

ENVIRONMENTAL INFORMATION DOCUMENT (EID)

**CONSTRUCTION OF A NEW WATER STORAGE TANK LOCATED AT WELL SITE 9, CITY OF
RIO RANCHO, SANDOVAL COUNTY, NEW MEXICO**

CITY OF RIO RANCHO PROJECT NO. WA1937

PREPARED FOR:

HUITT-ZOLLARS, INC.
333 RIO RANCHO DRIVE, NE SUITE 101
RIO RANCHO, NM 87124-1450

PREPARED BY:

ROCKY MOUNTAIN ECOLOGY, LLC
P.O. Box 45193
RIO RANCHO, NM 87174

FOR SUBMITTAL TO:

CITY OF RIO RANCHO
UTILITIES SECTION
3200 CIVIC CENTER CIRCLE NE
RIO RANCHO, NM 87124



APRIL 2020

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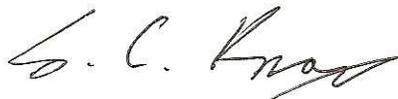
CITY OF RIO RANCHO
UTILITIES SECTION
3200 CIVIC CENTER CIRCLE NE
RIO RANCHO, NM 87124

PREPARATION DATE:

APRIL 2020

INVESTIGATORS:

SHAWN C. KNOX, M.S., C.W.B
DIRECTOR, ROCKY MOUNTAIN ECOLOGY, LLC



Signature/ Date:
Rocky Mountain Ecology, LLC.

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1.0 PURPOSE AND NEED FOR PROJECT

1.1 Project Description

The City of Rio Rancho is seeking funding assistance to update and expand Site 9. Rio Rancho has identified this site as a critical facility for existing and future operations. Site 9 currently includes a well, reservoir, and arsenic treatment facility. The City does not have any outstanding debt related to any aspect of the Site 9 proposed improvements. The City intends to self-fund the engineering, land acquisition, and tank construction for Phase I. Additionally, the City recently submitted for funds in the total amount between \$10M and \$15M to finance Phases II and III through the New Mexico Finance Authority (NMFA) Drinking Water Revolving Loan Fund. The loan application along with this document will be resubmitted in June for further funding consideration. Phases II and III will be funded through NMFA, City Bonds or a combination thereof. The project area is located in Sandoval County, west of City limits, adjacent to and north of King Boulevard (Figures 1 & 2).

The water storage tank (from hereon “Reservoir 9”) at Well Site #9 most directly serves Pressure Zone 6A, but is hydraulically capable of serving Zone 6B as well. It is expected that the combined peak day demands of Zones 6A and 6B, at full build out, will be approximately 28 million gallons per day (MGD). Given this demand and the City’s design standard for total storage, the storage requirement to serve the Zones is approximately 13 MG. As they currently exist, the combined storage of Reservoir 9, along with Tank 13 and Mariposa 1 which also serve these zones, are not adequate to meet the demands with a storage shortfall of 5.0 MG. At this time, it is recommended that Reservoir 9 be replaced with a 3.0 MG reservoir to provide redundancy to Reservoir 13. As part of the project, additional property will be acquired to expand Well Site #9 for the new reservoir and future new Well 9.

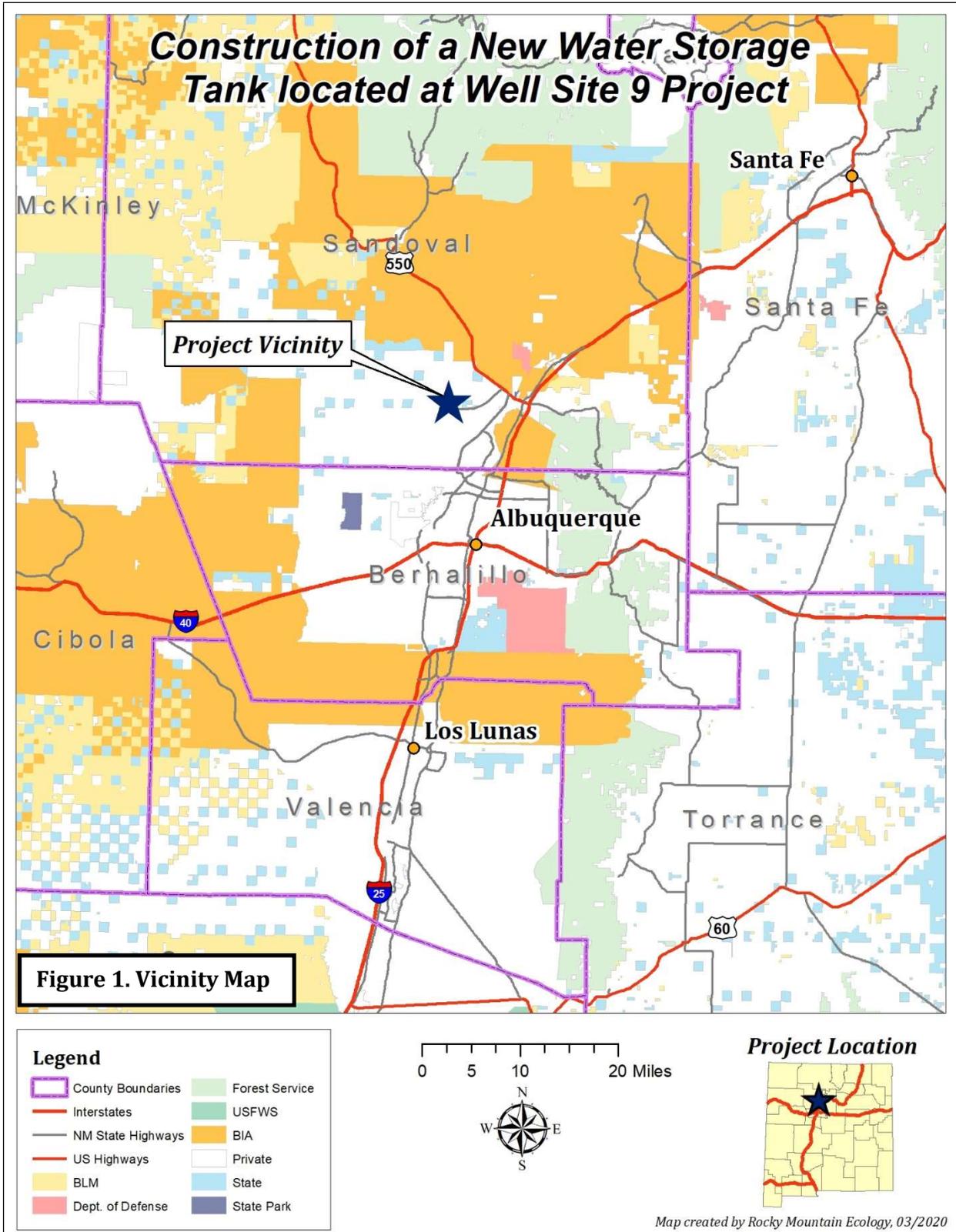
The site was developed in the mid 1980’s. The current facilities are over 30 years old and are deteriorating. Well 9 was never equipped to meet its permit limits, and the well hole is not straight, resulting in maintenance issues. The well has seen a decrease in production due to sanding and is susceptible to power outages. Replacement of Well 9 will require drilling a new within 100 feet of the existing well in order to be considered a replacement well under the existing permit. Siting the new well within this radius would be ideal; however, if it is not feasible to do so, building outside of it is possible with additional Office of the State Engineer (OSE) coordination. The City would like this well to be re-drilled and equipped to fulfill the 2,419 AFY of water permitted for this well. The new well will be drilled in accordance with the hydrogeologist’s recommendations. Furthermore, power availability will be analyzed and extended as necessary to mitigate power outages.

Construction (for the new Reservoir only) will begin in October 2020 and end in March 2021. The geohydrology / well re-drilling will occur in the fall of 2020, re-drilling in the spring of 2021 and Well re-equipping in the late fall of 2021 through the summer of 2022. Land ownership includes City of Rio Rancho land within the existing Well Site #9. Adjacent lands will be acquired for site expansion. The proposed construction activities would be conducted with standard equipment including, but not limited to backhoes, excavators, a front-end loader, trenchers, compaction equipment, and water trucks.

The project is represented on the Arroyo de las Calabacillas, NM U.S. Geological Survey (USGS) 7.5-minute quadrangle map. Specifically, the project is located within the West ½ of the Southeast ¼ of Section 25, in Township 13 North, Range 10 East.

As part of the regulatory compliance process, Rocky Mountain Ecology, LLC (RME) was sub-contracted to develop this environmental information document. As part of that analysis, a biological survey and master sensitive species lists (Appendix B), environmental justice background documents (Appendix C), floodplain maps (Appendix D), air quality maps (Appendix E), a stakeholder mailing list (Appendix F), and a cultural resource survey (Appendix G) are included here in.

Huitt-Zollars, Inc. (HZI) has been contracted by the City to develop a *Technical Memorandum* (HZI 2020) that updated the findings and recommendations of the Evaluation document (Appendix H).



Construction of a New Water Storage Tank located at Well Site 9 Project



Figure 2. Aerial Photo

Copyright: © 2013 National Geographic Society, i-cubed, Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend

-  Reservoir 9 Project Area
-  Private
-  State

0 0.0375 0.075 0.15 Miles



Project Location



Map created by Rocky Mountain Ecology, 03/2020

1.2 Purpose and Need

Well Site #9 is located in a critical location for existing and future operations of the City's water distribution system. Reservoir 9 services the City's Pressure Zone 6A. Reservoir 9 is filled by Well 9 which was constructed in 1984. It had an original production rate of approximately 950 gallons per minute. Sand production has deteriorated pumping capacity and requires pump replacement every 2 to 4 years based on communications with the City's O&M personnel. Additionally, the well was never equipped to fulfill either of its permit limits of 2,419 acre-feet per year (AFY), or continuous pumping of 1,500 gpm under permit RD-26259.

Well 9 was drilled to a depth of 1,540 feet. According to records, the well was not drilled plumb and has a dog leg in the alignment which has created maintenance issues at the facility. The well is also susceptible to lightning strikes, causing periodic outages; this, limiting water supply to the City. The limited storage of Reservoir 9 has been inadequate during recent events, and Reservoir 13 is required to supplement supply for the customers in Pressure Zone 6A and below.

Well Site #9 is undersized, deteriorating, and in need of upgrades. Several current factors limit the effectiveness of the facility. A single 10-inch transmission line limits conveyance capacity to developed areas of the City. Over the years, Well Site # 9 has seen decreased production, and the existing 200,000-gallon ground storage tank has recently been inspected and is recommended for replacement. In order to reliably supply existing and future customers, Well Site #9 needs to be redeveloped. The deteriorated condition of Reservoir 9 is cause for concern. Consequently, the City has been observing and testing the water quality at this site. To date, the water supplied from the facility continues to meet Drinking Water Standards.

1.3 Federal, State or Local Permits, Licenses or Other Consultation Requirements

All necessary permits and approvals for the proposed project would be obtained prior to any disturbance activities. To ascertain all permit requirements and approvals, consultation was initiated through letters with all stakeholders and potentially interested parties based on guidance contained within the Drinking Water Revolving Loan Fund State Environmental Review Process (NMED 2009) (See Section 5.1 Agencies Consulted; Appendix F. Mailing List/ Example Letter). Responses to consultation letters are included (Appendix J).

In addition, a public hearing would be held during the summer/ fall of 2020 (Appendix I. Public Hearing Documentation). Comments and mitigation measures would be incorporated into the Proposed Mitigation Measures Section 4.0 - Summary of Proposed Mitigation Measures. No further consultation with these agencies is required.

2.0 ALTERNATIVES INCLUDING THE PROPOSED ACTION

2.1 Alternative A -No Action

The No Action Alternative generally means that the proposed activity would not take place. Under the No Action Alternative, the current land and resource uses would continue to occur in

the project area. No mitigation measures would be required. Under this alternative, Well Site #9 would not be modified or upgraded. As a result, a reliable means for providing drinking water to Zone 6A would not exist, and another, likely more expensive option would need to be developed. Reservoir 9 would continue to be inadequate, and Reservoir 13 would still be required to supplement supply for the customers in Pressure Zone 6A and below.

The No Action Alternative is presented for baseline analysis of resource impacts and will not be discussed further.

2.2 Alternative B – (Proposed Action) Construction of a New Water Storage Tank located at Well Site #9.

Under the Proposed Action, the existing Reservoir 9 tank would be removed, and replaced with a new larger tank. In addition, Well 9 would be re-drilled to increase yield. The City's water distribution system (WDS) model was used to evaluate the hydraulic effectiveness of proposed facilities. The WDS model has spatially allocated demand by billing data for existing conditions as well as demands for future growth models, including ultimate buildout based on existing land Use (Zoning) and platting.

Proposed improvements for the Well Site #9 infrastructure include:

- replacing the existing Reservoir 9 with a new tank sized to provide adequate storage capacity and redundancy, working in conjunction with Reservoir 13;
- re-drilling Well 9 and increasing its yield up to permitted limits; and
- adding additional arsenic treatment capacity to the existing treatment facility, if required.

Funding available for the proposed project includes \$21,443,274.00 in DWSRF money, including a 20% contingency and NM Gross Receipts Tax (NMGRT). The Area of Potential Effects (APE) for the project area is up to 2.92 acres, however much less would likely be disturbed. The new reservoir would be 130 feet in diameter, and extend approximately 32 feet above ground, while the new well would be drilled to approximately 1,500 feet below ground.

Land ownership includes City of Rio Rancho at the existing Well Site #9 site (0.92 acres). The City would acquire four separate lots containing 0.50 acres each, which surround the existing site. The proposed construction activities would be conducted with standard equipment including, but not limited to backhoes, excavators, a front-end loader, trenchers, compaction equipment, and water trucks. All equipment would be removed from the site upon completion of the project.

Details and specifications for the proposed action are included in *Technical Memorandum* (Appendix H).

3.0 AFFECTED ENVIRONMENT/ ENVIRONMENTAL CONSEQUENCES

This section describes the affected environment and potential impacts to the environment from the Alternative D - Proposed Action. Proposed mitigation measures to limit and avoid impacts to specific resources are summarized in Section 4.0.

Alternative B – (Proposed Action) **Construction of a New Water Storage Tank located at Well Site #9.**

Under Alternative B - Proposed Action, construction of a new water storage tank located at Well Site #9 would be implemented as described in Section 2.4. Table 1 below describes the area of potential disturbances associated with Alternative B.

Table 1 - Summary of Disturbances

Action	Acreage of Disturbance	Duration of Disturbance
Construction of a new water storage tank located at Well Site #9, and associated infrastructure	2.92	Short-term and long-term

Up to 2.92 acres of land could be disturbed by the Proposed Action, though it is likely to be less. Short-term impacts from surface disturbance are those, which could be stabilized or mitigated rapidly (within five years). Long-term impacts are those that would substantially remain for more than five years.

3.1 Environmental Setting

The project occurs within the Albuquerque Basin sub-region of the Arizona/ New Mexico Plateau Ecoregion (Griffith et al. 2006; Bailey 1988, 1995, 1998) and is located within the Rio Grande – Albuquerque sub-basin of the Rio Grande Watershed (NM Water Resources Research Institute 2009). The basin is filled with thick sediments of mostly Quaternary and some Tertiary age, with a few areas of volcanic rocks and lava-capped mesas. The Santa Fe Group aquifer is the drinking water source for Albuquerque and most of the Middle Rio Grande Valley. The Albuquerque Basin sub-region contains a largely thermic soil temperature regime, with a mix of sand scrub and desert grassland vegetation. Annual flooding of terraces and benches has been eliminated. The general topography within the greater project area slopes gradually to the east towards the Rio Grande Valley. The elevation of the project area is approximately 6,050 ft above sea level on an southeastern aspect with a slope of 2 percent. The warmest average daily maximum temperature in Rio Rancho, NM occurs in June and July at 90.0 degrees Fahrenheit (°F), while the coldest average daily minimum temperature of 26.0 °F occurs in January. Annual precipitation averages 9.47 inches (in) in Rio Rancho, NM (WRCC 2020). The population of Rio Rancho between 2000 and 2010 increased by 69 percent, which in 2010, totaled 87,521 people.

3.1.1 Impacts

No impacts to the environmental setting would be incurred.

3.2 Land Use

3.2.1 General Land Use

Well Site #9 is located on City land. The adjacent lots that are planned to be acquired are privately owned and undeveloped. The entirety of the general area, including the project area is unzoned. The general area surrounding the project area is defined by expansive, undeveloped sandscrub with various dirt roads. Well Site #9 is the only existing infrastructure in the general area.

3.2.1.1 Impacts

Up to 2.92 acres could be directly disturbed from the Proposed Action. The existing Well Site #9 is 0.92 acres and has already experienced permanent impacts. 1.5 acres will be acquired from AMREP Southwest, Inc., and the remaining ½ acre would be acquired from a private landowner. The City is in the process of acquiring the land for the Well Site #9 project. Given the rural nature of the project area, no impacts to the general land use would be incurred.

3.2.2 Growth and Population Trends

At the time of the last official U.S. census, the City had a population of approximately 87,521 people (U.S. Census Bureau 2010). Between 2000 and 2010, the City experienced a 69 percent increase in population. According to the U.S. Census Bureau, the City's 2018 population was 98,023, a 90 percent growth from 2000 (U.S. Census Bureau 2020). The population within a 4.0-mile radius of the project area is approximately 9,608 people with 56 percent of that, minority (Appendix C). The population within a 0.5 mile radius is approximately 4 people with 48 percent of that, minority based on the EJView website, found at: <https://ejscreen.epa.gov/mapper/>

3.2.2.1 Impacts

The project greatly enhances the City's ability to provide a reliable source of drinking water to a portion of the City. The upgrades would better accommodate future growth in the project area, and have been developed for this purpose. However, it is not anticipated that the Proposed Action alone would result in increased growth above and beyond the current rate.

3.2.3 Important Farmland

A consultation letter was sent to the NRCS during March 2020 to determine if soils within the project area are classified as prime farmlands, prime rangelands, or prime forestlands, and if the Proposed Action would result in the conversion of those soils to non-agricultural uses. Further, the NRCS website was also evaluated to obtain information on prime soils (NRCS 2020).

3.2.3.1 Impacts

The NRCS concurred with the initial determination of no impact, in their correspondence from March 2020 (Appendix J. Consultation Responses). Moreover, the NRCS web soil survey website (NRCS 2020) also indicated that the site does not occur within prime or unique farmlands. No impacts to prime or unique farmlands would be incurred from the Proposed Action.

3.2.4 Soils

Soils within the project area primarily consist of Clovis fine sandy loam, 1 to 4 percent slopes. These are well-drained soils and occur within the Loamy (R035XA112NM) Ecological Site (NRCS 2020). They are found on plains, fan remnants and mesas with a parent material of eolian deposits over slope alluvium derived from sandstone and shale. These soils have no frequency of ponding or flooding. Less than 7 percent of the project area occurs on Zia-Clovis association, 2 to 10 percent slopes soils. These are well-drained soils and occur within the Sandy (R035XA113NM) Ecological Site (NRCS 2020). They are found on plateaus and fan remnants with a parent material of eolian deposits over fan alluvium derived from sandstone and shale. These soils have no frequency of ponding or flooding.

3.2.4.1 Impacts

Though the total disturbance area of the project is up to 2.92 acres, 0.92 acres of that makes up the existing Well Site #9 and has been previously impacted. Actual new impacts could occur on up to 2.0 acres; however it would likely be less than that. Direct impacts could include soil compaction, wind erosion, soil erosion, and loss of topsoil.

3.2.5 Formally Classified Lands

No formally classified land exists within the project boundaries. A consultation letter was sent to the NPS during March 2020 to inquire about National Landmarks or Wilderness Areas within the project area. No city, county, state or federally designated special management areas exist within the project area, based on correspondence with the NPS and evaluation of numerous land status maps.

3.2.5.1 Impacts

Correspondence from the NPS was received during April 2020, with a “no comment” response (Appendix J. Consultation Responses). No impacts to formally classified lands would occur from the Proposed Action.

3.3 Floodplains

Letters were mailed to the FEMA and the Floodplain Administrator for the City and Sandoval County during March 2020 to determine if the project was within a critical floodplain

management zone. The project area is currently mapped in Zone X on Flood Insurance Rate Map (FIRM) Number #35043C1875D, Effective Date 3/18/08 (Appendix D). This zone includes “areas of 0.2% annual chance floods; areas of 1% annual chance floods with average depths of less than 1 ft or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance floods” (FEMA 2008).

The majority of annual precipitation occurs between July and September, and potential for flash-flood events within the project boundaries would be highest at that time.

3.3.1 Impacts

Correspondence was received from the Floodplain Administrator of both the City and Sandoval County, who both indicated the project was outside any Special Flood Hazard Area (Appendix J. Consultation Responses). Therefore, no impacts to floodplains would be incurred from the Proposed Action.

3.4 Wetlands

The site was evaluated for the presence of some wetland indicators on March of 2020 (i.e., hydrophytic vegetation or wetland hydrology) by Rocky Mountain Ecology LLC (RME). It was determined that no wetlands occur in or near the project area.

3.4.1 Impacts

Based on RME’s field survey findings, no wetlands occur within the project area. Therefore, no impacts to wetlands are anticipated.

3.5 Water Resources

3.5.1 Surface Water

A consultation letter was mailed to the New Mexico Environment Department SWQB during March 2020, requesting input regarding impacts to surface water within the project area. In addition, a letter was mailed to the USACE during March 2020 to ascertain if their jurisdiction applies to this project. The watershed and hydrology in the area are affected by land and water use practices. The degree to which hydrologic processes are affected by land and water use depends on the location, extent, timing, and the type of activity. Factors that currently cause short-lived alterations to the hydrologic regime in the area are limited to the existing Well Site #9 itself, which has an outflow structure that discharges occasional water as part of the water pumping process. In addition, the existing site contains little vegetation, which likely promotes sheetflow during heavy precipitation events.

Runoff from the project area flows to the southeast as overland sheetflow which then percolates into the ground. During heavy precipitation events, that runoff could reach an adjacent unnamed ephemeral arroyo that occurs approximately ¼ mile to the southeast of the project area. That arroyo eventually converges with the Arroyo de las Callabacillas after approximately 3.3 river miles. The Arroyo de las Callabacillas empties into the Rio Grande

River, a Traditional Navigable Water (TNW). Therefore, the Arroyo de las Calabacillas and its small tributaries may be considered jurisdictional Waters of the U.S. (WOUS) by the U.S. Army Corps of Engineers (USACE). However, given that the project area is over 14 river miles from the Rio Grande River, it is highly unlikely that any water originating in the project area reaches the Rio Grande River.

3.5.1.1 Impacts

Surface water characteristics may be slightly impacted due to actions associated with the Proposed Action; however these impacts would be insignificant given the relatively small footprint of the project area when compared to the expansive, rural nature of the greater area. Correspondence from the SWQB was received during April 2020, who concurred with the initial determination that the Proposed Action would not result in impacts to surface water quality (Appendix J. Consultation Responses). A response from the USACE was received during April 2020 indicating that the project does not fall under their jurisdiction since it would not result in discharge of dredge or fill material into Waters of the U.S. (Appendix J. Consultation Responses).

3.5.2 Ground Water

A consultation letter was mailed to the New Mexico Environment Department GWQB during March 2020, requesting input regarding impacts to ground water within the project area. Moreover, a letter was mailed to the OSE during March 2020 regarding any water rights issues. Ground water within the area is affected by geology and precipitation. Factors that can affect groundwater resources in the area are primarily limited to groundwater pumping by the existing Well 9.

3.5.2.1 Impacts

Correspondence was received from the GWQB and OSE during April 2020 (Appendix J. Consultation Responses). The OSE had no comments on the Proposed Action. The GWQB indicated that a Notice of Intent (NOI) need be filed from the City to the GWQB, and discharge permit may be required. Ground water will be encountered during the installation of the new well. Potential contaminant releases from heavy equipment malfunctions, such as fuel or hydraulic fluid leaks, could have adverse impacts to ground water. However, ground water quality is not expected to be directly impacted from the Proposed Action. Ultimately, the GWQB advises that all parties involved in the project to be aware of notification requirements for accidental discharges as specified at 20.6.2.1203 NMAC.

3.5.3 Ground Water

A consultation letter was mailed to the New Mexico Environment Department DWQB during March 2020, requesting input regarding impacts to drinking water within the project area. Factors that can affect drinking water resources in the area are primarily limited to groundwater pumping by the existing Well 9.

3.5.3.1 Impacts

Correspondence was received from the DWQB during April 2020 (Appendix J. Consultation Responses). All mitigation measures described within the responses have been included in Section 4.0, and are described below.

“This project as described will require approval from the New Mexico Environment Department Drinking Water Bureau. The water system, if it has not already done so, should submit an Application for Construction or Modification of Public Water Supply System (20.7.10.200 NMAC). Note the additional requirements for projects involving a source. Please review the complete application requirements at https://www.env.nm.gov/drinking_water/water-system-projects/”.

3.6 Coastal Resources

Coastal resources are not present within or near the project area.

3.6.1 Impacts

No impacts to coastal resources would occur from the Proposed Action. No mitigation measures are proposed.

3.7 Air Quality

A consultation letter was mailed to the NM Environment Department AQB during March 2020, requesting input regarding impacts to air quality within the project area. Air quality within the area is affected by wind events and precipitation.

This area of Sandoval County is not within a non-attainment area for the particulate matter (PM10) 24-hour National Ambient Air Quality Standard (Appendix E).

3.7.1 Impacts and Potential Mitigation

Correspondence was received from the AQB during April 2020 (Appendix J. Consultation Responses). All mitigation measures described within the responses have been included in Section 4.0, and are described below.

“All reasonable measures should be employed to reduce emissions of nitrogen oxides and volatile organic compounds associated with this project to avoid adverse impacts to air quality. Potential exists for temporary increases in dust and emissions associated with earthmoving, construction equipment, and other vehicles. Areas disturbed by the construction activities, within and adjacent to the project area should be reclaimed to avoid long-term problems with erosion and fugitive dust. Any applicable local or county regulations requiring noise and/or dust control must be followed. All asphalt, concrete, quarrying, crushing, and screening facilities contracted in conjunction with the proposed project must have current and proper air quality permits. Generators, light towers, and other equipment powered by diesel, gasoline, or natural gas engines may require registration or an air quality permit if the emissions of any

criteria air pollutant will exceed 10 pounds per hour and 10 tons per year. If the proposed project includes this type of equipment, please contact the NMED Air Quality Bureau Permitting Section to determine if a permit is required. For more information on air quality permitting and modeling requirements, please refer to 20.2.72 NMAC.” (Appendix J. Consultation Responses).

3.8 Biological Resources

3.8.1 Vegetation and Noxious Weeds

A general biological survey of the project area was conducted by RME on March 5th of 2020. The project area is located within a zone that harbors plant species indicative of the Plains-Mesa Sand Scrub vegetation type (Dick-Peddie 1993). Dominant species throughout the project area include tree cholla (*Cylindropuntia imbricata*), four-wing saltbush (*Atriplex canescens*), broom snakeweed (*Gutierrezia sarothrae*), alkali sacaton (*Sporobolus airoides*) and prickly pear (*Opuntia polyacantha*). Other species noted during the survey include one-seed juniper (*Juniperus monosperma*), Russian thistle (*Kali tragus*), Torreys wolfberry (*Lycium torreyi*), thinleaf yucca (*Yucca angustissima*) and desert joint fir (*Ephedra trifurca*).

The portion of the project area harboring the existing Well Site #9 has been disturbed and most of the native vegetative community is absent, resulting in a primary vegetative component of Russian thistle.

No noxious weeds, as defined by the New Mexico Department of Agriculture (NMDA 2016) occur within the project area.

3.8.1.1 Impacts

No impacts to vegetation are anticipated on the 0.92 acres that harbors the existing Well Site #9. The remaining 2.0 acres will experience direct impacts that could remove the native vegetation that is currently present. Impacts could be permanent in areas. Areas that are only used for a short period of time such as staging areas, would experience temporary impacts where vegetation would eventually re-establish. Re-establishment of grasses, forbs and shrubs could take several years after reclamation. An indirect impact of removing the vegetative cover is the increased potential for colonization of the sites by aggressive, non-native species.

The construction site would be accessed utilizing existing roads, and no new roads would be created. To accelerate the reestablishment of native vegetation immediately after construction is complete, areas that are not for parking or vehicle mobility would be reseeded with a native seed mix. This mitigation measure has been incorporated into Section 4.0.

3.8.2 Wildlife

A consultation letter was mailed to the NMDGF during March 2020. A general biological survey of the project area was conducted by RME on 5 March 2020. Moreover, the USFWS Information, Planning and Conservation (IPAC) website (<http://ecos.fws.gov/ipac/wizard/trustResourceList>) was queried and a consultation response was requested for potential impacts to federally listed species. The project area contains the

existing Well Site #9 which may deter wildlife from the area, as very little wildlife sign was noted during the biological survey. Wildlife that may use the general project area include various small mammals, diverse avifauna, reptiles, amphibians, and big game species (Brown and Lowe 1980). Wildlife typical of the general area include coyotes (*Canis latrans*), desert cottontails (*Sylvilagus audubonii*), kangaroo rats (*Dipodomys* spp.), mule deer (*Odocoileus hemionus*), common ravens (*Corvus corax*), turkey vultures (*Cathartes aura*), swallows (*Hirundo* spp.), mourning doves (*Zenaida macroura*), western kingbirds (*Tyrannus verticalis*), red-tailed hawks (*Buteo jamaicensis*), bull snakes (*Pituophis catenifer sayi*), and whiptail lizards (*Cnemidophorus* spp.).

During the field survey, some jackrabbit scat was observed, in addition to multiple wood rat burrows. The following bird species were observed around the existing Well Site #9 facility: multiple house sparrows, few Western bluebirds, a mourning dove and a curve-billed thrasher. In addition, one inactive bird nest was observed within a tree cholla in the west-central portion of the project area, approximately 150 ft west of the western perimeter fence of the existing Well Site #9 facility.

Migratory Birds: Migratory birds and occupied nests are protected by the federal Migratory Bird Treaty Act of 1918. Removal of active nests would require a permit from the USFWS. Common migratory birds, which may use the area as habitat, include various species of songbirds, owls, ravens, hawks, finches, doves, thrashers, and meadowlarks.

3.8.2.1 Impacts

A letter response from the NMDGF was received during April 2020 which indicated the agency does not anticipate significant impacts to wildlife or sensitive habitats (Appendix J. Consultation Responses). However, NMDGF recommends that a burrowing owl survey take place between April and September, prior to any ground disturbing activities. A letter response from the USFWS was generated from their website during March 2020. All mitigation measures from the USFWS have been incorporated into Section 4.0. Impacts to wildlife, including migratory birds are expected to be very minimal (if any) because the availability of suitable habitat that occurs adjacent to the project area, which is expansive. Impacts are expected to primarily be in the form of temporary disturbance due to noise and presence from project personnel. Any wildlife occurring in or near the project area during construction would be expected to shift their patterns to adjacent habitats.

The Proposed Action could have the following direct and indirect impacts to wildlife in the project area. Minimal loss of wildlife habitat could occur through destruction of mammal, reptile, and amphibian burrows during site preparation grading activities. Direct mortality of ground dwelling mammals, reptiles, and amphibians would likely be minimal. Impacts to large mammals would primarily be in the form of individual displacement; however, no sign of large mammals was noted during the field survey. Impacts of site development on raptors such as hawks and owls would be limited to displacement of prey species; however, these animals have expansive adjacent habitat from which to forage from. Given the presence of an inactive bird nest documented during the field survey, it is recommended that a migratory bird survey be conducted prior to construction activities, if construction takes place in the migratory bird nesting season, defined as April 1- August 15. The Proposed Action could result in the

permanent loss of habitat for some species on up to 2 acres. This impact is considered insignificant and discountable given the expansive availability of adjacent and suitable habitat that surrounds the project area.

3.8.3 Threatened or Endangered Species

The USFWS IPAC website was queried and a consultation response was requested for potential impacts to federally listed species. Master species lists are located in Appendix B. A general biological survey of the project area was conducted by RME on 5 March 2020. Under Section 7 of the Endangered Species Act (ESA) of 1973 (as amended), consultation with the USFWS is required on any Proposed Action which may affect federal listed threatened or endangered species or species proposed for listing. An Effects Determination is required for these species, and is presented in Table 2, below. All determinations were “no effect.”

3.8.3.1 Impacts

A letter response from the USFWS was generated from their website during March 2020. No potential habitat exists within the project area based on the biological survey and master species lists (Appendix B) for any federally threatened or endangered species. Results from the biological survey indicate a “no effect” determination for federally listed species. This project is expected to have no adverse effects on threatened or endangered species based on the species habitat analysis by RME, and therefore no further consultation with USFWS is required.

Table 2 – Federal Proposed Threatened & Endangered Species and Candidate Species Determinations

Species Category	Common Name	Scientific Name	Habitat	Rationale for Elimination for Further Consideration	Status	Determination
BIRD	Southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	Riparian areas with multiple canopy tree structure.	No riparian habitat occurs within the project area.	USFWS Endangered	No effect
BIRD	Mexican spotted owl	<i>Strix occidentalis lucida</i>	Old-growth, uneven-aged ponderosa pine or mixed coniferous forests.	The forest types and structure are absent from the project area.	USFWS Threatened	No effect
BIRD	Yellow-billed cuckoo	<i>Coccyzus americanus</i>	Western cuckoos breed in large blocks of riparian habitats, particularly woodlands with cottonwoods (<i>Populus fremontii</i>) and willows (<i>Salix</i> sp.). Dense understory foliage appears to be an important factor in nest site selection.	The project area lacks riparian habitats with dense understory foliage.	USFWS Threatened	No effect
MAMMAL	New Mexican meadow jumping mouse	<i>Zapus hudsonius luteus</i>	Riparian areas with a dense grass component.	No riparian areas exist within or adjacent to the project area.	USFWS Endangered	No effect
AMPHIBIAN	Jemez mountain salamander	<i>Plethodon neomexicanus</i>	The species is known from various localities in the Jemez Mts. in Sandoval, Los Alamos, and Rio Arriba counties. Specifically, it is found in mixed conifer and	No mixed conifer forests occur within or near the project area.	USFWS Endangered	No effect

			spruce-fir forests above 7,200 feet in specific microhabitat conditions. Preferred microhabitat is generally characterized by relatively high humidity and soils with specific rock structure, although populations have been found outside these parameters (BISON-M 2020).			
FISH	Rio Grande silvery minnow	<i>Hybognathus amarus</i>	Rio Grande and associated tributaries.	No riverine habitats occur in the project area.	USFWS Endangered	No effect

3.9 Archeological, Cultural, and Historic Resources

A consultation letter was mailed to the SHPO during March 2020. In addition, consultation letters were mailed to all tribes that could have affiliations with the project area. As part of the Section 106 consultation process, the project area was surveyed by Okun Consulting Solutions (OCS) during March 2020. During the course of the Class III surveys, no cultural resource sites or isolated occurrences were encountered.

3.9.1 Impacts

A letter of concurrence from the SHPO was received during April 2020, which indicated that no further investigations or mitigation measures are necessary, and that the project would have no effect on cultural resources or historic properties (Appendix J. Consultation Responses). No impacts to cultural or historic resources are expected as no cultural resources were located during the survey (Appendix G. Cultural Resource Report).

3.10 Socio-economic/ Environmental Justice

3.10.1 Socioeconomic Issues

Impacts to minority and low-income communities are given special consideration under Executive Order 12898, Environmental Justice (EJ), and Title VI of the Civil Rights Act. These seek to avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects on minority populations and low-income populations, and ensure the full and fair participation by all potentially affected communities in the decision-making process.

At the time of the last official U.S. census, the City had a population of approximately 87,521 people (U.S. Census Bureau 2010). Between 2000 and 2010, the City experienced a 69 percent increase in population. According to the U.S. Census Bureau, the City's 2018 population was 98,023, a 90 percent growth from 2000 (U.S. Census Bureau 2020).

The social demographics of Rio Rancho include a population in which 9% of the residents live below the federal poverty level, in comparison to 19% across New Mexico. Home ownership in Rio Rancho is 77% versus 69% across New Mexico (Appendix C). The infant mortality rate per The above information can be verified using the USEPA Environmental Justice Screening and Mapping Tool found at: <https://ejscreen.epa.gov/mapper/>.

A public hearing would be held during the summer/fall of 2020 to solicit input regarding the project. All comments would be analyzed and the project would be adjusted, if warranted, to accommodate any concerns.

3.10.1.1 Impacts

Improvements under the Proposed Action would not affect socioeconomic conditions. Improvements to a reliable source of drinking water would benefit homes and businesses that are within the Zone that is served by Well Site #9. The improved Well Site #9 would provide

increased capacity, which would both improve existing drinking water management, but also enable future expansion. However, the Proposed Action alone would not result future growth. No residents or businesses would be relocated as a result of the Proposed Action.

3.10.2 Environmental Justice

Impacts to minority and low-income communities are given special consideration under Executive Order 12898, Environmental Justice (EJ), and Title VI of the Civil Rights Act. These seek to avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects on minority populations and low-income populations, and ensure the full and fair participation by all potentially affected communities in the decision-making process.

A review of the project, focusing specifically on environmental justice issues within proximity of the project, was conducted (Appendix C). The web tool used for this analysis was EJView, found at: <http://epamap14.epa.gov/ejmap/entry.html>.

Approximately 51% of the population within the 5.0 mile radius of the project is a minority (Appendix C), with most of that Hispanic in origin. The project area is predominately White in ethnicity. The primary beneficiaries of the proposed improvements would be predominantly Hispanic and White residents that live and work in the area.

A public hearing would be held during the summer/ fall of 2020 to solicit input regarding the project. All comments would be analyzed and the project would be adjusted, if warranted, to accommodate any concerns.

3.10.2.1 Impacts

The area of this proposed project contains a lower percentage of minorities than the State, and thus, the outcome would not result in negative environmental justice issues. The project would not disproportionately affect minority or low income populations. It would result in positive impacts to both Hispanic and White families and businesses in the area, through an improved source of drinking water.

3.11 Other Resources

3.11.1 Public Health and Safety

The primary stakeholders involved in this project are homeowners and businesses in the area that are hooked into the local drinking water system. Safety at the existing Well Site #9 is not a concern due to the remote nature of the site and the existing perimeter fence around that facility that prevents illegal trespass.

3.11.1.1 Impacts

The Proposed Action would have negligible safety impacts; while there would be additional infrastructure than currently exists, it would be properly fenced to prevent unauthorized entry.

Further, the remote nature of the project area does not lend itself to the typical safety issues that urban sites experience. No traffic control plan or detour routes would be necessary.

3.11.2 Energy

Energy consumption would not be significantly impacted from the Proposed Action.

3.11.2.1 Impacts

No impacts on energy consumption would be incurred.

3.11.3 Transportation

A consultation letter was mailed to the NMDOT during March 2020. Construction under the Proposed Action would have no impact on any transportation elements as the project area is located in a remote part of Sandoval County. The primary drivers that use roads in the area include ranchers and recreationists, albeit all surrounding land is privately owned.

3.11.3.1 Impacts

A response from the NMDOT was received during April 2020 (Appendix J). No impacts to transportation are anticipated, and the NMDOT responded to the consultation letter with “no comment”. No detours or traffic plan would be necessary given the remote nature of the project area.

3.11.4 Visual Quality

The project is located in a remote and relatively flat area west of City limits. The area is low-use with no businesses, houses, or major intersections nearby. Therefore, the skyline at the existing Well Site#9 is the well site itself. The replacement reservoir would be larger than the existing reservoir, which is visible to anyone that may be in the general area.

3.11.4.1 Impacts

Visual impacts beyond what is currently being experienced at the existing Well Site #9 would be insignificant and discountable, given that the site is already in place, and the replacement reservoir would only be slightly larger, visually, than the existing reservoir. Short-term impacts to the project area would occur during the construction period due to the presence of construction equipment. However, these would be months in duration only. Construction activities would be visible only from incidental people passing by. At the conclusion of construction, a slightly larger facility would result, in addition to more numerous infrastructure and increased perimeter fencing. However, given the expansive nature of the project area, coupled with the very low use of the area, impacts would not measurably increase from current levels.

3.11.5 Noise

The project site is located within a low-noise area, with very little to no vehicular traffic, the predominant noise. The anticipated work force for the Proposed Action would range from 10-20 equipment operators and laborers, plus one supervisor throughout the duration of the project. The proposed construction activities would involve standard construction equipment including, but not limited to backhoes, excavators, a front end loader, compaction equipment, and a water truck.

3.11.5.1 Impacts and Potential Mitigation

During construction, an increase in noise would constitute weak and temporary impacts; following construction, the site would have no noise impacts. No long-term noise impacts would be incurred by the Proposed Action.

3.11.6 Solid Waste

A consultation letter was mailed to the NM Environment Department SWB during March 2020, requesting input regarding solid waste concerns within the project area.

3.11.6.1 Impacts and Potential Mitigation

Correspondence was received from the SWB during April 2020 (Appendix J. Consultation Responses). All mitigation measures described within the responses have been included in Section 4.0, and are described below.

“The Solid Waste Bureau (“SWB”) advises that the demolition and construction work indicated in this project may result in the knowing or inadvertent generation of regulated asbestos waste. Necessary tank demolition, trenching or excavation has the potential to impact asbestos-containing materials, such as asbestos-cement pipes (water or conduit). Suspect asbestos-containing materials, including any pipes, fragments or soils contaminated with related fragments or fines, must be sampled and analyzed by Polarized Light Microscopy to determine if the materials contain greater than one percent (1%) asbestos. If so, such materials require management as regulated asbestos waste per the New Mexico Solid Waste Rules (“SWR”), 20.9.2 – 20.9.10 NMAC, to include proper containerization, labeling, manifesting, transport by an approved commercial hauler and disposal at a permitted solid waste facility specifically permitted to accept regulated asbestos waste.

Additionally, trenching and excavation also has the potential to identify areas of known or unknown buried solid waste. If more than 120 cubic yards of solid waste from any one contiguous area requires excavation, the SWB may require submission of a Waste Excavation Plan pursuant to the SWR, 20.9.2.10.A(15) NMAC.

Solid Waste Rules are available at <http://www.srca.nm.gov/chapter-9-solid-waste/>.”

3.12 Cumulative Impacts

The cumulative impact as defined by the Council on Environmental Quality (40 CFR 1508.7) is the impact on the environment, which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. No significant, adverse cumulative impacts are expected from the Proposed Action.

The primary cumulative impacts from the Proposed Action, when considered with past and future impacts of other local actions (including existing drinking water infrastructure developments), are improved drinking water management and improved public health and safety in the long-term. Specifically, these include the following positive cumulative impacts: (1) an upgrade to the Well Site #9 capacity to serve the existing development in Zones 6A and 6B; and (2) an increase in storage capacity at Well Site #9 to accommodate a 3.0 MG reservoir, and increase pumping to fulfill the 2,419 AFY of water permitted for this well.

The proposed improvements greatly enhance the City's ability to manage its drinking water resources, and would better accommodate future growth in the project area. The project area is already partially in place; therefore cumulative impacts to biological resources are minimal. No cultural resource cumulative impacts are anticipated given the lack of any cultural resources at the site. The mitigation measures described below would ensure minimal cumulative impacts over time.

4.0 SUMMARY OF PROPOSED MITIGATION MEASURES

The mitigation measures described below would minimize resource impacts from the Proposed Action. Only those resources for which mitigation measures were described in Section 3.0 are discussed within this section.

4.1 Physical Resource Mitigation Measures

1. All exposed trenches or holes would be fenced and secured to prevent access by unauthorized people. All trenches would be filled in and leveled to the pre-construction grade.
2. Erosion control structures would be installed where appropriate to prevent sedimentation.
3. An NPDES General Construction Permit would be obtained which would outline plans that prevent sediment from washing beyond the project boundaries and reduce erosion overall during the construction period.
4. In addition, the GCP requires a Storm Water Pollution Prevention Plan (SWPPP) to be prepared for the project area.

5. The Ground Water Quality Bureau, “advises all parties involved in the project to be aware of notification requirements for accidental discharges contained in 20.6.2.1203 NMAC.”
6. The Solid Waste Bureau advises that any suspect asbestos-containing materials, including any pipes, fragments or soils contaminated with related fragments or fines, must be sampled and analyzed by Polarized Light Microscopy to determine if the materials contain greater than one percent (1%) asbestos. If so, such materials require management as regulated asbestos waste per the New Mexico Solid Waste Rules (“SWR”), 20.9.2 – 20.9.10 NMAC, to include proper containerization, labeling, manifesting, transport by an approved commercial hauler and disposal at a permitted solid waste facility specifically permitted to accept regulated asbestos waste.

Additionally, if more than 120 cubic yards of solid waste from any one contiguous area requires excavation, the SWB may require submission of a Waste Excavation Plan pursuant to the SWR, 20.9.2.10.A(15) NMAC.

7. Soil disturbance would be minimized and native vegetation and topsoil would be retained where possible.
8. Dust control measures would be taken to minimize the release of particulates due to vehicular traffic and construction.
9. All appropriate air quality permits required according to 20.2.72 NMAC, would be obtained prior to construction.

4.2 Biological Resource Mitigation Measures

1. The construction sites would be accessed utilizing existing roads, and no new roads would be created. This would minimize the introduction and spread of potential noxious weeds during construction activities.
2. To accelerate the reestablishment of vegetation immediately after construction is complete, the area would be reseeded with a seed mix approved by the City.
3. A burrowing owl survey will take place between April and September, prior to any ground disturbing activities. Should any burrowing owls be documented within the project area, RME will contact the NMDGF or the USFWS for further recommendations regarding nest site mitigation measures or owl relocation techniques in order to avoid impacts that could result in take.
4. If construction takes place in the migratory bird nesting season, defined as April 1-August 15, it is recommended that a migratory bird survey be conducted prior to construction activities.

4.3 Threatened, Endangered or Special Status Species Mitigation Measures

1. No threatened, endangered or special status species are known within or near the project corridor. The project area is partially developed and wildlife habitat is of poor quality. Therefore, no mitigation measures are proposed.

4.4 Archaeological, Cultural, and Historic Resource Mitigation Measures

1. No cultural resources or historic structures are located within the project area. No mitigation measures are proposed.

4.5 Socioeconomic/ Environmental Justice Mitigation Measures

1. Citizen input from a public hearing during summer/fall 2020 would be incorporated, where appropriate, into this EID.

4.6 Environmentally Sensitive Area Mitigation Measures

1. No environmentally sensitive areas are located within the project area; therefore no mitigation measures are proposed.

4.7 Other Resources

1. The contractor could place signage if necessary to inform incidental area traffic of the construction activities.

4.8 Cumulative Impact Mitigation Measures

1. The cumulative impacts from the Proposed Action would be positive. Therefore, no mitigation measures for cumulative impacts are necessary.

5.0 CONSULTATION, COORDINATION, AND PUBLIC INVOLVEMENT

Consultation was initiated through letters with all stakeholders and potentially interested parties based on guidance contained within the New Mexico DWSRF SERP. A record of the dates that letters were sent, received, and comments submitted is located below (Table 3).

Table 3 – Summary of Tribal and Agency Contacts Made During Preparation of Document
(See Appendix J for Consultation Responses)

Agency/ Party	Contact Method	Date Sent	Response Date/s	Summary of Agency Comments
Pueblo of Cochiti	Letter	March 2020	No comments to date	1) All comments and mitigation measures would be included with the EID and associated mitigation measures.
Pueblo of Jemez	Letter	March 2020	No comments to date	1) All comments and mitigation measures would be included with the EID and associated mitigation measures.
Pueblo of Laguna	Letter	March 2020	No comments to date	1) All comments and mitigation measures would be included with the EID and associated mitigation measures.
Pueblo of San Felipe	Letter	March 2020	No comments to date	1) All comments and mitigation measures would be included with the EID and associated mitigation measures.
Pueblo of Santa Ana	Letter	March 2020	No comments to date	1) All comments and mitigation measures would be included with the EID and associated mitigation measures.
Pueblo of Santo Domingo	Letter	March 2020	No comments to date	1) All comments and mitigation measures would be included with the EID and associated mitigation measures.
Pueblo of Sandia	Letter	March 2020	No comments to date	1) All comments and mitigation measures would be included with the EID and associated mitigation measures.
Pueblo of Zia	Letter	March 2020	No comments to date	1) All comments and mitigation measures would be included with the EID and associated mitigation measures.
Pueblo of San Ildefonso	Letter	March 2020	No comments to date	1) All comments and mitigation measures would be included with the EID and associated mitigation measures.
Pueblo of Santa Clara	Letter	March 2020	No comments to date	1) All comments and mitigation measures would be included with the EID and associated mitigation measures.
Pueblo of Tesuque	Letter	March 2020	No comments to date	1) All comments and mitigation measures would be included with the EID and associated mitigation measures.
Jicarilla Apache Nation	Letter	March 2020	No comments to date	1) All comments and mitigation measures would be included with the EID and associated mitigation measures.
Navajo Nation	Letter	March 2020	4/8/2020	1) No comments
Ramah Navajo Chapter	Letter	March 2020	No comments to date	1) All comments and mitigation measures would be included with the EID and associated mitigation measures.
Pueblo of San Juan	Letter	March 2020	No comments to date	1) All comments and mitigation measures would be included with the EID and associated mitigation measures.
Comanche Indian Tribe	Letter	March 2020	No comments to date	1) All comments and mitigation measures would be included with the EID and associated mitigation measures.

Agency/ Party	Contact Method	Date Sent	Response Date/s	Summary of Agency Comments
Hopi Tribe	Letter	March 2020	No comments to date	1) All comments and mitigation measures would be included with the EID and associated mitigation measures.
Pueblo of Isleta	Letter	March 2020	No comments to date	1) All comments and mitigation measures would be included with the EID and associated mitigation measures.
U.S. Fish and Wildlife Service: Albuquerque Ecological Services Field Office	Website query	March 2020	3/25/2020	1) A list of species for analysis was provided.
EMNRD - NM State Forestry Division	Email	March 2020	4/6/2020	1) No impacts to state-listed plants anticipated.
NMED- Environmental Impact Review Coordinator for comment from the following Bureaus: Surface Water Quality Bureau, Drinking Water Quality Bureau, Ground Water Quality Bureau, Air Quality Bureau, Solid Waste Bureau	Email	March 2020	4/16/2020	1) Comments from the AQB, NMED Constructions Program Bureau, DWQB, GWQB and SWB were provided. All mitigation measures have been incorporated into Section 4.0.
U.S. Department of Agriculture, Natural Resource Conservation Service, NM Office	Email	March 2020	3/27/2020	1) "The proposed project will not cause Prime or Important Farmlands or hydric soils to be converted to non-agricultural or non-hydric uses"
City of Rio Rancho (Local Floodplain Administrator)	Email	March 2020	3/26/2020	1) "For an official designation please contact Sandoval County, contact info below, as this property is located in Sandoval County."
Sandoval County Floodplain Administrator	Email	March 2020	3/27/2020	The above referenced properties are shown on FIRM #35043C1875D, Effective Date 3/18/08 (see attached.) According to that FIRM, all of those properties are located entirely outside of the Special Flood Hazard Area (commonly known as the 100-year Floodplain.)
Federal Emergency Management Agency, Region VI	Letter	March 2020	No comments to date	1) All comments and mitigation measures would be included with the EID and associated mitigation measures.
U.S. EPA, Region VI, Air Planning	Email	March 2020	No comments to date	1) All comments and mitigation measures would be included with the EID and associated mitigation measures.
NM Department of Game & Fish	Email	March 2020	4/23/2020	1) "Burrowing Owl (<i>Athene cunicularia</i>) is one species known to occur within Sandoval County and could occur within the project area. We recommend that a preliminary survey be conducted by qualified biologists during the time period when Burrowing Owls are most likely to occur. This is typically during the breeding season which is from April – September before any ground disturbing activities occur. However, in the southern half of the state and during warmer winters in the more northern parts, some owls may remain on territory year round. For your convenience we have enclosed a copy of our recommended survey protocol for your use. Should

Agency/ Party	Contact Method	Date Sent	Response Date/s	Summary of Agency Comments
				burrowing owls be documented within the project area we recommend that you contact the Department or the U.S. Fish and Wildlife Service (USFWS) for further recommendations regarding nest site mitigation measures or owl relocation techniques in order to avoid impacts that could result in take.”
National Park Service – Intermountain Region	Email	March 2020	4/1/2020	1) “The NPS has reviewed the project and has no comments at this time.”
U.S. Army Corps of Engineers, Albuquerque District Regulatory Branch	Email	March 2020	3/30/2020	1) “If there would be no discharge of fill or dredged material into waters of the United States for the construction of this project, a Department of the Army Section 404 permit would not be required. If the project changes to include the placement of fill of dredged material into a waters of the United States, please contact the Corps prior to construction, because this change in the project may trigger the need for a Department of the Army Section 404 permit verification from the Corps.”
U.S. EPA, Region VI, Source Water Protection	Email	March 2020	3/27/2020	1) Based on the information provided, we have concluded that the project does not lie within the boundaries of a designated sole source aquifer and is thus not eligible for review under the SSA program.
NM Department of Transportation	Email	March 2020	3/27/2020	1) No comments.
New Mexico Office of Cultural Affairs, State Historic Preservation Office	Email	March 2020	4/13/2020	1) “There are no historic properties situated in the project area and, thus, this project will have no effect on cultural resources.”
Office of the State Engineer	Email	March 2020	3/30/2020	1) Concurs with initial determination.

All details from agency responses and mitigation measures proposed by the agencies have been incorporated into the Proposed Mitigation Measures subsection described in Section 3.0 and summarized in Section 4.0., Summary of Proposed Mitigation Measures. Responses via phone, letters or emails were received from all cross-cutting agencies.

5.1 Public Involvement

A public hearing was held on XX (See Appendix I for transcripts). A summary of comments is provided in Table 4, below. No comments that resulted in a significant impact were obtained.

5.2 Responsiveness Summary

Table 4 - Summary of Comments from Public Involvement Process

Specific Public Comment	Agency Response	Modifications in Response to Public Comment
How is this being paid for?	Drinking Water State Revolving Loan fund.	No modifications to the EID were necessary.
Cost?	\$21.4 million.	No modifications to the EID were necessary.
What is the purpose of this project?	The existing lift station is 25 years old. The mechanism that the city uses to get flow into it is dilapidated, corroded, nonexistent at this point and doesn't give the city the opportunity or the flexibility to send flow, send controlled flow to plant 1 or to plant 2, so what this is, is an opportunity to come in and upgrade this system, the wet well the pumps are old and they fail, they get struck by lightning all the time and they have issues with systems failures there.	No modifications to the EID were necessary.
When will this be constructed?	Mid-summer.	No modifications to the EID were necessary.

6.0 REFERENCES

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United States Census Bureau. 2010. <http://www.census.gov/>

7.0 APPENDICES

APPENDIX A. PHOTOS

Photo 1. From southeast corner of project area facing northwest



Photo 2. From southern project area facing north.



Photo 3. From southwest portion of project area facing northeast.



Photo 4. From central project area facing east to existing facility.



Photo 5. Facing southeast to property that will be acquired from AMREP.



Photo 6. Outfall feature at eastern perimeter of existing facility.



APPENDIX B. USFWS SPECIES LIST



United States Department of the Interior



FISH AND WILDLIFE SERVICE
New Mexico Ecological Services Field Office
2105 Osuna Road Ne
Albuquerque, NM 87113-1001
Phone: (505) 346-2525 Fax: (505) 346-2542
<http://www.fws.gov/southwest/es/NewMexico/>
http://www.fws.gov/southwest/es/ES_Lists_Main2.html

In Reply Refer To:

March 25, 2020

Consultation Code: 02ENNM00-2020-SLI-0783

Event Code: 02ENNM00-2020-E-01670

Project Name: CoRR Reservoir 9

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

Thank you for your recent request for information on federally listed species and important wildlife habitats that may occur in your project area. The U.S. Fish and Wildlife Service (Service) has responsibility for certain species of New Mexico wildlife under the Endangered Species Act (ESA) of 1973 as amended (16 USC 1531 et seq.), the Migratory Bird Treaty Act (MBTA) as amended (16 USC 701-715), and the Bald and Golden Eagle Protection Act (BGEPA) as amended (16 USC 668-668c). We are providing the following guidance to assist you in determining which federally imperiled species may or may not occur within your project area and to recommend some conservation measures that can be included in your project design.

FEDERALLY-LISTED SPECIES AND DESIGNATED CRITICAL HABITAT

Attached is a list of endangered, threatened, and proposed species that may occur in your project area. Your project area may not necessarily include all or any of these species. Under the ESA, it is the responsibility of the Federal action agency or its designated representative to determine if a proposed action "may affect" endangered, threatened, or proposed species, or designated critical habitat, and if so, to consult with the Service further. Similarly, it is the responsibility of the Federal action agency or project proponent, not the Service, to make "no effect" determinations. If you determine that your proposed action will have "no effect" on threatened or endangered species or their respective critical habitat, you do not need to seek concurrence with the Service. Nevertheless, it is a violation of Federal law to harm or harass any federally-listed threatened or endangered fish or wildlife species without the appropriate permit.

If you determine that your proposed action may affect federally-listed species, consultation with the Service will be necessary. Through the consultation process, we will analyze information contained in a biological assessment that you provide. If your proposed action is associated with Federal funding or permitting, consultation will occur with the Federal agency under section 7(a)(2) of the ESA. Otherwise, an incidental take permit pursuant to section 10(a)(1)(B) of the ESA (also known as a habitat conservation plan) is necessary to harm or harass federally listed threatened or endangered fish or wildlife species. In either case, there is no mechanism for authorizing incidental take "after-the-fact." For more information regarding formal consultation and HCPs, please see the Service's Consultation Handbook and Habitat Conservation Plans at www.fws.gov/endangered/esa-library/index.html#consultations.

The scope of federally listed species compliance not only includes direct effects, but also any interrelated or interdependent project activities (e.g., equipment staging areas, offsite borrow material areas, or utility relocations) and any indirect or cumulative effects that may occur in the action area. The action area includes all areas to be affected, not merely the immediate area involved in the action. Large projects may have effects outside the immediate area to species not listed here that should be addressed. If your action area has suitable habitat for any of the attached species, we recommend that species-specific surveys be conducted during the flowering season for plants and at the appropriate time for wildlife to evaluate any possible project-related impacts.

Candidate Species and Other Sensitive Species

A list of candidate and other sensitive species in your area is also attached. Candidate species and other sensitive species are species that have no legal protection under the ESA, although we recommend that candidate and other sensitive species be included in your surveys and considered for planning purposes. The Service monitors the status of these species. If significant declines occur, these species could potentially be listed. Therefore, actions that may contribute to their decline should be avoided.

Lists of sensitive species including State-listed endangered and threatened species are compiled by New Mexico state agencies. These lists, along with species information, can be found at the following websites:

Biota Information System of New Mexico (BISON-M): www.bison-m.org

New Mexico State Forestry. The New Mexico Endangered Plant Program: www.emnrd.state.nm.us/SFD/ForestMgt/Endangered.html

New Mexico Rare Plant Technical Council, New Mexico Rare Plants: nmrareplants.unm.edu

Natural Heritage New Mexico, online species database: nhnm.unm.edu

WETLANDS AND FLOODPLAINS

Under Executive Orders 11988 and 11990, Federal agencies are required to minimize the destruction, loss, or degradation of wetlands and floodplains, and preserve and enhance their natural and beneficial values. These habitats should be conserved through avoidance, or mitigated to ensure that there would be no net loss of wetlands function and value.

We encourage you to use the National Wetland Inventory (NWI) maps in conjunction with ground-truthing to identify wetlands occurring in your project area. The Service's NWI program website, www.fws.gov/wetlands/Data/Mapper.html integrates digital map data with other resource information. We also recommend you contact the U.S. Army Corps of Engineers for permitting requirements under section 404 of the Clean Water Act if your proposed action could impact floodplains or wetlands.

MIGRATORY BIRDS

The MBTA prohibits the taking of migratory birds, nests, and eggs, except as permitted by the Service's Migratory Bird Office. To minimize the likelihood of adverse impacts to migratory birds, we recommend construction activities occur outside the general bird nesting season from March through August, or that areas proposed for construction during the nesting season be surveyed, and when occupied, avoided until the young have fledged.

We recommend review of Birds of Conservation Concern at website www.fws.gov/migratorybirds/CurrentBirdIssues/Management/BCC.html to fully evaluate the effects to the birds at your site. This list identifies birds that are potentially threatened by disturbance and construction.

BALD AND GOLDEN EAGLES

The bald eagle (*Haliaeetus leucocephalus*) was delisted under the ESA on August 9, 2007. Both the bald eagle and golden eagle (*Aquila chrysaetos*) are still protected under the MBTA and BGEPA. The BGEPA affords both eagles protection in addition to that provided by the MBTA, in particular, by making it unlawful to "disturb" eagles. Under the BGEPA, the Service may issue limited permits to incidentally "take" eagles (e.g., injury, interfering with normal breeding, feeding, or sheltering behavior nest abandonment). For information on bald and golden eagle management guidelines, we recommend you review information provided at www.fws.gov/midwest/eagle/guidelines/bgepa.html.

On our web site www.fws.gov/southwest/es/NewMexico/SBC_intro.cfm, we have included conservation measures that can minimize impacts to federally listed and other sensitive species. These include measures for communication towers, power line safety for raptors, road and highway improvements, spring developments and livestock watering facilities, wastewater facilities, and trenching operations.

We also suggest you contact the New Mexico Department of Game and Fish, and the New Mexico Energy, Minerals, and Natural Resources Department, Forestry Division for information regarding State fish, wildlife, and plants.

Thank you for your concern for endangered and threatened species and New Mexico's wildlife habitats. We appreciate your efforts to identify and avoid impacts to listed and sensitive species in your project area. For further consultation on your proposed activity, please call 505-346-2525 or email nmesfo@fws.gov and reference your Service Consultation Tracking Number.

Attachment(s):

- Official Species List
 - Migratory Birds
-

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New Mexico Ecological Services Field Office

2105 Osuna Road Ne

Albuquerque, NM 87113-1001

(505) 346-2525

Project Summary

Consultation Code: 02ENNM00-2020-SLI-0783

Event Code: 02ENNM00-2020-E-01670

Project Name: CoRR Reservoir 9

Project Type: WATER SUPPLY / DELIVERY

Project Description: The City of Rio Rancho has received funding for the Construction of a New Water Storage Tank located at Well Site 9 Project. We are gathering information for an environmental review of the referenced project. The project is described in the attached project summary sheet and the location is depicted on the attached maps.

Reservoir 9 is filled by Well 9 which was constructed in 1984. Reservoir 9 is located west of City Center, outside City limits, off King Boulevard, in Sandoval County. Over the years, Well 9 has seen decreased production, and the existing 200,000-gallon ground storage tank has recently been inspected and is recommended for replacement. Therefore, it is proposed that 1) the existing Tank 9 be replaced with a new tank sized to provide adequate storage capacity and redundancy, working in conjunction with Tank 13; 2) re-drill Well 9 and increase its yield up to permitted limits; and 3) adding additional arsenic treatment capacity to the existing treatment facility, if required.

The City has contracted with Huitt-Zollars, Inc. (HZI) for design of this system. Rocky Mountain Ecology, LLC (RME) is preparing an environmental information document to comply with the National Environmental Policy Act. RME is gathering information for an environmental review of the proposed project, which requires coordination with stakeholders. Your input on the proposed project is an important element of this review process.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/35.32311892987425N106.7855628751531W>



Counties: Sandoval, NM

Endangered Species Act Species

There is a total of 6 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
New Mexico Meadow Jumping Mouse <i>Zapus hudsonius luteus</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7965	Endangered

Birds

NAME	STATUS
Mexican Spotted Owl <i>Strix occidentalis lucida</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8196	Threatened
Southwestern Willow Flycatcher <i>Empidonax traillii extimus</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6749	Endangered
Yellow-billed Cuckoo <i>Coccyzus americanus</i> Population: Western U.S. DPS There is proposed critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

Amphibians

NAME	STATUS
Jemez Mountains Salamander <i>Plethodon neomexicanus</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/4095	Endangered

Fishes

NAME	STATUS
Rio Grande Silvery Minnow <i>Hybognathus amarus</i> Population: Wherever found, except where listed as an experimental population There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1391	Endangered

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

-
1. The [Migratory Birds Treaty Act](#) of 1918.
 2. The [Bald and Golden Eagle Protection Act](#) of 1940.
 3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bendire's Thrasher <i>Toxostoma bendirei</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9435	Breeds Mar 15 to Jul 31
Brewer's Sparrow <i>Spizella breweri</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9291	Breeds May 15 to Aug 10

Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ “Proper Interpretation and Use of Your Migratory Bird Report” before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

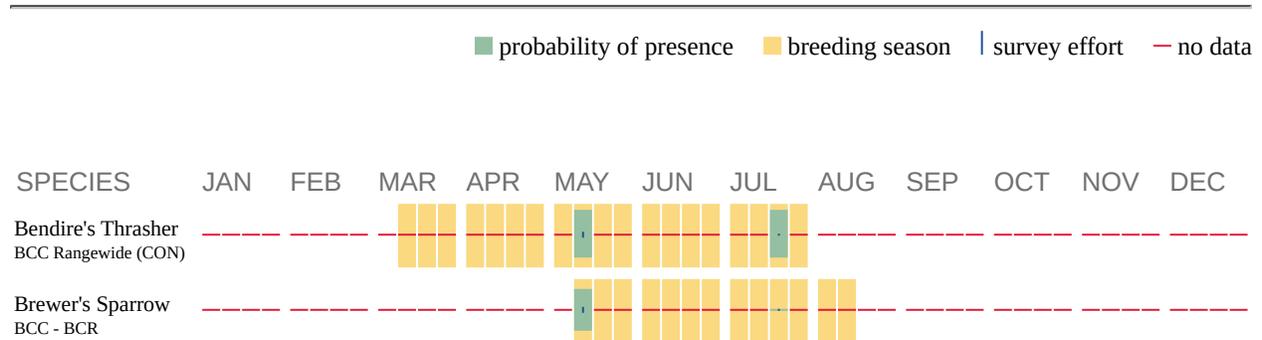
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (-)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

Migratory Birds FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) and/or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
 2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
 3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).
-

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ “What does IPaC use to generate the migratory birds potentially occurring in my specified location”. Please be aware this report provides the “probability of presence” of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the “no data” indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ “Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds” at the bottom of your migratory bird trust resources page.

**APPENDIX C. ENVIRONMENTAL JUSTICE ANALYSIS AND CENSUS
INFORMATION**

Location: User-specified point center at 35.323904, -106.785289

Ring (buffer): 10-miles radius

Description:

Summary of ACS Estimates		2013 - 2017
Population		118,296
Population Density (per sq. mile)		760
Minority Population		62,109
% Minority		53%
Households		40,976
Housing Units		43,835
Housing Units Built Before 1950		145
Per Capita Income		27,230
Land Area (sq. miles) (Source: SF1)		155.67
% Land Area		100%
Water Area (sq. miles) (Source: SF1)		0.10
% Water Area		0%

	2013 - 2017 ACS Estimates	Percent	MOE (±)
Population by Race			
Total	118,296	100%	953
Population Reporting One Race	112,727	95%	2,998
White	94,356	80%	1,020
Black	3,605	3%	500
American Indian	3,245	3%	301
Asian	2,120	2%	370
Pacific Islander	220	0%	120
Some Other Race	9,182	8%	687
Population Reporting Two or More Races	5,569	5%	324
Total Hispanic Population	51,261	43%	826
Total Non-Hispanic Population	67,035		
White Alone	56,188	47%	721
Black Alone	3,155	3%	493
American Indian Alone	2,786	2%	301
Non-Hispanic Asian Alone	1,618	1%	173
Pacific Islander Alone	181	0%	91
Other Race Alone	106	0%	82
Two or More Races Alone	3,003	3%	275
Population by Sex			
Male	57,380	49%	588
Female	60,916	51%	621
Population by Age			
Age 0-4	7,802	7%	304
Age 0-17	32,371	27%	560
Age 18+	85,925	73%	786
Age 65+	14,778	12%	366

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race.

N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS) 2013 - 2017

Location: User-specified point center at 35.323904, -106.785289

Ring (buffer): 10-miles radius

Description:

	2013 - 2017 ACS Estimates	Percent	MOE (±)
Population 25+ by Educational Attainment			
Total	76,674	100%	579
Less than 9th Grade	1,708	2%	119
9th - 12th Grade, No Diploma	3,808	5%	309
High School Graduate	17,947	23%	349
Some College, No Degree	29,374	38%	513
Associate Degree	8,159	11%	230
Bachelor's Degree or more	23,839	31%	380
Population Age 5+ Years by Ability to Speak English			
Total	110,494	100%	854
Speak only English	89,566	81%	728
Non-English at Home ¹⁺²⁺³⁺⁴	20,929	19%	559
¹ Speak English "very well"	17,362	16%	496
² Speak English "well"	2,432	2%	194
³ Speak English "not well"	988	1%	163
⁴ Speak English "not at all"	147	0%	65
³⁺⁴ Speak English "less than well"	1,135	1%	163
²⁺³⁺⁴ Speak English "less than very well"	3,567	3%	195
Linguistically Isolated Households*			
Total	794	100%	89
Speak Spanish	591	74%	82
Speak Other Indo-European Languages	97	12%	37
Speak Asian-Pacific Island Languages	67	8%	42
Speak Other Languages	39	5%	49
Households by Household Income			
Household Income Base	40,976	100%	185
< \$15,000	3,690	9%	168
\$15,000 - \$25,000	3,378	8%	148
\$25,000 - \$50,000	8,513	21%	266
\$50,000 - \$75,000	9,112	22%	265
\$75,000 +	16,283	40%	304
Occupied Housing Units by Tenure			
Total	40,976	100%	185
Owner Occupied	31,664	77%	314
Renter Occupied	9,312	23%	262
Employed Population Age 16+ Years			
Total	89,588	100%	701
In Labor Force	58,127	65%	706
Civilian Unemployed in Labor Force	3,897	4%	400
Not In Labor Force	31,462	35%	472

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of anyrace.

N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS)

*Households in which no one 14 and over speaks English "very well" or speaks English only.

Location: User-specified point center at 35.323904, -106.785289

Ring (buffer): 10-miles radius

Description:

	2013 - 2017 ACS Estimates	Percent	MOE (±)
Population by Language Spoken at Home*			
Total (persons age 5 and above)	110,494	100%	854
English	89,566	81%	842
Spanish	17,895	16%	617
French	140	0%	108
French Creole	N/A	N/A	N/A
Italian	N/A	N/A	N/A
Portuguese	N/A	N/A	N/A
German	357	0%	88
Yiddish	N/A	N/A	N/A
Other West Germanic	N/A	N/A	N/A
Scandinavian	N/A	N/A	N/A
Greek	N/A	N/A	N/A
Russian	N/A	N/A	N/A
Polish	N/A	N/A	N/A
Serbo-Croatian	N/A	N/A	N/A
Other Slavic	N/A	N/A	N/A
Armenian	N/A	N/A	N/A
Persian	N/A	N/A	N/A
Gujarathi	N/A	N/A	N/A
Hindi	N/A	N/A	N/A
Urdu	N/A	N/A	N/A
Other Indic	N/A	N/A	N/A
Other Indo-European	410	0%	118
Chinese	170	0%	145
Japanese	N/A	N/A	N/A
Korean	39	0%	170
Mon-Khmer, Cambodian	N/A	N/A	N/A
Hmong	N/A	N/A	N/A
Thai	N/A	N/A	N/A
Laotian	N/A	N/A	N/A
Vietnamese	102	0%	72
Other Asian	386	0%	86
Tagalog	301	0%	75
Other Pacific Island	N/A	N/A	N/A
Navajo	N/A	N/A	N/A
Other Native American	N/A	N/A	N/A
Hungarian	N/A	N/A	N/A
Arabic	71	0%	49
Hebrew	N/A	N/A	N/A
African	N/A	N/A	N/A
Other and non-specified	959	1%	159
Total Non-English	20,929	19%	1,199

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race.

N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS) 2013 - 2017.

*Population by Language Spoken at Home is available at the census tract summary level and up.

Location: User-specified point center at 35.323904, -106.785289

Ring (buffer): 10-miles radius

Description:

Summary		Census 2010
Population		107,321
Population Density (per sq. mile)		690
Minority Population		52,238
% Minority		49%
Households		38,390
Housing Units		40,869
Land Area (sq. miles)		155.53
% Land Area		100%
Water Area (sq. miles)		0.10
% Water Area		0%

Population by Race	Number	Percent
Total	107,321	-----
Population Reporting One Race	102,035	95%
White	80,553	75%
Black	3,309	3%
American Indian	3,633	3%
Asian	2,064	2%
Pacific Islander	174	0%
Some Other Race	12,301	11%
Population Reporting Two or More Races	5,286	5%
Total Hispanic Population	41,809	39%
Total Non-Hispanic Population	65,512	61%
White Alone	55,083	51%
Black Alone	2,864	3%
American Indian Alone	2,885	3%
Non-Hispanic Asian Alone	1,878	2%
Pacific Islander Alone	139	0%
Other Race Alone	248	0%
Two or More Races Alone	2,417	2%

Population by Sex	Number	Percent
Male	52,175	49%
Female	55,146	51%

Population by Age	Number	Percent
Age 0-4	8,554	8%
Age 0-17	31,492	29%
Age 18+	75,829	71%
Age 65+	10,329	10%

Households by Tenure	Number	Percent
Total	38,390	
Owner Occupied	30,002	78%
Renter Occupied	8,388	22%

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race.

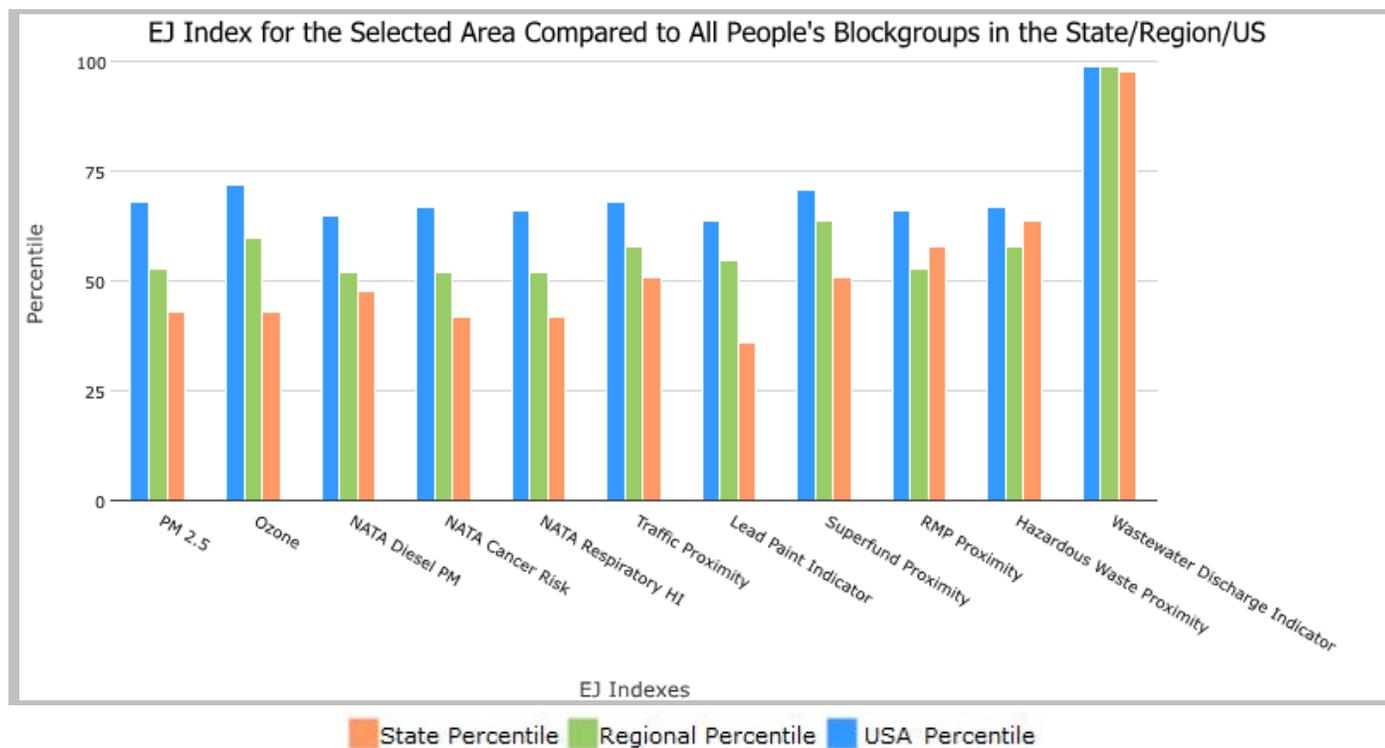
Source: U.S. Census Bureau, Census 2010 Summary File 1.

10 miles Ring Centered at 35.323904,-106.785289, NEW MEXICO, EPA Region 6

Approximate Population: 119,130

Input Area (sq. miles): 314.03

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
EJ Indexes			
EJ Index for PM2.5	43	53	68
EJ Index for Ozone	43	60	72
EJ Index for NATA* Diesel PM	48	52	65
EJ Index for NATA* Air Toxics Cancer Risk	42	52	67
EJ Index for NATA* Respiratory Hazard Index	42	52	66
EJ Index for Traffic Proximity and Volume	51	58	68
EJ Index for Lead Paint Indicator	36	55	64
EJ Index for Superfund Proximity	51	64	71
EJ Index for RMP Proximity	58	53	66
EJ Index for Hazardous Waste Proximity	64	58	67
EJ Index for Wastewater Discharge Indicator	98	99	99

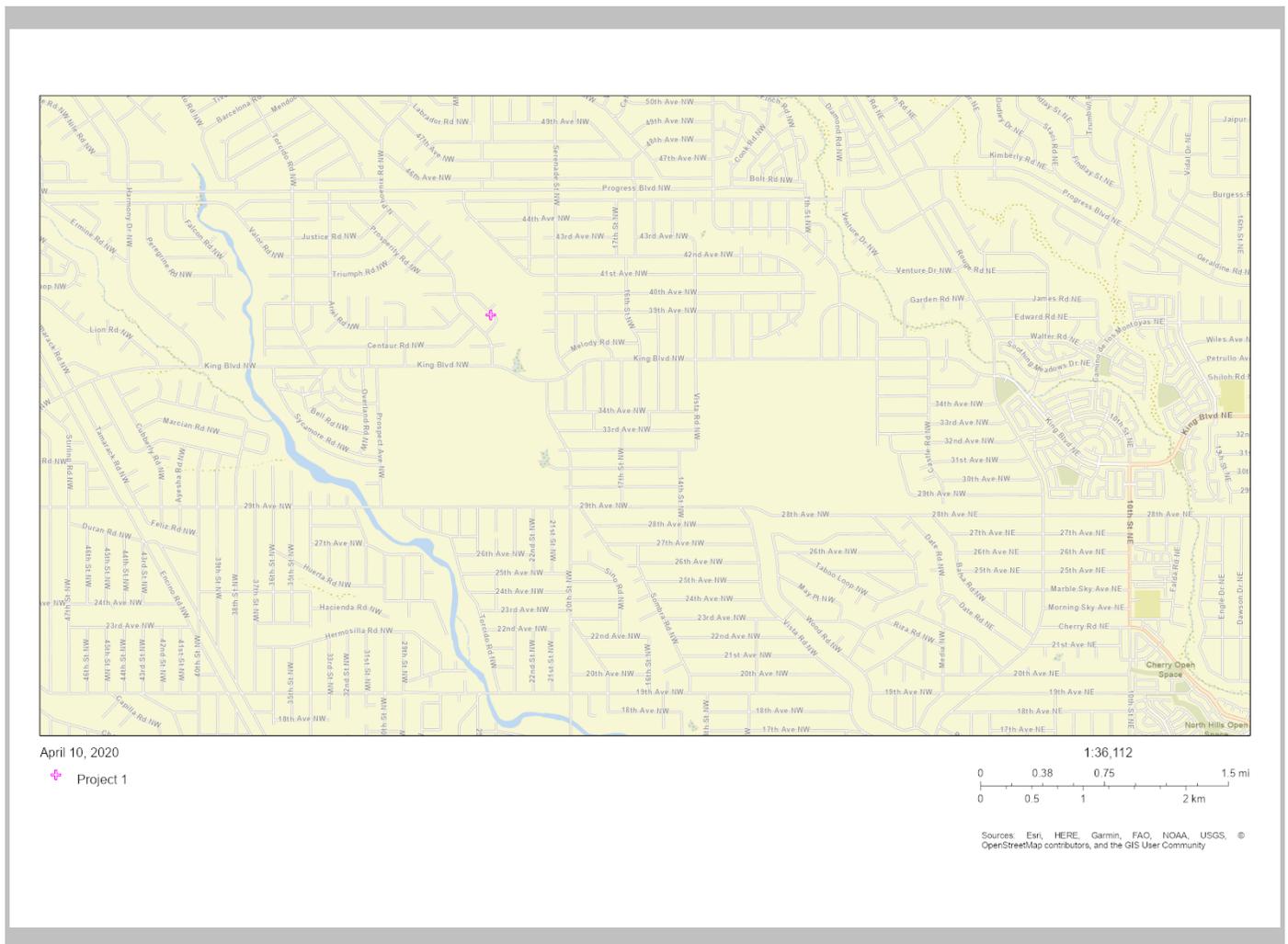


This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

10 miles Ring Centered at 35.323904,-106.785289, NEW MEXICO, EPA Region 6

Approximate Population: 119,130

Input Area (sq. miles): 314.03



Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	2

EJSCREEN Report (Version 2019)



10 miles Ring Centered at 35.323904,-106.785289, NEW MEXICO, EPA Region 6

Approximate Population: 119,130

Input Area (sq. miles): 314.03

Selected Variables	Value	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
Environmental Indicators							
Particulate Matter (PM 2.5 in $\mu\text{g}/\text{m}^3$)	6.39	6.15	53	8.37	5	8.3	10
Ozone (ppb)	51.7	50.4	68	39.4	98	43	91
NATA* Diesel PM ($\mu\text{g}/\text{m}^3$)	0.268	0.281	59	0.401	<50th	0.479	<50th
NATA* Cancer Risk (lifetime risk per million)	24	24	51	36	<50th	32	<50th
NATA* Respiratory Hazard Index	0.31	0.32	51	0.45	<50th	0.44	<50th
Traffic Proximity and Volume (daily traffic count/distance to road)	210	360	56	400	59	750	49
Lead Paint Indicator (% Pre-1960 Housing)	0.012	0.18	20	0.17	25	0.28	14
Superfund Proximity (site count/km distance)	0.055	0.14	48	0.081	61	0.13	46
RMP Proximity (facility count/km distance)	0.34	0.24	81	0.82	48	0.74	52
Hazardous Waste Proximity (facility count/km distance)	0.42	0.46	74	0.75	58	4	49
Wastewater Discharge Indicator (toxicity-weighted concentration/m distance)	1100	130	97	9.8	99	14	99
Demographic Indicators							
Demographic Index	41%	52%	32	44%	50	36%	64
Minority Population	53%	62%	36	51%	54	39%	69
Low Income Population	29%	42%	29	37%	39	33%	48
Linguistically Isolated Population	2%	5%	40	6%	47	4%	56
Population With Less Than High School Education	7%	15%	33	16%	31	13%	41
Population Under 5 years of age	7%	6%	60	7%	51	6%	61
Population over 64 years of age	12%	16%	40	13%	54	15%	44

* The National-Scale Air Toxics Assessment (NATA) is EPA's ongoing, comprehensive evaluation of air toxics in the United States. EPA developed the NATA to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that NATA provides broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the NATA analysis can be found at: <https://www.epa.gov/national-air-toxics-assessment>.

For additional information, see: www.epa.gov/environmentaljustice

EJSCREEN is a screening tool for pre-decisional use only. It can help identify areas that may warrant additional consideration, analysis, or outreach. It does not provide a basis for decision-making, but it may help identify potential areas of EJ concern. Users should keep in mind that screening tools are subject to substantial uncertainty in their demographic and environmental data, particularly when looking at small geographic areas. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports. This screening tool does not provide data on every environmental impact and demographic factor that may be relevant to a particular location. EJSCREEN outputs should be supplemented with additional information and local knowledge before taking any action to address potential EJ concerns.

APPENDIX D. FEMA FLOODPLAIN MAPS

National Flood Hazard Layer FIRMette



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) <i>Zone A, V, A99</i>
		With BFE or Depth <i>Zone AE, AO, AH, VE, AR</i>
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile <i>Zone X</i>
		Future Conditions 1% Annual Chance Flood Hazard <i>Zone X</i>
		Area with Reduced Flood Risk due to Levee. See Notes. <i>Zone X</i>
		Area with Flood Risk due to Levee <i>Zone D</i>
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard <i>Zone X</i>
		Effective LOMRs
		Area of Undetermined Flood Hazard <i>Zone D</i>
GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5 Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **3/23/2020 at 12:17:01 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

35°19'31.65"N
106°47'25.92"W



USGS The National Map: Orthoimagery. Data refreshed April, 2019.

0 250 500 1,000 1,500 2,000 Feet 1:6,000

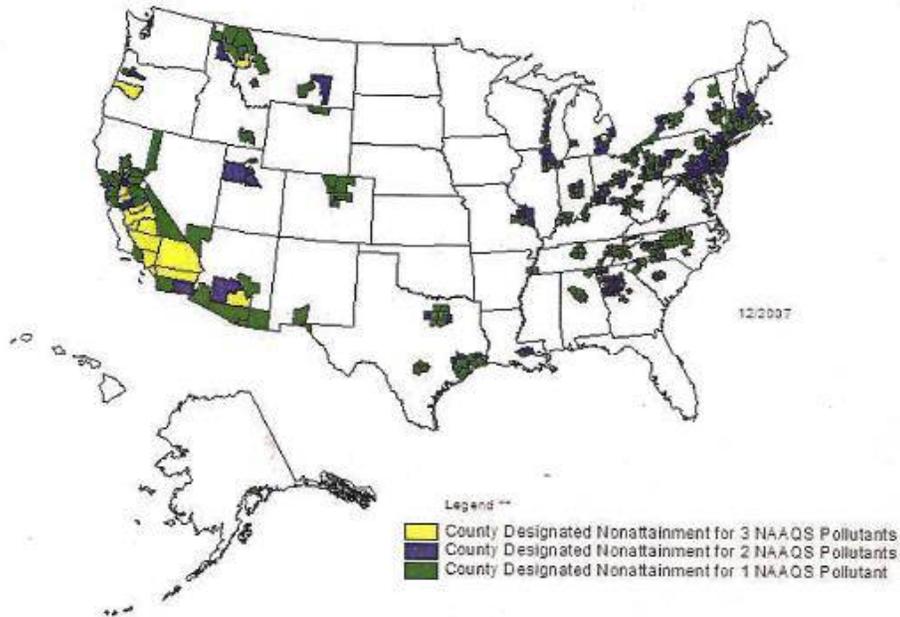
35°19'2.30"N
106°46'48.46"W

APPENDIX E. AIR QUALITY NON-ATTAINMENT AREAS

Environmental Protection Agency: Green Book: Counties Designated Nonattainment

Counties Designated "Nonattainment"

for Clean Air Act's National Ambient Air Quality Standards (NAAQS) *



Guam - Piti and Tanguisson Counties are designated nonattainment for the SO₂ NAAQS

Puerto Rico - Mun. of Guaynabo is designated nonattainment for the PM₁₀ NAAQS

The National Ambient Air Quality Standards are health standards for lead, carbon monoxide, sulfur dioxide, ground level 8-hour ozone, and particulate matter (PM-10 and PM-2.5). There are no nitrogen dioxide nonattainment areas.

Partial counties, those with part of the county designated nonattainment and part attainment, are shown as full counties on the map.

SOURCE: <http://epa.gov/air/data/reports.html>

APPENDIX F. MAILING LIST/EXAMPLE LETTERS

State/City	Land Owners	Indian Tribes/Pueblos
Engineering Development Division, City of Rio Rancho FEMA Floodplain Administrator	Patrica E. Cruz Los Alamos, NM 87544-1535	Pueblo of Cochiti PO Box 70 Cochiti Pueblo, NM 87072
New Mexico Historic Preservation Division - Director Department of Cultural Affairs 407 Galisteo Street, Suite 236 Santa Fe, NM 87501	Outter Rim Investments, Inc. 333 Rio Rancho Dr NE, STE 400 Rio Rancho, NM 87124-1460	Comanche Nation of Oklahoma PO Box 908 Lawton, OK 73502
U.S. Department of Interior - National Park Service Intermountain Region 12795 Alamda Pwky. Denver, CO 80225 email: IMRextrev@nps.gov	Save The Children Foundation 1910 Garden Springs Dr., STE 260 Lexington, KY 40504-3664	The Hopi Tribe P.O. Box 123 Kykotsmovi, AZ 86039
U.S. Department of Interior - Fish and Wildlife Service New Mexico Ecological Services Field Office 2105 Osuna NE Albuquerque, NM 87113-1001	Dora M. & Renee Hutchison 101 W. 147th St., Apt. 221 New York, NY 10039-4353	Pueblo of Isleta PO Box 1270 Isleta Pueblo, NM 87022
NM Department of Game and Fish Conservation Services Division PO Box 25112 Santa Fe, New Mexico 87504	Albert P. & Ruby Nash 631 Hiser Ave. Springfield, OH 45503-7418	Pueblo of Jemez PO Box 100 Jemez Pueblo, NM 87024
New Mexico Energy, Minerals, and Natural Resources Department Forestry Division 1220 S. St. Francis Drive – PO Box 1948 Santa Fe, NM 87505-1948	George & Christine Nelson 4253 Hile Road Stow, OH 44224	Jicarilla Apache Nation PO Box 507 Dulce, NM 87528
U.S. Army Corps of Engineers - Albuquerque District Regulatory Branch 4101 Jefferson Plaza NE Albuquerque, NM 87109-3435	Alice E. Dirks 2535 E. Cloud Dr. Chandler, AZ 85249	Pueblo of Laguna PO Box 194 Laguna Pueblo, NM 87026
State Conservationist USDA- NRCS 6200 Jefferson NE Albuquerque, NM 87109-3734	William R. Heller 15275 Green Rd. Bowling Green, OH 43402-8694	Navajo Nation P.O. Box 7440 Window Rock, AZ 86515
Environmental Impact Review Coordinator New Mexico Environment Department – Office of General Counsel, P.O. Box 5469 Santa Fe, NM 87502-5469	Edna C., Kathie & Kristin D. Lundgren 2495 Canabury Dr., Apt. 224 St. Paul, MN 55117-1574	Ohkay Owingeh (Pueblo of San Juan) PO Box 1099 San Juan Pueblo, NM 87566

Chief New Mexico Environment Department – Surface Water Quality Bureau P.O. Box 5469 Santa Fe, NM 87502-5469	David & Susan Trombley 6942 Adelaide Ave. Las Vegas, NV 89115	Pueblo of San Felipe PO Box 4339 San Felipe, NM 87001
Chief New Mexico Environment Department – Ground Water Quality Bureau P.O. Box 5469 Santa Fe, NM 87502-5469	BISC, LLC. 3096 E. Raven Ct. Chandler, AZ 85249	Pueblo of San Ildefonso 02 Tunyo Po Santa Fe, NM 87506
Chief New Mexico Environment Department – Drinking Water Bureau P.O. Box 5469 Santa Fe, NM 87502-5469	H. Kane Bieri 1308 Inca Rd. NE Rio Rancho, NM 87124-4267	Pueblo of Sandia 481 Sandia Loop Bernalillo, NM 87004
Chief New Mexico Environment Department – Solid Waste Bureau P.O. Box 5469 Santa Fe, NM 87502-5469	Frank N. & Anna F. Nero 872 Kendal Dr. Broadview Heights, OH 44147	Pueblo of Santa Ana 2 Dove Road Santa Ana Pueblo, NM 87004
Chief New Mexico Environment Department – Air Quality Bureau 525 Camino de los Marquez Santa Fe, NM 87505-1816	Alan P. Flaig P.O. Box 41 Quemado, NM 87829-0041	Pueblo of Santa Clara PO Box 580 Española, NM 87532
EPA Region 6 Air Planning Section (6PDL) Multimedia Planning & Permitting Division 1445 Ross Avenue, Suite 700 Dallas, TX 75202- 2733	Joseph M. & Mary E. Scollan 9 Village Green Dr. Port Jefferson Station, NY 11776-4501	Pueblo of Santo Domingo PO Box 99 Santo Domingo Pueblo, NM 87052
State Engineer New Mexico Office of the State Engineer PO Box 25102 Santa Fe, NM 87504-5102	Sandy Desert Properties, LLC PO Box 15834 Rio Rancho, NM 87174-0834	Pueblo of Tesuque Route 42, Box 360-T Santa Fe, NM 87506
NM Department of Transportation- Environmental Design Bureau P.O. Box 1149 Santa Fe, NM 87504-1149	Sabina A., Richard, Marie & Deborah Morringello 5713 NW 46 Dr., Apt #1 FAM Coral Springs, FL 33067	Pueblo of Zia 135 Capitol Square Dr Zia Pueblo, NM 87053-6013
Federal Emergency Management Agency Region VI FRC 800 N. Loop 288 Denton, TX 76209-3698	James D. & Winifred Roach 3720 100th St. Corona, NY 11368-1851	
U.S. Environment Protection Agency Region 6 Source Water Protection Branch/Groundwater Section (6WQ-SG) 1445 Ross Avenue, Suite 1200 Dallas, TX 75202-2733	U.S. Environment Protection Agency Region 6 Office of Planning & Coordination Section 1445 Ross Avenue, Suite 1200 Dallas, TX 75202-2733	



ROCKY MOUNTAIN ECOLOGY

ENVIRONMENTAL CONSULTING | APPLIED RESTORATION SERVICES

Pueblo of Cochiti
PO Box 70
Cochiti Pueblo, NM 87072

March 24, 2020

RE: Construction of a New Water Storage Tank located at Well Site 9 Project

To Whom It May Concern:

The City of Rio Rancho has received funding for the Construction of a New Water Storage Tank located at Well Site 9 Project. We are gathering information for an environmental review of the referenced project. The project is described in the attached project summary sheet and the location is depicted on the attached maps.

Reservoir 9 is filled by Well 9 which was constructed in 1984. Reservoir 9 is located west of City Center, outside City limits, off King Boulevard, in Sandoval County. Over the years, Well 9 has seen decreased production, and the existing 200,000-gallon ground storage tank has recently been inspected and is recommended for replacement. Therefore, it is proposed that 1) the existing Tank 9 be replaced with a new tank sized to provide adequate storage capacity and redundancy, working in conjunction with Tank 13; 2) re-drill Well 9 and increase its yield up to permitted limits; and 3) adding additional arsenic treatment capacity to the existing treatment facility, if required.

The City has contracted with Huitt-Zollars, Inc. (HZI) for design of this system. Rocky Mountain Ecology, LLC (RME) is preparing an environmental information document to comply with the National Environmental Policy Act. RME is gathering information for an environmental review of the proposed project, which requires coordination with stakeholders. This letter initiates the Section 106 consultation process to determine whether the proposed project has the potential to disturb areas considered important or culturally significant. Culturally significant areas might include traditional plant use areas, traditional mineral areas, shrines or important geologic formations, archeological sites, or any areas deemed culturally significant. We would appreciate your determination whether there are religious or cultural ties to the project area. We also need to know if you have any concerns regarding any potential impacts that may result from the proposed project.

Surveys for cultural and biological resources were conducted during March of 2020. We have made an initial determination that this project will not have a significant environmental impact within the context of the National Environmental Policy Act. Please provide your comments by completing and returning a copy of the acknowledgement via email to: knox@rockymountaineology.com, or by mail at P.O. Box 45193, Rio Rancho, NM 87174.

To provide verbal comments or for more information, please contact me at 505.992.6150 or by email.

Shawn C. Knox, Director - Rocky Mountain Ecology LLC

ACKNOWLEDGEMENT:

As a representative for the referenced organization, the undersigned acknowledges receipt of this request for comment, and having reviewed the attached project summary and additional information, if provided,

concurs with the initial determination, or, has no comments.

Signature: _____ Date: _____

Name: _____ Title: _____



ROCKY MOUNTAIN ECOLOGY

ENVIRONMENTAL CONSULTING | APPLIED RESTORATION SERVICES

H. Kane Bieri
1308 Inca Rd. NE
Rio Rancho, NM 87124-4267

March 24, 2020

RE: Construction of a New Water Storage Tank located at Well Site 9 Project

To Whom It May Concern:

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Surveys for cultural and biological resources were conducted during March of 2020. We have made an initial determination that this project will not have a significant environmental impact within the context of the NEPA. Please provide your comments by completing and returning a copy of the acknowledgement via email to: knox@rockymountaineology.com, or by mail at P.O. Box 45193, Rio Rancho, NM 87174.

To provide verbal comments or for more information, please contact me at 505.992.6150 or by email.

Shawn C. Knox, Principal - Rocky Mountain Ecology LLC

ACKNOWLEDGEMENT:

As a representative for the referenced organization, the undersigned acknowledges receipt of this request for comment, and having reviewed the attached project summary and additional information, if provided,

concurs with the initial determination, or, has no comments.

Signature: _____ Date: _____

Name: _____ Title: _____



ROCKY MOUNTAIN ECOLOGY

ENVIRONMENTAL CONSULTING | APPLIED RESTORATION SERVICES

U.S. Environment Protection Agency Region 6
Source Water Protection Branch/Groundwater Section (6WQ-SG)
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

March 24, 2020

RE: Construction of a New Water Storage Tank located at Well Site 9 Project

To Whom It May Concern:

The City of Rio Rancho has received funding for the Construction of a New Water Storage Tank located at Well Site 9 Project. We are gathering information for an environmental review of the referenced project. The project is described in the attached project summary sheet and the location is depicted on the attached maps.

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The City has contracted with Huitt-Zollars, Inc. (HZI) for design of this system. Rocky Mountain Ecology, LLC (RME) is preparing an environmental information document to comply with the National Environmental Policy Act. RME is gathering information for an environmental review of the proposed project, which requires coordination with stakeholders. **Your input on the proposed project is an important element of this review process.** We would specifically like to know if sole source aquifers could be impacted by the proposed action.

Surveys for cultural and biological resources were conducted during March of 2020. We have made an initial determination that this project will not have a significant environmental impact within the context of the NEPA. Please provide your comments by completing and returning a copy of the acknowledgement via email to: knox@rockymountaineology.com, or by mail at P.O. Box 45193, Rio Rancho, NM 87174.

To provide verbal comments or for more information, please contact me at 505.992.6150 or by email.

Shawn C. Knox, Principal - Rocky Mountain Ecology LLC

ACKNOWLEDGEMENT:

As a representative for the referenced organization, the undersigned acknowledges receipt of this request for comment, and having reviewed the attached project summary and additional information, if provided,

concurs with the initial determination, or, has no comments.

Signature: _____ Date: _____

Name: _____ Title: _____

APPENDIX G. CULTURAL RESOURCE REPORT

NMCRIS No.: 145598

NMCRIS INVESTIGATION ABSTRACT FORM (NIAF)

1. NMCRIS Activity No.: 145598	2a. Lead Agency: City of Rio Rancho	2b. Other Agency(ies): New Mexico Finance Authority New Mexico Environment Dept.	3. Lead Agency Report No.:
--	---	---	-----------------------------------

4. Title of Report: Cultural Resource Survey for New Water Infrastructure at Reservoir 9, City of Rio Rancho, Sandoval County, New Mexico Author(s) Okun, Adam	5. Type of Report <input checked="" type="checkbox"/> Negative <input type="checkbox"/> Positive
---	---

6. Investigation Type

Research Design Archaeological Survey/Inventory Architectural Survey/Inventory Test Excavation Excavation
 Collections/Non-Field Study Compliance Decision Based on Previous Inventory Overview/Lit Review Monitoring
 Ethnographic Study Site/Property Specific Visit Historic Structures Report Other

7. Description of Undertaking (what does the project entail?):

The City of Rio Rancho (CORR) is proposing the construction of a new well and water storage tank in Sandoval County, New Mexico. The project would involve re-drilling the existing Well 9 and replacing existing Reservoir 9 with a new tank sized to provide adequate storage capacity based on current demand and permitting limits. All construction would be within and adjacent to the existing CORR Reservoir 9 facility, which is along Unicorn Circle NW, north of King Boulevard, in the far western part of Rio Rancho. The surrounding area is mostly undeveloped, with a grid of dirt roads and occasional, widely scattered residences. The CORR owns the existing facility and will be purchasing surrounding land for construction. Funding for construction will be through the Drinking Water State Revolving Loan Fund, which is a federally funded program that is administered by the New Mexico Finance Authority (NMFA), in partnership with the New Mexico Environment Department (NMED), on behalf of the state. The program provides financing for construction and improvements to drinking water systems. The CORR will fund all property acquisition.

[x] Continuation

8. Dates of Investigation: from: 22-Mar-2020 to: 22-Mar-2020	9. Report Date: 08-Apr-2020
---	------------------------------------

10. Performing Agency/Consultant: Okun Consulting Solutions

Principal Investigator: Adam Okun

Field Supervisor: Adam Okun

Field Personnel Names:

Historian / Other:

11. Performing Agency/Consultant Report No.:
OCS-2020-9

12. Applicable Cultural Resource Permit No(s):
New Mexico Archaeological Survey Permit NM-20-285-S

NMCRIS No.: 145598

13. Client/Customer (project proponent):

City of Rio Rancho

Contact: Shawn Knox (Rocky Mountain Ecology-environmental lead)

Address: 306 Rosalie Drive, Durango, Colorado

Phone: 505.992.6150

14. Client/Customer Project No.:

15. Land Ownership Status (must be indicated on project map):

Land Owner (By Agency)

Acres Surveyed Acres in APE

Municipal Government (see records for agency)	5.40	5.40
TOTALS	5.40	5.40

16. Records Search(es): see continuation pages

Date(s) of HPD/ARMS File Review: March 20, 2020	Name of Reviewer(s): Adam Okun	
Date(s) of Other Agency File Review:	Name of Reviewer(s):	Agency:

17. Survey Data:

a. Source Graphics [] NAD 27 [x] NAD 83 **Note: NAD 83 is the NMCRIS standard.**

USGS 7.5' (1:24,000) topo map Other topo map, Scale:

GPS Unit Accuracy <1.0m 1-10m 10-100m >100m

Aerial Photo(s)

Other Source Graphic(s):

b. USGS 7.5' Topographic Map Name

USGS Quad Code

Arroyo de las Calabacillas, NM	35106-C7
--------------------------------	----------

c. County(ies): Sandoval

d. Nearest City or Town: Rio Rancho

e. Legal Description:

Township (N/S)

Range (E/W)

Section

13N	1E	25
-----	----	----

Projected legal description? [] Yes [] No [] Unplatted

f. Other Description (e.g. well pad footages, mile markers, plats, land grant name, etc.):

The project area is along Unicorn Circle NW, north of King Boulevard, in the far western part of Rio Rancho.

[] Continuation

18. Survey Field Methods:

Intensity: 100% coverage <100% coverage

Configuration: block survey units linear survey units (l x w):

NMCRIS No.: 145598

other survey units (specify):

Scope: non-selective (all sites/properties recorded) selective/thematic (selected sites/properties recorded)

Coverage Method: systematic pedestrian coverage

other method (describe):

Survey Interval (m): 15 **Crew Size:** 1 **Fieldwork Dates:** from: 22-Mar-2020 to: 22-Mar-2020

Survey Person Hours: 4.00 **Recording Person Hours:** 0.00 **Total Hours:** 4.00

Additional Narrative:

The 100-percent pedestrian survey was completed by walking transects no more than 15 m (50 ft) apart across the entire APE, which was defined to include the entire facility, areas where new infrastructure could be constructed, and appropriate survey buffers. Some areas inside the existing facility that are fully disturbed/developed could not be accessed. Throughout this process, UTM coordinates were obtained using the NAD 83 projection on a GPS receiver, and the GPS receiver and project area maps were consistently consulted to assure full coverage of the project area.

[] Continuation

19. Environmental Setting (NRCS soil designation; vegetative community; elevation; etc.):

The project area is located in the far western portion of Rio Rancho in an area that is mostly undeveloped but has been platted for future development and contains a grid of dirt roads and occasional residences. The terrain is gently rolling, with low ridges and hills separated by southeast-trending drainages. Several small drainages in the project vicinity form a larger, unnamed, southeast-flowing tributary of Arroyo de los Calabacillas. This is a major south-flowing arroyo that drains a large portion of the West Mesa. Elevation in the project area is approximately 6,000 ft above mean sea level (amsl). A defining characteristic of this environment is the presence of a mantle of aeolian sand that covers each landform. The location exhibits open views of the Rio Grande Valley, Sandia Mountains, and Manzano Mountains.

[x] Continuation

20.a. Percent Ground Visibility: **b. Condition of Survey Area (grazed, bladed, undistributed, etc.):**

Surface visibility is excellent due to sparse grass cover and averaged at least 75 percent. Overall, the location is in poor condition. The existing facility is entirely disturbed, and this disturbance extends into the surrounding area, where there are bladed areas, push piles, and faint two-track roads. A deeply entrenched drainage begins just southeast of the facility (see attached photograph), and there is evidence of sediment deflation throughout the area.

[] Continuation

21. CULTURAL RESOURCE FINDINGS Yes, see next report section No, discuss why:

No archaeological sites, historic buildings, linear resources, historic districts, isolated occurrences (IOs), or other cultural resources of any kind were discovered during pedestrian survey of the APE. The lack of archaeological sites is likely due to the erosional setting, lack of nearby water sources, and (possibly) disturbance from the existing facility. Few archaeological sites have been documented in the surrounding area.

[] Continuation

22. Attachments (check all appropriate boxes):

[x] USGS 7.5 Topographic Map with sites, isolates, and survey area clearly drawn (required)

[x] Copy of NMCRIS Map Check (required)

[] LA Site Forms - new sites (with sketch map & topographic map) if applicable

[] LA Site Forms (update) - previously recorded & un-relocated sites (first 2 pages minimum)

[] Historic Cultural Property Inventory Forms, if applicable

[] List and Description of Isolates, if applicable

[] List and Description of Collections, if applicable

23. Other Attachments:

[] Photographs and Log

[] Other Attachments
(Describe):

24. I certify the information provided above is correct and accurate and meets all applicable agency standards.

Principal Investigator/Qualified Supervisor: **Printed Name:** Adam Okun

Signature:  **Date:** 4.8.2020 **Title:** Principal Investigator

25. Reviewing Agency Reviewer's Name/Date: Accepted [] Rejected []	26. SHPO Reviewer's Name/Date: HPD Log #: Date sent to ARMS:
--	---

CULTURAL RESOURCE FINDINGS

[fill in appropriate section(s)]

SURVEY RESULTS:

No archaeological sites, historic buildings, linear resources, historic districts, IOs, or other cultural resources of any kind were discovered during pedestrian survey of the APE.

Archaeological Sites discovered and registered: 0

Archaeological Sites discovered and NOT registered: 0

Previously recorded archaeological sites revisited (site update form required): 0

Previously recorded archaeological sites not relocated (site update form required): 0

TOTAL ARCHAEOLOGICAL SITES (visited & recorded): 0

Total isolates recorded: 0

Non-selective isolate recording?

HCPI properties discovered and registered: 0

HCPI properties discovered and NOT registered: 0

Previously recorded HCPI properties revisited: 0

Previously recorded HCPI properties not relocated: 0

TOTAL HCPI PROPERTIES (visited & recorded, including acequias): 0

MANAGEMENT SUMMARY:

No archaeological sites, historic buildings, linear resources, districts, IOs, or other resources were identified during survey. No previously documented cultural resources are located within the APE. Subject to agency consultation and comment, the proposed undertaking would have no effect on any historic property listed, or eligible for listing, on the National Register of Historic Places (NRHP). However, if buried cultural deposits are discovered during project activities, work shall cease and the New Mexico State Preservation Officer (SHPO) shall be notified immediately. This cultural resource investigation complies with Section 106 of the National Historic Preservation Act (NHPA), the provisions of the New Mexico Cultural Properties Act (18-6-1 through 18-6-17 New Mexico Statutes Annotated 1978), and all other applicable cultural resource rules or regulations. The project was completed in accordance with §4.10.15 NMAC: Standards for Survey and Inventory.

[] **Continuation**

IF REPORT IS NEGATIVE, YOU ARE DONE AT THIS POINT.

NMCRIS No. 145598 Continuation Pages

BOX 7: DESCRIPTION OF UNDERTAKING

Reservoir 9 is filled by Well 9, with current facilities that were constructed in 1984. The location services the CORR's Pressure Zone 6A and is a critical part of existing and future water distribution for the city. However, the current well is deteriorated, experiences maintenance issues and declining production due to construction flaws and is not equipped to fulfill the water production permit limits for this location. In addition, Reservoir 9 is An undersized storage facility that has experienced deterioration and needs to be replaced. As a result, the entire facility needs to be upgraded. The CORR proposes to acquire additional property to expand the facility, drill a new well within 100 feet (ft) of the existing well, and replace the current Reservoir 9 with a larger storage tank. New facilities will be sited within four lots that are 0.5 acres in size and surround the existing facility. The area of potential effects (APE) was defined to include the existing facility, all areas with ground disturbance associated with the existing facility, the four lots that will be acquired for new construction, and at least a 50-ft buffer surrounding these lots or proposed infrastructure.

Based on the federally funded program, state administration (NMFA/NMED), and municipal lands, the project must comply with both state and federal rules and regulations concerning the identification and management of cultural resources, including Section 106 of the National Historic Preservation Act of 1966 (NHPA; 54 U.S.C. §306108), the New Mexico Cultural Properties Act (18-6-1 through 18-6-17 NMSA, as amended through 2005), and the Prehistoric and Historic Sites Preservation Act (18-8-1 through 18-8-8 NMSA 1978). As a result, the survey was completed to federal standards and the guidelines outlined in §4.10.15 NMAC: Standards for Survey and Inventory.

BOX 16: RECORD SEARCH RESULTS

On March 20, 2020, Adam Okun conducted a pre-field records search of the NMCRIS database to obtain information on all previously conducted surveys and recorded archaeological sites located within 500 m (1640 ft) of the APE. Current listings of the NRHP and New Mexico State Register of Cultural Properties were also consulted to determine the presence of any registered properties or districts within the study area. The purpose of these pre-field records searches was to determine the location of known cultural resources and derive expectations regarding the nature and frequency of resources that might be encountered during the field survey.

Based on these searches, no previous cultural resource investigations have been conducted within 500 m (1,640 ft) of the project area. The only known archaeological site within 500 m (1,640 ft) of the project area is LA 18421, which is a small multi-component artifact scatter located across the arroyo approximately 420 m northeast of the project area. The next closest cultural resource is LA 18420, a prehistoric lithic scatter located 600 -700 m to the northwest. A small number of artifact scatters have been documented during a 1976 survey conducted by the Public Service Company of New Mexico. Very little cultural resource survey has been conducted in this part of Rio Rancho.

BOX 19: ENVIRONMENTAL SETTING

The project area is located in the far western portion of Rio Rancho in an area that is mostly undeveloped but has been platted for future development and contains a grid of dirt roads and occasional residences. The terrain is gently rolling, with low ridges and hills separated by southeast-trending drainages. Several small drainages in the project vicinity form a larger, unnamed, southeast-flowing tributary of Arroyo de los Calabacillas. This is a major south-flowing arroyo that drains a large portion of the West Mesa. Elevation in the project area is approximately 6,000 ft above mean sea level (amsl). A defining characteristic of this environment is the presence of a mantle of aeolian sand that covers each landform. The location exhibits open views of the Rio Grande Valley, Sandia Mountains, and Manzano Mountains.

Physiographically, the project location is within the Rio Grande Subsection of the Mexican Highland Section of the Basin and Range Province (Hawley 1986). The Mexican Highland Section contains broad basin-and-range topography along both sides of the Rio Grande Rift and is characterized by block-faulted mountains, with Precambrian cores overlaid with sedimentary deposits. The basins are oriented north to south and are separated by parallel, narrow uplifted mountain ranges (Hawley 1986). The West Mesa divides the Rio Grande Valley from the Rio Puerco, a major tributary of the Rio Grande. The mesa is an uplifted remnant of the floor of the Rio Grande Rift that slopes from west to east, and its surface consists of ancestral Rio Grande alluvial deposits. The project area itself contains Clovis Fine Sandy

Loam and Zia-Clovis soil classification units. These soils are deep, well-drained, occur on plains and fan remnants, and are comprised of aeolian deposits over slope alluvium derived from sandstone and shale.

The project area is near the transition between Desert Grassland and Plains-Mesa Sand Scrub biotic communities (Dick-Peddie 1993). The Plains-Mesa Sand Scrub community is found within post-Pleistocene deep sands and aeolian sands. It is dominated by sand sagebrush and also includes a variety of other low shrubs adapted to sandy environments including rabbitbrush, broom snakeweed, and four-wing saltbush. The project area contains a few widely spaced juniper trees but is mostly open grassland/scrubland. Species observed during survey include grama grass and other grass types, cholla, broom snakeweed, four-wing saltbush, catclaw, prickly-pear cactus, Russian thistle, and narrow-leaf yucca.

REFERENCES

Dick-Peddie, William A.

1993 *New Mexico Vegetation: Past, Present and Future*. University of New Mexico Press, Albuquerque.

Hawley, John W.

1986 Physiographic Provinces I. In *New Mexico in Maps*, edited by Jerry L. Williams, pp. 23-25. University of New Mexico Press, Albuquerque.

National Resource Conservation Service

2020 *Web Soil Survey*. Available online at <http://websoilsurvey.nrcs.usda.gov/>. Accessed March 2020

Western Regional Climate Center

2020 *Historical Climate Information*. <http://www.wrcc.dri.edu/climatedata.html>. Electronic Data Accessed March 2020

PHOTOGRAPHS



Photograph 1. Existing Reservoir 9 Facility Facing Northeast



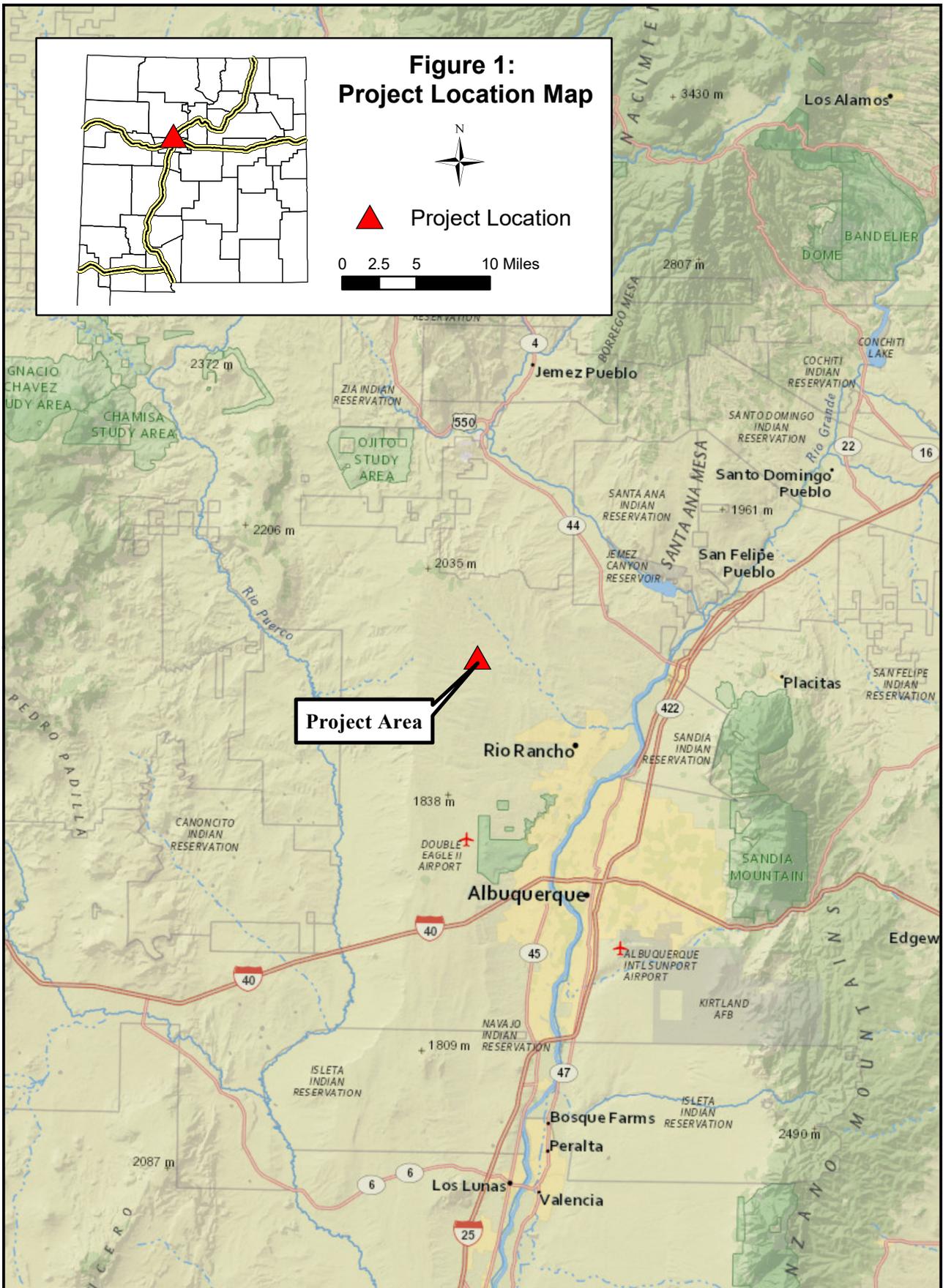
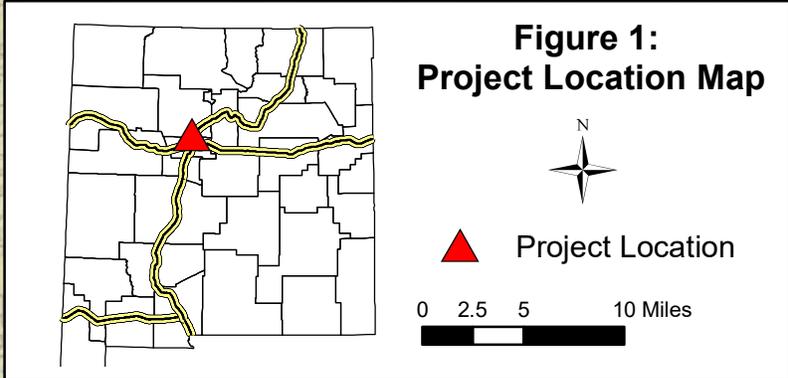
Photograph 2. Existing Reservoir 9 Facility Facing Northwest

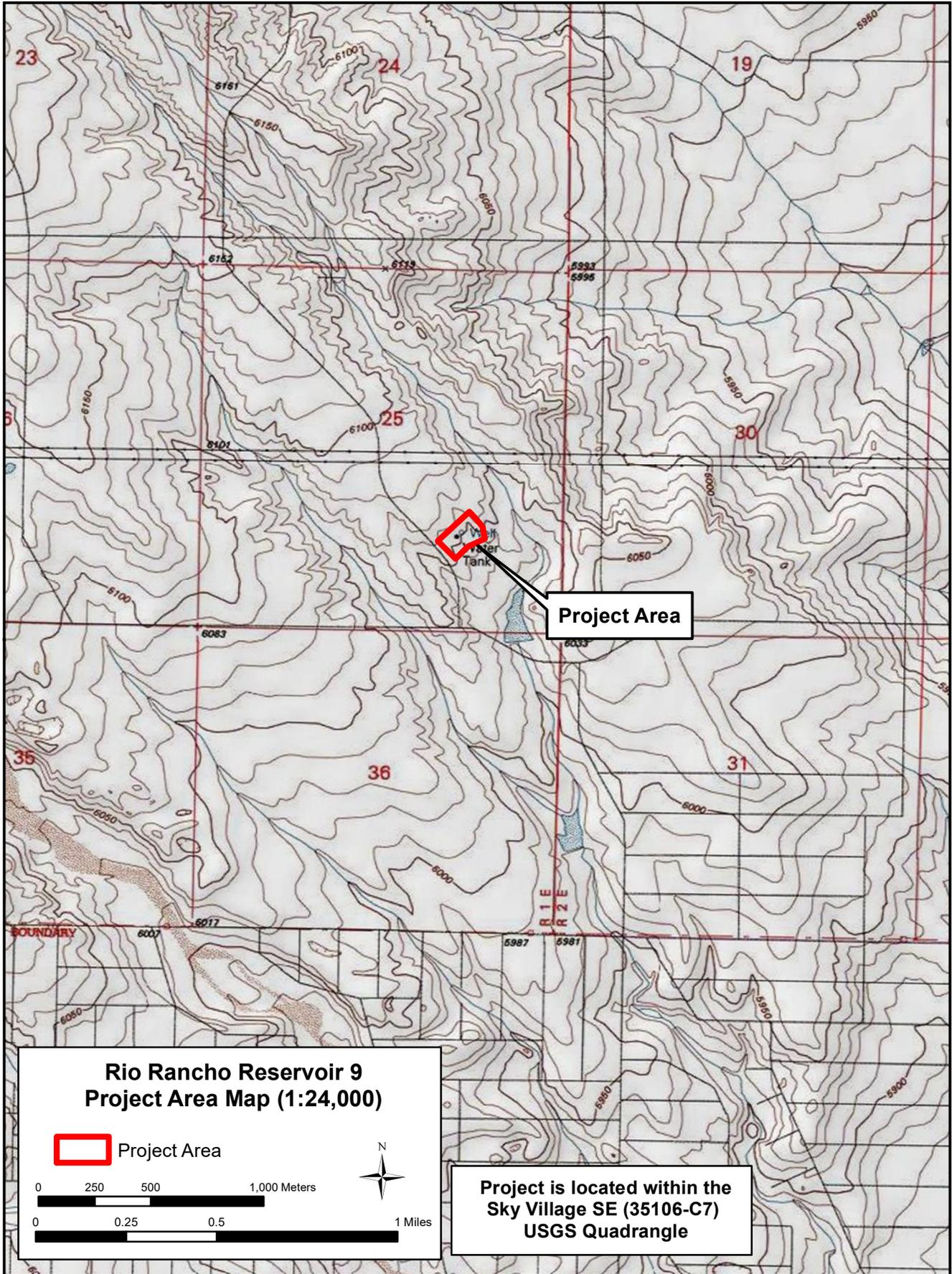


Photograph 3. Existing Conditions in the Area where New Infrastructure is Proposed



Photograph 4. Severe Erosion Immediately Southeast of the Project Area







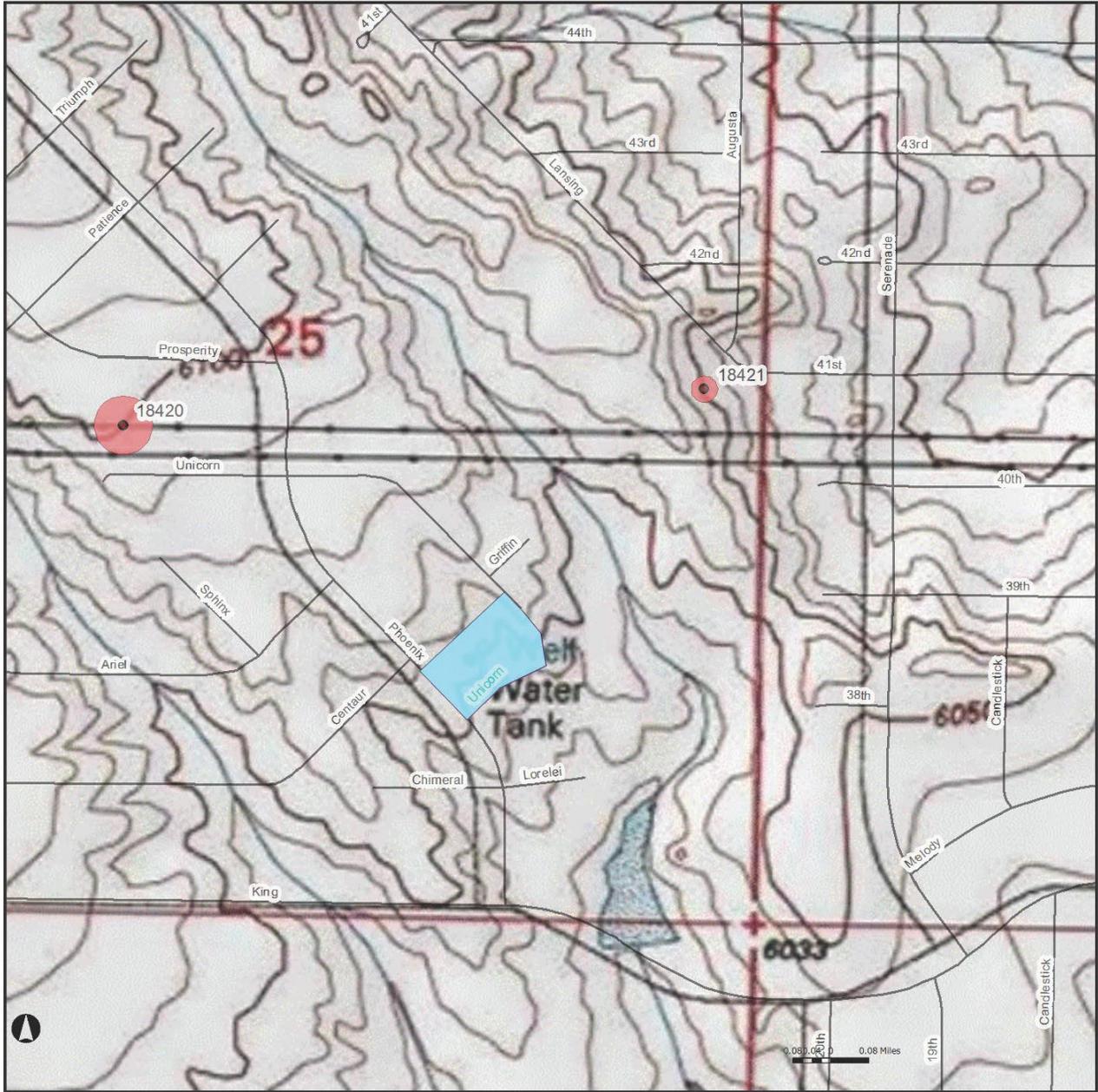
Existing Facility

**Rio Rancho Reservoir 9:
Aerial View of Survey Area**

 Project Area 

0 25 50 100 Meters

ARMS Previous Research Map



- Archaeological Surveys
 - Not Defined
- Site Labels
 -
- Site Boundaries (Edit)
 -
- Site Boundaries
 - Not Defined
 - Proposed
 - Approved

- Historic Structures
 - Not Defined
 - Proposed
 - Approved
- Buildings
 - Not Defined
 - Proposed
 - Approved
- Objects
 -

- Register Properties
 - Not Defined
 - Proposed
 - Approved
- Archaeological Surveys (Edit)
 -
- Archaeological Surveys
 - Not Defined
 - Proposed

APPENDIX H. TECHNICAL MEMORANDUM

Updated Technical Memorandum

DATE: May 6, 2020

TO: Bill Ladd, Project Manager, City of Rio Rancho

FROM: Wes Vote, PE, Project Manager, Huitt-Zollars, Inc.

SUBJECT: The City of Rio Rancho Site 9 Improvements
City Project No. WA 1937
HZ Project No. R312054.01 – New Water Reservoir at Well Site 9

EXECUTIVE SUMMARY

This Updated Technical Memorandum (UTM) serves as an update to the “Technical Memorandum for the City of Rio Rancho Site 9 Proposed Improvements” dated September 2018 by Bohannon Huston, Inc. (BHI), Appendix A. This UTM is not intended to change the original intent and design basis for the overall Site 9 evaluation of the BHI Technical Memorandum (TM) and will emphasize some of its conclusions. In an effort to not rewrite the approved TM, this UTM will utilize, when possible, the TM descriptions. As part of Huitt-Zollars, Inc. (HZ) contractual services, we have been tasked with updating and modifying the original technical memorandum to consider site-specific conditions, perform the required Environmental Information Documentation (EID), land acquisition and to optimize probable estimated construction costs, in order to comply with USDA RUS Bulletin 1780-2 and NMED PER checklist requirements. This entailed reviewing the memorandum for overall system consistencies, existing site conditions / structures, modeling existing flows and potential future flows. As part of this review process, we met on several occasions with the City of Rio Rancho’s (City) engineering staff and Jacobs operation & maintenance (O&M) personnel to better understand the existing system’s limitations. Through these meetings, we have been able to pinpoint the water system deficiencies within pressure zone 6, O&M limitations, and additional costs.

Reservoir 9 is located west of City Center, outside the City limits, off King Boulevard and is a critical location for existing and future operations of the City’s water distribution system. Reservoir 9 services the City’s Pressure Zone 6A. Reservoir 9 is filled by Well 9, constructed in the mid 1980’s, with an original production rate of approximately 950-gallons per minute (gpm). The well has become prone to sand production; thus, reducing pumping capacity to approximately 450-gpm and requiring pump replacement every 2 to 4 years based on communications with Jacobs personnel. Additionally, the well was never equipped to fulfill either its permit limit of 2,419-acre-feet per year (AFY), or continuous pumping of 1,500-gpm under permit RD-26259.

Well 9 was drilled to a depth of 1,540 feet and according to Jacobs personnel / record information the well was not drilled straight. This dogleg in the casing alignment has led to maintenance issues with pulling and setting the pump. Additionally, the power supply is inconsistent and the site is susceptible to lightning strikes (no existing lightning protection); thus, causing periodic outages and limiting water production.

Site 9 is undersized, deteriorating, and in need of upgrades. Several current factors limit the effectiveness of the facility. A single 10-inch transmission line limits conveyance capacity to developed areas of the City. Well 9 has experienced decreased production and the under capacity existing 200,000-gallon ground storage tank was recommended for replacement by recent site investigations. To reliably supply existing and future customers, Site 9 needs to be redeveloped. The deteriorated condition of Reservoir 9 is cause for concern and requires the City to perform additional water quality testing at this site.

The City's water distribution system (WDS) model was used to evaluate the hydraulic effectiveness of proposed facilities. The WDS model has spatially allocated demand by billing data for existing conditions as well as demands for future growth models, including ultimate buildout based on existing land Use (Zoning) and platting.

It is anticipated that the City's population will continue to grow. To ensure future water availability, all of the City's water resources need to be optimized and it is imperative the City continue to seek more efficient means of utilizing all of its available water resources. The following projects have been identified as required future projects in order to complete the system, including their assumptions:

1. New 3 MG Reservoir at Well Site 9;
2. Re-drilling of the Existing Well 9;
3. Equipping Well 9;
4. New Onsite Water Treatment;
5. New 16-inch parallel waterline within 20th Street;
6. New 16-inch connector line within King Boulevard.

1. GENERAL

The Updated Technical Memorandum (UTM) serves as an update to the “Technical Memorandum for the City of Rio Rancho Site 9 Proposed Improvements” dated September 2018 by Bohannon Huston, Inc. (BHI), Appendix A. Huitt-Zollars, Inc. (HZ) has been tasked with updating and modifying the original technical memorandum to consider site-specific conditions, perform the required Environmental Information Documentation (EID), land acquisition and to optimize probable estimated construction costs, in order to comply with USDA RUS Bulletin 1780-2 and NMED PER checklist requirements.

Reservoir 9 is located west of City Center, outside City limits, off King Boulevard and is a critical location for existing and future operations of the City’s water distribution system. Reservoir 9 services the City’s Pressure Zone 6A. Reservoir 9 is filled by Well 9, which was constructed in mid-1980. It had an original production rate of approximately 950-gpm. The well has become prone to sand production; thus, reducing pumping capacity to approximately 450-gpm and requiring pump replacement every 2 to 4 years based on communications with Jacobs personnel. Additionally, the well was never equipped to fulfill its permit limits of 2,419 acre-feet per year (AFY), or continuous pumping of 1,500-gpm under permit RD-26259.

Well 9 was drilled to a depth of 1,540 feet. According to Jacobs personnel and record information the well was not drilled straight and. This dogleg in the casing alignment has led to maintenance issues with pulling and setting the pump. Additionally, the power supply is inconsistent and the site is susceptible to lightning strikes (no existing lightning protection); thus, causing periodic outages and limiting water production.

Site 9 is undersized, deteriorating, and in need of upgrades. Several current factors limit the effectiveness of the facility. A single 10-inch transmission line limits conveyance capacity to developed areas of the City. Well 9 has experienced decreased production and the under capacity existing 200,000-gallon ground storage tank was recommended for replacement by recent site investigations. To reliably supply existing and future customers, Site 9 needs to be redeveloped. The deteriorated condition of Reservoir 9 is cause for concern and requires the City to perform additional water quality testing at this site.

The City’s water distribution system (WDS) model was used to evaluate the hydraulic effectiveness of proposed facilities. The WDS model has spatially allocated demand by billing data for existing conditions as well as demands for future growth models, including ultimate buildout based on existing land Use (Zoning) and platting. This project originated as the result of several recent planning and feasibility studies. These include:

- NMED -CPB Reaffirmation Letter, New Mexico Environment Department, Construction Programs Bureau (January 2020).
- Technical Memorandum for the City of Rio Rancho Site 9, Bohannon Huston (September 2018)
- 2018 Water Reuse Plan, Bohannon Huston

2. PROJECT PLANNING AREA

2.1 LOCATION

The Reservoir / Well Site 9 is located within the unincorporated limits of the City of Rio Rancho west of City Center just off King Boulevard. **Figure 2-1, Overall Water System** illustrates the City's existing water distribution system and pressures zones. The existing site is located in Sections 24-26 of Township 13 North, Range 1 East, Unit 23 Block 77, Lot 17. In order to complete the project, the City intends to purchase Lots 16, 18, 19 and 20, as shown on **Figure 2-2, Existing Site and Land Requirements**. **Figure 2-3** illustrates the **Sites Improvements**, including land requirements.

2.2 ENVIRONMENTAL RESOURCES PRESENT

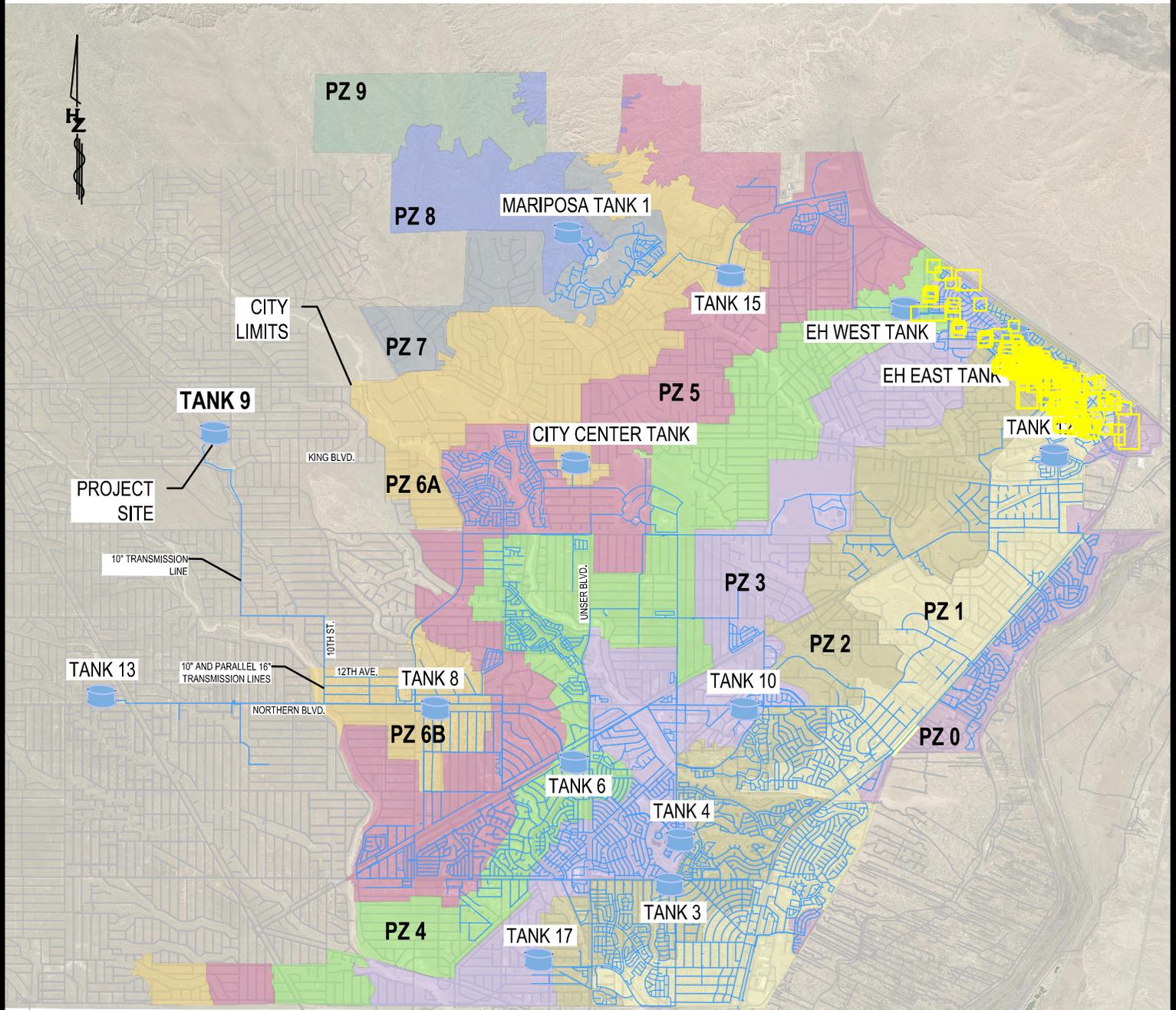
Rocky Mountain Ecology, LLC., a sub consultant to HZ, has performed an environmental / cultural resources review and completed the Environmental Information Document (EID), April 2020. The following is a summary of the information contained in the review:

During the planning process, consultation letters were sent to numerous agencies and Native American tribes that could have legal or cultural affiliations to the area. Moreover, archeological and biological surveys were conducted within the project area to identify cultural or biological resources of significance. No habitat for state or federal threatened/endangered species was located within the project area. No impacts to these species are expected from the proposed action. No archaeological sites or historic buildings were identified during the survey, within the APE, and no impacts to these resources are expected.

2.3 GROWTH AREAS AND POPULATION TRENDS

Rio Rancho is one New Mexico's newest communities, incorporated as a City in 1981. It encompasses approximately 105 square miles. Rio Rancho is one of the fastest growing cities and the third largest city in New Mexico. According to the U.S. Census Bureau in 2010 and 2012, Rio Rancho had respective populations of 87,521 and 90,818. The water distribution system includes approximately 560 miles of water line, 32 million gallons per day (MGD) of supply from ground water wells, and 44 MG of storage.

The City Center corridor is seeing increased development after being stalled for a number of years after 2008. The Sandoval Regional Medical Center, Rio Rancho Star Center, City offices, and other commercial and institutional facilities are all located in the City Center corridor. This critical region is served by the City Center Reservoir, currently undersupplied with limited capacity to maintain water levels. A transmission line within King Boulevard would create a direct connection between the Reservoir 9 Site and the City Center corridor providing a much-needed redundant supply line.



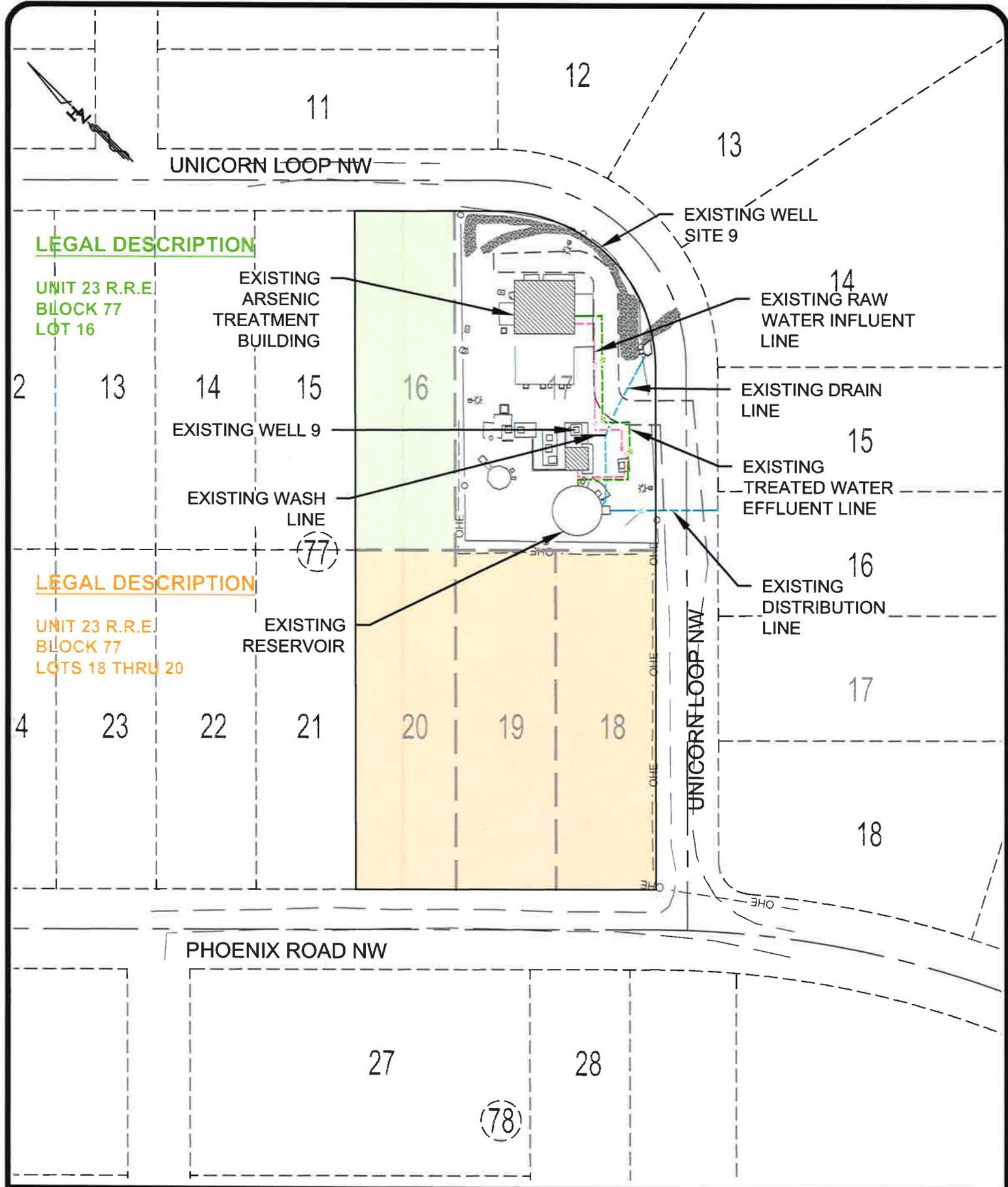
Designed By:

HUITT-ZOLIARS
 Huitt-Zollars, Inc. Rio Rancho
 333 Rio Rancho Drive NE, Suite 101
 Rio Rancho, New Mexico 87124
 Phone (505) 892-5141 Fax (505) 892-3259

OVERALL WATER SYSTEM

SCALE: 1" = 10,000'

FIGURE 2-1

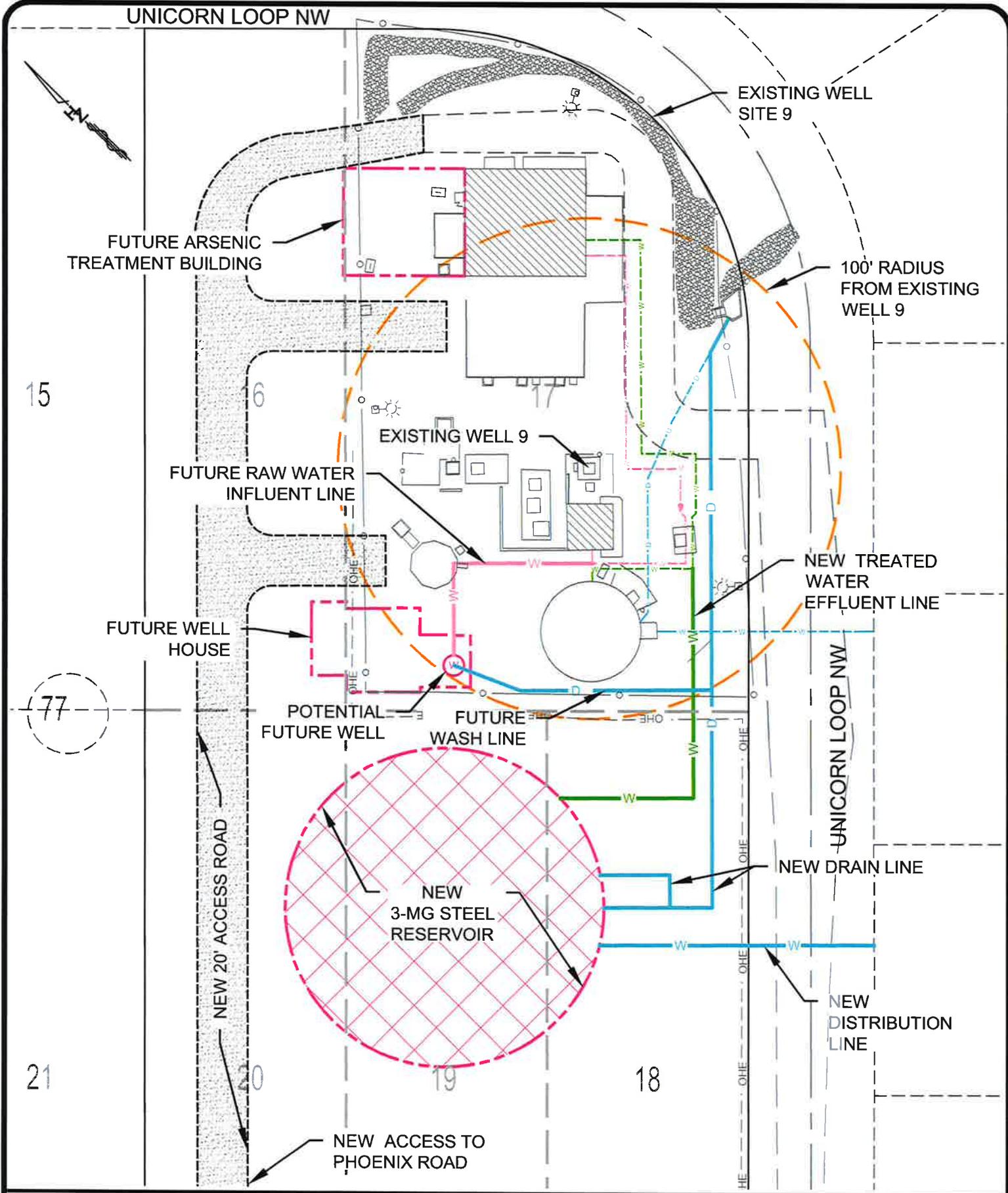


Designed By:
HUITT-ZOLIARS
 Huitt-Zollars, Inc. Rio Rancho
 333 Rio Rancho Drive NE, Suite 101
 Rio Rancho, New Mexico 87124
 Phone (505) 892-5141 Fax (505) 892-3259

**EXISTING SITE AND
 LAND REQUIREMENTS**

SCALE: 1" = 100'

FIGURE 2-2



Designed By:

HUITT-ZOLIARS

Huitt-Zollars, Inc. Rio Rancho
 333 Rio Rancho Drive NE, Suite 101
 Rio Rancho, New Mexico 87124

Phone (505) 892-5141 Fax (505) 892-3259

SITE IMPROVEMENTS

SCALE: 1" = 50'

FIGURE 2-3

EXISTING FACILITIES

3.1 LOCATION MAP

The City is currently permitted to operate 22 groundwater wells (not all in operation), 13 booster stations, and 18 reservoirs. The water distribution system includes approximately 560 miles of water lines, 32 million-MGD of supply from ground water wells, and 44 MG of storage. The existing water system facilities and infrastructure are illustrated on **Figure 2-1, System Overview**. The proposed improvements for Site 9, including capacities and sizes are illustrated **Table 3-1**.

Table 3-1	
Site 9 Proposed Improvements	
New Reservoir	Phase I - 3-MG
Re-Drilling / Equipping Existing Well	Phase II - 2,419 AFY, 1,500-GPM
Water Treatment Facility Upgrades	Phase II - 2,419 AFY, 1,500-GPD
New Parallel Waterline 20 th Street	Phase III
New 16" Connector Line in King Blvd.	Phase III

3.2 CONDITION OF FACILITIES

3.2.1 History

The City of Rio Rancho is seeking funding assistance to update and expand Site 9. Rio Rancho has identified this site as a critical facility for existing and future operations. Site 9 currently includes a well, reservoir, and arsenic treatment facility.

The site was developed in the mid 1980’s making the existing facilities over 30 years old. The well and reservoir have out served their usefulness and reliability, especially considering their deteriorating conditions. The existing 200,000-gallon reservoir is undersized and unable to provide the required storage capacities for the serviced pressure zones. Additionally, Well 9 was never equipped to meet its pumping permit limits and the well has seen a decrease in production due to a number of factors discussed throughout the UTM.

Additionally, subsequent reports including the “Water Reuse Master Plan”, Bohannon Huston, Inc., (2018) and the “Technical Memorandum for the City of Rio Rancho Site 9 Proposed Improvements”, Bohannon Huston, Inc. (2018) have defined the project needs.

3.2.2 Reservoir 9

Site 9 is located west of City Center, outside City limits, off King Boulevard and is a critical location for existing and future operations. The existing reservoir was constructed in 1985 and has a limited capacity of 200,000-gallons. Reservoir 9’s overflow elevation of 6,080 feet above mean sea level is the highest in the City’s water system; therefore, defining the City’s

uppermost pressure zone (Zone 7). Currently, no customers exist in this pressure zone and pressure from this supply is reduced at Pressure Zone 6A near Northern Boulevard. This connection provides additional capacity if and when Site 13 is offline. Reservoir 9 was independently inspected and received a recommendation for replacement due to its age, condition, and capacity.

3.2.3 Well 9

Well 9, constructed in the mid 1980's, with an original production rate of approximately 950-gallons per minute (gpm). The well has become prone to sand production; thus, reducing pumping capacity to approximately 450-gpm and requiring pump replacement every 2 to 4 years based on communications with Jacobs personnel. Additionally, the well was never equipped to fulfill either its permit limit of 2,419-acre-feet per year (AFY), or continuous pumping of 1,500-gpm under permit RD-26259. Well 9 was drilled to a depth of 1,540 feet and according to Jacobs personnel / record information the well was not drilled straight. This dogleg in the casing alignment has led to maintenance issues with pulling and setting the pump. Additionally, the power supply is inconsistent and the site is susceptible to lightning strikes (no existing lightning protection); thus, causing periodic outages and limiting water production.

3.2.4 Arsenic Treatment

Water from Well 9 is treated with a Hungerford and Terry coagulation-filtration arsenic treatment system in October 2006. Water is also chlorinated with ferric and PH adjustment prior to entering the water distribution system. The existing arsenic treatment system has a maximum capacity of 0.95-MGD.

3.2.5 Distribution

Water from Site 9 is conveyed to the system through a 10-inch transmission line, approximately 4.5 miles in length. This is the only transmission main from Site 9 to the system. The transmission main connects to the distribution at 10th Street and Northern Boulevard through a pressure reducing valve (PRV) to supply Pressure Zone 6B.

3.3 NEED FOR PROJECT

3.3.1 Reservoir 9 – Phase I

Reservoir 9 defines Pressure Zone 7 while serving Pressure Zone 6A and is capable of serving Pressure Zone 6B. The combined peak day demands of Zones 6A and 6B, at full build out, are projected to be approximately 28 MGD. Given this demand and the City's design standards for total storage, the storage requirement to serve these Pressure Zones is approximately 13-MG. Currently, the combined storage of Reservoir 9, Reservoir 13 and Mariposa 1 (which also serve these zones) is 8-MG; thus, yielding a 5-MG storage capacity deficiency. To offset this inadequacy and provide redundancy to Reservoir 13, Reservoir 9 should be replaced with a 3.0-MG Reservoir.

3.3.2 Well 9 – Phase II

Replacement of Well 9 requires drilling within 100 feet of the existing well to be considered a replacement well under the existing permit. If drilling / construction of the new well cannot occur within the 100-foot radius, it is still possible to modify the existing permit through additional coordination with the Office of the State Engineer (OSE) coordination. The City intends for the new well to be equipped to provide the permitted 2,419 AFY or 1,500-gpm. The new well will be drilled in accordance with the hydrogeologist’s recommendations. Lastly, as part of this project, the existing power supply will be analyzed and recommendations provided to improve power supply, efficiency, and redundancy to mitigate power outages.

3.3.3 Arsenic Treatment – Phase II

The requirements for treatment at Site 9 will be determined upon well production and water quality testing of the re- drilled Well 9. It is anticipated that arsenic treatment will be required based on other wells in the City’s water system. The existing arsenic treatment has a maximum capacity of 0.95-MGD; therefore, the system will likely need to be expanded or replaced to meet the new capacity.

3.3.4 Distribution – Phase III

20th Street Parallel Line:

An existing 10-inch transmission main in the ROW of 20th Street is the only conveyance means to the City’s system. The line is adequately sized to meet existing demands but falls short in meeting the projected demands. It is recommended, the City install a parallel 16-inch transmission main of approximately 22,000-LF.

To provide a more direct connection to the City’s upper supply wells and to provide redundancy to the City Center Reservoir, a 16-inch transmission main in King Boulevard should be constructed from Reservoir 9 to Rainbow. This line in King Boulevard’s ROW would be approximately 11,000 feet.

3.4 FINANCIAL STATUS OF EXISTING FACILITIES

The City of Rio Rancho will submit the most recent audit and/or financial statement as part of their loan application package. This information will also be submitted to the City’s Finance Department for review and approval of a potential Public Works/Utilities Bond.

3.4.1 Annual Operations and Maintenance (O&M)

The City contracts with Jacobs for operations of all of its water and wastewater system facilities so the O&M costs associated with the existing water system are not directly known.

3.4.2 Current Water Rate Schedule

The new rates became effective July 1, 2019 as approved by the City of Rio Rancho’s Governing Body in Ordinance Title V: Public Works, Chapter 51.12. The City’s current and future charges for water are as follows:

WATER:

Monthly Base Charges: Based on Meter size for all classes:

5/8" Meter.....	\$ 11.73
1" Meter.....	\$ 13.40

Volume Charges per 1,000 Gallons:

Rate is based on class:

Single Family Residential Per Thousand

First 6,000 Gallons.....	\$ 5.41
7,000-10,000 Gallons.....	\$ 5.86
More than 10,000 gallons.....	\$ 6.32

Multi-Family Residential.....	\$ 5.51
Commercial.....	\$ 5.74
Commercial Irrigation	\$ 6.32
City.....	\$ 6.01

Water Rights Acquisition Fee..... \$ 6.00

The greater of the minimum fee (\$6.00) or the volume fee (\$0.50 per 1,000 gallons billed).

3.4.3 Other Capital Improvements

The Infrastructure Capital Improvement Plan (ICIP) adopted by the City of Rio Rancho is a 5 year plan that is updated annually. The plan constantly accounts for necessary existing projects upgrades, repairs, and expansions, including new projects based on growth / demands. As part of this project, four additional future projects have been identified as shown in Table 3-1 and are included in the City's ICIP.

3.4.4 Existing Debt and Required Reserve Account Status

The City does not have any outstanding debt related to any aspect of the Site 9 proposed improvements. The City intends to self-fund the engineering, land acquisition, and tank construction for Phase I. Additionally, the City recently submitted for funds in the total amount between \$10M and \$15M to finance Phases II and III through the New Mexico Finance Authority (NMFA) Drinking Water Revolving Loan Fund. Phases II and III will be funded through NMFA, City Bonds or a combination thereof.

4.1 HEALTH, SANITATION, & SECURITY

Well 9 works in conjunction with Wells 13 and 14 in the City's water distribution system. Well 13 is being re-drilled and is currently unavailable. Well 14 historically has gone offline for various reasons and several times all three wells serving these pressure zones have simultaneously been offline. In February 2015, a boil alert was issued and modifications made to the existing system to supply water to Pressure Zone 6A.

The deteriorated condition of Reservoir 9 presents a cause for concern requiring the City to perform additional water quality testing at this site. The water supplied from the facility continues to meet Drinking Water Standards.

4.2 SYSTEM O&M

The City is the sole water and wastewater utility provider within the project area. The City's Utilities Operation Division subcontracts operation and maintenance of all the water, wastewater, and recycled effluent facilities to Jacobs. Specific operational issues for this project are similar to the existing water transmission systems and include, pump maintenance, treatment maintenance, valve maintenance.

The majority of the proposed improvements, including the new pipeline and reservoir, are not expected to appreciably change the operations or maintenance costs associated with the existing infrastructure. The updated arsenic treatment and well infrastructure O&M costs will be dependent on the well capacity and water quality. In 2013, the City reported an electrical cost associated with Well 9 of about \$170,000 for the year. Assuming the new well is 1,500-feet deep and is pumped at a rate of 1,500-gpm, the cost of electricity to operate the pump would likely be similar to that of Well 19 (depth 1,060-feet, 1,500-gpm) at about \$220,000 per year.

4.3 REASONABLE GROWTH

Land use in the project area is comprised mostly of residential, commercial, and light industrial development and some open space. Additionally, this area is experiencing rapid growth in the medical industry due to the construction of UNM Regional Medical Center and the potential medical centers. With population growth, water demands are will increase. Commercial and industrial growth in the area will also increase the water demand.

The City of Rio Rancho completed their Water Reuse Master Plan in 2018. Population projections were included in this report and were the basis for demand projections. Currently, the peak day for the total system is approximately 17.3 MGD. The peak day in 2021 is projected to be 18.5 MGD.

Based on the 2018 Water Reuse Plan, the City's goal is to meet peak day demand with 75 percent of the well production in service. This will provide system redundancy in the event multiple wells are out of service or unavailable for extended periods, as well allowing to rest wells from continuous operation. To meet these criteria, Well 13 was recommended to come online in 2019; however, the completion of this project is ongoing. Well 13 geohydrology investigations are complete, Well 13 has been re-drilled and is scheduled to be equipped in 2021. Additionally, to meet the 2018 Water Reuse Plan requirements, Well 9 has been identified as the next well to be re-drilled in 2021.

The City Center corridor is seeing increased development after stalling for a number of years after 2008. The Sandoval Regional Medical Center, Rio Rancho Star Center, City offices, and other commercial / institutional facilities are all located in the City Center corridor. This critical region is served by the City Center Reservoir that is currently undersupplied and has limited redundancy. A transmission line within King Boulevard would create a direct connection

between the Reservoir 9 Site and the City Center corridor providing a more direct supply and a redundancy to this area.

4.4 LAND ACQUISITION

The City currently owns the existing Site 9 parcel described as Unit 23, Block 77, Lot 17. To accommodate the new reservoir and well, additional property (lots) will need to be purchased. The additional properties to be purchased include Lots 16, 18, 19, and 20 as shown on Figure 2-2. The City had already received interest from landowners in the vicinity willing to sell their property and required land acquisition has been completed.

The City currently owns the right-of-way along the existing 10-inch transmission line and King Boulevard which for the construction of the proposed transmission mains.

5. ALTERNATIVES CONSIDERED

Three alternatives have been identified and considered viable for this project. Alternatives 1 and 2 consist of designing and constructing the recommended 3 MG Reservoir at Well Site 9. The alternatives consider include; 1) an on grade steel reservoir, 2) an on grade concrete reservoir, and 3) is the "Do Nothing" alternative. The basis of the analysis includes the most beneficial; aesthetically pleasing; cost effective; accessibility; and ability to expand the site.

5.1 ALTERNATIVE 1 – New On Grade 3-MG Steel Reservoir

5.1.1 Description

Alternative 3 includes designing and constructing a 3-MG AWWA D100 welded steel reservoir. The new reservoir will have internal cathodic corrosion protection as a mixing system to prevent short-circuiting. To make the site more aesthetically pleasing, the reservoir will be painted a color to match the existing surroundings.

5.1.2 Design Criteria

A conceptual-level analysis for all considered alternatives was performed using topographic survey and existing facilities. The design will adhere to the following criteria:

Leakage	Zero Measurable Loss
Seismic Criteria	TBD
O&M	15 Year Maintenance

5.1.3 Site Design

Refer to **Figure 2 -3, Project Improvements**

5.1.4 Environmental Impacts

None

5.1.5 Land Requirements

Land requirements for all the alternatives are the same.

Construction Problems

Although varying levels of complexity affect construction costs for the project Alternatives, no significant construction difficulty is anticipated for Alternative 1. The C completed the design and construction of very similar reservoirs throughout its system. Construction issues affecting Alternative 1 are as follows:

- Site Access.
- Site Security
- Seasonal Construction

5.2 ALTERNATIVE 2 – New On-Grade 3-MG Concrete Reservoir

5.2.1 Description

Alternative 2 includes designing and constructing a 3-MG AWWA D110 concrete reservoir. The reservoir will be designed will be designed to provide zero measurable loss for leakage and an internal mixing system to prevent short-circuiting. To make the site more aesthetically pleasing, the reservoir will be stained a color to match the existing surroundings.

5.2.2 Design Criteria

A conceptual-level analysis for all considered alternatives was performed using topographic survey and existing facilities. The design will adhere to the following criteria:

Leakage	Zero Measurable Loss
Seismic Criteria	TBD
O&M	20 Year Maintenance

5.2.3 Site Design

Refer to **Figure 2 -3, Project Improvements**

5.2.4 Environmental Impacts

None

5.2.5 Land Requirements

Land requirements for all three alternatives are the same.

Construction Problems

Although varying levels of complexity affect construction costs for the project Alternatives, no significant construction difficulty is anticipated for Alternative 2. The City completed the design and construction of very similar reservoirs at WWTP 6 in 2014 and Well 10A in 2017. Construction issues affecting Alternative 2 are as follows:

- Site Access.
- Site Security
- Seasonal Construction
- Distance from the concrete source.

5.3 ALTERNATIVE 3 – Do nothing

5.3.1 Description

Leave the site as is and make no additional improvements.

6. SELECTION OF ALTERNATIVE

6.1 PRESENT WORTH ANALYSIS

A comparison of the difference in costs for each alternative on the project essentially leads to the difference in construction and material costs. Alternative 1 offers the cheapest reservoir cost but has the higher O&M cost due to cathodic protection and special coatings requiring more frequent maintenance; however, the frequency and cost of periodic maintenance is not enough to justify the additional construction costs. On this basis, Alternative 1 is the most economical option.

6.2 NON-MONETARY FACTORS

Non-monetary factors are the same for the alternatives.

6.3 ADVANTAGES / DISADVANTAGES

ITEM	ALTERNATE 1	ALTERNATE 2	ALTERNATE 3
Leakage	Zero Measurable Loss	Zero Measurable Loss	NA
Seismic Criteria	TBD	TBD	NA
O&M	15 Year Maintenance Free	20 Year Maintenance Free	NA
O&M Costs	Moderate	Low	NA
Site Access	Easy	Easy	NA
Cost	Lowest	Highest	NA
Manpower Access	Moderate	Moderate	NA

7. PROPOSED PROJECT / RECOMMENDED ALTERNATIVE

7.1 PROJECT DESIGN

Alternative 1 includes the design and construction of a 3-MG AWWA D100 welded steel reservoir. The reservoir will be designed for a volume of 3 MG per the “Technical Memorandum for the City of Rio Rancho Site 9 Proposed Improvements,” Bohannon Huston, Inc., (2018).

7.2 TOTAL PROJECT COST ESTIMATE

Engineer’s Estimate of Probable Cost

Item	Uni	Unit Price	Quantity	Amount
3MG Steel Reservoir	Gal	\$0.90	3,000,000	\$2,700,000
Well 9 Drilling and Equipping	EA	\$5,500,000	1	\$5,500,000
Arsenic Treatment Facility modifications	EA	\$3,250,000	1	\$3,250,000
16-inch Parallel Waterline in 20th St	LF	\$100	22,000	\$2,200,000
New 16-inch Waterline in King	LF	\$100	11,000	\$1,100,000
Subtotal				\$14,750,000
Preliminary Capital Costs				
Contingency			20%	\$2,950,000
Engineering and Construction Administration			15%	\$2,212,500
NMGRT			7.6875%	\$1,530,774
TOTAL				\$21,443,274

7.3 ANNUAL OPERATING BUDGET

Operations budget for the reservoir will approximately \$50,000.00 every 15 years for recoating and cathodic protection maintenance. The updated arsenic treatment and well infrastructure O&M costs will be dependent on the well capacity and water quality. In 2013, the City reported an electrical cost associated with Well 9 of about \$170,000 for the year. Assuming the new well is 1,500-feet deep and is pumped at a rate of 1,500-gpm, the cost of electricity to operate the pump would likely be similar to that of Well 19 (depth 1,060-feet, 1,500-gpm) at about \$220,000 per year.

7.4 FUNDING AND DEBT REPAYMENT PLAN

The City intends to self-fund the engineering, land acquisition, and tank construction for Phase I. Additionally, the City recently submitted for funds in the total amount between \$10M and \$15M to finance Phases II and III through the New Mexico Finance Authority (NMFA) Drinking Water Revolving Loan Fund. Phases II and III will be funded through NMFA, City Bonds, or a combination thereof.

8. CONCLUSIONS & RECOMMENDATIONS

Given the discussion above, Alternative 1 is the recommended construction for the new 3 MG reservoir at Site 9. The reservoir shall be designed in accordance with AWWA D100 welded steel tank specifications. As the demand for potable water increases in the rapidly growing Rio Rancho metropolitan area, efficient use of potable water becomes imperative.

Appendix A

Technical Memorandum for the City of Rio Rancho Site 9, Bohannon Huston (September 2018)



Michelle Lujan Grisham
Governor

Howie C. Morales
Lt. Governor

**NEW MEXICO
ENVIRONMENT DEPARTMENT**

Construction Programs Bureau

121 Tijeras Ave NE, Ste. 1000
Albuquerque, New Mexico 87102-3400
Phone (505) 222-9500 Fax (505) 222-9510
www.env.nm.gov/construction-programs



James C. Kenney
Cabinet Secretary

Jennifer J. Pruett
Deputy Secretary

January 7, 2020

Mr. Todd Johansen
Senior Program Administrator – Drinking Water Program
New Mexico Finance Authority
207 Shelby Street
Santa Fe, NM 87501

RE: Approval of the Technical Memorandum for the City of Rio Rancho Site 9 Proposed Improvements

Mr. Johansen:

The New Mexico Environment Department Construction Programs Bureau (NMED-CPB) approved the technical memorandum for the City of Rio Rancho Site 9 Proposed Improvements on September 14, 2018. This letter serves as NMED-CPB reaffirmation that the document adequately defines the scope and need for the project. CPB hereby approves the technical memorandum.

Should you have any question or comments, I can be reached at 505-222-9567 or e-mail at david.bishop@state.nm.us.

Sincerely,

A handwritten signature in blue ink that reads "David E. Bishop".

David E. Bishop, P.E.
Technical Section Manager

cc: Jim Chiasson, P.E., City of Rio Rancho
file

Courtyard I
7500 Jefferson St. NE
Albuquerque, NM
87109-4335
www.bhinc.com
voice: 505.823.1000
facsimile: 505.798.7988
toll free: 800.877.5332

MEMORANDUM

DATE: August 17, 2018

TO: Jim Chiasson, PE, City of Rio Rancho

FROM:  Nathan Roberts, PE
Cole Bedford, PE

SUBJECT: City of Rio Rancho Site 9 Proposed Improvements

The City of Rio Rancho is seeking funding assistance to update and expand Site 9. Rio Rancho has identified this site as a critical facility for existing and future operations. Site 9 currently includes a well, storage tank, and arsenic treatment building.

The following technical memorandum has been prepared in accordance with the New Mexico Environment Department (NMED) Construction Programs Bureau (CPB) Technical Memorandum Outline.

1. Background and Existing Conditions

The City of Rio Rancho is the largest community in Sandoval County. It is located immediately North of Albuquerque along the west side of the I-25 corridor. The City covers an area of 103.7 square miles and has a population of nearly 100,000. The water distribution system includes approximately 560 miles of water line, 32 million gallons per day (MGD) of supply from ground water wells, and 44 MG of storage.

Site 9 is located west of City Center, outside City limits, off King Boulevard and is a critical location for existing and future operations. Tank 9 has an overflow elevation of 6,080 feet above mean sea level. This tank sets the hydraulic grade line for Zone 7 of the City's water distribution system. Currently, no customers exist in this pressure zone and pressure from this supply is reduced to Pressure Zone 6A near Northern Boulevard. Tank 9 has recently been inspected and recommended for replacement.

Pressure Zone 6 is divided into 6A and 6B as the pressure zone piping is not interconnected between the northern and southern portions. The customer elevations of 6A and 6B are approximately the same. Site 9 has the ability to serve both portions off Pressure Zone 6 with the buildout infrastructure.

Tank 9 is filled by Well 9 which was installed in 1984. It had an original production rate of approximately 950 gpm. However, sand production deteriorates the pump capacity to 450 gpm between every two to four years period requiring pump replacement. Furthermore, the well was never equipped to fulfill either of its permit limits of 2,419 acre-feet per year (AFY), or continuous pumping of 1,500 gpm under permit RD-26259.

Well 9 was drilled to a depth of 1,540 feet. The well was not drilled plumb but has a dog leg in the alignment which has created maintenance issues at the facility. The well is also susceptible to lightning strikes, causing periodic outages of Well 9 and limiting supply to the City. The limited storage of Tank 9 has been inadequate during recent events, and Tank 13 is required to supplement supply for the customers in Pressure Zone 6A and below.

Water from Well 9 is treated with a Hungerford and Terry coagulation and filtration arsenic treatment system. Water is also chlorinated with ferric and PH adjustment prior to entering the water distribution system.

From Site 9, water is conveyed through a 10-inch transmission line, approximately 4.5 miles in length, which connects the existing infrastructure at 10th Street and 12th Avenue off Northern Boulevard. A pressure reducing valve (PRV) at this location reduces the hydraulic gradient to match Zone 6B.

Tanks 9 and 13 have matching overflow elevations which, in theory, allow Booster Station 8 to pump to either tank location. In order for this to happen, a new waterline from the 16-inch transmission line in Northern Blvd would need to have a lateral constructed along 10th St. and connect north of the existing PRV mentioned. Additionally, a new transmission line would need to be constructed between the PRV in 10th St and Tank 9, so headloss along this corridor would equal the headlosses to Tank 13. With these improvements, Tanks 9 and 13 would float with each other and provide reliability and redundancy to these facilities as well as customers in Zone 6A and 6B.

Figure 1 shows the City's water distribution system overview, and Figure 2 shows the project vicinity and infrastructure. Also, Appendix A shows the distribution system in schematic format developed as part of the Ultimate System Master Plan.

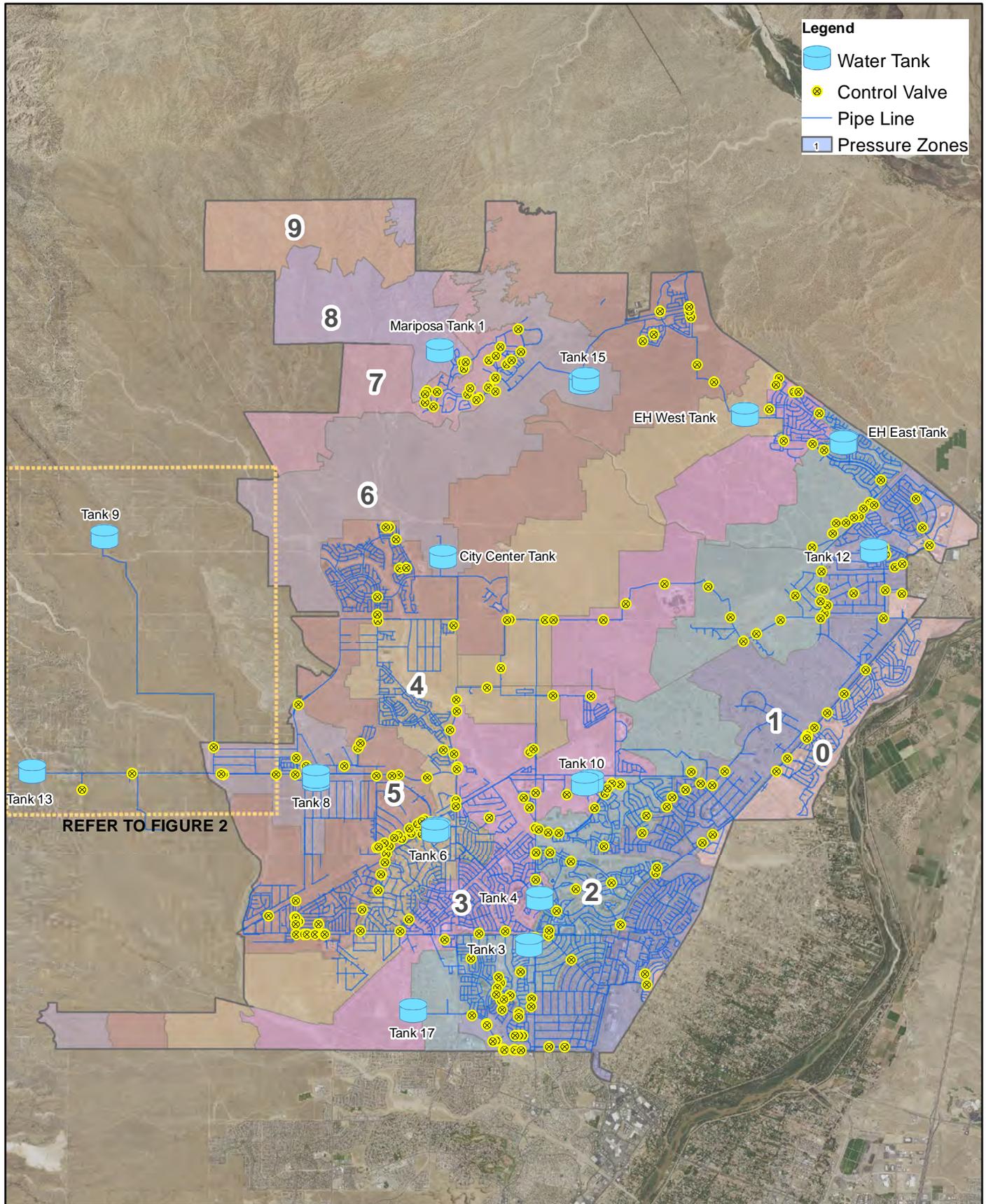
2. Project Need

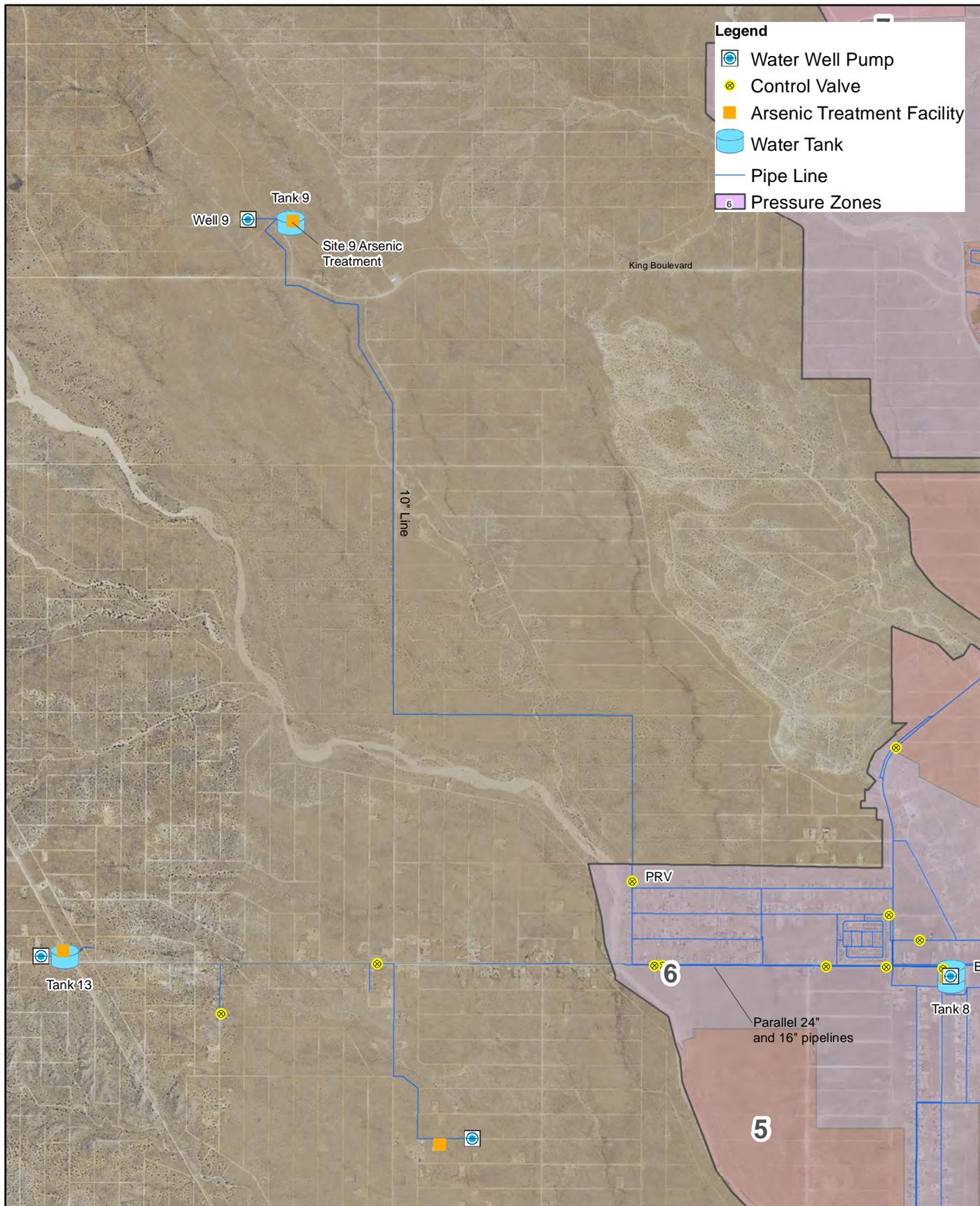
Site 9 is undersized, deteriorating, and in need of upgrades. Several current factors limit the effectiveness of the facility. A single 10-inch transmission line limits conveyance capacity to developed areas of the City. Over the years, Well 9 has seen decreased production, and the existing 200,000-gallon ground storage tank has recently been inspected and is recommended for replacement. In order to reliably supply existing and future customers, Site 9 needs to be redeveloped.

a. *Health, Sanitation and Security*

Well 9 works in conjunction with Wells 13 and 14 in the City's water distribution system. Well 13 is being re-drilled and is currently unavailable. Well 14 has gone down for extended periods in the past, and at times all three wells have been down at once. In February 2015, a boil alert was issued and modifications made to the existing system to supply water to Pressure Zone 6A.

The deteriorated condition of Tank 9 is cause for concern. Consequently, the City has been observing and testing the water quality at this site. To date, the water supplied from the facility continues to meet Drinking Water Standards.





b. *Aging Infrastructure / Reliability*

The site was developed in the mid 1980's. The current facilities are over 30 years old and are deteriorating. Well 9 was never equipped to meet its permit limits, and the well hole is not straight, resulting in maintenance issues. The well has seen a decrease in production due to sanding and is susceptible to power outages.

c. *Reasonable Growth*

The City of Rio Rancho completed their Water Reuse Master Plan in 2018. Population projections were included in this report and were the basis for demand projections. Currently, the peak day for the total system is approximately 17.3 MGD. The peak day in 2021 is projected to be 18.5 MGD.

As identified in the 2018 Water Reuse Plan, the City's goal is to be able to meet peak day demand with 75 percent of the well production. This provides system redundancy if several wells are out of service or unavailable and provides the ability to rest wells from continuous operation. In order to meet these criteria, Well 13 was recommended to come online in 2019. Well 13 improvements are currently under construction, and the City is on track to have Well 13 re-drilled in by the end of 2018. Another well is recommended to meet projected growth in 2021. Well 9 has been identified as the next well to be re-drilled.

The City Center corridor is seeing increased development which stalled for a number of years after 2008. The Sandoval Regional Medical Center, Rio Rancho Star Center, City offices, and other commercial and institutional facilities are all located in the City Center corridor. This critical region is served by the City Center Tank which is currently undersupplied and has limited capacity to maintain water levels. A transmission line along King Boulevard would create a direct connection between the Tank 9 Site and the City Center corridor, providing a more direct supply to customers in this area.

3. Proposed Improvements

The City's water distribution system (WDS) model was used to evaluate the hydraulic effectiveness of proposed facilities. The WDS model has spatially allocated demand by billing data for existing conditions as well as demands for future growth models, including ultimate buildout.

Proposed improvements for the Site 9 infrastructure include:

- replacing the existing Tank 9 with a new tank sized to provide adequate storage capacity and redundancy, working in conjunction with Tank 13;
- re-drilling Well 9 and increasing its yield up to permitted limits; and
- adding additional arsenic treatment capacity to the existing treatment facility.

New transmission lines will be required to effectively and efficiently transfer supply from Site 9 and include:

- a new transmission line parallel to the existing 10-inch transmission line; and
- a new transmission line along King Blvd with connection to existing infrastructure.

a. *Description of Projects*

i. *Tank 9*

Tank 9 most directly serves Pressure Zone 6A but is hydraulically capable of serving Zone 6B as well. It is expected that the combined peak day demands of Zones 6A and 6B, at full build out, will be approximately 28 MGD. Given this demand and the City's design standard for total storage, the storage requirement to serve the Zones is approximately 13 MG. As they currently exist, the combined storage of Tank 9, along with Tank 13 and Mariposa 1 which also serve these zones, are not adequate to meet the demands with a storage shortfall of 5.0 MG. At this time, it is recommended that Tank 9 be replaced with a 2.0 MG to 3.0 MG tank to provide full redundancy to Tank 13 and the additional storage needed to accommodate full build-out conditions be installed at a later date.

ii. *Well 9*

Replacement of Well 9 requires drilling within 100 feet of the existing well in order to be considered a replacement well under the existing permit. Siting the new well within this radius would be ideal; however, if it is not feasible to do so, building outside of it is possible with additional Office of the State Engineer (OSE) coordination. The City would like this well to be re-drilled and equipped to fulfill the 2,419 AFY of water permitted for this well. The new well will be drilled in accordance with the hydrogeologist's recommendations. Furthermore, power availability will be analyzed and extended as necessary to mitigate power outages.

iii. *Site 9 Water Treatment*

The requirements for treatment at Site 9 will be determined upon testing of the re-drilled Well 9. It is anticipated that arsenic treatment will be required based on other wells in the City's water system. Based on the future well capacity and assumed arsenic contamination, the existing arsenic treatment system will likely need to be expanded or replaced to meet the new capacity.

iv. *20th Street Parallel Line*

A 10-inch pipeline conveys flows from Site 9 southward toward Zone 6A in the right-of-way of 20th Street. While the existing pipe is adequate to convey existing required flows, it does so with significant pipe friction losses. In order to convey additional flows which will be required as demand increases as well as to reduce the friction losses, a parallel 16-inch pipeline of 22,000 feet is recommended.

v. *King Boulevard New Connector Line*

In order to address the limited connectivity between Zones 6A and 6B, it is proposed that a connector line, 16-inch in diameter, be installed from the new Tank 9 to the City Center corridor. This line would follow the King Boulevard right-of-way for approximately 11,000 feet.

b. Basis of Design / Design Criteria

The basis of design for these projects are the City of Rio Rancho's Development Process Manual (DPM). In addition to the City's DPM, the NMED's Recommended Standards for Water Facilities and associated AWWA Guidelines and Standards will be used.

The sizing of the facilities is based on information in previous reports by the City of Rio Rancho including the Reuse Master Plan (2018) and other planning documents. Undeveloped areas within the City limits have future demand projections based on land use demand factors in the City's DPM.

Facilities will be designed with a wholistic perspective on future growth and facility consistency.

c. Land Requirements

The City currently owns the existing Site 9 parcel. The City intends to purchase additional parcels near the current Site 9 as needed for new facilities. The City has already received interest from landowners in the vicinity who are willing to sell their land.

The City currently owns the right-of-way along the existing 10-inch transmission line and King Boulevard which can be utilized for any improvements in those areas.

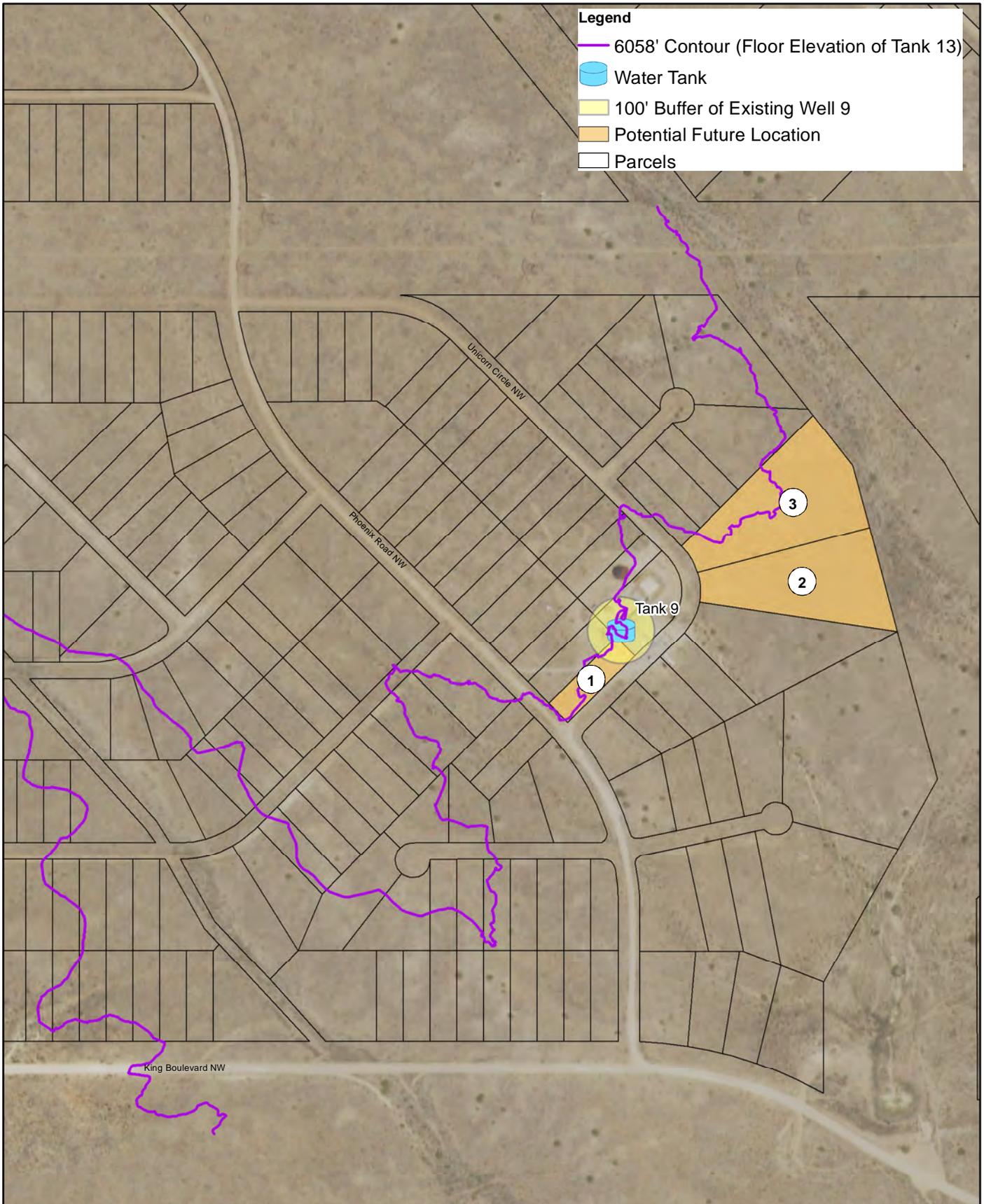
Figure 3 identifies three parcels which could support Site 9 improvements.

1. Parcel 1 would allow for Well 9 to be relocated within 100 feet of its current location. It is adjacent to the existing Well 9 parcel which would allow the City to easily utilize both. The 6,058 ft contour line also crosses the parcel which would make it convenient for placing a new tank with the same overflow elevation as the existing.
2. Parcel 2 would not allow the new Well 9 to be sited within 100 feet of its current location but would allow the new well to be placed about 300 feet away. The parcel is large enough to allow for larger or more spread out infrastructure than currently exists. The 6,058 ft contour line does not cross Parcel 2, which would require either a taller tank to match the existing overflow or earthwork to raise the ground level.
3. Parcel 3 is the largest of the three potential parcels but also the furthest away from the current well site. The 6,058 ft contour line does cross it, and it borders an arroyo on its back side which might offer a convenient place to direct overflows.

If feasible, the new well should remain on the existing site. Parcel 3 is recommended for supporting infrastructure due to its size and proximity of the arroyo adjacent to the site.

d. Potential Construction Problems

It is currently assumed that Well 9 will have a capacity equal to that of its permitted allowance; however, hydrogeological investigations have not been conducted, and it is possible that the new well may not be able to meet the permitted allowance.



Legend

- 6058' Contour (Floor Elevation of Tank 13)
- Water Tank
- 100' Buffer of Existing Well 9
- Potential Future Location
- Parcels

RRioRancho
City of Vision

Bohannon & Huston
www.bhinc.com 800.877.5332

0 200 400 Feet
1 in = 400 ft

**City of Rio Rancho
Water Distribution System
Figure 3
Site 9 Potential Parcels**

e. *Permit Requirements*

Any changes to the existing water distribution system will need to be reviewed by the New Mexico Environment Department (NMED). Approval may or may not be required based on the various projects.

The Office of the State Engineer will need to approve the permit to replace Well 9. If the new location of the proposed Well 9 is greater than 100 feet from the existing wellhead, further coordination and permitting will be required by the OSE.

Site 9 is located within Sandoval County. The City will need to verify whether any permits are required by the county or if work is included in their franchise agreement.

Based on the funding source an environmental clearance will be required prior to construction.

4. **Cost**

Preliminary estimates of the project's associated cost are detailed below including construction costs, annual operations and maintenance costs, and an analysis of the project's lifecycle costs.

a. *Preliminary Construction Cost Estimate*

Table 1: Engineer's Estimate of Probable Cost

Item	Unit	Unit Price	Quantity	Amount
Tank 9A, 3MG Steel Tank	Gal	\$0.90	3,000,000	\$2,700,000
Well 9 Drilling and Equipping	EA	\$5,500,000	1	\$5,500,000
Site 9 Arsenic Treatment and Building modifications	EA	\$3,250,000	1	\$3,250,000
20th Street Parallel Line and appurtenances, 16" DIP	LF	\$100	22,000	\$2,200,000
King Blvd Connector and appurtenances, 16" DIP	LF	\$100	11,000	\$1,100,000
Preliminary Capital Costs				
Contingency			20%	\$2,950,000
Engineering and Construction Administration			15%	\$2,655,000
NMGRT			7.5625%	\$1,539,000
TOTAL				\$21,894,000

b. *Annual O&M*

Most of the proposed improvements, including the new pipeline construction and the replacement tank, are not expected to appreciably change the operations or maintenance costs associated with the existing infrastructure. The updated arsenic treatment and well infrastructure O&M costs will be dependent on the well capacity and water quality. In

2013, the City reported an electrical cost associated with Well 9 of about \$170,000 for the year. Assuming the new well is 1,500 feet deep and is pumped at a rate of 1,500 gpm, the cost of electricity to operate the pump would likely be similar to that of Well 19 (1060 feet, 1500 gpm) at about \$220,000 per year.

c. *Life Cycle Cost Analysis*

Table 2 Shows the probable life cycle costs for a 20-year period for the proposed improvement.

Table 2: Probable Life Cycle Costs for 20-year period

Component	Year 5	Year 10	Year 15	Year 20	PW of Capital Maintenance Costs
Tanks 9 Recoating			\$50,000		\$42,000
Well 9 Routine Brushing of Screen	\$10,000	\$10,000		\$10,000	\$26,000
Well 9 Brushing and Acidization			\$50,000		\$42,000
TOTAL					\$110,000

NOTE: All Costs Assuming 1.2% Inflation

5. Schedule

Based on the work elements and costs, construction is anticipated to be phased. Below is an estimated schedule of construction.

Table 3: Estimated Construction Schedule

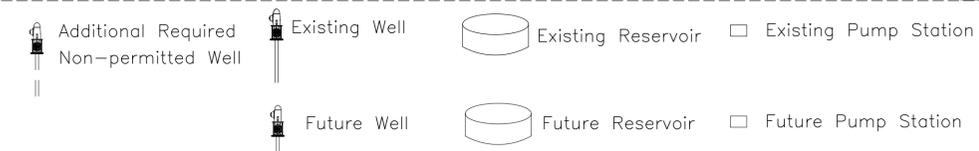
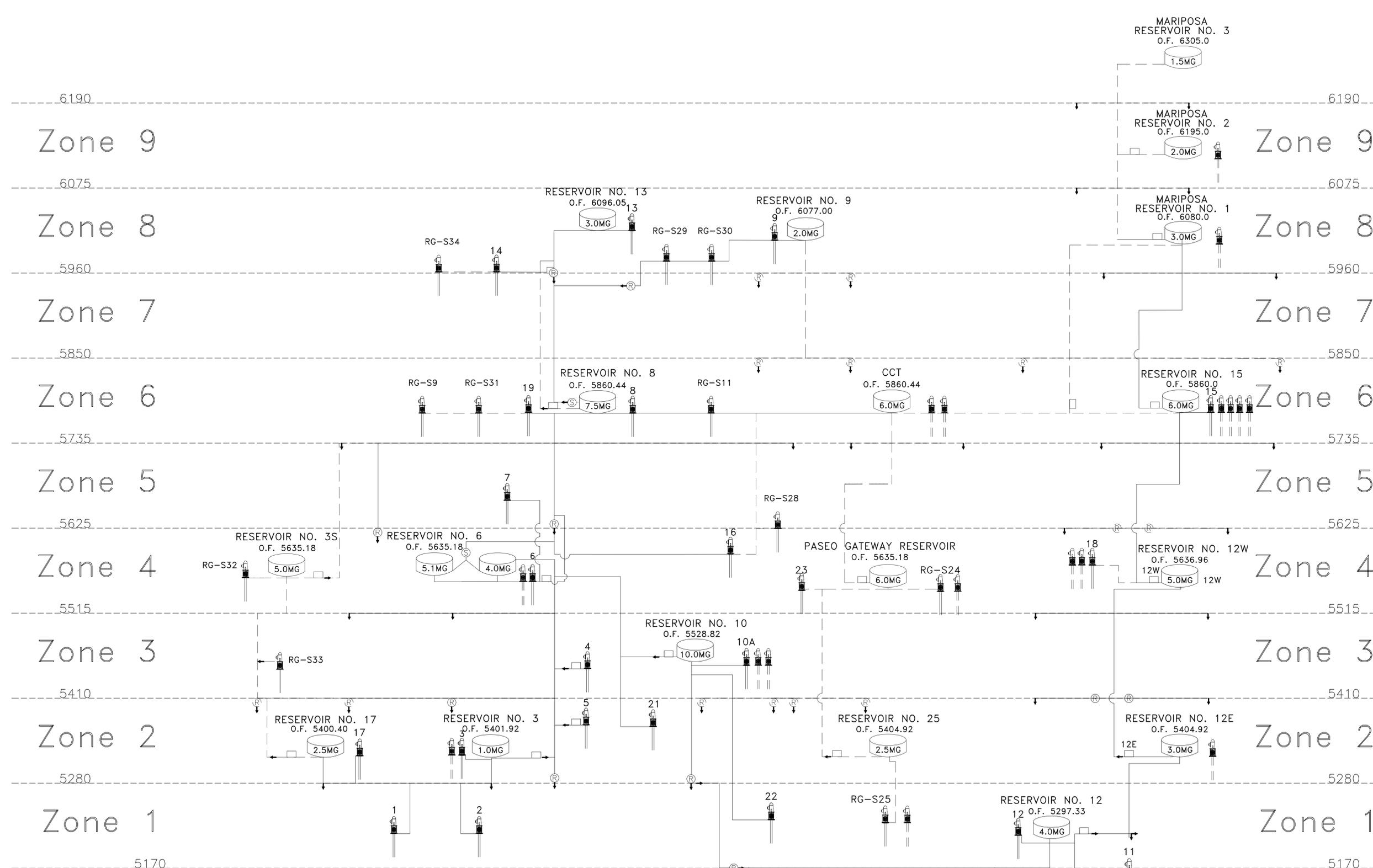
Construction Item	Approximate Start Date
Storage Tank and Demolish Old	Fall 2019
Well Drilling	Spring 2020
Parallel 10-inch Transmission Line	Summer 2020
Well Equipping	Spring 2021
Arsenic Treatment	Spring 2021
King Boulevard Connector Line	Fall 2021

6. Conclusions and Recommendations

The City of Rio Rancho needs to replace the existing Tank 9 and Well 9 to provide reliable supply to their existing and future customers. As a result of these needs, supporting infrastructure is required to send the water to where it is needed at the required standard.

APPENDIX A

City of Rio Rancho Water System Schematic



Ultimate City Limits System
HYDRAULIC PROFILE

C:\Users\cbelora\AppData\Local\Temp\AcPublish_5920\ultimate_city_limits_hydrograph_with_additional_supply.dwg
Jul 10, 2018 - 9:41am

APPENDIX I. PUBLIC HEARING DOCUMENTATION

APPENDIX J. CONSULTATION RESPONSES

Subject Fwd: Rocky Mountain Ecology-Construction of a New Water Storage Tank located at Well Site 9 Project
From Shawn C. Knox <knox@rockymountainecology.com>
To Clay Bowers <bowers@rockymountainecology.com>
Date 2020-04-08 11:29



- image002.png (~7 KB)
- 20200408-Rocky Mountain Ecology-Construction of a New Water Storage Tank located at Well Site 9 Project-966320200408.pdf (~1.2 MB)

Shawn C. Knox
www.rockymountainecology.com
505.992.6150

Begin forwarded message:

From: "Richard M. Begay" <r.begay@navajo-nsn.gov>
Date: April 8, 2020 at 1:16:27 PM EDT
To: "knox@rockymountainecology.com" <knox@rockymountainecology.com>
Cc: Timothy Begay <tbegay@navajo-nsn.gov>
Subject: FW: Rocky Mountain Ecology-Construction of a New Water Storage Tank located at Well Site 9 Project

Good morning sir,

I reviewed the information for the proposed undertaking and do not have any concerns or questions. Please proceed with the project without further consultation with the Navajo Nation.

Thank you,

Richard M Begay, THPO

NN Heritage and Historic Preservation Dep't

From: Brian Begaye <bbegaye@navajo-nsn.gov>
Sent: Wednesday, April 8, 2020 10:36 AM
To: Richard M. Begay <r.begay@navajo-nsn.gov>; Rudolph R. Shebala <rudyshebala@navajo-nsn.gov>
Cc: Jonathan Nez <jonathannez@navajo-nsn.gov>; Myron Lizer <myronlizer@navajo-nsn.gov>; Paulson Chaco <paulsonchaco@navajo-nsn.gov>; Milton Bluehouse Jr. <mbluehouse@navajo-nsn.gov>; James J. Davis, Jr <jjdavisjr@navajo-nsn.gov>; Christopher T. Bahe <cbahe@navajo-nsn.gov>; Sharon Yazzie <shyazzie@navajo-nsn.gov>; Brenda Yazzie <brendayazzie@navajo-nsn.gov>; Sarah L. Woodie-Jackson

<swoodie-jackson@navajo-nsn.gov>; Ettie Anderson <eanderson@navajo-nsn.gov>

Subject: Rocky Mountain Ecology-Construction of a New Water Storage Tank located at Well Site 9 Project

FWD: NN Division of Natural Resources.

File attached.

Ahéhee',

(Thank you)

Brian Begaye II

Administrative Assistant

THE NAVAJO NATION

Office of the President & Vice President

P.O. Box 7440 | 100 Parkway | Window Rock, AZ 86515

Office: (928) 871-7000 | Facsimile: (928) 871-4025

E-mail: bbegaye@navajo-nsn.gov

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ROCKY MOUNTAIN ECOLOGY

ENVIRONMENTAL CONSULTING | APPLIED RESTORATION SERVICES

March 24, 2020

H. Kane Bieri
1308 Inca Rd. NE
Rio Rancho, NM 87124-4267

RE: Construction of a New Water Storage Tank located at Well Site 9 Project

To Whom It May Concern:

The City of Rio Rancho has received funding for the Construction of a New Water Storage Tank located at Well Site 9 Project. We are gathering information for an environmental review of the referenced project. The project is described in the attached project summary sheet and the location is depicted on the attached maps.

Reservoir 9 is filled by Well 9 which was constructed in 1984. Reservoir 9 is located west of City Center, outside City limits, off King Boulevard, in Sandoval County. Over the years, Well 9 has seen decreased production, and the existing 200,000-gallon ground storage tank has recently been inspected and is recommended for replacement. Therefore, it is proposed that 1) the existing Tank 9 be replaced with a new tank sized to provide adequate storage capacity and redundancy, working in conjunction with Tank 13; 2) re-drill Well 9 and increase its yield up to permitted limits; and 3) adding additional arsenic treatment capacity to the existing treatment facility, if required.

The City has contracted with Huitt-Zollars, Inc. (HZI) for design of this system. Rocky Mountain Ecology, LLC (RME) is preparing an environmental information document to comply with the National Environmental Policy Act. RME is gathering information for an environmental review of the proposed project, which requires coordination with stakeholders. **Your input on the proposed project is an important element of this review process.** Please inform us of any concerns you may have regarding line of sight, noise issues, etc., from the proposed project.

Surveys for cultural and biological resources were conducted during March of 2020. We have made an initial determination that this project will not have a significant environmental impact within the context of the NEPA. Please provide your comments by completing and returning a copy of the acknowledgement via email to: knox@rockymountaineology.com, or by mail at P.O. Box 45193, Rio Rancho, NM 87174.

To provide verbal comments or for more information, please contact me at 505.992.6150 or by email.

Shawn C. Knox, Principal - Rocky Mountain Ecology LLC

ACKNOWLEDGEMENT:

As a representative for the referenced organization, the undersigned acknowledges receipt of this request for comment, and having reviewed the attached project summary and additional information, if provided,

concurs with the initial determination, or, - has no comments.

Signature: H. Kane Bieri Date: 3-31-20

Name: H. KANE BIERI Title: Howe OWNER

Subject FW: Construction of a New Water Storage Tank located at Well Site 9 Project
From shawn knox <knox@rockymountainecology.com>
To 'Clay Bowers' <bowers@rockymountainecology.com>
Date 2020-04-07 06:27



From: Roth, Daniela, EMNRD <Daniela.Roth@state.nm.us>
Sent: Monday, April 6, 2020 5:29 PM
To: 'knox@rockymountainecology.com' <knox@rockymountainecology.com>
Subject: RE: Construction of a New Water Storage Tank located at Well Site 9 Project

Dear Shawn Knox:

Thank you for providing me with the opportunity to review and comment on the construction of a New Water Storage Tank located at Well Site 9, in Rio Rancho, Bernalillo County, NM. I concur with your determination that the project will not significantly impact any state listed endangered plants.

Sincerely,

Daniela Roth

Botany Program Coordinator

EMNRD – Forestry Division

1220 S. Saint Francis Drive

Santa Fe, NM 87505

505-476-3347

<http://www.emnrd.state.nm.us/SFD/>

Subject RE: Rio Rancho Reservoir #9 Project , Sole Source Aquifer (SSA) Program: Reviewed, (FYI: We have moved and have a New Address & Mail Code, please see below.)



From Martinez, Omar <Martinez.Omar@epa.gov>
To Clay Bowers <bowers@rockymountainecology.com>
Cc knox@rockymountainecology.com
<knox@rockymountainecology.com>, Ray, Lauren
<Ray.Lauren@epa.gov>, Dellinger, Philip
<dellinger.philip@epa.gov>, Martinez, Omar
<Martinez.Omar@epa.gov>
Date 2020-03-27 12:36

Dear Mr. Clay Bowers:

We have received your March 24, 2020, letter requesting our evaluation of the potential environmental impacts that might result from the following project:

**Propose Construction of a New Water Storage Tank located at Well Site 9 Project
Phoenix Road NW & Unicorn Cir NW, Near King Blvd NW
General Area: Lat: 35.323188, Long: -106.785302
City of Rio Rancho, Sandoval County, NM 87004**

In administering the sole source aquifer (SSA) program under Section 1424 of the Safe Drinking Water Act our Office performs evaluations of projects with federal financial assistance which are located over a designated sole source aquifer.

Based on the information provided, we have concluded that the project does not lie within the boundaries of a designated sole source aquifer and is thus not eligible for review under the SSA program.

EPA intends to evaluate and respond to all projects submitted for formal review or evaluation purposes within forty-five (45) calendar days, from the Stamped Date the project is received by the EPA. However, if EPA is unable to complete its review within that timeframe, no assumption of a determination of a lack of impacts can be made. EPA acknowledges our approval is not required by law for the project to proceed with funding.

If you did not include a project description, project location, the parish, area map, plat and the federal funding agency if available, please do so in future Sole Source Aquifer correspondence.

If you have any questions on this letter or the SSA program, please contact me at (214) 665-8485

Sincerely yours,

 Omar T. Martinez, Coordinator
 Sole Source Aquifer Program
 Ground Water/UIC Section

Date: March 27, 2020

FYI: We have moved and have a New Address & Mail Code, please see below.

Omar T. Martinez, Environmental Scientist
 Sole Source Aquifer Program Coordinator
 Ground Water/UIC Section (Mail Code: WDDG)
 U.S. Environmental Protection Agency, Region 6,
 1201 Elm Street, Suite 500
 Dallas, Texas 75270

=====

Thanks,

Omar T. Martinez
 Environmental Scientist

 GW/UIC Program Manager
 Sole Source Aquifer Coordinator
 Ground Water/UIC (WDDG)
 U.S. EPA / Region 6

 Direct: (214) 665-8485
 Fax: (214) 665-2191
 Martinez.Omar@epa.gov

Roll-Tide-Roll, . . . Go BAMA!



ROCKY MOUNTAIN ECOLOGY

ENVIRONMENTAL CONSULTING | APPLIED RESTORATION SERVICES

March 24, 2020

NM Department of Transportation
Environmental Design Bureau
P.O. Box 1149
Santa Fe, NM 87504

RE: Construction of a New Water Storage Tank located at Well Site 9 Project

To Whom It May Concern:

The City of Rio Rancho has received funding for the Construction of a New Water Storage Tank located at Well Site 9 Project. We are gathering information for an environmental review of the referenced project. The project is described in the attached project summary sheet and the location is depicted on the attached maps.

Reservoir 9 is filled by Well 9 which was constructed in 1984. Reservoir 9 is located west of City Center, outside City limits, off King Boulevard, in Sandoval County. Over the years, Well 9 has seen decreased production, and the existing 200,000-gallon ground storage tank has recently been inspected and is recommended for replacement. Therefore, it is proposed that 1) the existing Tank 9 be replaced with a new tank sized to provide adequate storage capacity and redundancy, working in conjunction with Tank 13; 2) re-drill Well 9 and increase its yield up to permitted limits; and 3) adding additional arsenic treatment capacity to the existing treatment facility, if required.

The City has contracted with Huitt-Zollars, Inc. (HZI) for design of this system. Rocky Mountain Ecology, LLC (RME) is preparing an environmental information document to comply with the National Environmental Policy Act. RME is gathering information for an environmental review of the proposed project, which requires coordination with stakeholders. **Your input on the proposed project is an important element of this review process.** Though the proposed action would not take place within NMDOT right-of-way, we would like your review and comments.

Surveys for cultural and biological resources were conducted during March of 2020. We have made an initial determination that this project will not have a significant environmental impact within the context of the NEPA. Please provide your comments by completing and returning a copy of the acknowledgement via email to: knox@rockymountaineology.com, or by mail at P.O. Box 45193, Rio Rancho, NM 87174.

To provide verbal comments or for more information, please contact me at 505.992.6150 or by email.

Shawn C. Knox, Principal - Rocky Mountain Ecology LLC

ACKNOWLEDGEMENT:

As a representative for the referenced organization, the undersigned acknowledges receipt of this request for comment, and having reviewed the attached project summary and additional information, if provided,

concurs with the initial determination, or, has no comments.

Signature: Date: 3/27/20

Name: Kasey Miller Title: Environmental Scientist

P.O. Box 45193
Rio Rancho, NM 87174

(505) 992-6150
knox@rockymountaineology.com



||IRECTOR A|| D SECRETAR||
TO T|| E COMMISS||O||
Michael B. Sloane

STATE OF NEW MEXICO DEPARTMENT OF GAME & FISH

One Wildlife Way, Santa Fe, NM 87507
Post Office Box 25112, Santa Fe, NM 87504
Tel: (505) 476-8000 | Fax: (505) 476-8131
For information call: (888) 248-6866

www.wildlife.state.nm.us

STATE GAME COMMISSION
SHARON SALAZAR HICKEY
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ROBERTA SALAZAR-HENRY
Vice-Chair
Las Cruces
JIMMY RAY BATES, SR.
Albuquerque
GAIL CRAMER
Mayhill
TIRZIO J. LOPEZ
Cebolla
DAVID SOULES
Las Cruces
JEREMY VESBACH
Placitas

23 April 2020

Mr. Shawn C. Knox, Principal
Rocky Mountain Ecology LLC
PO Box 45193
Rio Rancho, NM 87174

RE: Construction of a New Water Storage Tank located at Well Site 9 Project; NMDGF # NMERT-541.

Dear Mr. Knox:

In response to your request for review regarding the above referenced project, the Department of Game and Fish (Department) does not anticipate significant impacts to wildlife or sensitive habitats. For your information, we have enclosed a list of sensitive, threatened and endangered species that may occur within a mile of the project area. Burrowing Owl (*Athene cunicularia*) is one species known to occur within Sandoval County and could occur within the project area. We recommend that a preliminary survey be conducted by qualified biologists during the time period when Burrowing Owls are most likely to occur. This is typically during the breeding season which is from April – September before any ground disturbing activities occur. However, in the southern half of the state and during warmer winters in the more northern parts, some owls may remain on territory year round. For your convenience we have enclosed a copy of our recommended survey protocol for your use. Should burrowing owls be documented within the project area we recommend that you contact the Department or the U.S. Fish and Wildlife Service (USFWS) for further recommendations regarding nest site mitigation measures or owl relocation techniques in order to avoid impacts that could result in take.

Included below are sources of additional information:

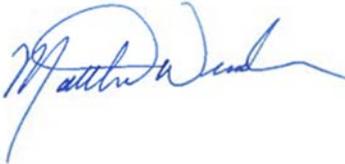
1. For Biota Information System of New Mexico (BISON-M) species accounts, searches, and county lists go to bison-m.org.
2. For the Department's Habitat Handbook Project guidelines go to <http://www.wildlife.state.nm.us/conservation/habitat-information/habitat-handbook/>.
3. For custom, site-specific database searches on plants and wildlife go to nhnm.unm.edu.
4. For state-listed plants go to nmrareplants.unm.edu/index.html.
5. For the most current listing of federally listed species **always** check the U.S. Fish and Wildlife Service's Information, Planning, and Conservation website at <http://ecos.fws.gov/ipac/>.

Please note that future requests of this nature may be submitted to the Department's online Environmental Review Tool at <https://nmert.org/>. This interactive tool allows users to submit

proposed projects for review of potential impacts to special status species and their habitats in New Mexico. It generates automated project reports that provide Department guidance regarding routine or low-impact projects, and initiates the Department review process for activities that may require a custom review of potential considerations for wildlife and wildlife habitats.

Thank you for the opportunity to review and comment on the proposed project. If you have any questions, please contact Meaghan Conway, Aquatic and Riparian Habitat Specialist, at 505-476-8160 or Meaghan.Conway@state.nm.us.

Sincerely,

A handwritten signature in blue ink, appearing to read "Matthew Wunder". The signature is fluid and cursive, with a large initial "M" and a long, sweeping underline.

Matthew Wunder Ph.D.
Chief, Ecological and Environmental Planning Division

Enc.: 1 (Guidelines and Recommendations for Burrowing Owl Surveys and Mitigation)

cc: USFWS NMES Field Office
Chuck Schultz, NMDGF Northwest Regional Habitat Biologist

List of special status animal species that may occur within 1 mile of the project area generated through the [New Mexico Environmental Review Tool](#).

Common Name	Scientific Name	USFWS (ESA)	State (WCA)	NMDGF SGCN/SERI
American Bittern	<i>Botaurus lentiginosus</i>			SGCN
Aplomado Falcon	<i>Falco femoralis</i>		E	SGCN
Peregrine Falcon	<i>Falco peregrinus</i>		T	SGCN
Mountain Plover	<i>Charadrius montanus</i>			SGCN
Lewis's Woodpecker	<i>Melanerpes lewis</i>			SGCN
Red-Headed Woodpecker	<i>Melanerpes erythrocephalus</i>			SGCN
Williamson's Sapsucker	<i>Sphyrapicus thyroideus</i>			SGCN
Olive-Sided Flycatcher	<i>Contopus cooperi</i>			SGCN
Bank Swallow	<i>Riparia riparia</i>			SGCN
Pinyon Jay	<i>Gymnorhinus cyanocephalus</i>			SGCN
Clark's Nutcracker	<i>Nucifraga columbiana</i>			SGCN
Juniper Titmouse	<i>Baeolophus ridgwayi</i>			SGCN
Pygmy Nuthatch	<i>Sitta pygmaea</i>			SGCN
Western Bluebird	<i>Sialia mexicana</i>			SGCN
Bendire's Thrasher	<i>Toxostoma bendirei</i>			SGCN
Loggerhead Shrike	<i>Lanius ludovicianus</i>			SGCN
Gray Vireo	<i>Vireo vicinior</i>		T	SGCN
Painted Redstart	<i>Myioborus pictus</i>			SGCN
Spotted Bat	<i>Euderma maculatum</i>		T	SGCN
Black-Tailed Prairie Dog	<i>Cynomys ludovicianus</i>			SGCN
Gunnison's Prairie Dog	<i>Cynomys gunnisoni</i>			SGCN
Cougar	<i>Puma concolor</i>			SERI
Mule Deer	<i>Odocoileus hemionus</i>			SERI

ESA = Endangered Species Act, CA = California Wildlife Conservation Act, SCS = Species of Greatest Conservation Need, SERI = Species of Economic and Recreational Importance

**GUIDELINES AND RECOMMENDATIONS
FOR BURROWING OWL
SURVEYS AND MITIGATION**

NEW MEXICO DEPARTMENT OF GAME AND FISH

JULY 2007

(Note: Most of the following recommendations were developed by the New Mexico Burrowing Owl Working Group (2005), The California Burrowing Owl Consortium (1993), and The California Department of Fish and Game (1995))

The burrowing owl (*Athene cunicularia*) is considered a species of concern by the U.S. Fish and Wildlife Service and is protected by both the Migratory Bird Treaty Act and by New Mexico statute 17-2-14 (NMSA 1978). These guidelines are provided to assist in conducting burrowing owl surveys and mitigation during the preparation of environmental assessment reports and environmental impact statements. The guidelines also aid in the decision making process implemented when there is potential for any type of project to adversely affect burrowing owls or any of the resources that support them.

Project proponents should: 1) identify burrowing owl habitats and burrows; 2) choose and implement an appropriate survey method to confirm the presence of owls; and 3) determine and implement appropriate mitigation.

Step 1. Identify Burrowing Owl Habitat and Burrows

Seventy-five percent of New Mexico's ecological zones, as described by Dick-Peddie (1993), support or have the potential to support burrowing owls (Arrowood et al. 2001). These zones include: Chihuahuan desert scrub, closed basin scrub, desert grassland, Great Basin desert scrub, juniper savanna, lava beds, plains-mesa grassland, plains-mesa sand scrub, sand dunes, urban, and farmland (Arrowood et al. 2001). More specifically, burrowing owls generally are associated with dry, open, short-grass, treeless plains (Haug et al. 1993). Burrowing owls are also known to use areas that include shrubs such as creosote bush (*Larrea tridentata*), mesquite (*Prosopis* spp.), four-wing saltbush (*Atriplex canescens*), and rabbit-brush (*Chrysothamnus nauseosus*) (Martin 1973, Botelho and Arrowood 1996). Burrowing owls also inhabit human-modified landscapes, such as golf courses and parking lots.

Burrowing owls rarely dig their own burrows and, therefore, depend in part upon the presence of burrowing animals. In New Mexico, burrowing owls are associated with Gunnison's prairie dogs (*Cynomys gunnisoni*), black-tailed prairie dogs (*C. ludovicianus*), American badgers (*Taxidea taxus*), ground squirrels (*Spermophilus* spp.), rock squirrels (*S. variegatus*), foxes (*Vulpes* spp.), and coyotes (*Canis latrans*). Burrowing owls and prairie dogs are included as species of greatest conservation need in the western great plain shortgrass prairie vegetation type (Comprehensive Wildlife Conservation Strategy for New Mexico 2006). Burrowing owls can also utilize human-made structures, such as, storm drains, berms, roadsides, irrigation canals, and artificial burrows specifically constructed for the owls.

Occupancy of suitable burrowing owl sites can be verified by observing at least one burrowing owl, or owl molted feathers, cast pellets, prey remains, eggshell fragments, or excrement at or near a burrow entrance (The California Burrowing Owl Consortium 1993).

Step 2. Choose and Implement an Appropriate Survey Method to Confirm Owl Presence

The most suitable time to survey for burrowing owls in New Mexico is during the nest initiation and incubation phases (Table 1). Most burrowing owls are migratory in the state, although some over-winter in New Mexico, particularly males in southern New Mexico (Arrowood et al. 2001, Johnson et al. 1997). Migratory owls typically arrive on the breeding grounds by March and remain there until October.

Table 1. General breeding chronology of the burrowing owl in New Mexico.

Location	Pair Bonding/Nest Initiation	Egg Laying and Incubation	Chicks Fledge above Ground	Independence
New Mexico	March to April	Late April to early June	Early-Mid June	Mid-Late July

Surveys should not be conducted in certain weather conditions when owls are more likely to be in their burrows and not visible, such as temperatures above 30°C (86°F) and winds exceeding 20 km/hr (approx. 12 mph). Surveys also should be restricted to the early morning and evening hours, because above ground activity is often higher during these times (Conway and Simon 2003).

A single survey on a proposed project site is adequate to determine the presence or absence of active burrows. If owls are not observed, all active burrows should be inspected for indications of use by the presence of owl pellets, droppings, or feathers. If active burrows are found follow-up survey, utilizing the methods described below, should be scheduled to confirm the presence or absence and numbers of owls on a project site.

Burrowing owl surveys can be accomplished effectively by either walking or driving transects. Either the entire length of the transect or point count stations along the transect can be surveyed, and surveys can be conducted with or without broadcasting audio burrowing owl alarm (*quick-quick-quick*) and/or male territory (*coo-coo*) calls. Studies have shown that broadcasting calls increases detection probability of burrowing owls (Haug and Didiuk 1993, Conway and Simon 2003) and that trained surveyors can detect owls up to 300 m (Conway and Simon 2003). These methods might need to be modified depending upon the terrain and equipment being used, which, respectively, affect the distance owls and the broadcasted vocalizations can be heard.

If burrowing owl habitat is found at the project site, a 150-m buffer zone around the project should also be assessed for potential burrowing owl habitat. At the project site, use one of the following survey methods as recommended by the New Mexico Burrowing Owl Working Group (NMBOWG).

METHOD 1: Walking Surveys

Without Audio Calls

Transects should be established in suitable owl habitat. A single, straight line should be walked for the entire length of the transect (for specific protocol and comparison of line transect methodology see Emlen 1971 and 1977). Observers should record all owls observed along either side of the line. If a more thorough estimate of abundance in a specific area is desired, an observer should walk multiple parallel lines (or many observers walk parallel lines concurrently) that are approximately 50 m apart. All owls observed along either side of the transect line should be recorded. Data recorded should include: date and time of survey, weather conditions, dominant vegetation, burrow aspect, survey location (including GPS coordinates), number of owls observed, sex and age classes of owls (if determinable), and presence of prairie dogs and other burrowing animals.

With Audio Calls

Observers should proceed along a transect line, stopping at points approximately every 200 m to broadcast owl vocalizations and listen for responses. Distance between points will depend upon terrain and broadcast system, which, respectively, affect the distance owls and the broadcasted vocalizations can be heard. If the broadcast system and owl response calls, can be heard up to 200 m. then the observer should stop every 200 m. The distance between observation points can be shortened if necessary. If a more thorough estimate of abundance is desired, the observer should walk multiple parallel lines (or many observers walk parallel lines concurrently) to cover a greater proportion of the area. The lines should be spaced according to the same distance of audio coverage. At each observation point, the observer should scan for any owls with binoculars for the first two minutes, after which a territorial and/or alarm calls should be played for one minute. Finally, there should be two additional minutes of scanning after broadcasting. Scanning and broadcasting should be done in a 360° arc. All owls detected during this five-minute observation period should be recorded. Data recorded should include: date and time of survey, weather conditions, dominant vegetation, burrow aspect, survey location (including GPS coordinates), number of owls observed, sex and age classes of owls (if determinable), and presence of prairie dogs and other burrowing animals.

METHOD 2: Roadside Point-count Surveys

Without Audio Calls

Routes should be established along roads in the project site. Observers should stop the vehicle and pull off the side of the road at 0.5-mile (0.8 km) intervals (if project site is large enough). If visibility is impaired at a point, observers should continue until the next immediate suitable surveying spot is reached. All surveyors should exit the vehicle at each point and scan with binoculars in a 360° arc for a total of five minutes. All owls detected during this five-minute observation period should be recorded. Data recorded should include: date and time of survey, weather conditions, dominant vegetation, burrow aspect, survey location (including GPS coordinates), number of owls observed, sex and age classes of owls (if determinable), and presence of prairie dogs and other burrowing animals.

With Audio Calls

Routes should be established along roads in the project site. Observers should stop the vehicle and pull off the side of the road at 0.5-mile (0.8km) intervals (if project site is large enough). If visibility is impaired at a point, observers should continue until the next immediate suitable surveying spot is reached. Observers should exit the vehicle at each point and scan for the first two minutes. Afterwards, owl calls (territorial and/or alarm) should be played for one minute, followed by two additional minutes of scanning. Scanning should be done with binoculars in a 360° arc. All owls detected during this five-minute observation should be recorded. Data recorded should include: date and time of survey, weather conditions, dominant vegetation, burrow aspect, survey location (including GPS coordinates), number of owls observed, sex and age classes of owls (if determinable), and presence of prairie dogs and other burrowing animals.

Step 3. Determine and Implement Appropriate Mitigation

The objectives of these mitigation guidelines are to minimize the negative impacts to burrowing owls at a project site and preserve habitat that will support burrowing owl populations into the future. The mitigation process begins with the survey protocol to document the presence of burrowing owl habitat, and to determine if burrowing owls use the project site and the surrounding buffer zone. Occupied burrows should be determined based on survey information. If more than 30 days elapse between the initial survey and construction activities, project sites and buffer zones with suitable habitat should be resurveyed to ensure no burrowing owls have occupied these areas in the interim period. Resurveying the project site should be conducted no more than 30 days prior to initial project initiation. If ground disturbing activities are delayed or suspended for more than 30 days after the preconstruction survey, the site should be resurveyed. If burrowing owls are present on a project site, the following mitigation measures should be followed to minimize negative impacts to burrowing owls, nest burrows and burrowing owl habitat.

According to the California Burrowing Owl Consortium there are three definitions of negative impacts:

- Disturbance or harassment within 50 m of occupied burrows.
- Destruction of burrows and burrow entrances. Burrows include structures such as culverts, concrete slabs and debris piles that provide shelter to burrowing owls.
- Destruction and/or degradation of foraging habitat adjacent to occupied burrows (within 100 m).

If burrowing owls are found at a project site, measures to avoid or mitigate negative impacts should follow one of three general approaches. These approaches are listed below:

1. Design and implement project activities to spatially avoid negative impacts and disturbance to burrowing owls and their habitat.
 - No disturbance should occur within 50 m of occupied burrows during the non-breeding season (September through February) or within 75 m during the breeding season (March through August). Avoidance also requires that a minimum of 6.5 acres of foraging habitat be maintained in undisturbed habitat condition for each pair or unpaired burrowing owl.
 - No disturbance or destruction of any prairie dogs or other burrowing animals or their burrows, should occur within the owl avoidance areas.

2. Design and implement project activities to seasonally avoid negative impacts and disturbances to burrowing owls.
 - Occupied burrows should not be disturbed during the nesting period, from March 1st through August 1st.
 - No disturbance or destruction of any prairie dogs or other burrowing animals or their burrows, should occur within the owl avoidance areas.
 - When destruction of burrows is unavoidable, burrow destruction or ground disturbing activities should only occur during the season when migratory owls have left the breeding site. The unoccupied season can be expected to begin in September or October and end in February or March. However, burrowing owl occupancy always must be confirmed by survey data, regardless of season. Immediately prior to burrow destruction a video probe should be used to confirm that the burrow is unoccupied.
 - For any occupied burrows that are destroyed outside of the nesting season, any remaining, undestroyed, burrows should be enhanced (enlarged or cleared of debris) or new burrows should be created (by installing artificial burrows) at a ratio of 2:1 on the protected lands site. A minimum of 6.5 acres of foraging habitat should be maintained in an undisturbed habitat condition for each pair or unpaired resident bird.
 - To ensure compliance with the federal Migratory Bird Treaty Act and state laws and regulations, the U.S. Fish and Wildlife Service and New Mexico Department of Game and Fish must be contacted to confirm that any construction activities resulting in destruction of burrows will not result in a taking of burrowing owls and, thus, violation of federal and state law.

3. Relocate burrowing owls that will be negatively impacted by project activities to protected areas of potential burrowing owl habitat.
 - If owls must be moved away from the disturbance area, passive relocation techniques should be used rather than trapping. At least one or more weeks will be necessary to accomplish this and to allow the owls to acclimate to alternate burrows. Passive relocation can be accomplished by use of one-way doors. Owls should be excluded from burrows in the immediate negatively impacted zone and within a 50-m buffer zone by installing one-way doors in burrow entrances. One-way doors should be left in place for approximately 48 hours to ensure that owls have left burrows before excavation. Prior to burrow destruction a video probe should be used to confirm that the burrow is unoccupied. If a video probe is not available burrows should be excavated with hand tools to ensure that the burrows are unoccupied. Two natural or artificial burrows should be provided for each burrow in the project area that will be rendered biologically unsuitable. Passive relocation should only be used during the non-breeding season,. This method should not be used once a pair of owls is at a burrow unless it is determined that the female does not exhibit a brood patch.
 - If removal or relocation is necessary, trapped burrowing owls should be released in a new location with suitable habitat in a soft release cage. Soft release involves placing owls in a cage with an artificial burrow and fed mice daily for three weeks. After three weeks one side of the cage is removed. More information on this technique is available from NMBOWG.
 - A minimum of 6.5 acres of foraging habitat should be maintained in an undisturbed habitat condition for each pair or unpaired resident bird. No disturbance or destruction of any prairie dogs or other burrowing animals or their burrows, should occur within the owl avoidance areas.
 - To ensure compliance with the federal Migratory Bird Treaty Act and state laws and regulations, the U.S. Fish and Wildlife Service (505-248-7882) and New Mexico Department of Game and Fish (505-476-8101) must be contacted and federal and state permits must be obtained for handling of owls.

Links

New Mexico Burrowing Owl Working Group

<http://www.hawksaloft.org/BUOW/BUOW.htm>

Use of Artificial Burrows by Burrowing Owls at the HAMMER Facility on the U.S. Dept. of Energy Hanford Site

http://www.pnl.gov/main/publications/external/technical_reports/PNNL-15414.pdf

How to Install Artificial Nesting Burrows for Burrowing Owls

<http://www.usga.org/turf/articles/environment/general/Burrowing-Owl-Brochure.pdf>

Artificial Burrowing Owl Burrow Design

<http://www2.ucsc.edu/scpbrg/artifici.htm>

Literature Cited

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New Mexico Burrowing Owl Working Group (NMBOWG). 2005. Recommended burrowing owl survey and monitoring protocol. Unpubl. report. 5 p.



Michelle Lujan Grisham
Governor

Howie C. Morales
Lt. Governor

NEW MEXICO ENVIRONMENT DEPARTMENT

Harold Runnels Building
1190 Saint Francis Drive, PO Box 5469
Santa Fe, NM 87502-5469
Telephone (505) 827-2855
www.env.nm.gov



James C. Kenney
Cabinet Secretary

Jennifer J. Pruett
Deputy Secretary

April 16, 2020

Shawn C. Knox
Principal
Rocky Mountain Ecology LLC
P.O. Box 45193
Rio Rancho, NM 87174

Submitted by email to: knox@rockymountaineecology.com

Dear Mr. Knox,

The New Mexico Environment Department (NMED) has reviewed information submitted for the March 24, 2020 Consultation Letter for the **Proposed Rio Rancho Reservoir #9 project** and offers the following comments. We have included regulations and requirements that apply to the project as described; however, other environmental regulations administered by NMED may apply depending on the circumstances of your project, in addition to regulations and requirements of other federal, state, tribal, county and municipal agencies.

NMED Air Quality Bureau Comments

The Air Quality Bureau (AQB) has evaluated the information submitted with respect to the above proposed action.

While Sandoval County is currently in attainment for all New Mexico and National Ambient Air Quality Standards (NAAQS), 2018 certified ozone design values in Sandoval County is within 95% of the ozone NAAQS. Pursuant to State Statute 74-2-5.3.A. NMSA, NMED is required to develop a plan for ozone mitigation in areas for which design values exceed 95% of the standard. This will be accomplished through our [Ozone Attainment Initiative](#) (OAI) that will include both voluntary and mandatory measures to reduce emissions of ozone precursors, nitrogen oxides and volatile organic compounds. All reasonable measures should be employed to reduce emissions of nitrogen oxides and volatile organic compounds associated with this project to avoid adverse impacts to air quality.

Potential exists for temporary increases in dust and emissions associated with earthmoving, construction equipment, and other vehicles. Areas disturbed by the construction activities, within and adjacent to the project area should be reclaimed to avoid long-term problems with erosion and fugitive dust. Any applicable local or county regulations requiring noise and/or dust control must be followed.

All asphalt, concrete, quarrying, crushing, and screening facilities contracted in conjunction with the proposed project must have current and proper air quality permits.

Generators, light towers, and other equipment powered by diesel, gasoline, or natural gas engines may require registration or an air quality permit if the emissions of any criteria air pollutant will exceed 10 pounds per hour and 10 tons per year. If the proposed project includes this type of equipment, please contact the NMED Air Quality Bureau Permitting Section to determine if a permit is required. For more information on air quality permitting and modeling requirements, please refer to 20.2.72 NMAC.

NMED Construction Programs Bureau

This project is being funded by the New Mexico Finance Authority (NMFA) Drinking Water State Revolving Loan Fund (DWSRF). The NMED Construction Programs Bureau (CPB) will be providing technical support to NMFA which will include review and approval of the construction plans and specifications for this project. The City of Rio Rancho will be required to submit the plans and specification to NMED CPB for review and approval. NMED CPB does not anticipate any adverse impacts.

NMED Drinking Water Bureau Comments

This project as described will require approval from the New Mexico Environment Department Drinking Water Bureau. The water system, if it has not already done so, should submit an Application for Construction or Modification of Public Water Supply System (20.7.10.200 NMAC). Note the additional requirements for projects involving a source. Please review the complete application requirements at https://www.env.nm.gov/drinking_water/water-system-projects/.

NMED Ground Water Quality Bureau Comments

Ground Water Quality Bureau (GWQB) staff reviewed the information submitted, focusing specifically on the potential effect to ground water resources in the area of the proposed project.

Implementation of the project may involve the use of heavy equipment leading to a possibility of contaminant releases associated with equipment malfunctions (e.g., fuel, hydraulic fluid, etc.). The GWQB advises all parties involved in the project to be aware of notification requirements for accidental discharges as specified at 20.6.2.1203 NMAC.

Ground and Surface Water Protection Regulations, 20.6.2 NMAC, are available at <http://www.srca.nm.gov/parts/title20/20.006.0002.html>.

NMED Solid Waste Bureau Comments

The Solid Waste Bureau (“SWB”) advises that the demolition and construction work indicated in this project may result in the knowing or inadvertent generation of regulated asbestos waste. Necessary tank demolition, trenching or excavation has the potential to impact asbestos-containing materials, such as asbestos-cement pipes (water or conduit). Suspect asbestos-containing materials, including any pipes, fragments or soils contaminated with related fragments or fines, must be sampled and analyzed by Polarized Light Microscopy to determine if the materials contain greater than one percent (1%) asbestos. If so, such materials require management as regulated asbestos waste per the New Mexico Solid Waste Rules (“SWR”), 20.9.2 – 20.9.10 NMAC, to include proper containerization, labeling, manifesting, transport by an approved commercial hauler and disposal at a permitted solid waste facility specifically permitted to accept regulated asbestos waste.

Additionally, trenching and excavation also has the potential to identify areas of known or unknown buried

solid waste. If more than 120 cubic yards of solid waste from any one contiguous area requires excavation, the SWB may require submission of a Waste Excavation Plan pursuant to the SWR, 20.9.2.10.A(15) NMAC.

Solid Waste Rules are available at <http://www.srca.nm.gov/chapter-9-solid-waste/> .

NMED Surface Water Quality Bureau Comments

The NMED Surface Water Quality Bureau reviewed this proposed project and responded under separate cover on March 31, 2020 (copy attached).

The following NMED Bureaus reviewed the information provided and had no comments:

- Department of Energy Oversight Bureau
- Environmental Health Bureau
- Hazardous Waste Bureau
- Petroleum Storage Tank Bureau
- Radiation Control Bureau

Thank you for providing NMED with the opportunity to review and comment on this proposed project.

Sincerely,

Chief Scientist
New Mexico Environment Department
Office: 505-827-2140
E-mail: dennis.mcquillan@state.nm.us



ROCKY MOUNTAIN ECOLOGY

ENVIRONMENTAL CONSULTING | APPLIED RESTORATION SERVICES

NM Environment Department
Surface Water Quality Bureau
P.O. Box 5469
Santa Fe, NM 87502-5469

March 24, 2020

RE: Construction of a New Water Storage Tank located at Well Site 9 Project

To Whom It May Concern:

The City of Rio Rancho has received funding for the Construction of a New Water Storage Tank located at Well Site 9 Project. We are gathering information for an environmental review of the referenced project. The project is described in the attached project summary sheet and the location is depicted on the attached maps.

Reservoir 9 is filled by Well 9 which was constructed in 1984. Reservoir 9 is located west of City Center, outside City limits, off King Boulevard, in Sandoval County. Over the years, Well 9 has seen decreased production, and the existing 200,000-gallon ground storage tank has recently been inspected and is recommended for replacement. Therefore, it is proposed that 1) the existing Tank 9 be replaced with a new tank sized to provide adequate storage capacity and redundancy, working in conjunction with Tank 13; 2) re-drill Well 9 and increase its yield up to permitted limits; and 3) adding additional arsenic treatment capacity to the existing treatment facility, if required.

The City has contracted with Huitt-Zollars, Inc. (HZI) for design of this system. Rocky Mountain Ecology, LLC (RME) is preparing an environmental information document to comply with the National Environmental Policy Act. RME is gathering information for an environmental review of the proposed project, which requires coordination with stakeholders. **Your input on the proposed project is an important element of this review process.** Please inform us of any concerns you may have pertaining to the proposed project.

Surveys for cultural and biological resources were conducted during March of 2020. We have made an initial determination that this project will not have a significant environmental impact within the context of the NEPA. Please provide your comments by completing and returning a copy of the acknowledgement via email to: knox@rockymountaineecology.com, or by mail at P.O. Box 45193, Rio Rancho, NM 87174.

To provide verbal comments or for more information, please contact me at 505.992.6150 or by email.

Shawn C. Knox, Principal - Rocky Mountain Ecology LLC

ACKNOWLEDGEMENT:

As a representative for the referenced organization, the undersigned acknowledges receipt of this request for comment, and having reviewed the attached project summary and additional information, if provided,

concurs with the initial determination, or, has no comments.

Signature: _____ Date: 3/31/2020

Name: Abraham Franklin Title: Program Manager, NMED Watershed Protection Section

Concurrence with initial determination is limited to surface water quality impacts. Request has been forwarded to Dennis McQuillan, NMED Environmental Review Coordinator.

Subject Re: [EXTERNAL] Rio Rancho Reservoir #9 Project
From IMRextrev, NPS <IMRextrev@nps.gov>
Sender Finn, Claire E <Claire_Finn@nps.gov>
To Clay Bowers <bowers@rockymountaineology.com>
Date 2020-04-01 12:38



Dear Mr. Bowers,

The National Park Service (NPS) would like to thank you for the opportunity to be involved in this project. The NPS has reviewed this project and has no comments at this time.

National Park Service
NPS Regional Office External Review Team
Serving DOI Regions 6, 7, and 8
imrxtrev@nps.gov

From: Clay Bowers <bowers@rockymountaineology.com>
Sent: Thursday, March 26, 2020 7:00 PM
To: IMRextrev, NPS <IMRextrev@nps.gov>
Subject: [EXTERNAL] Rio Rancho Reservoir #9 Project

To Whom It May Concern:

Please review the attached information and provide a response within 30 days. Thank you.

--

Clay Bowers
Field Operations Director/Plant Ecologist
Rocky Mountain Ecology, LLC
P.O. Box 45193
Rio Rancho, NM 87174
bowers@rockymountaineology.com
(575)639-3883

Subject Rio Rancho Reservoir #9 Project

From Brad Stebleton <BStebleton@sandovalcountynm.gov>
To Clay Bowers <bowers@rockymountainecology.com>
Cc STEVE GALLEGOS <SGALLEGOS@ci.rio-rancho.nm.us>
Date 2020-03-27 09:16



- 20200326152957946.pdf (501 KB)

March 27, 2020

Clay Bowers
Field Operations Director/Plant Ecologist Rocky Mountain Ecology, LLC
P.O. Box 45193
Rio Rancho, NM 87174
bowers@rockymountainecology.com

SUBJECT: Properties known as Lots 16-20, Block 77, Unit 23, Rio Rancho Estates, Sandoval County, NM

Dear Mr. Bowers:

This certification is issued in response to your inquiry of March 26, 2020.

The above referenced properties are shown on FIRM #35043C1875D, Effective Date 3/18/08 (see attached.) According to that FIRM, all of those properties are located entirely outside of the Special Flood Hazard Area (commonly known as the 100-year Floodplain.)

If you have any further questions or require additional information, please do not hesitate to contact me at (505) 867-7628.

Sincerely,

Brad Stebleton, CFM
Sandoval County Floodplain Manager

-----Original Message-----

From: Clay Bowers [mailto:bowers@rockymountainecology.com]
Sent: Thursday, March 26, 2020 2:37 PM
To: Brad Stebleton <BStebleton@sandovalcountynm.gov>
Subject: RE: RE: Rio Rancho Reservoir #9 Project

This Message has originated outside your organization.

Block: 77
Unit: 23
Lots: 16, 17, 18, 19 and 20

On 2020-03-26 14:31, Brad Stebleton wrote:

Do you have the Unit, Block & Lot?

-----Original Message-----

From: Clay Bowers [mailto:bowers@rockymountainecology.com]
Sent: Thursday, March 26, 2020 2:30 PM
To: Brad Stebleton <BStebleton@sandovalcountynm.gov>
Subject: RE: RE: Rio Rancho Reservoir #9 Project

This Message has originated outside your organization.

T 13 N, R 10 E, Sec 25, W2SE4

On 2020-03-26 14:19, Brad Stebleton wrote:

Clay-



Michelle Lujan
Grisham
Governor

STATE OF NEW MEXICO
DEPARTMENT OF CULTURAL AFFAIRS
HISTORIC PRESERVATION DIVISION

BATAAN MEMORIAL BUILDING
407 GALISTEO STREET, SUITE 236
SANTA FE, NEW MEXICO 87501
PHONE (505) 827-6320 FAX (505) 827-6338

April 13, 2020

Shawn C. Knox, Principal
Rocky Mountain Ecology LLC
knox@rockymountaineecology.com,

Re: Log 112833, Construction of a New Water Storage Tank located at Well Site 9 Project: *Cultural Resource Survey for New Water Infrastructure at Reservoir 9, City of Rio Rancho, Sandoval County, New Mexico (NMCRIS #145598)*

Dear Mr. Knox

Thank you for submitting the above referenced survey report for the proposed water tank construction project to the State Historic Preservation Officer (SHPO). The SHPO concurs with the results and recommendations detailed in the survey report. Specifically, there are no historic properties situated in the project area and, thus, this project will have no effect on cultural resources.

If you would like to discuss this further, please do not hesitate to contact me. I can be reached by telephone at (505) 452-6115 or email at richard.reycraft@state.nm.us.

Sincerely,

Richard Reycraft

Richard Reycraft
HPD Archaeologist



ROCKY MOUNTAIN ECOLOGY

ENVIRONMENTAL CONSULTING | APPLIED RESTORATION SERVICES

NM Office of the State Engineer
State Engineer
P.O. Box 25102
Santa Fe, NM 87504-5102

March 24, 2020

RE: Construction of a New Water Storage Tank located at Well Site 9 Project

To Whom It May Concern:

The City of Rio Rancho has received funding for the Construction of a New Water Storage Tank located at Well Site 9 Project. We are gathering information for an environmental review of the referenced project. The project is described in the attached project summary sheet and the location is depicted on the attached maps.

Reservoir 9 is filled by Well 9 which was constructed in 1984. Reservoir 9 is located west of City Center, outside City limits, off King Boulevard, in Sandoval County. Over the years, Well 9 has seen decreased production, and the existing 200,000-gallon ground storage tank has recently been inspected and is recommended for replacement. Therefore, it is proposed that 1) the existing Tank 9 be replaced with a new tank sized to provide adequate storage capacity and redundancy, working in conjunction with Tank 13; 2) re-drill Well 9 and increase its yield up to permitted limits; and 3) adding additional arsenic treatment capacity to the existing treatment facility, if required.

The City has contracted with Huitt-Zollars, Inc. (HZI) for design of this system. Rocky Mountain Ecology, LLC (RME) is preparing an environmental information document to comply with the National Environmental Policy Act. RME is gathering information for an environmental review of the proposed project, which requires coordination with stakeholders. **Your input on the proposed project is an important element of this review process.** Please inform us of any concerns you may have pertaining to the proposed project.

Surveys for cultural and biological resources were conducted during March of 2020. We have made an initial determination that this project will not have a significant environmental impact within the context of the NEPA. Please provide your comments by completing and returning a copy of the acknowledgement via email to: knox@rockymountaineology.com, or by mail at P.O. Box 45193, Rio Rancho, NM 87174.

To provide verbal comments or for more information, please contact me at 505.992.6150 or by email.

Shawn C. Knox, Principal - Rocky Mountain Ecology LLC

ACKNOWLEDGEMENT:

As a representative for the referenced organization, the undersigned acknowledges receipt of this request for comment, and having reviewed the attached project summary and additional information, if provided,

concurs with the initial determination, or, has no comments.

Signature: Gary Stansifer Date: 3-30-20

Name: GARY STANSIFER Title: WATER RESOURCE SPECIALIST SENIOR

Subject RE: [Non-DoD Source] Rio Rancho Reservoir #9 Project (UNCLASSIFIED)Formerly
FuseMail

From Luna, Forrest D CIV USARMY CESPA (USA)
<Forrest.Luna@usace.army.mil>
To Clay Bowers <bowers@rockymountainecology.com>
Date 2020-03-30 16:30

Hello Mr. Bowers

This correspondence is regarding your request for comment by the U.S. Army Corps of Engineers (Corps) on the City of Rio Rancho project to construction of a new water storage tank located at Well Site 9, and drill a new well. At the edge of the property there appears to be an ephemeral stream, those features are regulated by the Corps under Section 404 of the Clean Water Act. The information provided does not state if the entire project will be within the current fencing of the existing structures. If the proposed work would happen within the current fencing of the existing structures then it appears there would be no placement of any fill or dredged material into waters of the United States. Under Section 404 of the Clean Water Act, the Corps regulates the placement of fill or dredged material into waters of the United States. If there would be no discharge of fill or dredged material into waters of the United States for the construction of this project, a Department of the Army Section 404 permit would not be required. If the project changes to include the placement of fill of dredged material into a waters of the United States, please contact the Corps prior to construction, because this change in the project may trigger the need for a Department of the Army Section 404 permit verification from the Corps.

Thank you,

Forrest Luna
Regulatory Specialist
Albuquerque Division
U.S. Army Corps of Engineers
4101 Jefferson Plaza NE
Albuquerque, NM 87109

Phone 505-342-3678

<https://www.spa.usace.army.mil/Missions/Regulatory-Program-and-Permits/>

-----Original Message-----

From: Clay Bowers [mailto:bowers@rockymountainecology.com]
Sent: Thursday, March 26, 2020 2:52 PM
To: Luna, Forrest D CIV USARMY CESPA (USA) <Forrest.Luna@usace.army.mil>
Cc: Parrish, Christopher M CIV USARMY CESPA (USA) <Christopher.M.Parrish@usace.army.mil>
Subject: RE: [Non-DoD Source] Rio Rancho Reservoir #9 Project (UNCLASSIFIED)

Here you go

On 2020-03-26 14:48, Luna, Forrest D CIV USARMY CESPA (USA) wrote:

Hello Mr. Powers

There were no attachments to the email I received for the proposed Rio Rancho Reservoir #9 project. If you could send those to me I will review the documents and get back to you.

V/r

Forrest Luna
Regulatory Specialist
Albuquerque Division
U.S. Army Corps of Engineers
4101 Jefferson Plaza NE
Albuquerque, NM 87109



March 27, 2020

Shawn C. Knox, Principal
Rocky Mountain Ecology LLC
Post Office Box 45193
Rio Rancho, New Mexico 87174

Dear Mr. Knox:

Thank you for providing the Natural Resources Conservation Service (NRCS) the opportunity to review the City of Rio Rancho Water Storage Tank Project, Sandoval County, New Mexico.

The Farmland Protection Policy Act (FPPA) authorizes the NRCS to provide review of proposed projects that have the potential to irreversibly convert farmlands to non-farmland. Or irreversibly converting hydric areas to non-hydric uses as the result of programs funded by the federal government. In review of the information provided on the project, it is determined that the entire project is located in an urban or development area in an existing easement. Or the project is in an area not designated as Prime or Important Farmland. The FPPA rules define farmland conversion to be “to the extent that it irreversibly converts farmland to other purposes”. This project is not expected to have that effect. With this acknowledged, the proposed project will not cause Prime or Important Farmlands or hydric soils to be converted to non-agricultural or non-hydric uses, and is not subject to the Act.

If you have any questions concerning soils information, please contact Richard Strait, State Soil Scientist, at (505) 761-4433 or email at richard.stait@usda.gov.

Sincerely,

J. XAVIER MONTOYA
State Conservationist

cc:

Jill Mumford, Acting District Conservationist, NRCS, Cuba, NM
Richard Strait, State Soil Scientist, NRCS, Albuquerque, NM



United States Department of the Interior



FISH AND WILDLIFE SERVICE
New Mexico Ecological Services Field Office
2105 Osuna Road Ne
Albuquerque, NM 87113-1001
Phone: (505) 346-2525 Fax: (505) 346-2542
<http://www.fws.gov/southwest/es/NewMexico/>
http://www.fws.gov/southwest/es/ES_Lists_Main2.html

In Reply Refer To:

March 25, 2020

Consultation Code: 02ENNM00-2020-SLI-0783

Event Code: 02ENNM00-2020-E-01670

Project Name: CoRR Reservoir 9

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

Thank you for your recent request for information on federally listed species and important wildlife habitats that may occur in your project area. The U.S. Fish and Wildlife Service (Service) has responsibility for certain species of New Mexico wildlife under the Endangered Species Act (ESA) of 1973 as amended (16 USC 1531 et seq.), the Migratory Bird Treaty Act (MBTA) as amended (16 USC 701-715), and the Bald and Golden Eagle Protection Act (BGEPA) as amended (16 USC 668-668c). We are providing the following guidance to assist you in determining which federally imperiled species may or may not occur within your project area and to recommend some conservation measures that can be included in your project design.

FEDERALLY-LISTED SPECIES AND DESIGNATED CRITICAL HABITAT

Attached is a list of endangered, threatened, and proposed species that may occur in your project area. Your project area may not necessarily include all or any of these species. Under the ESA, it is the responsibility of the Federal action agency or its designated representative to determine if a proposed action "may affect" endangered, threatened, or proposed species, or designated critical habitat, and if so, to consult with the Service further. Similarly, it is the responsibility of the Federal action agency or project proponent, not the Service, to make "no effect" determinations. If you determine that your proposed action will have "no effect" on threatened or endangered species or their respective critical habitat, you do not need to seek concurrence with the Service. Nevertheless, it is a violation of Federal law to harm or harass any federally-listed threatened or endangered fish or wildlife species without the appropriate permit.

If you determine that your proposed action may affect federally-listed species, consultation with the Service will be necessary. Through the consultation process, we will analyze information contained in a biological assessment that you provide. If your proposed action is associated with Federal funding or permitting, consultation will occur with the Federal agency under section 7(a)(2) of the ESA. Otherwise, an incidental take permit pursuant to section 10(a)(1)(B) of the ESA (also known as a habitat conservation plan) is necessary to harm or harass federally listed threatened or endangered fish or wildlife species. In either case, there is no mechanism for authorizing incidental take "after-the-fact." For more information regarding formal consultation and HCPs, please see the Service's Consultation Handbook and Habitat Conservation Plans at www.fws.gov/endangered/esa-library/index.html#consultations.

The scope of federally listed species compliance not only includes direct effects, but also any interrelated or interdependent project activities (e.g., equipment staging areas, offsite borrow material areas, or utility relocations) and any indirect or cumulative effects that may occur in the action area. The action area includes all areas to be affected, not merely the immediate area involved in the action. Large projects may have effects outside the immediate area to species not listed here that should be addressed. If your action area has suitable habitat for any of the attached species, we recommend that species-specific surveys be conducted during the flowering season for plants and at the appropriate time for wildlife to evaluate any possible project-related impacts.

Candidate Species and Other Sensitive Species

A list of candidate and other sensitive species in your area is also attached. Candidate species and other sensitive species are species that have no legal protection under the ESA, although we recommend that candidate and other sensitive species be included in your surveys and considered for planning purposes. The Service monitors the status of these species. If significant declines occur, these species could potentially be listed. Therefore, actions that may contribute to their decline should be avoided.

Lists of sensitive species including State-listed endangered and threatened species are compiled by New Mexico state agencies. These lists, along with species information, can be found at the following websites:

Biota Information System of New Mexico (BISON-M): www.bison-m.org

New Mexico State Forestry. The New Mexico Endangered Plant Program:
www.emnrd.state.nm.us/SFD/ForestMgt/Endangered.html

New Mexico Rare Plant Technical Council, New Mexico Rare Plants: nmrareplants.unm.edu

Natural Heritage New Mexico, online species database: nhnm.unm.edu

WETLANDS AND FLOODPLAINS

Under Executive Orders 11988 and 11990, Federal agencies are required to minimize the destruction, loss, or degradation of wetlands and floodplains, and preserve and enhance their natural and beneficial values. These habitats should be conserved through avoidance, or mitigated to ensure that there would be no net loss of wetlands function and value.

We encourage you to use the National Wetland Inventory (NWI) maps in conjunction with ground-truthing to identify wetlands occurring in your project area. The Service's NWI program website, www.fws.gov/wetlands/Data/Mapper.html integrates digital map data with other resource information. We also recommend you contact the U.S. Army Corps of Engineers for permitting requirements under section 404 of the Clean Water Act if your proposed action could impact floodplains or wetlands.

MIGRATORY BIRDS

The MBTA prohibits the taking of migratory birds, nests, and eggs, except as permitted by the Service's Migratory Bird Office. To minimize the likelihood of adverse impacts to migratory birds, we recommend construction activities occur outside the general bird nesting season from March through August, or that areas proposed for construction during the nesting season be surveyed, and when occupied, avoided until the young have fledged.

We recommend review of Birds of Conservation Concern at website www.fws.gov/migratorybirds/CurrentBirdIssues/Management/BCC.html to fully evaluate the effects to the birds at your site. This list identifies birds that are potentially threatened by disturbance and construction.

BALD AND GOLDEN EAGLES

The bald eagle (*Haliaeetus leucocephalus*) was delisted under the ESA on August 9, 2007. Both the bald eagle and golden eagle (*Aquila chrysaetos*) are still protected under the MBTA and BGEPA. The BGEPA affords both eagles protection in addition to that provided by the MBTA, in particular, by making it unlawful to "disturb" eagles. Under the BGEPA, the Service may issue limited permits to incidentally "take" eagles (e.g., injury, interfering with normal breeding, feeding, or sheltering behavior nest abandonment). For information on bald and golden eagle management guidelines, we recommend you review information provided at www.fws.gov/midwest/eagle/guidelines/bgepa.html.

On our web site www.fws.gov/southwest/es/NewMexico/SBC_intro.cfm, we have included conservation measures that can minimize impacts to federally listed and other sensitive species. These include measures for communication towers, power line safety for raptors, road and highway improvements, spring developments and livestock watering facilities, wastewater facilities, and trenching operations.

We also suggest you contact the New Mexico Department of Game and Fish, and the New Mexico Energy, Minerals, and Natural Resources Department, Forestry Division for information regarding State fish, wildlife, and plants.

Thank you for your concern for endangered and threatened species and New Mexico's wildlife habitats. We appreciate your efforts to identify and avoid impacts to listed and sensitive species in your project area. For further consultation on your proposed activity, please call 505-346-2525 or email nmesfo@fws.gov and reference your Service Consultation Tracking Number.

Attachment(s):

- Official Species List
 - Migratory Birds
-

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New Mexico Ecological Services Field Office

2105 Osuna Road Ne

Albuquerque, NM 87113-1001

(505) 346-2525

Project Summary

Consultation Code: 02ENNM00-2020-SLI-0783

Event Code: 02ENNM00-2020-E-01670

Project Name: CoRR Reservoir 9

Project Type: WATER SUPPLY / DELIVERY

Project Description: The City of Rio Rancho has received funding for the Construction of a New Water Storage Tank located at Well Site 9 Project. We are gathering information for an environmental review of the referenced project. The project is described in the attached project summary sheet and the location is depicted on the attached maps.

Reservoir 9 is filled by Well 9 which was constructed in 1984. Reservoir 9 is located west of City Center, outside City limits, off King Boulevard, in Sandoval County. Over the years, Well 9 has seen decreased production, and the existing 200,000-gallon ground storage tank has recently been inspected and is recommended for replacement. Therefore, it is proposed that 1) the existing Tank 9 be replaced with a new tank sized to provide adequate storage capacity and redundancy, working in conjunction with Tank 13; 2) re-drill Well 9 and increase its yield up to permitted limits; and 3) adding additional arsenic treatment capacity to the existing treatment facility, if required.

The City has contracted with Huitt-Zollars, Inc. (HZI) for design of this system. Rocky Mountain Ecology, LLC (RME) is preparing an environmental information document to comply with the National Environmental Policy Act. RME is gathering information for an environmental review of the proposed project, which requires coordination with stakeholders. Your input on the proposed project is an important element of this review process.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/35.32311892987425N106.7855628751531W>



Counties: Sandoval, NM

Endangered Species Act Species

There is a total of 6 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
New Mexico Meadow Jumping Mouse <i>Zapus hudsonius luteus</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7965	Endangered

Birds

NAME	STATUS
Mexican Spotted Owl <i>Strix occidentalis lucida</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8196	Threatened
Southwestern Willow Flycatcher <i>Empidonax traillii extimus</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6749	Endangered
Yellow-billed Cuckoo <i>Coccyzus americanus</i> Population: Western U.S. DPS There is proposed critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

Amphibians

NAME	STATUS
Jemez Mountains Salamander <i>Plethodon neomexicanus</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/4095	Endangered

Fishes

NAME	STATUS
Rio Grande Silvery Minnow <i>Hybognathus amarus</i> Population: Wherever found, except where listed as an experimental population There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1391	Endangered

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

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1. The [Migratory Birds Treaty Act](#) of 1918.
 2. The [Bald and Golden Eagle Protection Act](#) of 1940.
 3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bendire's Thrasher <i>Toxostoma bendirei</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9435	Breeds Mar 15 to Jul 31
Brewer's Sparrow <i>Spizella breweri</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9291	Breeds May 15 to Aug 10

Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ “Proper Interpretation and Use of Your Migratory Bird Report” before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

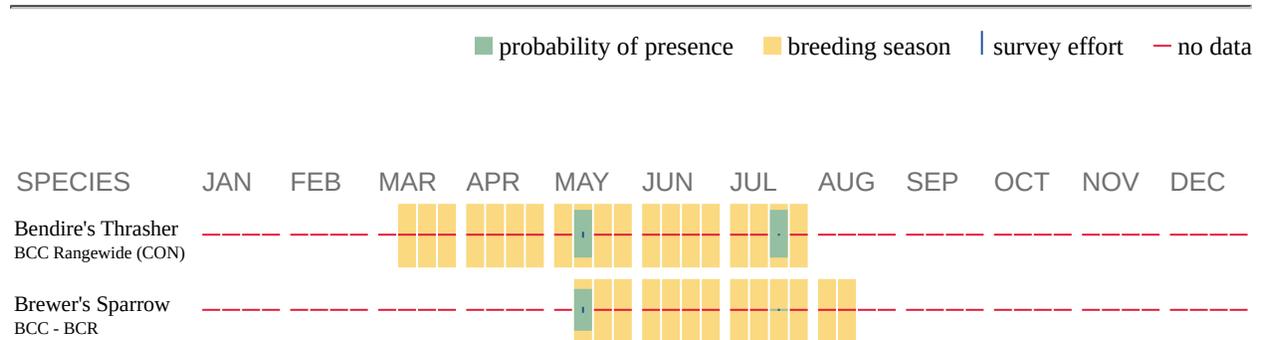
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

Migratory Birds FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) and/or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
 2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
 3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).
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Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ “What does IPaC use to generate the migratory birds potentially occurring in my specified location”. Please be aware this report provides the “probability of presence” of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the “no data” indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ “Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds” at the bottom of your migratory bird trust resources page.
