately emphasizing Criterion D where warranted by the nature, integrity, and archaeological character of the resource types identified within the APE.

Response to Comment 1(e): Built Environment and Historic-Era Resource Eligibility Rationales

Comment Summary: SHPO requests additional explanation and supporting documentation for the approximately 20 built-environment resources that the BLM recommends as ineligible for the NRHP, noting that the basis for those determinations is not adequately explained in the inventory report.

The BLM acknowledges SHPO's request for additional clarification regarding the basis for recommending certain built-environment and historic-era resources as ineligible for the NRHP. The report documentation (ESA 2026:197-217; 239-241) demonstrates that the BLM carefully evaluated historic-period transportation or infrastructure resources. The inventory differentiated among significant transportation corridors and historic roads, ordinary unimproved roads lacking demonstrated historical significance, isolated roadside dumping events, sparse refuse scatters, and more complex historic-period refuse loci.

Resources such as Route 66/National Trails Highway, Amboy Road, and the Powerline Road/LADWP transmission corridor were recognized and treated as significant transportation-related properties or corridors. Conversely, other roads and associated features were individually evaluated based upon integrity, historical associations, associated features, transportation context, and physical characteristics (ESA 2026:177-180; 197-217; 239-241).

The inventory report further demonstrates that ESA critically evaluated whether nearby refuse manifestations were actually associated with adjacent roads or infrastructure rather than assuming contributory relationships. In multiple instances, the report expressly concludes that nearby refuse lacked definitive associative relationships with adjacent transportation resources.

Similarly, historic refuse manifestations documented within the APE vary substantially in scale, integrity, depositional complexity, and apparent research potential. Some manifestations consist only of isolated dumping episodes or sparse refuse scatters lacking broader contextual integrity, while others represent larger multicomponent refuse loci with multiple concentrations, moderate buried-site potential, and more complex depositional histories.

The BLM therefore did not apply a blanket dismissal approach to historic-period built environment resources but instead evaluated each resource proportionate to its observed characteristics and contextual associations.

Response to Comment 1(f): Subsurface Sensitivity Mapping and Analysis

Comment Summary: SHPO states that while the cultural resource inventory report identifies areas of moderate to moderate-high subsurface sensitivity within the APE, the documentation does not include maps showing where those areas occur or analysis explaining how those areas relate to prior disturbance or proposed construction impacts. SHPO requests additional information describing how BLM considered areas of subsurface sensitivity in its efforts to identify historic properties and evaluate effects.

The BLM acknowledges SHPO's request for additional information regarding areas identified as exhibiting moderate to moderate-high subsurface sensitivity within the APE, including how those areas relate to previously documented disturbance and proposed undertaking activities. However, the BLM respectfully disagrees that the existence of moderate or moderate-high subsurface sensitivity necessarily required broad subsurface excavation throughout the APE to satisfy the "reasonable and good faith effort" standard under 36 CFR 800.4(b)(1). Rather, archaeological sensitivity and buried-site potential vary substantially across the APE and were evaluated proportionate to geomorphic setting, observed site conditions, prior investigations, known disturbance histories, resource type, and the scale and likelihood of anticipated effects

The BLM agrees that geomorphic context and buried-site sensitivity are important considerations in evaluating archaeological sensitivity and identifying historic properties. As reflected throughout the inventory documentation, the cultural resources inventory considered aeolian and alluvial depositional processes, erosional redistribution, prior pipeline trenching, roadway and utility corridor disturbance, and broader geomorphic conditions in evaluating archaeological sensitivity and buried-site potential within the APE.

The inventory documentation repeatedly and transparently acknowledges areas where moderate buried-site potential exists, additional buried materials may occur, alluvial or aeolian deposition may have affected archaeological integrity, and prior disturbance may variably affect subsurface deposits depending on the nature and extent of earlier ground disturbance (ESA 2026: resource description and evaluation sections).

The BLM further notes that many portions of the APE are located within or immediately adjacent to existing pipeline, utility, roadway, or maintenance corridors that exhibit varying degrees of prior excavation, grading, trenching, and ongoing disturbance. At the same time, the inventory did not assume that all portions of the corridor lack archaeological sensitivity or integrity. Rather, the BLM employed a resource-specific and geomorphically informed approach that acknowledged both the potential for intact buried deposits in certain settings and the existence of prior disturbance conditions that may affect integrity and information potential within portions of the APE.

The BLM also notes that the undertaking incorporates enforceable protection measures designed to minimize the potential for unanticipated effects to buried cultural deposits, including environmentally sensitive area delineations, work-area restrictions, flexible siting provisions, archaeological monitoring where appropriate, and additional review requirements for future disturbance outside previously evaluated contexts.

The record demonstrates that the BLM considered areas of moderate and moderate-high subsurface sensitivity as part of its efforts to identify historic properties and evaluate undertaking effects, and that those considerations were incorporated into both the identification methodology and the undertaking's avoidance and treatment measures.

Response to Comment 1(g): Consolidated Resource Accounting

Comment Summary: SHPO requests a comprehensive stand-alone table listing all 252 identified resources, SHPO requests that the BLM provide a comprehensive stand-alone table listing all 252 identified resources, including primary number, trinomial, and/or resource name; NRHP status and eligibility recommendation; identification of the 60 resources for which BLM seeks SHPO concurrence; identification of resources with prior SHPO-concurred eligibility determinations; documentation of prior SHPO concurrence where applicable; identification of resources assumed eligible for the undertaking only; and identification of the NRHP criteria applicable to assumed-eligible resources. SHPO further requests that any assumed-eligible resources potentially subject to effects be fully evaluated under all NRHP criteria and consulted upon prior to assessment of effects.

The BLM is providing a consolidated accounting of all 252 resources identified within or intersecting the APE, as requested (Enclosure 5). This information was previously provided to SHPO and all consulting parties, and has merely been reformatted at SHPO's request. This table includes, as applicable:

- primary number
- trinomial designation
- resource name or temporary field designation
- resource type
- prior NRHP determinations
- current eligibility recommendations
- applicable NRHP criteria
- treatment assumptions
- identification of resources for which the BLM seeks SHPO concurrence on updated eligibility recommendations
- identification of resources previously determined eligible or ineligible with prior SHPO concurrence where documentation is available in the administrative record.

The resource accounting table also identifies resources assumed eligible for purposes of the current undertaking only, including the NRHP criteria under which such resources are being conservatively treated for purposes of the undertaking-level effects analysis.

The BLM further acknowledges SHPO's concerns regarding the use of assumed eligibility determinations where effects may occur. Consistent with longstanding Section 106 practice, the BLM conservatively treated certain previously unevaluated or unresolved resources as eligible for purposes of the undertaking where eligibility could not be fully resolved within the confines of the current identification effort. This approach was intended to ensure that potentially significant resources were afforded consideration within the effects analysis notwithstanding unresolved eligibility questions.

Importantly, the assumption of eligibility approach does not reflect a determination that all such resources necessarily possess significance under one or more NRHP criteria. Rather, assumed eligibility was employed as a conservative treatment mechanism within the context of the current undertaking and effects analysis pending any future need for additional evaluation outside the scope of the present undertaking.

The BLM further notes that the undertaking's design, avoidance measures, work restrictions, monitoring provisions, and treatment assumptions were specifically developed to avoid or minimize the potential for adverse effects to both formally evaluated and assumed-eligible resources (ESA 2026: 228-229). Many assumed-eligible resources intersect the APE only marginally or at discrete crossing locations associated with existing utility, transportation, or maintenance corridors, and the undertaking-level effects analysis focused on reasonably foreseeable effects within those limited portions of the resources potentially subject to disturbance. Class I/III Cultural Resources Inventory Appendix C contains maps demonstrating the locations of these resources and Appendix D provides maps depicting the boundaries and site constituents of eligible resources compared with the potential disturbance areas.

At the same time, the BLM recognizes that future undertaking modifications, newly identified effects pathways, or future activities outside the scope of the current undertaking could necessitate additional evaluation or consultation should circumstances materially change. The BLM also recognizes that where future activities may result in effects not presently considered within the current undertaking-level analysis, additional evaluation and consultation may be appropriate at that time consistent with 36 CFR 800.4 and 800.5.

The record provides a comprehensive summary of resource status, treatment assumptions, eligibility considerations, and prior determinations sufficient to support the BLM's identification efforts, eligibility recommendations, and effects analysis.

Conclusion

The BLM provides these responses as a courtesy and to further clarify its position that the finding of No Adverse Effect for this undertaking is sufficient and supported the documentation previously provided to SHPO. As described above, the BLM considered SHPO's comments and determined that they do not raise new issues that were not already considered in the BLM's investigation and evaluation and, therefore, do not require further analysis or consultation. The BLM's identification approach and level of effort, including the tiered approach with targeted Class III surveys, was appropriate under 36 CFR 800.4(b)(1); the BLM appropriately evaluated historic significance by applying all relevant NRHP eligibility criteria according to 36 CFR 800.4(c), 36 CFR Part 63, and applicable guidance; and the BLM appropriately applied the criteria of adverse effect to reach the finding of No Adverse Effect, consistent with 36 CFR 800.5(a)-(b). The BLM's analysis continues to support the finding of No Adverse Effect.

Should you have any questions or require additional information, please contact John Fogerty, BLM State Archaeologist, at (279) 202-7035 or jfogerty@blm.gov, or Ronald Nuckles, Field Manager, at (760) 326-7000.

Sincerely,

Ronald O. Nuckles
Field Manager
Bureau of Land Management, Needles Field Office

References:

Advisory Council on Historic Preservation (ACHP)
2018 Meeting the "Reasonable and Good Faith" Identification Standard in Section 106 Review. Advisory Council on Historic Preservation, Washington, D.C.

Bedrossian, T.L., P. Roffers, C.A. Hayhurst, J.T. Lancaster, and W.R. Short
2012 Geologic Compilation of Quaternary Surficial Deposits in Southern California. California Geological Survey Special Report 217. California Department of Conservation, Sacramento.

Cyr, A.J., and D.M. Miller
2023 Preliminary Surficial Geologic Map of Leuhman Ridge and the Surrounding Area, Edwards Air Force Base and Air Force Research Laboratory, Kern and San Bernardino Counties, California. U.S. Geological Survey Open-File Report 2023-1014. U.S. Geological Survey, Reston, Virginia.

Dibblee, T.W., Jr., and J.A. Minch

2008a Geologic Map of the Boron Quadrangle, Kern County, California. Dibblee Geological Foundation Map DF-410. Dibblee Geological Foundation, Santa Barbara, California.

Dibblee, T.W., Jr., and J.A. Minch

2008b Geologic Map of the Kramer Quadrangle, San Bernardino and Kern Counties, California. Dibblee Geological Foundation Map DF-411. Dibblee Geological Foundation, Santa Barbara, California.

Dibblee, T.W., Jr., and J.A. Minch

2008c Geologic Map of the Hinkley Quadrangle, San Bernardino County, California. Dibblee Geological Foundation Map DF-412. Dibblee Geological Foundation, Santa Barbara, California.

Environmental Science Associates (ESA)

2026 FGMWC Northern Pipeline Right-of-Way Conversion Project: Class III Cultural Resources Inventory. Unpublished report prepared for Fenner Valley Water Authority and the Bureau of Land Management, California Desert District. Environmental Science Associates, Los Angeles, California.

Miller, D.M., D.L. Hughson, E.V. McDonald, and M.C. Reheis

2020 Surficial Geology of the Mojave Desert Region, California (geospatial database and map compilation). U.S. Geological Survey, Reston, Virginia.

Enclosures:

1. Tribal Consultation Record Matrix ([link](#))
2. Other Consulting Parties Consultation Matrix ([link](#))
3. Archaeological District Overview Map ([link](#))
4. Archaeological District Map Book ([link](#))
5. Consolidated Resource Accounting Table ([link](#))

Cc: Brendon Greenaway, CA OHP Senior State Archaeologist, NHPA Section 106 Review

Jody L. Brown, CA OHP Deputy State Historic Preservation Officer/Tribal Liaison

Alicia Perez, CA OHP Associate State Archaeologist

Daniel Leivas, Chairman, Chemehuevi Indian Tribe

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Timothy Williams, Chairman, Fort Mojave Indian Tribe

Shan Lewis, Vice Chairman, Fort Mojave Indian Tribe

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Mandi Campbell, Tribal Historic Preservation Officer, Timbisha Shoshone Tribe
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Victoria Harvey, EAFB Cultural Resources Manager/Archaeologist
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United States Department of the Interior

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INTERIOR REGION 8 • LOWER COLORADO BASIN

ARIZONA, CALIFORNIA*, NEVADA*

* PARTIAL

In Reply Refer To:

1780(P)/2800 CAD090

CA-D090-2025-0018-EA

ELECTRONIC DELIVERY

Julianne Polanco
State Historic Preservation Officer
Office of Historic Preservation
1725 23rd Street, Suite 100
Sacramento, CA 95816

Subject: Final Determination of No Adverse Effect - Fenner Gap Mutual Water Company Northern Pipeline Conversion Project (SHPO Tracking No. BLM_2025_1120_001)

Dear Ms. Polanco:

The Bureau of Land Management (BLM) appreciates the time, expertise, and perspectives provided by the California State Historic Preservation Officer (SHPO), Indian Tribes, consulting parties, and other interested parties throughout consultation for the proposed Fenner Gap Mutual Water Company (FGMWC) Northern Pipeline Conversion Project.

As lead federal agency for compliance with Section 106 of the National Historic Preservation Act (54 U.S.C. 306108) and its implementing regulations (36 CFR Part 800), the BLM has completed a reasonable and good-faith effort to identify historic properties within the Area of Potential Effects (APE), evaluate those properties for eligibility for listing in the National Register of Historic Places (NRHP), and assess the effects of the undertaking. These efforts included Class I records research, intensive Class III cultural resources inventory where appropriate, evaluation of newly identified and previously recorded resources, government-to-government consultation with Indian Tribes, consultation with the California SHPO and consulting parties, and consideration of all information received during consultation.

On April 24, 2026, the BLM transmitted its determinations of eligibility and finding that the undertaking would result in No Adverse Effect pursuant to 36 CFR 800.5(b). In correspondence dated May 22, 2026, the California SHPO expressed concerns regarding the adequacy of the identification effort, evaluation methodology, and supporting documentation. The BLM carefully considered those comments and, on June 15, 2026, provided supplemental documentation and detailed written responses addressing each issue raised.

Although SHPO expressed general methodological concerns, it did not identify specific historic properties, National Register eligibility determinations, or findings of effect with which it disagreed. Accordingly, after concluding that further consultation was unlikely to resolve the disagreement, on June 15, 2026, the BLM referred its finding of No Adverse Effect to the Advisory Council on Historic Preservation (ACHP) pursuant to 36 CFR 800.5(c)(2)(i) and 800.5(c)(3)(i).

The ACHP received the referral, which provided for fifteen days to review under 36 CFR 800.5(c)(3)(i). On July 6, 2026, the ACHP notified the BLM that they were unable to provide comments within the 15-day period and stated that the BLM's responsibilities under Section 106 are considered fulfilled. Accordingly, the BLM has satisfied the procedural requirements of 36 CFR Part 800 applicable to its finding of effect.

This letter serves as notice that the BLM has completed its responsibilities under Section 106 of the National Historic Preservation Act and 36 CFR Part 800 with respect to the determination of effects for this undertaking. The complete administrative record includes the BLM's determinations of eligibility, finding of effect, consultation correspondence, responses to SHPO comments, referral to the ACHP, and supporting technical documentation.

The BLM appreciates the participation of all consulting parties throughout this process. Consultation with Indian Tribes and other stakeholders remains an important component of the BLM's broader government-to-government relationships and land management responsibilities. Should implementation of the undertaking require modifications that constitute a new undertaking or result in changes with the potential to alter previously evaluated effects to historic properties, the BLM will fulfill any additional obligations required under Section 106 and other applicable authorities.

Sincerely,

Ronald O. Nuckles
Field Manager
Bureau of Land Management, Needles Field Office

Cc: Reid Nelson, Executive Director, ACHP

Jaime Loichinger, Director - Office of Federal Agency Programs, ACHP

Bill Marzella, Program Analyst, ACHP

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