Environmental

Draft Environmental Information Document
Village of Los Lunas, Valencia County, New Mexico
Los Lunas Wastewater Treatment and Sludge Management Facilities Expansion Project

October
2013

PREPARED BY
Molzen Corbin
Marron and Associates, Inc.

PREPARED FOR
Village of Los Lunas, NM

Draft

ENVIRONMENTAL INFORMATION DOCUMENT
for
Village of Los Lunas
Valencia County, New Mexico

Project No. LL112-11
October 2013

LOS LUNAS WASTEWATER TREATMENT AND SLUDGE MANAGEMENT FACILITIES EXPANSION PROJECT

Total Estimated Project Cost $31,886,600 - $ 37,302,600

Potential Funding Agencies:

- **New Mexico Finance Authority**
- **Environmental Protection Agency**
- **United States Department of Agriculture Rural Utilities Service**
- **State and Federal Appropriations**

Prepared for:

Village of Los Lunas
P.O. Box 1209
Los Lunas, NM 87031

Prepared by:

Molzen Corbin
2701 Miles Road SE
Albuquerque, NM 87106

Marron and Associates
7511 4th Street NW
Albuquerque, NM 87107

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1.0 PURPOSE AND NEED FOR PROJECT

This Environmental Information Document (EID) was prepared to comply with the Council on Environmental Quality (CEQ) National Environmental Policy Act (NEPA) regulations at 40 Code of Federal Regulations (CFR) 1500-1508. The EID follows the outline used by the New Mexico Environment Department (NMED) Construction Programs Bureau. This section describes the project purpose and need as outlined in 40 Code of Federal Regulations (CFR) 6.506(b)3.

1.1 Project Description

To provide for future wastewater treatment demand, the Village of Los Lunas proposes to make improvements to its wastewater treatment plant. This treatment plant is located at the south edge of Los Lunas on Heaton Loop south of Desert Flower Avenue (see Figures 1.1 and 1.2). A Preliminary Engineering Report (PER) was prepared and evaluated alternatives for expansion of the treatment plant (Molzen Corbin, 2013). The expansion includes both components: liquids and solids (sludge) treatment and disposal. The PER deemed the following alternatives as feasible for further evaluation: 1) for sludge thickening: gravity belt thickener; 2) for biosolids treatment/stabilization: aerobic digestion; 3) for dewatering: belt filter press; and 4) for final disposal: surface disposal and/or landfill disposal. The technology recommended for treatment is Membrane Bioreactors (MBRs).

1.2 Purpose and Need for Project

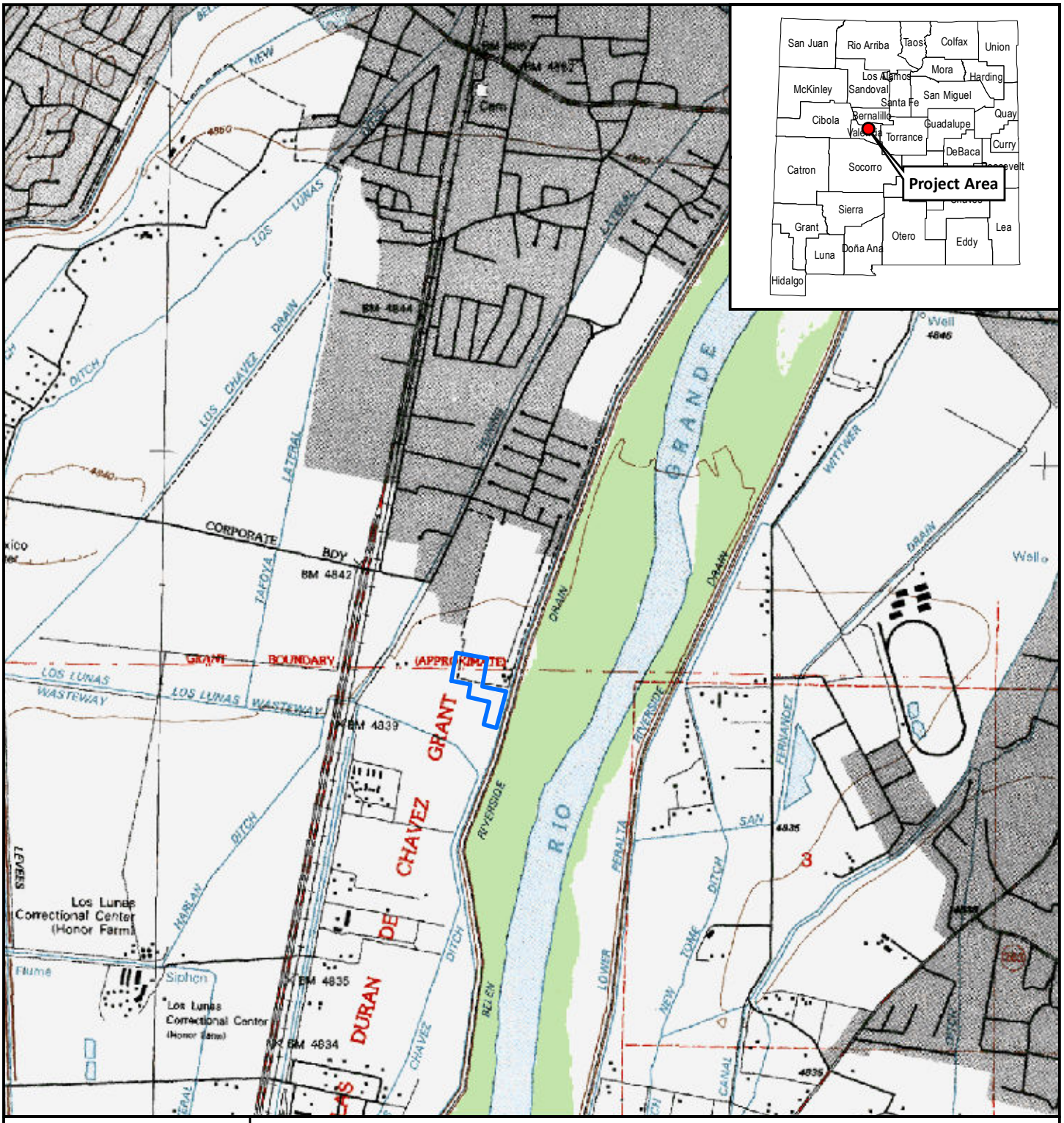
1.2.1 Purpose

The purpose of the Los Lunas Wastewater Treatment and Sludge Management Facilities Expansion Project is to ensure that the plant has sufficient treatment capacity through the year 2041. At the end of the 30-year planning period in the year 2041, the project flow to the wastewater treatment plant (WWTP) is estimated at 4.67 million gallons per day (MGD), which includes 0.17 MGD from the Central New Mexico Correctional Facility. In addition, the project would ensure reliability of the WWTP.

1.2.2 Need

The WWTP facilities need to be capable of meeting current and potential future requirements for disposal of both liquid effluent to the Rio Grande and sludge to the surface disposal site. Landfill disposal of sludge was also evaluated as an alternative for solids disposal. Current limits in the National Pollutant Discharge Elimination System (NPDES) permit are 30 milligrams per liter (mg/L) for biological oxygen demand (BOD) and total suspended solids (TSS) based on a 30-day average concentration. The sludge treatment process must meet U.S. Environmental Protection Agency (USEPA) standards as specified in 40 Code of Federal Regulations 503 as well as New Mexico Environment Department (NMED) requirements for sludge disposal. NMED's current maximum allowable nitrogen loading for surface disposal is 200 pounds of total nitrogen per acre per year.

Plant operations need to be considered safe for plant operators and the public. The existing centrifugal blowers are potential safety concern because of the noise they produce, which exceeds the Occupational Safety and Health Administration (OSHA) standard of 85 decibels at 3 feet from the unit. Operators currently use hearing protection when working around the blowers, but reduced noise levels obtained through quieter machinery, sound muffling devices, or sound enclosures would be preferable.



Project Area

Los Lunas, NM (1991)
USGS 7.5' Quadrangle

Nicolas Duran de Chavez Grant
Valencia County, New Mexico

Land Ownership

Private

0 255 510 1,020 Meters

0 1,000 2,000 4,000 Feet

N

1:24,000

Figure 1.1
Project Area Map

Los Lunas WWTP, Valencia County, New Mexico

Wastewater flow was projected through year 2041 based on population growth (see Table 1.1 and population growth discussion in Section 3.2.2). Residential, commercial, and industrial users were included in the projections. The per capita flow contribution used in the projections was 80 gallons per capita per day (gpcd). There is one major flow contributor in the community – Central New Mexico Correctional Facility. The flow generated by Central New Mexico Correctional Facility was assumed at 170,000 gallon per day or 0.17 MGD. The correctional facility was connected to the village's sanitary sewer system in November 2011. Based on historical wastewater flows, the annual average day flow in 2009 was about 1.05 MGD and increased to approximately 1.18 MGD in 2012. With projected population growth, wastewater flow is projected to reach 4.67 MGD by year 2041 at the end of the 30-year planning period. For planning purposes, this figure was rounded up to 4.7 MGD.

Table 1.1 Los Lunas Wastewater Flow Projections 2010-2041

Year	Population	Projected Residential and Commercial Flows	Projected Central New Mexico Correctional Facility Flow	Total Projected Flows
2010	14,835	1.19 MGD	0.00 MGD	1.19 MGD
2011	15,487	1.24 MGD	0.17 MGD	1.41 MGD
2012	16,167	1.29 MGD	0.17 MGD	1.46 MGD
2013	16,878	1.35 MGD	0.17 MGD	1.52 MGD
2014	17,619	1.41 MGD	0.17 MGD	1.58 MGD
2015	18,393	1.47 MGD	0.17 MGD	1.64 MGD
2016	19,201	1.54 MGD	0.17 MGD	1.71 MGD
2017	20,045	1.60 MGD	0.17 MGD	1.77 MGD
2018	20,926	1.67 MGD	0.17 MGD	1.84 MGD
2019	21,845	1.75 MGD	0.17 MGD	1.92 MGD
2020	22,805	1.82 MGD	0.17 MGD	1.99 MGD
2021	23,807	1.90 MGD	0.17 MGD	2.07 MGD
2022	24,853	1.99 MGD	0.17 MGD	2.16 MGD
2023	25,945	2.08 MGD	0.17 MGD	2.25 MGD
2024	27,085	2.17 MGD	0.17 MGD	2.34 MGD
2025	28,275	2.26 MGD	0.17 MGD	2.43 MGD
2026	29,517	2.36 MGD	0.17 MGD	2.53 MGD
2027	30,814	2.47 MGD	0.17 MGD	2.64 MGD
2028	32,168	2.57 MGD	0.17 MGD	2.74 MGD
2029	33,581	2.69 MGD	0.17 MGD	2.86 MGD
2030	35,057	2.80 MGD	0.17 MGD	2.97 MGD
2031	36,597	2.93 MGD	0.17 MGD	3.10 MGD
2032	38,205	3.06 MGD	0.17 MGD	3.23 MGD
2033	39,883	3.19 MGD	0.17 MGD	3.36 MGD
2034	41,636	3.33 MGD	0.17 MGD	3.50 MGD
2035	43,465	3.48 MGD	0.17 MGD	3.65 MGD
2036	45,375	3.63 MGD	0.17 MGD	3.80 MGD
2037	47,368	3.79 MGD	0.17 MGD	3.96 MGD
2038	49,450	3.96 MGD	0.17 MGD	4.13 MGD
2039	51,622	4.13 MGD	0.17 MGD	4.30 MGD
2040	53,890	4.31 MGD	0.17 MGD	4.48 MGD
2041	**56,258**	**4.50 MGD**	**0.17 MGD**	**4.67 MGD**

Source: Molzen-Corbin (2013)

Currently, the Village of Los Lunas owns and operates two wastewater treatment plants (processes) located within the same site. The existing combined capacity of the activated sludge plant and the membrane bioreactor (MBR) plant is 1.7 MGD, which will handle projected flows through year 2016. However, the operating staff's preference is to operate the old plant at 0.5 MGD, thus, reducing the combined capacity to 1.4 MGD. This flow is projected to be received by year 2014. Based on the operations staff's experience, the activated sludge process reaches its best performance at a flow rate of 0.5 MGD. When flows exceed 0.5 MGD for long periods of time, process upsets and degradation of effluent quality have been observed. New MBR treatment facilities are needed to replace the existing activated sludge plant and increase the overall treatment capacity.

In terms of sludge management, the existing treatment process basins, equipment, and sludge disposal site were designed and constructed in the mid-1990s. This 15-year old process is developing signs of deterioration and is in need of immediate expansion and improvements.

In addition, sludge disposal capacity is limited. Under a recent Groundwater Discharge Plan, the Village of Los Lunas is permitted to discharge up to 45,000 gallons of sludge per week at the sludge disposal site. The Village previous Groundwater Discharge Plan (DP-1053) allowed just 35,000 gallons of sludge per week.

The hydraulic capacity of the basins to meet the detention requirements to achieve pathogen reduction through aerobic digestion has been calculated at 1.2 MGD. There are four separate basins in the aerobic digester (Cells 1, 2, 3, and 4). The digester aeration system is nearing the end of its design life, and portions of the system are failing due to corrosive conditions that exist between the liquid surface and covers over the digesters. In response to this situation, the aeration system for Cells 1 and 2 was modified in 2007 to replace the air piping and related components that were corroding at that time. The aeration system in Cells 3 and 4 was not modified in 2007 and continued to be exposed to the corrosive atmosphere. Emergency repairs and improvements to the aeration system were completed in March 2011. The digesters were designed to meeting regulations when constructed (40 CFR 503) for vector attraction reduction and pathogen reduction for surface disposal of sludge. For pathogen reduction, the temperature-retention time conditions of 15°C for mean cell residence time is 60 days, or at 20°C, the mean cell residence time is 40 days. Since winter temperatures are about 15°C, this is used to determine the design and size of digesters. The capacity of the digesters to achieve pathogen reduction through aerobic digestion at 15°C and 60 days mean cell residence time was calculated at 1.2 MGD average daily flow to the Los Lunas Wastewater Treatment Plant. According to these projections, the aerobic digesters will likely reach their design capacity in terms of their ability to achieve pathogens reduction based on time-temperature requirements in the near future if temperatures are at or below 15°C. The DP-1053 application is for renewal and modification to discharge digested sludge at the disposal site at a higher flow rate. Sludge treatment and disposal are considered the most deteriorated components of the entire wastewater treatment process and as a result are in need of immediate improvement and capacity expansion.

With regards to effluent disposal, the existing 16-inch effluent disposal pipeline has an estimated capacity to convey 1.7 MGD of average daily flow (or 3.4 MGD peak flow), which would be reached by year 2016. The PER recommended replacing this 16-inch line with a 24-inch disposal line.

The existing administration/laboratory building was part of the original wastewater treatment plant constructed in the 1980s. The existing floor space is inadequate for current operations. With the

projected increase in flows that will result in a change from a minor to a major facility, the wastewater treatment plant will requirement more sampling and monitoring that will need more laboratory space.

Wastewater Treatment Plant History and Existing Treatment Facilities

Collection System

The Los Lunas sewer collection system consists of many small lines (typically 8-inch diameter pipes) that feed into the main interceptor system. Interceptors range from 8-inch to 30-inch diameter pipes. Los Lunas has implemented recommended improvements to the collection systems to allow for ultimate build-out of the community. The *Wastewater Facilities Plan Addendum PER* (Molzen-Corbin, 2005) recommended the following improvements to correct inflow problems: (1) replace existing manhole covers with lids that fit flush with the top of the ring and do not have holes; (2) fit existing covers with an inner ring to raise the cover above ponding height and weld the vent holes shut; and (3) use manhole inserts to prevent water from seeping into the collection system through the outer edges of the manhole ring. There does not appear to be a large amount of infiltration and inflow into the collection system. The overall condition of the Village's sewer collections system is good. The majority of the infrastructure is new, and the Village regularly maintains and updates older portions of the collection system.

Activated Sludge Treatment Plant

The original WWTP was constructed in 1981 as an extended aeration process with a design capacity of 0.7 MGD. In 1992, the capacity was increased to 1.2 MGD by converting the WWTP to a conventional activated sludge process. As a result of modifications to the discharge permit, the capacity of the plant was de-rated from 1.2 MGD to 0.8 MGD. This reduction was implemented because an increase in detention time was needed within certain process units to convert ammonia to nitrate, which was required for compliance within the effluent discharge limits. The treatment capacity of the final clarifiers was also reduced to some extent because nitrified sludge settles at a slower rate than conventional sludge.

Entrance Works

The entrance works include the influent lift station, flow metering (Parshall flume), mechanical bar screen, and aerated grit chamber. The influent lift station pumps wastewater (with three pumps) from the wetwell where the raw sewage is received into the treatment process. The Parshall flume measures influent flow and records average and diurnal flow variations. The mechanical bar screen removes large objects from the influent flow streams such as rags, paper, plastics, metals, sticks, and other materials. The aerated grit chamber removes heavier, inorganic materials such as sand, grinds, gravel, and other non-putrescible components from the influent wastewater.

Chlorination was used as the original effluent disinfection method. In 1995, this method was replaced with an open channel ultraviolet light disinfection system. In 2007, the screw pumps at the influent lift station were replaced with submersible pumps, and in 2010, electrical (controls) modifications were made to the effluent pumps. As of 2012, the activated sludge plant is still in service and fully operational.

Sludge Treatment and Disposal System

The Los Lunas sludge treatment and disposal system begins with mixed liquor being wasted from the activated sludge process and/or the MBR plant (waste activated sludge), which is thickened by a gravity belt thickener to remove water and increase solids concentration. The thickened sludge is pumped into the covered aerobic digesters for stabilization of biosolids. Digested sludge is periodically transported off-site to the sludge disposal site for land surface application. The sludge disposal site is located approximately 9 miles southwest of the Los Lunas wastewater treatment plant. The existing sludge disposal facilities were constructed in 1997. The current facilities consist of approximately 220 acres of land of which 200 acres are used for land application of sludge, a sludge nurse tank and appurtenances, and a storage building for the Terra Gator (sludge disposal vehicle). The site is graded to route storm water into six retention ponds. A 50-foot buffer zone surrounds the perimeter of the site. The site is divided into 11 sections of approximately 20 acres each. Sections for applying sludge are rotated frequently. The total surface available is used in less than one year, which means that some sections receive sludge twice per year.

Membrane Bioreactors (MBR) Plant

Construction of the new MBR wastewater treatment facility began 2007, and the facility went into operation in 2010. Because of the anticipated population growth in Los Lunas, the MBR facility was designed to increase by increments the hydraulic capacity of the plant in phases. As a result, some of the plant components, such as the entrance works, were designed for an ultimate capacity of up to 3.6 MGD while other components, such as the MBR building, have capacity up to 1.8 MGD when fully equipped. The currently operating first phase is capable of providing treatment to an average flow rate of 0.9 MGD, and the plant can be easily expanded up to 1.8 MGD by adding equipment to the MBR basins already in place.

In 2010, a second treatment facility using a new membrane bioreactor basin (MBR) process began operations. The first phase of the MBR process is capable of providing treatment to an average flow rate of 0.9 MGD, which can easily be expanded up to 1.8 MGD by adding some equipment to the MBR basins already in place. The existing combined capacity of the activated sludge and the MBR plants is 1.7 MGD, which will provide adequate wastewater treatment capacity through approximately 2015, but operating the old plant at 0.5 MGD would reduce the capacity to 1.4 MGD. This flow is projected to be received by year 2014.

2.0 Alternatives

This section describes and analyzes alternatives as described in 40 CFR 6.506(b)5.

2.1 Alternative A - No Action

As required under NEPA, a No Action Alternative is considered in order to provide a description of conditions that would occur if action alternatives were not implemented and to serve as a baseline for comparison. Under this alternative, proposed improvements for liquid treatment sludge improvements including thickening, digestion, post-digestion processing (sludge dewatering), and land disposal would not be implemented. The Los Lunas Wastewater Treatment Plant would remain in its current configuration, and no additional land at the plant would be disturbed. Without improvement to the treatment plant, capacity would be exceeded in the next 1-5 years unless population growth did not increase during these years. With projected population growth, the Village of Los Lunas would have to find other options for treating wastewater such as constructing another wastewater treatment plant, connecting to another wastewater treatment plant in the region, or curtailing housing construction in Los Lunas. These other options would need funding to cover additional capital and operating costs for wastewater treatment.

2.2 Alternative B – Preferred Action

2.2.1 Overall Concept

Based on the analysis in the PER (Molzen-Corbin, 2013), alternatives were selected for the Los Lunas Wastewater Treatment Plant to expand the existing membrane bioreactor (MBR) plant and to improve and expand the sludge handling facilities. One of the advantages of MBR technology is the ease of expansion through phased improvements. The criteria used to compare and evaluate alternatives included: capability to comply with regulations and meet permit requirements, ease of expansion, site efficiency and land requirements, operation and maintenance, public acceptance, and cost. The project area is located in Los Lunas, Valencia County, New Mexico. The project area covers approximately 6.8 acres on a property owned by the Village of Los Lunas (see Figures 1.1 and 1.2). Project area components include sludge treatment/handling facilities (4.0 acres), laboratory/ administrative facility (1.6 acres), and contractor staging area (1.2 acres). Remaining project activities would be housed in the new membrane bioreactors treatment facilities (MBR plant), which would not result in land disturbance as part of this project.

In terms of regulator requirements, the effluent discharge into the river currently meets standards and limits for pollutants established in the existing National Pollutant Discharge Elimination System (NPDES) permit. In the future, the existing activated sludge plant would be replaced with the MBR system. As a result, the MBR plants would provide all treatment, and the effluent currently discharged to the river would be higher quality than the current blended effluent.

The MBR technology can be expanded easily. The existing MBR plant hydraulic capacity can be doubled by adding the upper layer of cassettes. For sludge treatment, new digesters would be added in phases, and this treatment process can be expanded by adding more basins.

The MBR plant has a smaller footprint than traditional biological processes such as activated sludge plants. All of the facilities would be constructed within the existing Village of Los Lunas property, and additional land acquisition would not be required.

In terms of operation and maintenance, plant operations would be kept reasonably simple, comply with discharge limits and regulations, and meet objectives for public health protection. The treatment processes, individual components, and equipment would be designed to be managed by a New Mexico Class 4 Operator. The plant equipment and components would be sufficiently robust that frequent repairs are not required. For specialized repairs, manufacturers' or vendors' representatives would be utilized.

Specific improvements related to the liquid treatment as well as sludge thickening, dewatering, post-digestion processing, and sludge disposal are described below. Project construction activities would occur in existing wastewater treatment plant facilities, in newly constructed facilities, or at the sludge disposal site.

2.2.2 Entrance Works

The entrance works would be modified to accommodate MBR facilities expansion. The existing entrance works at the MBR plant were designed and built to account for future expansion of MBR facilities. Provisions for expansion included space and piping to add a third rotary drum screen and outlet pipes to connect the entrance works to future MBR facilities.

2.2.3 Membrane Bioreactors (MBR)

The MBR system consists of interacting components that achieve full wastewater treatment. The MBR plant has two biological treatment trains with the following components per train: one anoxic basin, one pre-aeration basin, two MBR basins, waste activated sludge pumps, permeate pump station, membrane cleaning system, and support systems.

An MBR will replace the activated sludge process as the preferred treatment process for liquid waste. The advantage of the MBR is it requires less physical space than the activated sludge process and allows for long-term plant expansion. The Los Lunas Wastewater Treatment Plant already has one MBR facility in operation, which has allowed for operations staff to become familiar with MBR technology.

Discharge from the entrance works enters a splitter box through an 18-inch diameter pipe at the end of the MBR system. The flow is then divided between the two MBR trains by two weir gates. Each of these gates splits the flow into two anoxic basins to begin treatment. The anoxic basins are equipped with two mechanical mixers, which are used to mix screened raw wastewater with mixed liquor recycled from the MBR basins. The mixture of influent and mixed liquor is pumped from the anoxic basins to the pre-aeration basins by submersible transfer pumps with adjustable frequency drives to allow control of the discharge rate.

The pre-aeration basins provide an environment for additional nitrogen removal through simultaneous nitrification/denitrification of the mixed liquor. There is one pre-aeration basin per treatment train. Each basin is equipped with mechanical mixers and aerators.

Following the pre-aeration basins are the MBR basins. The MBR basins provide an aerobic environment that supports bacteria to metabolize organic matter and to nitrify ammonia to nitrate. The MBR basins also separate solids and treated water by retaining the solids in the basin while treated water (or permeate) passes through the membranes and onto disinfection.

The waste activated sludge pumps pull sludge to be wasted from the MBR basins and discharge the sludge to the gravity belt thickener. The permeate pump station collects the disinfected permeate and provides a sump for the permeate and chlorine injection pumps. A closed vessel ultraviolet light disinfection system is installed at the MBR plant to disinfect the permeate. The permeate flows by gravity from the MBR basins through the ultraviolet light disinfection vessels to the permeate pump station. Each vessel has six medium pressure, high intensity lamps. The effluent from the MBR treatment streams is mixed with effluent from the activated sludge plant before it is discharged into the Rio Grande. Chlorine injection pumps provide water to the MBR membrane clean in place system. A facility drain system collects drainage from the buildings and treatment process and pumps it back to the entrance works to be mixed with raw sewage and begin treatment. The washwater system provides high-pressure disinfected effluent for use throughout the plant.

The following phasing would be implemented to expand the MBR facilities:

1. *Phase I (year 2013 or immediate future)* - An upper layer of membrane cassettes would be added to the existing MBR basins, which will expand the hydraulic capacity from 0.9 MGD to 1.8 MGD.
2. *Phase 2 (year 2015 – near future)* – The capacity of the existing MBR system would be expanded from 1.8 MGB (MBR-1) to 2.7 MGD by adding a new MBR plant (MBR-2) initially equipped with lower cassettes only, 0.9 MGD. It should be noted that implementation of this phase could be delayed if the activated sludge plant is maintained in service, and both the MBR-1 (1.8 MGD) and the old plant (0.8 MGD), are operated at their maximum capacities.
3. *Phase 3 (starting year 2025)* – The capacity of the existing MBR-2 system (constructed in Phase 2) would be expanded from 0.9 MGD to 1.8 MGD by adding the upper cassettes. At the time of implementation of this phase, it is expected that the process would use only MBR plants, and the old plant would have been decommissioned.
4. *Phase 4 (starting year 2031)* – Construct another MBR plant (MBR-3) to increase the hydraulic capacity to 4.7 MGD. This capacity expansion would cover all capacity requirements until the end of the 30-year planning period used for the project. Technology improvement may affect the need for another MBR plant. The treatment capacity per cassette is evolving and the newest units have more hydraulic capacity per square foot of surface area. As existing filtration technology is improved, there is a possibility that cassettes with more treatment capacity per unit could be installed in the future in the existing basins. This could result in obtaining the 4.7 MGD capacity without adding a new MBR plant.

In addition, an effluent discharge line would be constructed as a separate project in the future. The discharge line is described below in Section 2.9.12.

2.2.4 Sludge Thickening – Gravity Belt Thickener

Gravity Belt Thickener (Alternative A4) was selected for sludge thickening. The Gravity Belt Thickener (GBT) removes water from raw sludge. The wastewater treatment plant has one 2-meter wide GBT that can process sludge at an equivalent flow of about 2.7 MGD, but there is no backup unit in case of machine failure. The PER recommends the use of two gravity belt thickeners. The use of two thickeners

provides redundancy, which would allow sludge to continue to be thickened even if one of the thickeners needs to be taken out of service for repairs.

2.2.5 Digestion – Aerobic Digestion

Aerobic digestion (Alternative B3) was selected for digestion. Aerobic digestion is the biological conversion of organic matter in the sludge by supplying air to the sewage sludge in a concrete basin. As the supply of available substrate food and organics is depleted, the microorganisms begin to consume their own cell material to obtain energy. Cell tissue is aerobically oxidized to carbon dioxide, water, and ammonia. Typically, only 75-80 percent of the cell tissue can be oxidized, and the rest is considered the non-biodegradable fraction. The PER recommends immediate modifications to the existing aerobic digesters and eventual addition of aerobic digesters. There is an immediate need to retrofit the existing aerobic digesters to achieve total nitrogen removal as a temporary means to extend the capacity of the existing sludge treatment process and useful life of the sludge disposal site. Proposed improvements to the existing aerobic digestion system are: (1) add new aeration system and blowers with turn-down capability to achieve aerobic/anoxic conditions; (2) install submersible mixers in the existing basins; and (3) add instrumentation consisting of online probes for monitoring temperature, dissolved oxygen, and pH in the basins. In addition to the existing system, the second aerobic digestion system would be added when the flow increases to 1.3 MGD in the near future. The second new system would be needed when flow increases to 2.5 MGD, which is projected to occur around year 2026. When influent flow reaches 3.9 MGD, a fourth aerobic digestion system would be required. Four aerobic digestion systems will have enough capacity to provide treatment to the ultimate flow of 4.7 MGD. If alternate or additional methods for final disposal of sludge are implemented (such as landfill disposal), the volume of aerobic digesters needed in the future would be reduced.

2.2.6 Sludge Dewatering – Belt Filter Press

Belt filter press (Alternative C3) was selected for sludge dewatering. This alternative would only be used if landfill disposal were implemented (see Section 2.7.5). Belt filter presses are continuously fed with chemically conditioned sludge, then mechanically applied pressure dewaters the sludge by squeezing out the water. Conditioned sludge is then allowed to thicken and water removed on a gravity drainage section, and subsequently, the sludge is trapped between tensioned porous belts that pass over and under rollers of various diameters. Increased pressure is created as the belt passes over rollers, which decrease in diameter. The resulting solids concentration in the dewatered sludge, also known as cake, is 16-18 percent for aerobically digested sludge. Sludge dewatering can be applied to raw (sludge directly wasted from the wastewater treatment process) and to aerobically-digested sludge.

2.2.7 Sludge Disposal – Surface Disposal and Landfill Disposal

Surface disposal (Alternative D2) and landfill disposal (Alternative D3) were selected for sludge disposal. Land application consists of spreading biosolids on or just below the soil surface. Aerobically digested Class B sewage sludge disposal with limited public access represents the Village's current sludge disposal practice. The disposal process achieves both pathogen and vector attraction reduction. The Village of Los Lunas currently owns a sludge disposal site located approximately 9 miles southwest of Los Lunas. The sludge disposal site occupies 220 acres, but only 200 acres are currently used due to the topography of the terrain, which limits complete use of the site. In order to achieve the maximum nitrogen-loading rate of 200 pounds of nitrogen per acre per year, the Village of Los Lunas may need to acquire additional land for sludge disposal. At the end of the 30-year planning period, 485 acres would be needed for land

application of digested sludge. As a complementary disposal method, which offers more operational flexibility, sludge would be disposed of at the Valencia Regional Landfill, located west of Los Lunas. The landfill is permitted to accept biosolids (sludge), classified as a special waste, from wastewater treatment plants.

Instead of just surface disposal, a combination of surface disposal and landfill disposal may be used to reduce or eliminate the need for acquiring more land. The approximately 200 acres of land used for surface disposal of sludge can receive the amount of solids generated by an influent flow of up to 1.8 MGD. For flows higher than this, a combination of surface and landfill disposal methods would be needed. Per the NMED current solid waste regulations, sludge is considered a special waste, which is subject to specified handling, transportation, and disposal requirements. The Valencia County Landfill operated by Waste Management of New Mexico is permitted to receive special waste. If more land is acquired by the Village of Los Lunas or the aerobic digestion process is optimized, the amount of solids to be disposed of at the landfill may also be reduced. The Village will need to obtain a special waste disposal permit from the NMED Solid Water Bureau to dispose of dewatered sludge at the landfill. If additional land is required for sludge surface disposal, another EID would be prepared for this activity.

2.2.8 Administration/Laboratory Facilities

The new administration and laboratory would consist of a laboratory, mechanical area, and office space. The laboratory would include space for wastewater analysis, storage room, and office space. The mechanical area would provide space for the water heater and water softener. The office space would include space for administrative personnel, break room, and laundry and shower facilities for operations staff.

2.2.9 Site Improvements

The project area occupies approximately 6.8 acres at the Los Lunas Wastewater Treatment Plant (see Figure 1.2). Project area components include sludge treatment/handling facilities (4.0 acres), laboratory/administrative facility (1.6 acres), and contractor staging area (1.2 acres). Remaining project activities would be housed in the new membrane bioreactors treatment facilities (MBR plant), which would not result in land disturbance as part of this project. The MBR plant was constructed in 2007 and began operations in 2010. The sludge treatment/handling facilities would be located to the east of the existing treatment plant. The new laboratory/administration facility would be located west of the MBR plant. The contractor staging area would be located north of the new sludge treatment handling facilities and south of the MBR plant. This EID document addresses as cumulative and indirect impacts the sludge disposal site or Valencia County Landfill since these facilities are activities located outside of the project area. They are not included as part of the project area for the Los Lunas Wastewater Treatment Plant and Sludge Management Facilities Expansion Project since sludge disposal activities are permitted and currently taking place at the existing sludge disposal site. If additional land is required for sludge surface disposal, another EID would be prepared for this activity.

2.2.10 Cost and Priorities

Molzen-Corbin (2013) prepared separate cost estimates for individual elements of the Los Lunas Wastewater Treatment and Sludge Management Facilities Expansion Project. Table 2.1 presents a summary of the project costs. The total project cost would be $37,302,600 for surface sludge disposal, $31,886,600 for landfill disposal, and $35,546,600 for combined surface disposal. Some savings are

expected if more than one project element is implemented at a time. The new effluent discharge line would be a separate project and analyzed under a supplemental EID.

The project elements were prioritized based on the urgency of the project based on factors such as the need for additional capacity and compliance with regulations (see Table 2.2). The two priority projects are: (1) expansion of the existing MBR plant, which is needed for flow treatment, and (2) improvement of the existing aerobic digesters and new sludge handling building, which are needed to comply with regulations and for operational flexibility.

Table 2.1 Summary of Project Costs

Project Element	Construction Cost	Non-Construction Cost	Total Project Cost
Expansion of Existing MBR Plant (MBR-1)	$ 2,045,000	$ 198,600	$2,243,600
New MBR Plant (MBR-2) and Improvements of Existing Entrance Works	$ 15,106,000	$1,805,000	$ 16,911,000
Capacity Expansion of MBR-2 Plant	$ 2,045,000	$ 198,600	$ 2,243,600
New Administration and Laboratory Building	$ 1,708,000	$ 272,900	$ 1,980,900
New Effluent Discharge Line (separate project)	$ 398,000	$ 130,500	$ 528,500
Sludge, Option A – 100% Surface Disposal	$11,051,000	$2,344,000	$13,395,000
Sludge, Option B – 100% Landfill Disposal	$6,998,000	$981,000	$7,979,000
Sludge, Option C – Combined Surface Disposal and Landfill Disposal	$9,976,000	$1,663,000	$11,639,000

Source: Molzen-Corbin (2013)

The present worth of cost is a combination of capital and operating cost, presented as an overall cost. Using interest rates over a 20-year period, operating costs are translated to an equivalent lump sum that is combined with the capital cost to yield the present worth. An interest rate of 3 percent was used to calculate the present worth for the alternatives.

The present worth was calculated based on the total cost of all improvements and associated operations and maintenance costs for a plant capacity of 3.6 MGD, which is expected to be needed by year 2035. Table 2.3 shows the total project cost and annual operations and maintenance cost, as well as the present worth for each liquid and sludge treatment project. Of the three sludge and disposal alternatives, the one that resulted in the highest present work was Option A – 100 percent surface disposal at $19,316,200. The alternative with the lowest present worth was Option B – 100 percent Landfill Disposal at $13,930,000. Option C, which is a combination of surface and landfill disposal of sludge, resulted in a present worth of $17,798,300.

Table 2.2 Project Priority Ranking

Project Element	Year Needed	Priority Ranking
Expansion of Existing MBR Plant (MBR-1)	2013 or as soon as possible	1
Improvements to Existing Aerobic Digesters and New Sludge Handling System	2013 or as soon as possible	2
New Effluent Discharge Line (separate project)	Near future	3
New Administration and Laboratory Building	Near future	4
New Aerobic Digestion System	2015 – New Digester	5
New MBR Plant (MBR-2) and Improvements to Existing Entrance Works	2015 – if old plant taken off line 2025 – if old plant remains in service	6
Capacity Expansion of MBR-2 Plant	2025	7

Source: Molzen-Corbin (2013)

Table 2.3 Present Worth for Liquid and Sludge Treatment

Project	Total Project Cost	Annual Operations and Maintenance Cost	Present Worth
Expansion of Existing MBR Plant (MBR-1)	$2,243,600	$157,000	$4,579,400
New MBR Plant (MBR-2) and Improvements of Existing Entrance Works	$16,911,000	$314,000	$21,582,500
New Administration and Laboratory Building	$1,980,600	$20,000	$2,278,100
New Effluent Discharge Line (separate project)	$528,500	$5,000	$602,900
Sludge, Option A – 100% Surface Disposal	$13,395,500	$398,000	$19,316,200
Sludge, Option B – 100% Landfill Disposal	$7,979,000	$400,000	$13,930,000
Sludge, Option C – Combined Surface and Landfill Disposal	$11,639,000	$414,000	$17,798,300

Source: Molzen-Corbin (2013)

The sewer rate impact was also calculated. The cost per 1,000 gallons of wastewater discharged was calculated for two flow conditions: one for current flows of 1.3 MGD and one for future flows of 2.6 MGD, which is the maximum capacity of a fully equipped MBR-1 and the activated sludge wastewater treatment plant. Under the worst-case scenario, assuming that all the money has to be borrowed, the sewer rate impact would range from $1.11 to $2.22 per 1,000 gallons of discharge. The higher rate

impact is for current flows (lower flows because it is the start of the planning period), but as flows increase, the rate impact would decrease.

2.2.11 Future Project - Effluent Discharge Line

As part of a future project, the existing 16-inch effluent disposal line would be replaced with a 24-inch line. This would provide sufficient capacity for the 30-year life of the Los Lunas Wastewater Treatment Plant. This effluent discharge line would cross an irrigation canal, through riparian areas along the Rio Grande, and discharges into the Rio Grande. The proposed line would follow the existing 16-inch pipeline alignment and use the same discharge point into the Rio Grande. The effluent waterline is not included as part of the environmental impact evaluation in this EID, and this future project would be evaluated in a supplemental EID at a future date.

2.3 Evaluation Criteria Used In Alternative Selection

The PER used the following evaluation criteria to screen treatment alternatives and technologies (Molzen-Corbin, 2013). The six criteria included regulatory compliance, expandability, site efficiency and constructability, operations and maintenance, public acceptance, and cost.

Regulatory Compliance

The Los Lunas Wastewater Treatment Plant must achieve continued and consistent compliance with all applicable federal and state regulations. The regulations focus on two priorities: (1) effluent discharged into the Rio Grande, and (2) sludge disposal on land. The effluent is regulated primarily be the conditions of the NPDES permit and sludge disposal is regulated primarily by 40 CFR 503 and conditions of the NMED issued permit. In addition, a Storm Water Pollution Prevention Plan (SWPPP) will be implemented and maintained as required under the Clean Water Act.

Expandability

Expandability and phased construction is an advantageous consideration for the wastewater and sludge treatment facilities.

Site Efficiency and Constructability

Treatment alternatives that use fewer and smaller treatment components are more site-efficient because they require less space. Such components are also more constructible because they can be built more quickly. For the sludge treatment process, treatment technologies and disposal alternatives that require smaller space are also preferred.

Operations and Maintenance

Alternatives that keep operations and maintenance as simple as possible while meeting requirements for discharge limits, regulatory standards, and public health protection are preferred. The treatment processes, individual components, and equipment will be operated and maintained by a New Mexico Class 4 Operator. The plant equipment and components should be sufficiently robust that frequent repairs are not required. Care should be taken when evaluating highly specialized and proprietary equipment to ensure that spare parts and technical assistance will be readily available.

Public Acceptance

Public acceptance is particularly important because the plant is proximate to a residential area and discharges effluent into the Rio Grande. The treatment plant and sludge management process should not produce excessive odor. The public should accept the plant technology as safe, reliable, and environmentally friendly. With regard to sludge disposal, the sludge disposal site is far from residential and commercial areas. The site is already disturbed and has been in use for the past 16 years.

Cost

The design should minimize capital investment and annual operating costs, which are combined into a present worth of cost. For cost comparison purposes in cases of comparable present worth, capital costs should be used rather than operating costs. Conceptual cost estimates were developed for feasible alternatives.

2.4 Sludge Thickening Alternatives Considered

This solids pre-treatment process removes water and concentrates the solids by using a thickening mechanism. Thickening reduces the sludge volume to be processed by removing excess water, which improves operations and reduces costs for subsequent storage, processing, transporting, and final disposal.

Alternative A1 – Gravity Thickening

A gravity thickener consists of a circular concrete tank, usually with a conical bottom that is fitted with collectors or scapers, similar to secondary clarifiers. This type of process has the advantages of a simple operation with low operation and maintenance costs. However, gravity thickening also has some disadvantages: (1) since thickening is conducted prior to sludge treatment (digestion), the sludge is still laden with volatile organic compounds, which may decompose anaerobically and cause odor problems; (2) more land area for construction is required compared with mechanical thickening; (3) gravity thickeners are affected by weather conditions, particularly low temperatures and snow: and (4) gravity thickeners may only yield 2 to 4 percent solids concentration in the sludge, and thus, the volume of the basins for solids treatment and stabilization would still be considerably large. For these reasons, gravity thickening is not recommended.

Alternative A2 – Centrifuge

Centrifugal thickening and dewatering is a high-speed process that separates wastewater solids from liquid with the rapid rotation of a cylindrical bowl. The resulting solids concentration is produced as a thickened cake. Polymer addition is required for the process. The advantages of centrifuges include: (1) small amount of floor space relative to centrifuge capacity; (2) minimal operator attention needed when operations are stable; (3) operators have low exposure to sludge thus reducing occupational health hazards; (4) centrifuges are easy to clean; and (5) centrifuges can handle higher than design loads – thus, centrifuges are good thickening alternatives for medium to large wastewater treatment plants.

The disadvantages of using centrifuges for thickening include: (1) the equipment manufacturer usually preforms the centrifuge repair work; (2) centrifuge equipment has high power consumption and is noisy; (3) experience operating centrifuge equipment is required to optimize performance; (4) performance is

difficult to monitor because the process occurs inside the equipment where the operator's view is obstructed; (5) special structural considerations must be taken to safely install and operate centrifuge equipment; (6) spare parts are expensive and internal parts are subject to abrasive wear; and (7) start-up and shut-down may take an hour to gradually bring the centrifuge up to speed and slow it down for clean out prior to shut down. For these reasons, centrifuge thickening is not recommended.

Alternative A3 – Membrane Thickening

Membrane thickening is considered an innovative technology in the United States. However, membrane technologies have an extensive history of use in Europe and Japan for both liquid and sludge applications. The sludge flows in a loop between a digester, membrane thickener, and an anoxic tank before being discharged from a second digester. Combining the thickener and an anoxic tank with the aerobic digestion process offers the following advantages: (1) reduction in the tank volume required to meet time and temperature criteria for Class B sludge; (2) less water to warm thus increasing operating temperature; (3) smaller tanks also reduce the energy cost for aerating the digesters; (4) the un-aerated zone provides automatic anoxic conditions stimulating denitrification and pH adjustment; and (5) the nitrification/denitrification cycle in the process reduces total nitrogen in the recycle back to the liquid stream. Benefits of the membrane thickening process include the following: (1) improved thickening of wasted sludge without polymer addition; (2) reduction in operations and maintenance cost because there is no need for polymer addition; (3) less sludge volume to handle or dispose of due to the increased solids concentration; (4) automated process reduces operator attendance needs; (5) continuous process resulting in no set-up or cleanup time; (6) reduced footprint because of the smaller tanks; (7) existing or overloaded aerobic digesters may be retrofitted; (8) the technology produces a high quality permeate when used with an aerated digester; (9) reduction in total nitrogen and phosphorus in the permeate; (10) filtrate stream can be combined with effluent without reducing quality; and (11) sludge for disposal has lower nitrogen concentration.

Compared to other mechanical thickening processes, membrane thickening may have a higher capital cost and the technology may be intimidating to Operations Staff who are not familiar with membrane technologies. Regular cleaning is automated with the exception of a chemical cleaning approximately once every six months for two hours. Because chemicals are needed, the operation and maintenance cost increases. In addition, the Village of Los Lunas owns a gravity belt thickener, which is in good mechanical condition, thus if MBT is implemented, the gravity belt thickener would not be necessary. For implementation of the membrane thickening process, significant retrofitting of existing facilities would be required, including additional screening of the sludge wasted from the activated sludge plant due to the potential to have debris that could damage the membranes used for thickening. For these reasons, membrane thickening is not recommended.

Alternative A4 – Gravity Belt Thickening

A gravity belt thickener concentrates sludge using gravity-induced settling and compaction of sludge solids. Polymers are commonly used to chemically condition the biosolids and to enhance formation of solids conglomerates or flocs. The conditioned sludge is fed to the inlet or distribution box of the gravity belt thickener. Turbulence is undesirable because it can disrupt or break down the flocs. The belt is a moving, porous, synthetic mesh where water drains readily through it while the solids are retained on top. V-shaped plows are positioned to ride on the top surface of the belt as it conveys the sludge. The function of the plows is to move the solids from side-to-side as they move with the belt. The expected solids concentration, produced as a thickened cake, is 4-8 percent.

Gravity belt thickeners offer the following advantages: (1) the short residence time of a belt thickener reduces the potential for odor problems; (2) the solids content in the sludge is higher, thus, reducing the digester volume needed for solids treatment; (3) ease of maintenance and cleaning; (4) operators can see the equipment and sludge while the equipment is running, thus allowing for adjustments; and (5) the Village of Los Lunas owns a 2-meter wide gravity belt thickener, which has been in operation since 1996 without major mechanical or maintenance issues. The Operations Staff is very familiar with this piece of equipment, its performance, and maintenance requirements. For these reasons, a gravity belt thickener is recommended.

2.5 Digestion Alternatives Considered

Digestion is the process for stabilizing sludge prior to final disposal. It is often needed for various reasons including: (1) to reduce pathogens and minimize environmental impact and for health protection; (2) to minimize volatile organic compounds and other materials that may cause offensive odors; (3) to inhibit, reduce, or eliminate the potential for putrefaction; (4) to improve sludge characteristics prior to dewatering; and (5) to reduce the volumes of solids to be disposed.

Alternative B1 – Anaerobic Digestion

Anaerobic digestion consists of the biological conversion of organic matter in the absence of oxygen. Biogas is a mixture of methane, carbon dioxide and other gases, and it is produced during the process. Anaerobic digestion for biosolids stabilization has three advantages: (1) with proper processing, biogas can be used within the treatment facility to heat buildings, heat tanks, or generate electricity with additional equipment; (2) the resulting biosolids are typically suitable for land application; and (3) in large plants, the heat or electricity generated may be sufficient to meet many of the energy needs for plant operation. Anaerobic digestion has several disadvantages: (1) anaerobic digestion is most often employed at plants digesting both primary sludge from primary clarifiers and waste activated sludge because the mixture degrades readily; (2) it requires more skilled operation than aerobic digestion; (3) the process is susceptible to upset and recovery is slow; (4) it is very sensitive to temperature, and heating of the reactors is frequently needed; and (5) anaerobic digestion is also highly sensitive to pH, alkalinity concentration and inhibitory substances. In addition, the anaerobic digestion process is best suited for large plants due to high capital investment for construction. For these reasons, anaerobic digestion for biosolids stabilization is not recommended.

Alternative B2 – Autothermal Thermophilic Aerobic Digestion

Autothermal Thermophilic Aerobic Digestion (ATAD) creates warm conditions by using the heat released from the oxidation of volatile solids during the digestion process. The process is called “autothermal” because supplemental heat is not provided. ATAD has several advantages including: (1) high disinfection capability; (2) low space and tankage requirements; (3) easy to operate; (4) retention times required to achieve a given solids reduction are decreased substantially (about 5 to 6 days); and (5) when temperature is maintained at 55 degrees Celsius (°C) or higher and the reactor is well mixed, the concentration of most microorganisms can be reduced to below detectable levels, thus, meeting the requirements for Class A biosolids. Three disadvantages of ATAD include: (1) poor dewatering characteristics; (2) lack of nitrification; and (3) odor issues. Odors have been the main complaint, and the reason why this process is not used regularly. Since a residential area is located in close proximity to the Los Lunas Wastewater Treatment Plant, odors could be a problem. For these reasons, ATAD is not recommended.

Alternative B3 – Aerobic Digestion

Aerobic digestion is the biological conversion of organic matter in the sludge by supplying air to the sewage sludge in a concrete basin. The advantages of aerobic digestion Include: (1) it is a well-known, stable process; (2) it is used in many wastewater treatment facilities due to its simple operation and effectiveness; (3) capital costs are lower compared to anaerobic digestion; (4) the end product is biologically stable and typically odorless; and (5) the technology is suitable for digesting nutrient-rich biosolids. The aerobic digestion process also has disadvantages: it is energy-intensive because it requires air for the biodegradation process to occur and for mixing; and the process is affected by temperature, feed solids concentration, type of aeration/mixing devices, and tank geometry. Aerobic digestion is recommended for continued use in biosolids stabilization at the Village of Los Lunas Wastewater Treatment Plant.

2.6 Sludge Dewatering Alternatives Considered

Dewatering consists of the separation of water and stabilized solids (digested sludge). Dewatered solids can be transported in a dump truck.

Alternative C1 – Centrifuges

This is the same alternative as Alternative A2 under the sludge thickening alternatives. Centrifuges can also be used for sludge dewatering. Nevertheless, centrifuges are not recommended for the same reasons as not recommended for pre-digestion thickening.

Alternative C2 – Sludge Drying Beds

Digested solids are placed on drying beds, which can be conventional sand beds or paved drying beds, to allow for water to evaporate or drain. After drying, the solids can be disposed in a landfill or used as a soil conditioner. Sludge drying beds were part of the original components of the Los Lunas Wastewater Treatment Plant – extended aeration plant, but the beds were abandoned in 1996 when the current sludge treatment and handling facilities began operation. The advantages of sludge drying beds include: (1) low capital cost; (2) high-solids content in the dried product: (3) minimum operator attention requirements; (4) low energy consumption: and (5) product contains higher solids concentration than sludge dewatered by mechanical methods. The disadvantages of sludge drying beds include: (1) large land/space requirements; (2) process is highly sensitive to climatic/weather conditions; (3) it is labor-intensive to remove dried sludge and special equipment may be required; and (4) potential odor issues and insect attraction concerns. For these reasons, sludge disposal beds are not recommended, especially because of the proximity of residential areas, but they could be used temporarily if other alternatives are not available.

Alternative C3 – Belt Filter Press

Belt filter presses are continuously fed with chemically conditioned sludge, then mechanically, applied pressure dewaters the sludge by squeezing out the water. Conditioned sludge is then allowed to thicken and water removed on a gravity drainage section, and subsequently, the sludge is trapped between tensioned porous belts that pass over and under rollers of various diameters. Belt filter presses have the following advantages: (1) little labor is needed for equipment operation and shut down; (2) maintenance is simple; (3) belt replacement has a low cost; (4) belt presses can be started and shut

down quickly compared to centrifuges; (5) press has low energy requirements; (6) high pressure machines produce very dry cake; and (7) there is less noise associated with belt presses compared to centrifuges. Disadvantages of belt filter presses include: (1) odors may be a problem but can be controlled with good ventilation systems and chemical additions; (2) solids with higher concentrations of oil and grease can result in blinding the belt filter and lower solids content cake; (3) wastewater solids must be screened or ground to minimize the risk of sharp objects damaging the belt; and (4) belt washing at the end of each shift can be time consuming and require large amounts of water. A belt filter press is recommended for landfill disposal of digested sludge.

2.7 Disposal Alternatives Considered

The last step is the disposal of sludge.

Alternative D1 - Composting

During the composting process, the organic matter present in digested sludge undergoes biological degradation to a stable end product. The end product is usually a Class A, humus-like material without detectable levels of pathogens that can be applied as a soil conditioner and fertilizer. Composting creates a marketable end product that is easy to handle, store, and use. Composting has disadvantages including: (1) increased labor requirements; (2) specialized equipment may need to be purchased; (3) land requirements may be substantial; (4) specific process monitoring and recordkeeping are required; (5) bulking agents such as wood chips, saw dust, or tree branches are needed; and (6) final disposal of end product needs to be identified either by contracting farmers willing to use or market the compost product. Because of these disadvantages, composting is not recommended. However, if the Village of Los Lunas proceeds with the installation of dewatering equipment, they will have the opportunity to pursue composting at a later date.

Alternative D2 – Surface (Land) Disposal

Surface disposal or land application consists of spreading biosolids on or just below the soil surface. The Village of Los Lunas currently owns a sludge disposal site located approximately nine miles southwest of Los Lunas. The advantage of the land application alternative is that the Village of Los Lunas owns and currently uses a sludge disposal site located southwest of Los Lunas. The disadvantage of this alternative includes: (1) the sludge disposal site does not contain sufficient land to handle future sludge production and additional land would need to be acquired; and (2) nitrogen loading rates could be exceeded in the future in portions of the sludge disposal site. Land application of biosolids is recommended, but other alternatives would be needed if additional land cannot be acquired or if more operational flexibility is required.

Alternative D3 – Landfill Disposal

According to NMED regulations, sludge is classified as a special waste that is subject to specified handling, transportation, and disposal requirements. A sludge Disposal Management Plan (DMP) must be approved by the NMED Solid Waste Bureau prior to the transportation and disposal of sludge at a landfill. The Valencia Regional Landfill, located west of Los Lunas, is permitted to accept biosolids (sludge) from wastewater treatment plants as a special waste. Advantages of landfill disposal of sludge include: (1) additional land for continued sludge spreading will not be an urgent need; (2) if a dewatering process is used, the volume of biosolids would be reduced thus minimizing tipping fees; and (3) sampling

and recordkeeping requirements would be simplified. Disadvantages of landfill disposal of sludge include: (1) larger plants try to avoid landfill disposal because of fees that may be imposed; (2) landfills may choose not to receive sludge, thus, an alternative disposal method may be needed; and (3) additional equipment to process and transport the sludge to a landfill may be needed. Landfill disposal is recommended as an additional method to surface (land) disposal.

3.0 Affected Environment / Environmental Consequences

This section describes the affected environment and environmental consequences of the Preferred Action Alternative per 40 CFR 6.506(b).

3.1 Environmental Setting

The project area is located on the eastern side of the Rio Grande Valley in Los Lunas, Valencia County, New Mexico. The map location of the project area is on unsectioned land within the Nicolas Duran de Chavez Land Grant. The project area appears on the *Los Lunas, New Mexico* U.S. Geological Survey Quadrangle map.

3.2 Land Use

3.2.1 General Land Use

The Los Lunas Wastewater Treatment Plant is located in an area of mixed land use. Residential land use is located to the north of the treatment plant. Farmland is located to the west and south of the treatment plant. Undeveloped open space is located to the east of the treatment plant. This open space consists of riparian vegetation bordering the Rio Grande.

The Village of Los Lunas (1999) Comprehensive Plan includes the following goals for land use and growth management:

1. Encourage new growth and infill development within the Village limits.
2. Expand Village municipal limits within the Extra Territorial Zone through phased annexation.
3. Assure that new development will pay for expanded capita improvement attributable to development.
4. Improve facilities in existing annexed and developed areas.
5. Coordinate land use and growth management with the extension of infrastructure.
6. Implement zoning policies that achieve a desirable mix of different land uses and densities, preserve existing neighborhood character, and respect the rights of private property owners.
7. Achieve a range of housing densities that will ensure efficient use of land within the Village limits and extraterritorial planning area.
8. Encourage patterns of land use that decrease trip length of automobile travel and enable trip consolidation.
9. Encourage and preserve the residential character of the Village.
10. Study the problem of rural subdivisions.

The Preferred Action Alternative will be compatible with land use patterns in Los Lunas. The land uses surrounding the treatment plant would remain the same. This alternative complements the Comprehensive Plan by providing wastewater services for expected new development in Los Lunas. The wastewater facilities will be constructed within the existing Village of Los Lunas wastewater treatment plant property, and additional land acquisition would not be required.

3.2.2 Growth and Population Trends

Los Lunas population growth trends are expected to create a need for additional wastewater treatment capacity. According to the 2010 census, Los Lunas's population increased from 10,034 in 2000 to 14,835 in 2010, a 47.8% increase. Los Lunas is the second fastest growing community in New Mexico, after Rio Rancho with a 69.1% increase over the same decade. Valencia County grew by 15.7% and was New Mexico's fifth fastest growing county (Molzen-Corbin, 2013).

The PER used Mid-Region Council of Governments (MRCOG) projections for subzones to project population growth for Los Lunas. The projections were adjusted to reflect that it will take awhile for the village to annex all the areas included in the subzones. Nevertheless, Los Lunas is expected to have an average annual growth rate of 4.39% and the year 2041 population is projected to be 56,258 (see Table 3.1).

Table 3.1 Los Lunas Population Projects for 2010 – 2041

Year	Population	Year	Population
2010	14,835	**2026**	29,517
2011	15,487	**2027**	30,814
2012	16,167	**2028**	32,168
2013	16,878	**2029**	33,581
2014	17,619	**2030**	35,057
2015	18,393	**2031**	36,597
2016	19,201	**2032**	38,205
2017	20,045	**2033**	39,883
2018	20,926	**2034**	41,636
2019	21,845	**2035**	43,465
2020	22,805	**2036**	45,375
2021	23,807	**2037**	47,368
2022	24,853	**2038**	49,450
2023	25,945	**2039**	51,622
2024	27,085	**2040**	53,890
2025	28,275	**2041**	56,258

Source: Molzen-Corbin (2013)

3.2.3 Important Farmland

No agricultural activities, including crop production, are currently taking place within the project area. However, three soil mapping units classified as Farmland of Statewide Importance occur at the Los Lunas Wastewater Treatment Plant site: Gila clay loam; Glendale soils, slightly saline; and Vinton loam (Natural Resources Conservation Service [NRCS], 2011). The Preferred Alternative would not take any currently cultivated lands out of production. The Natural Resources Conservation Service (NRCS) was consulted in regard to farmlands and the Farmland Policy Protection Act (NRCS, 2011).

3.2.4 Geology and Soils

Lands in this part of Valencia County consists of level land along the Rio Grande. The project area is located in the Mexican Highland Section of the Basin and Range Physiographic Province (Williams, 1986).

Geologic material consists of the Quaternary alluvium (New Mexico Bureau of Geology and Mineral Resources, 2003). Elevation is approximately 4840 feet above mean sea level (amsl).

Soil survey information for the project area was obtained from the NRCS (1975 and 2011). Four soil mapping units occur at the Los Lunas Wastewater Treatment Plant site: Gila clay loam; Glendale soils, slightly saline; mixed alluvial land, and Vinton loam (see Table 3.2). These soils are susceptible to slight to moderate erosion. Exposed areas would require occasional maintenance and simple erosion measures. The Preferred Action Alternative will disturb approximately 6.8 acres of soils. Since more than 1 acre of soils would be affected by the Preferred Action Alternative, a Storm Water Pollution Prevention Plan (SWPPP) with recommended best management practices (BMP) to limit erosion and sediment transport will be prepared.

Table 3.2 Treatment Plant Soils

Soil Mapping Unit	Approximate Per Cent of Project Area	Permeability	Runoff	Erosion Risk
Gila clay loam	0.1%	Moderate	Slow	Slight
Glendale soils, slightly saline	65.0%	Moderately slow	Slow	Slight
Mixed alluvial land	14.5%	Variable	Slow	Slight to Moderate
Vinton loam	2.8%	Moderately Rapid	Very Slow to Slow	Moderate

Source: Natural Resources Conservation Service (1975 and 2011)

3.2.5 Formally Classified Lands

There are no national or state parks or forests within or adjacent to the project area. Two local parks are located near the project area. Chester Skinner Park is located approximately 0.2 mile north of the project area, and Artiaga Park is located approximately 0.4 mile north of the project area. Undeveloped open space is also located east of the Los Lunas Wastewater Treatment Plant. The Recommend Action Alternative would not affect the use of these parks and open space. The Preferred Action Alternative would not affect national or state parks, national or state forests, wildlife refuges, wilderness areas, or wild and scenic rivers. The National Park Service and Natural Resources Conservation Service were consulted with, and their comments are included in Section 5.1 and Appendix B.

3.3 Floodplains

Floodplains are lands that are inundated during high flows, typically 100-year floods. Executive Order (EO) 11988 regarding floodplain management requires that any potential impacts to floodplains be assessed to reduce the risk of flood loss, minimize flood impacts, and preserve the values served by floodplains. In order to comply with EO 11988, the project area was compared to the Flood Insurance Rate Map prepared by the Federal Emergency Management Agency (FEMA). The project area is shown on the following FEMA Flood Insurance Rate Map revised August 19, 2010: 35061C0240E. On this floodplain map, the project area is shown as Zone AE, an area within the 1 percent annual chance of annual flooding (100-year floodplain) with flood elevations determined. The flood elevation at the project area is 4844 feet (FEMA, 2010). Mr. Adolph Lopez, the Valencia County Floodplain

Administrator, provided the FEMA Standard Flood Hazard Determination Form for the project area confirming that the project area is within a floodplain. The FEMA Standard Flood Hazard Determination Form provided by the Valencia County Floodplain Administrator is included in Appendix B.

The Village of Los Lunas is a participant in the National Flood Insurance Program. The Village's Floodplain Administrator was consulted in regard to the proposed project. The Upper Belen Riverside Drain is located to the east of the Los Lunas Wastewater Treatment Plant. The Preferred Action Alternative is designed with the recognition that the project area is located within the 100-year floodplain. The Village of Los Lunas has developed procedures for management of the treatment plant during a flood event.

3.4 Wetlands

Wetlands are lowland areas that are inundated or saturated with water for a sufficient time to allow a prevalence of hydrophytic vegetation to develop. Jurisdictional wetlands, those protected from unauthorized dredge-and-fill activities under Section 404 of the Clean Water Act and EO 11990, have three essential characteristics: dominance by hydrophytic vegetation, hydric soils, and wetland hydrology. Hydrophytic vegetation requires inundated or soil saturation for existence. Hydric soils are ponded or flooded for a sufficient time during the growing season to develop anaerobic conditions. Wetland hydrology is the availability of surface or groundwater to create the wetland environment. The U.S. Army Corps of Engineers was coordinated with and provide information on Section 404 permits. The U.S. Army Corps of Engineers determined that a permit is not required since the project area consists entirely of uplands. This decision was based on the jurisdictional determination (JD) that there are no waters of the United States on the project site (refer to Appendix B).

The project area was surveyed for the presence of wetlands. No wetlands areas are present within or adjacent to the project area, and the Preferred Action Alternative would have no impact to wetlands or riparian habitat.

3.5 Water Resources

3.5.1 Surface Water

The project area is located within the Rio Grande basin. The main channel of the Rio Grande is located approximately 0.25 mile east of the Los Lunas Wastewater Treatment Plant. No surface water bodies are located within the project area. This section presents information on how the current and proposed treatment plant operations will meet current federal and state standards for water quality.

The Los Lunas Wastewater Treatment Plant was modified from an extended aeration process to an activated sludge system in 1992, which allowed for an increased capacity from 0.7 MGD to 1.2 MGD. Subsequent changes to the NPDES permit resulted in process adjustments to comply with ammonia toxicity limits, and the plant was de-rated from 1.2 MGD to approximately 0.8 MGD to increase detention time. This permit is based on a plant design flow of 0.9 MGD, but the current average flow is approximately 1.2 to 1.3 MGD, after the Central New Mexico Correctional Facility was connected to the Los Lunas sanitary sewer system at the end of 2011. A final NPDES permit was issued on April 18, 2013. The permit established final effluent limitations for a 2.7 MGD design flow. Principal discharge limitations include:

- Minimum pH of 6.6 and maximum pH of 9.0;

- Biological oxygen demand, 5-day (BOD_5) – 30 miligrams/liter (mg/l) on a 30-day average and 45 mg/l on a 7-day average;
- Total suspended solids – 30 mg/l on a 30-day average and 45 mg/l on a 7-day average;
- Percent removal (minimum), BOD_5 and TSS – 85 percent;
- *E. coli* bacteria – 126 colony forming units (cfu)/100 milliliters (ml) on a 30-day average and daily maximum of 410 cfu/ml;
- Dissolved oxygen (minimum) – ≥ 5.0 mg/l 30-day average and daily maximum; and
- Total residual chlorine – 19 micrograms/liter (µg/liter).

The NMED provided comments on NPDES permitting and the Storm Water Pollution Prevention Plan (SWPPP) (see Section 5.1 and letter in Appendix B). The plant prepares monthly discharge monitoring permits that are submitted to USEPA. The plant has operated within specified discharge limits except for one violation in June 2010 due to equipment failure. This resulted in process upset and release of TSS from the secondary clarifiers in excess of the discharge limit of 30 mg/l TSS and 225 pounds TSS/day. Twice per year, whole effluent toxicity (WET) tests are conducted. All WET test results were "Pass". Increased flows would affect daily loading, or mass of contaminants, that the plant is currently allowed to discharge to the river. Under the current NPDES, the maximum 30 day average loading of both BOD and TSS is 225 pounds/day (or 30 mg/l) based on a flow of 0.9 MGD. The next NPDES permit may include modifications to change concentrations or mass loadings for BOD and TSS.

In the PER (Molzen-Corbin, 2013), loading projections for the Wastewater Treatment Plants influent are 300 mg/l BOD and 250 mg/l TSS. Per capita influent loading estimates were 0.11-0.26 BOD pounds per capita per day and 0.11-0.33 TSS pounds per capita per day. BOD and TSS effluent loading for different flows and concentrations were calculated for different flow scenarios (see Table 3.3). Calculated average loadings through the planning period resulted in 0.22 pounds BOD/capita-day and 0.18 pounds TSS/capita-day, which are well within typical ranges for domestic wastewater.

A total maximum daily load (TMDL) for the Middle Rio Grande was recently approved (NMED, 2010). NMED identified two impairments along this reach of the Rio Grande: aluminum and *E. coli.* No nutrient impairments (phosphorus or nitrogen) were identified in the Rio Grande in the vicinity of Los Lunas. Aluminum was identified in the Rio Grande from San Marcial to Rio Puerco, and this, is not an impairment of concern for the Los Lunas Wastewater Treatment Plant. *E. coli* is a bacteria that was identified in several segments of the Rio Grande and may affect effluent quality requirements for the Los Lunas Wastewater Treatment Plant. This parameter can be treated with appropriate effluent disinfection. The treatment plant has two separate ultraviolet light disinfection systems (one at the old plant and one at the MBR facility) and appropriate standby equipment for effluent disinfection.

The New Mexico Water Quality Control Commission has set standards for surface waters throughout New Mexico. The standards established for the main stem of the Rio Grande from the headwaters of Elephant Butte reservoir upstream to the Alameda Bridge are specified in 20.6.4.105 New Mexico Administrative Code (NMAC) and 20.6.4.900 NMAC. Designated uses include irrigation, marginal warmwater aquatic life, livestock watering, public water supply, wildlife habitat, and primary contact. Criteria applicable to these uses include the following:

- Irrigation: (1) Dissolved selenium - 0.13 mg/l, and (2) dissolved selenium in presence of >500 mg/L SO_4 - 0.25 mg/l.

- Marginal warmwater: Dissolved oxygen 5 mg/l or more, pH with the range of 6.6 to 9.0 and maximum temperature 32.2°C (90°F).
- Livestock water: Criteria listed in 20.6.4.900 J NMAC apply.
- Wildlife habitat: Wildlife habitat shall be free from any substances at concentrations that are toxic to or will adversely affect plants and animals that use these environments for feeding, drinking, habitat or propagation; can bioaccumulate; or might impair the community of animals in a watershed or the ecological integrity of surface waters of the state. Criteria listed in 206.4.900 J NMAC apply.
- Primary contact: Monthly geometric mean of *E. coli* bacteria of 126 cfu/100 ml and single sample of 410 cfu/100ml and pH within the range of 6.6 to 9.0.

Table 3.3 BOD and TSS Effluent Loading for Different Flows and Concentrations

Approximate Year	Effluent Flow	BOD Equivalent per Capita Loading, Pounds/capita-day	TSS Equivalent per Capita Loading, Pounds/capita-day
2011	1.1 MGD	0.23	0.19
2012	1.4 MGD	0.23	0.19
2013	1.5 MGD	0.23	0.19
2014	1.6 MGD	0.22	0.19
2015	1.7 MGD	0.22	0.19
2016	1.8 MGD	0.22	0.19
2017	1.9 MGD	0.22	0.18
2018	2.0 MGD	0.22	0.18
2019	2.1 MGD	0.22	0.18
2020	2.2 MGD	0.22	0.18
2021	2.2 MGD	0.22	0.18
2022	2.3 MGD	0.22	0.18
2023	2.3 MGD	0.22	0.18
2024	2.4 MGD	0.22	0.18
2025	2.4 MGD	0.22	0.18
2026	2.5 MGD	0.21	0.18
2027	2.6 MGD	0.21	0.18
2028	2.7 MGD	0.21	0.18
2029	2.8 MGD	0.21	0.18
2030	3.0 MGD	0.21	0.18
2031	3.1 MGD	0.21	0.18
2032	3.2 MGD	0.21	0.18
2033	3.3 MGD	0.21	0.18
2034	3.5 MGD	0.21	0.18
2035	3.6 MGD	0.21	0.18
2036	3.8 MGD	0.21	0.17
2037	4.0 MGD	0.21	0.17
2038	4.1 MGD	0.21	0.17
2039	4.3 MGD	0.21	0.17
2040	4.5 MGD	0.21	0.17
2041	4.7 MGD	0.21	0.17

Source: Molzen-Corbin (2013)

Under the Preferred Action Alternative, effluent from the treatment plant would meet these standards. This would be achieved by ensuring that treatment plant discharges are within the requirements of their NPDES permit.

In terms of water rights, the Village of Los Lunas has 5,778.65 acre-feet per year (AFY) of diversion rights. The New Mexico Office of the State Engineer recently approved a comprehensive water rights permit that will allow the village to divert up to 6,320.5 AFY. This diversion limit is based on a

population of approximately 42,000 residents with a per capita use of 135 gallons per day. If eventually more than 6,320.5 AFY of water rights are needed, the Village of Los Lunas will obtain water rights through transfers as their service area is expanded. Village policy requires that subdivisions and large commercial users provide water rights adequate to meet development needs prior to connecting to the water system. If service is extended to currently unincorporated areas, the new customers will be required to transfer water rights to meet the new demand. This approach was used to obtain water rights in the process of providing water and wastewater service to the Central New Mexico Correctional Facility.

During construction, coverage will be obtained under the NPDES general construction permit since the project area is larger than 1.0 acre. As part of the permit, a storm water pollution prevention plan will be prepared. The plan will include best management practices to minimize erosion and transport of sediment and contaminants.

3.5.2 Groundwater

Groundwater at the project area occurs at a shallow depth, typically 5 to 20 feet depending on Rio Grande flows, precipitation, and geologic conditions. The Preferred Action Alternative will have no effect on groundwater at the project area. No discharges or sludge disposal activity would occur at the project area. The sludge disposal site is located approximately 9 miles southwest of Los Lunas. The sludge management system is covered under Discharge Permit 1053 (DP-1053) issued and maintained by the NMED Groundwater Quality Bureau. The permit was reviewed and modified on February 8, 2013. The discharge permit allows up to 45,000 gpd of liquid, semi-solid, and/or solid domestic wastewater treatment facility sludge to be discharged to the 220-acre surface disposal site according to the requirements of 20.6.3.3101 and 20.6.2.3103 NMAC. The sludge disposal site is required to be fenced with a locked gate and specified signs. Sludge will be applied to eleven 20-acre disposal cells on a rotational basis. Ponding of sludge will be minimized. The amount of total nitrogen will not exceed 200 pounds per acre. To prevent stormwater flows into and out of the site, a minimum 24-inch earthen berm will be maintained around the site perimeter. As part of the permit, requirements for monitoring, reporting, contingency plan, and closure plan will be followed. An evaluation of groundwater impacts of sludge disposal is discussed under cumulative impacts.

3.6 Coastal Resources

There are no coastal resources in New Mexico.

3.7 Air Quality

Los Lunas experiences a dry climate with low precipitation and low humidity. Based on 1971-2000 climate records, average annual precipitation is 9.93 inches. Precipitation occurs only on 61 days of the year on average. More than an inch of monthly precipitation is received during the monsoon season from July through October. The average annual temperature is 54.7 degrees Fahrenheit (°F). Temperatures range from an average monthly maximum of 91.9 °F in July to an average monthly minimum of 17.5 °F in January.

The USEPA has established National Ambient Air Quality Standards (NAAQS) for criteria pollutants. The criteria pollutants include carbon monoxide, lead, nitrogen dioxide, particulate matter greater than 10 microns in diameter, particulate matter greater than 2.5 microns in diameter, ozone, and sulfur dioxide.

Los Lunas and Valencia County are in attainment with the NAAQS (USEPA, 2010a and 2010b). USEPA and the NMED Air Quality Bureau confirmed that Valencia County is an attainment area (see Section 5.1 and correspondence in Appendix B).

The project will not affect the attainment status for Los Lunas or Valencia County. No emissions will be generated at levels that would require a permit from NMED.

3.8 Biological Resources

3.8.1 Vegetation

The project area occurs at the existing Village of Los Lunas Wastewater Treatment Plant. The site consists of existing plant facilities and undeveloped parcels. Improvements are proposed on three undeveloped parcels on a total area of approximately 6.8 acres located adjacent to existing facilities. Historically, this area supported a Riparian and Plains Mesa Sand Scrub vegetation community (Dick-Peddie, 1993). However, the site is now mostly un-vegetated. Vegetation present consists primarily of weedy species such as tumbleweed (*Salsola tragus*), summer cypress (*Kochia scoparia*), silverleaf nightshade (*Solanum* sp.) and bindweed (*Convolvulus arvensis*). Saltgrass (*Distichlis spicata*) and muhly grass (*Muhlenbergia* sp.) are also common. Approximately 90 percent of the project area is un-vegetated. Several mature Rio Grande cottonwoods (*Populus deltoides* ssp. *wislizeni*) occur in the project area (Marron, 2012).

Vegetation has been partially modified by human activity. The Preferred Action Alternative would disturb approximately 6.8 acres of vegetation.

3.8.2 Wildlife

The project area provides habitat for a variety of wildlife species. Bird nesting sites are limited because of the lack of trees. Marron (2013) conducted a biological survey of the project area in December 2011 and a follow-up survey in October 2013 (see Appendix F). The following animal species or their sign were observed within the project area: American crow (*Corvus brachyrhynchos*), sandhill crane (*Grus canadensis*), desert cottontail (*Sylvilagus audubonii*), red-tailed hawk (*Buteo jamaicensis*), Cooper's hawk (*Accipiter cooperii*), house finch (*Carpodacus mexicanus*), kangaroo rat (*Dipodymis* sp.), and black-tailed jack rabbit (*Lepus californicus*). Nests of most bird species are protected under the Migratory Bird Treaty Act. The nesting season in this area extends from March 15 through September 15.

The Preferred Action Alternative would disturb approximately 6.8 acres of wildlife habitat. Proposed project activities would affect previously disturbed wildlife habitat. A biological survey will be conducted prior to initiating construction activities. The U.S. Fish and Wildlife Service (USFWS), New Mexico Department of Game and Fish (NMDGF), and the state botanist at the New Mexico Energy, Minerals and Natural Resources Department were consulted with, and their responses are presented in Section 5.1 and Appendix B.

3.8.3 Threatened and Endangered Species

To identify potentially occurring threatened, endangered, sensitive, or special-status species in the project area, federal and state agencies and their lists of protected species were consulted in conjunction with an assessment of actual conditions at the project area. Examined lists included the

USFWS list of federally protected species (USFWS, 2012), New Mexico Department of Game and Fish NMDGF list of state protected animal species (NMDGF, 2012), and state protected plant species (New Mexico Native Plant Protection Advisory Committee, 2010).

Table 3.4 lists threatened and endangered species for Valencia County. Only two of these species have potential habitat at the project area. No threatened or endangered species were observed at the project area. Although no surface water bodies occur within the project area, the Rio Grande silvery minnow has habitat in the nearby Rio Grande. Effluent from the project will discharge into the Rio Grande. This discharge will meet standards under the Village's NPDES permit for the treatment plant and will have no effect on the Rio Grande silvery minnow. In consultation with the USFWS and NMDGF, the USFWS stated that the USFWS concurred with the NPDES permit for the expanded Los Lunas WWTP effluent discharges, and NMDGF did not anticipate significant impacts to wildlife or sensitive habitats (see Section 5.1 and USFWS and NMDGF letters in Appendix B).

Table 3.4 Threatened and Endangered Species Listed for Valencia County

Species	Federal Status	New Mexico Status	Potential of Occurrence
Mammals			
Black-footed ferret (*Mustela nigripes*)	Endangered	--	Extirpated in New Mexico except for experimental populations.
Gunnison's prairie dog *(Cynomys gunnisoni)*	Candidate	--	This is a recent USFWS candidate species listing, which applies to montane populations. Not present within or adjacent to the project area.
New Mexico meadow jumping mouse (*Zapus hudsonius luteus*)	Candidate	Endangered	Occurs in meadows and grasslands near perennial water. No suitable habitat in project area.
Spotted bat (*Euderma maculatum*)	--	Threatened	Forages over water and roosts in cliffs and sometimes trees. No suitable roosting habitat in project area.
Townsend's big-eared bat (*Corynorhinus townsendii*)	Species of Concern	Sensitive	Forages near water and roosts in cliffs and trees. No suitable roosting habitat in project area.
Birds			
American and Arctic peregrine falcon (*Falco peregrinus anatum / Falco peregrinus tundrius*)	--	Threatened	May occasionally fly over the project area, but no suitable roosting or nesting habitat in project area.
Baird's Sparrow *(Ammodramus bairdii)*	--	Threatened	May occasionally fly over the project area, but no suitable nesting habitat in project area.
Bald eagle (*Haliaeetus leucocephalus*)	Bald and Golden Eagle Protection Act	Threatened	Forages over rivers and lakes and roosts in trees near rivers and lakes. No roosting eagles were observed within the vicinity of the project area during surveys. However, they are known to winter within the Middle Rio Grande Valley within the project vicinity, and large cottonwoods near the Rio Grande adjacent to the project area provide suitable roost habitat. It is recommended that if roosting eagles are visible from the site during wintertime construction, the use of heavy equipment be delayed during morning hours until eagles leave roost sites.
Broad-billed hummingbird (*Cynanthus latirostris*)	--	Threatened	Occurs in riparian and woodlands and low wooded canyons; not common in northern New Mexico. Not likely to occur in project area.

Species	Federal Status	New Mexico Status	Potential of Occurrence
Common black-hawk (*Buteogallus anthracinus anthracinus*)	--	Threatened	Occurs in wooded riparian areas along rivers and streams. No suitable habitat in project area and few records from this part of the state.
Mexican spotted owl (*Strix occidentalis lucida*)	Threatened	Sensitive	Occurs in coniferous forest and sometimes in rocky canyons. No suitable habitat in project area.
Southwestern willow flycatcher (*Empidonax traillii extimus*)	Endangered	Endangered	Occurs in shrubby riparian vegetation such as willows. No suitable nesting or migration habitat in project area.
Western burrowing owl (*Athene cunicularia hypugaea*)	Species of Concern	--	Occurs on plains, treeless valleys, and mesas and prefers areas with empty prairie dog or other rodent burrows for nesting and shelter. Potential suitable habitat for this species occurs within the boundaries of the treatment plant property. However, no western burrowing owls were observed within the project area and no mammal burrows are present. Since treatment plant workers are present within the area regularly, it is unlikely that burrowing owl will establish nests within the project area.
Yellow-billed cuckoo (*Coccyzus americanus*)	Candidate	Sensitive	Occurs in wooded riparian areas. No suitable nesting or migration habitat in project area.
Whooping crane *(Grus americana)*	Experimental, non-essential population	__	No longer known to occur in New Mexico.
Fish			
Rio Grande silvery minnow (*Hybognathus amarus*)	Endangered	Endangered	Occurs in Rio Grande. No suitable habitat in project area, but the nearby Rio Grande is within critical habitat. The width of critical habitat along the Rio Grande is defined as those areas bound by existing levees or, in areas without levees, 300 feet of the riparian zone adjacent to the bankfull stage of the river. Critical habitat is designated from Cochiti Dam to the utility line crossing the Rio Grande in Socorro County (USFWS 2003). The project area boundaries are not located within designated silvery minnow critical habitat.

Sources: Marron (2012), NMDGF (2012), New Mexico Native Plant Protection Advisory Committee (2010), USFWS (2012)

3.9 Archaeological, Cultural, and Historic Resources

The prehistory and history of the Middle Rio Grande area consists of four major cultural-temporal periods—Paleoindian, Archaic, Ancestral Puebloan, and Historic. The Paleoindian period (10,000–5500 bc) was the earliest well-documented human occupation in New Mexico. People were hunters and foragers during this period. The climate became warmer and more arid during the Archaic (5500 bc–ad 450). Although this period saw a continuation of the mobile hunting and gathering pattern of the Paleoindian period, there was a shift towards resource diversification that included a variety of plants and the modern suite of Southwest fauna. The Ancestral Pueblo period (as 400-1600) is marked by population growth, greater residential sedentism, the appearance of the bow and arrow and pottery, increasing dependence upon agriculture and storage of foods, and developments in architecture and sociopolitical organization. During this period, villages evolved into extensive pueblos consisting of multi-storied roomblocks separated by plaza areas. In the Middle Rio Grande area, examples include Kuaua, Alameda, Puaray, Tijeras, Piedras Mercadas, San Antonio, and Pottery Mound. The Historic Period (ad 1540 to present) begins with the 1540–1542 *entrada* of Francisco Vasquez de Coronado, includes the Spanish and Mexican occupation of New Mexico through most of this period, and end with the annexation of New Mexico into the United States and more recent urban-focused development in New Mexico.

In February 2012, a cultural resource survey of the project area was conducted (Hroncich-Conner, 2011; see Appendix E). No archaeological sites or historic properties were located during the survey. The Preferred Action Alternative will have no effect on cultural resources. The State Historic Preservation Officer (SHPO) concurred with the findings of the cultural resource survey (see letter in Appendix B).

3.10 Socioeconomic Impacts and Environmental Justice

Socioeconomic data for New Mexico, Valencia County, and nearby Census Tracts 9704.01 and 9707 was obtained (see Table 3.5). The census tracts provide geographic information for the area in the immediate vicinity of the project area. Based on the 2010 Census, New Mexico had a population of 2,059,179, and Valencia County had a population of 76,569. At the local level, Census Tract 9704.01 had a population of 5,087, and Census Tract 9707 had a population of 6,841 (U.S Census Bureau, 2011). Valencia County experienced strong population growth during the past decade, increasing in population by 15.7%. The county was the fifth fastest growing county in the state (Bureau of Business and Economic Research, 2011). Much of this growth is occurring in Los Lunas, which is projected to increase from 14,845 in 2010 to 56,258 in 2041 (Molzen-Corbin, 2012).

Census Tract 9704.01 has a median age of 36.5 years, and Census Tract 9707 has a somewhat older median age of 39.1 years. County and state median ages are similar. The median age is 37.7 years in Valencia County and 36.7 years in New Mexico. Hispanic/Latino is the largest minority group representing 58.3 percent of the population in Valencia County, 69.8 percent of the population in Census Tract 9704.01, and 76.0% of the population in Census Tract 9707. The statewide representation for Hispanic/Latino is slightly lower at 68.4 percent (U.S. Census Bureau, 2011). Sandoval County has a sizeable Native American population (16.3 percent), but the proportion of Native Americans in Census Tract 107.01 is much lower (3.0 percent).

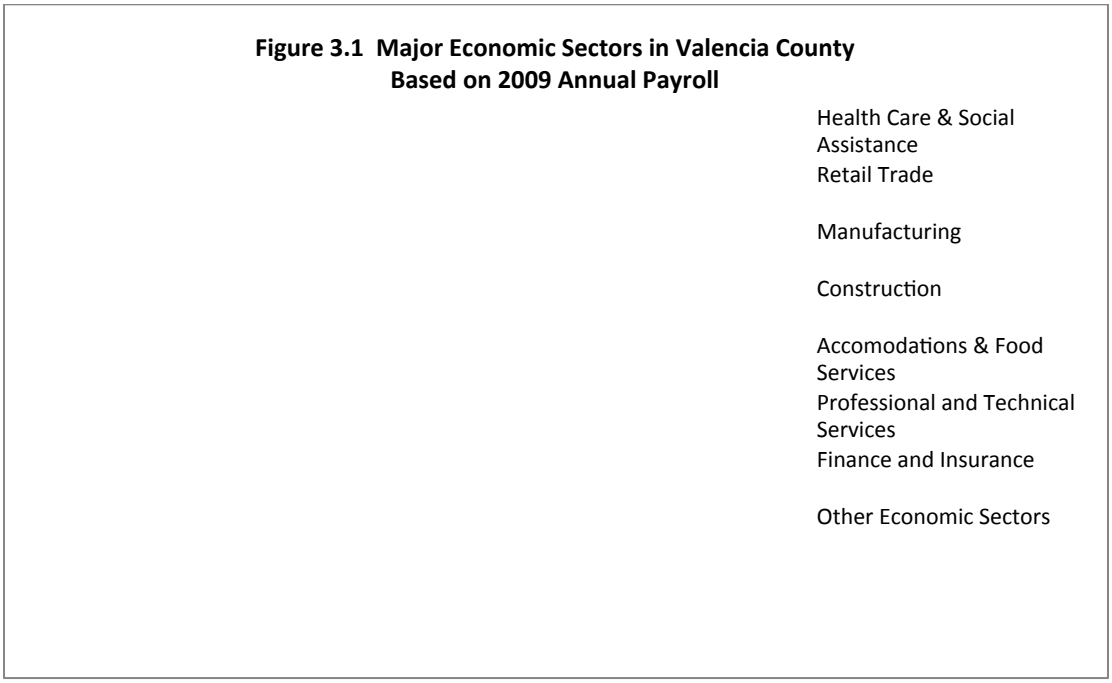
Table 3.5 Regional Socioeconomic Characteristics from 2010 Census

Characteristic	New Mexico	Valencia County	Census Tract 9704.01	Census Tract 9707
2010 Population				
- Population	2,059,179	76,569	5,087	6,841
- Percent Growth 2000-2010	13.2%	15.7%	--	--
- Median Age	36.7 years	37.7 years	36.5 years	39.1 years
- Percent of Population Under 18 Years of Age	25.2%	26.4%	25.3%	21.2%
- Percent of Population Over 64 Years of Age	13.2%	12.7%	13.0%	11.3%
Percent Racial Composition				
- White	68.4%	73.2%	69.8%	76.0%
- Black or African American	2.1%	1.4%	1.0%	2.3%
- Native American	9.4%	3.8%	2.2%	3.8%
- Asian	1.4%	0.5%	0.4%	0.4%
- Native Hawaiian and Pacific Islander	0.1%	0.1%	0.2%	0.0%
- Some Other Race	15.0%	17.0%	22.1%	13.9%
- Two or More races	3.7%	4.0%	4.3%	3.5%
Other Group – Any Race				
- Percent Hispanic/Latino Representation	46.3%	58.3%	65.4%	56.3%
Occupied Housing				
- Owner-occupied housing	68.5%	80.0%	74.9%	82.5%
- Renter-occupied Housing	31.5%	20.0%	25.1%	17.5%

Source: Bureau of Business and Economic Research (2011); U.S. Census Bureau (2011)

In terms of the regional economy, Valencia County and Los Lunas are mainly residential areas and the local economy is tied to Albuquerque region. Nevertheless, the county and village have a diversity of economic sectors that provide employment. Based on 2009 annual payroll, health care and social assistance was the largest economic sector in Valencia County followed by retail trade and manufacturing (see Figure 3.1). The annual payroll was $53,908,000 in health care and social assistance, $52,975,000 in retail trade, and $28,212 in manufacturing (U.S. Census Bureau, 2010).

Figure 3.1 Major Economic Sectors in Valencia County Based on 2009 Annual Payroll



Source: U.S. Census Bureau (2010)

The number of sewer connections has shown a steady increase (see Table 3.6). The total number of connections increased from 4,896 in 2007 to 5,047 in 2012. Most of the connections are residential connections with an average of 4,817 residential connections versus 389 commercial connections. The rates charged have also increased from $17.88 charged in 2007 for the first 1,000 gallons to $19.71 charged in 2012 for the first 1,000 gallons. The average cost for the first 1000 gallons was $19.15, and the cost for each 1,000 gallons after was $2.86.

Table 3.6 Los Lunas Wastewater System
Number of Sewer Connections and Rate Structure

Year	Sewer Connections – Residential Connections	Sewer Connections – Commercial Connections	Sewer Connections – Total Number of Connections	Rate Structure – Cost First 1000 Gallons	Rate Structure – Cost Each 1000 Gallons After
2007	4,558	338	4,896	$17.88	$2.64
2008	4,666	346	5,012	$18.58	$2.74
2009	4,755	349	5,104	$19.29	$2.84
2010	4,926	319	5,245	$19.71	$2.94
2011	4,952	322	5,274	$19.71	$2.94
2012	5,047	324	5,371	$19.71	$3.04
Average	4,817	389	5,206	$19.15	$2.86

Source: Molzen-Corbin (2013)

In compliance with Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations,* potential disproportionate impacts to minority and low-income communities were considered. Environmental justice is defined by the USEPA as the fair and meaningful involvement of all people regardless of race, color, national origin, or income with respect to development, implementation, and enforcement of environmental laws, regulations, and policies. The goal of fair treatment is not to shift risks among populations but to identify potential disproportionately high adverse impacts and to identify alternatives to mitigate those impacts. Table 3.5 shows minority and homeownership data for region. The percent Hispanic/Latino population in Valencia County (80.0 percent) and in Census Tract 9704.01 (65.4 percent) and Census Tract 9707 (56.3 percent) are higher than in New Mexico (46.3 percent). USEPA environmental justice maps are provided in Appendix A. The maps show that the percent minority population is greater than 40 percent near the project area. Poverty levels are 10 to 20 percent near the project area and 0 to 10 percent to the east of the project area. For this reason, Valencia County and the area near the project area may be considered a community of concern. However, homeownership rates are higher in the region than in New Mexico, which is an indicator of economic conditions. The percent owner-occupied housing is 80 percent in Valencia County, 74.9 percent in Census Tract 9704.01, and 82.5 percent in Census Tract 9707 compared with 68.5 percent owner-occupied housing in New Mexico.

The proposed project would be conducted in a manner to ensure that there would be no exclusion of persons or populations from participating in the project, no denying persons or populations the benefits of the project, and no subjecting persons or populations to discrimination because of their race, color, income level, or national origin, in accordance with EO 12898. No residents or businesses would be displaced by the proposed project. A short-term economic benefit would be the creation of

construction jobs for the project, and in the long-term, the project would facilitate economic growth in Los Lunas.

3.11 Other Resources

3.11.1 Public Health and Safety

If present in the environment, hazardous substances are a serious concern because of health and safety risks for the public and construction workers as well as potential cleanup liability. Federal and state environmental databases were reviewed for known hazardous materials site near the project area. The U.S. Environmental Protection Agency (USEPA) does not list and National Priority List or Superfund sites or Corrective Action sites within 1.0 mile of the project area (USEPA, 2012a and 2011b). According to the USEPA environmental justice maps, Pagano Salvage was a site that was located approximately 1.0 mile northeast of the project area and delisted as a Superfund Site in 1992 (see Appendix A). No permitted hazardous waste facilities are located within 1.0 mile of the project area (NMED, 2012b). No active or closed state cleanup sites are located near the project area (NMED, 2012a and 2012b). NMED does not list any leaking underground storage tank (LUST) sites within 0.5 miles of the project area (NMED, 2012c).

Chemical use is limited to the polymer for sludge thickening operations and occasional use of sodium hypochlorite for chemical cleaning of the membranes. To provide secondary containment in case of leaks, the polymer feed system has a sump. Sodium hypochlorite is only purchased when necessary and used immediately. Chemicals are not stored at the plant.

3.11.2 Energy

Irreversibly and irretrievably committed resources associated with the project are primarily the materials needed for construction, and fossil fuels and energy resources needed to operate and maintain the Los Lunas Wastewater Treatment Plant. In general, short-term energy demands would increase during the construction phase, including fuel uses for construction equipment. There will be a long-term gradually increase in energy use as the facility is expanded. The New Mexico Energy, Minerals, and Natural Resources Department recommended using energy efficiency measures, renewable energy sources, and power purchase agreements. The Village of Los Lunas will consider implementing these recommendations where feasible.

3.11.3 Transportation

The Preferred Action Alternative would have little impact on transportation. The Los Lunas Wastewater Treatment Plant has adequate transportation for operations and construction of an expanded facility. Temporary increase in truck traffic would occur when construction is occurring. Sludge disposal would require the continued use of trucks to transport sludge to the sludge disposal site or a landfill. Existing roadways are adequate for this truck traffic.

3.11.4 Visual Impacts

The Preferred Action Alternative would modify the visual appearance of the Los Lunas Wastewater Treatment Plant with the construction of new facilities. Trees screen views of the facility from nearby areas. The new facilities would not obstruct or modify any distinctive views in the southwest Los Lunas

area, such as views of the Rio Grande or Manzano Mountains from parks or residential areas. The sludge disposal site activities are on-going and do not obstruct or modify any distinctive views.

3.11.5 Noise

No long-term noise impacts would be anticipated from the Preferred Action Alternative. The treatment facility would be enclosed within buildings, which would eliminate off-site noise. During construction, noise levels would be higher than normal due to operation of construction equipment. Since there are no residences, schools, or other noise receptors adjacent to the project area, noise impacts during construction will be minimal.

Noise producing heavy equipment operates at the sludge disposal site. The sludge disposal site is located away from residences, schools, or other sensitive noise receptors.

The existing centrifugal blowers at the activated sludge plant may produce noise in excess of 85 decibels at a distance of 30 feet from the unit. Hearing protection is required for individuals working near the blowers.

3.12 Cumulative Impacts

Cumulative impacts are defined as the impacts that result from the incremental impact of an action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions. Cumulative impacts also can result from individually minor but collectively significant actions taking place over a period of time. The cumulative and secondary effects of the project may include stimulated growth in an area with associated loss of vegetation and wildlife habitat, increased traffic, and possible changes in the social and economic character of the area.

Implementation of the proposed project would involve a commitment of a range of natural, physical, human, and fiscal resources. Fossil fuels, labor, and construction materials will be expended in the project. These materials are generally not retrievable; however, they are not in short supply, and their use will not have an adverse effect on the continued availability of such resources. Construction will also require an expenditure of public funds that are not retrievable. The commitment of these resources is based on the concept that residents would benefit from additional wastewater treatment capacity. This benefit is anticipated to outweigh the use of material resources.

Growth is expected to continue in Valencia County and Los Lunas (see Section 3.2.2). Based on the PER, steady population growth is expected to continue through the foreseeable future. This growth will require infrastructures and services including transportation, electric power, water, wastewater, solid waste disposal, schools, police, and fire. In addition to the wastewater expansion, the Village of Lunas will implement a variety of project to serve the growing population.

Sludge disposal would result in indirect impacts at the sludge disposal site located 9 miles southwest of Los Lunas. The Village of Los Lunas is in the process of obtaining a renewed Groundwater Discharge Permit for their sludge disposal operations from NMED. Since the village applies wastewater sludge to a site less than 800 feet above a groundwater source, sludge disposal is subject to NMED Ground Water Quality Bureau regulations. The principal objective of the regulations is to prevent nitrate contamination of groundwater. NMED authorized the village to dispose of sludge by spray application

or subsurface injection on the 220-acre sludge disposal site. The existing discharge permit allows for application of 5,000 gallons per day of digested sludge projection, the maximum hydraulic sludge disposal rate may be reached in 2012. The permit requires that sludge be distributed evenly over the site on a rotational basis. Semi-annual reports are submitted to NMED. Twice each year, the sludge must be analyzed for total Kjeldahl nitrogen (TKN) and nitrate (NO_3-N) concentrations. Sludge applications are limited to 200 pounds per acre per year. The village has submitted a permit renewal and modification application to NMED, which included a request to discharge up to 7,800 gallons per day of digested sludge.

Sludge treatment must meet the federal requirements of 40 CFR 503 – standards for the uses of disposal of sludge and NMED requirements for sludge disposal. In New Mexico, the maximum allowable nitrogen concentration for land application is 200 pounds of total nitrogen per acre per year. At the end of the 30-year planning period for a plant flow of 4.70 MGD, the estimated sludge production rate is 27,375 gallons per day (after thickening) and a mass of 7,800 pounds of solids will be wasted from the treatment process. These projections could be affected by influent wastewater composition or plant operational conditions.

The sludge is also subject to other federal requirements under 40 CFR 503 as a Class B sludge for pathogen and vector reduction. The village meets the pathogen reduction criteria through aerobic digestion and the mean cell residence time/temperature criteria (between 40 days at 20°C and 60 days at 15°C). Vector attraction reduction is achieved by reduction of volatile solids content by at least 38% during treatment.

Table 3.7 shows the projected disposal flows and mass of digested sludge for final disposal at the existing site. The projections assume maximum solids concentrations in the digested sludge of 4%. Nitrogen loading calculations used a total nitrogen concentration of 50,000 mg/kg (dry weight basis). This concentration is based on recent total nitrogen concentrations measured in digested sludge (about 100,000 mg/kg dry weight basis) and assumes that the digesters will be modified to achieve 50% total nitrogen removal from current concentrations.

Table 3.7 Projected Sludge Disposal Flow and Projected Nitrogen Loading

Year	Total Flow - MGD	Digested Sludge Disposal Requirements pounds/month	`Nitrogen Loading Projections per Section – pounds/month	Nitrogen Loading Projections per Each Section – pounds/acre/ year
Early 2011	1.1	49,858	2,493	125
Late 2011	1.3	57,865	2,893	145
2012	1.4	61,869	3,093	155
2013	1.5	65,873	3,294	165
2014	1.6	69,876	3,494	175
2015	1.7	73,880	3,694	185
2016	1.8	77,884	3,894	195
2017	1.9	81,887	4,094	205
2018	2.0	85,891	4,295	215
2019	2.1	89,895	4,495	225
2021	2.2	93,899	4,695	235
2023	2.3	97,902	4,895	245
2025	2.4	101,906	5,095	255
2026	2.5	105,910	5,295	265
2027	2.6	109,913	5,496	275
2028	2.7	113,917	5,696	285
2029	2.8	117,921	5,896	295
2030	3.0	125,928	6,296	315
2031	3.1	129,932	6,497	325
2032	3.2	133,936	6,697	335
2033	3.3	137,939	6,897	345
2034	3.5	145,947	7,297	365
2035	3.6	149,950	7,498	375
2036	3.8	157,958	7,898	395
2037	4.0	165,965	8,298	415
2038	4.1	169,969	8,498	425
2039	4.3	177,976	8,899	445
2040	4.5	185,984	9,299	465
2041	4.7	193,991	9,700	485

Source: Molzen-Corbin (2013)

Sludge transportation requirements to the disposal site will increase proportionately with increasing influent flows to the Wastewater Treatment Plant. Additional equipment and personnel will be needed as influent flows and sludge disposal quantities increase. Continued use of the land disposal method for sludge will require additional land. By the year 2041, the estimated land area required for sludge disposal is 485 acres to comply with the maximum nitrogen loading of 200 pounds per acre per year. Therefore, in addition to the existing site, 285 acres of additional land would be needed. This assumes that the digesters are operated for total nitrogen removal and that nitrogen content in digested sludge is below 50,000 mg/kg dry weight basis. If additional land is not available, other sludge disposal methods would need to be implemented. If additional land is required for sludge surface disposal, another EID would be prepared for this activity, and all needed environmental clearances will be obtained.

4.0 Summary of Mitigation Measures

This section describes mitigation measures that will be used to keep the level of environmental impact below the significant level as outlined in 40 CFR 6.506(6) and (7).

4.1 Physical Resource Measures

Land Use. Proposed Preferred Action Alternative improvements would be constructed on Village of Los Lunas Wastewater Treatment Plant property. This use will be compatible with adjoining land uses. No mitigation is required. If additional land is required for sludge surface disposal, another EID would be prepared for this activity, and all needed environmental clearances will be obtained.

Floodplains. The Preferred Action Alternative is designed with the recognition that the project area is located within the 100-year floodplain. The Village of Los Lunas has developed procedures for management of the treatment plant during a flood event.

Wetlands. As stated in Section 3.4, no wetlands are present within the project area. No mitigation is required.

Water Resources. Discharges from the Los Lunas Wastewater Treatment Plant will comply with the conditions of the existing and future NPDES permit for the plant. The discharge point will remain the same. In the future when the effluent discharge line plans are developed, the Village of Los Lunas will coordinate with NMED regarding compliance with the NPDES permit

There are no waters of the U.S. within the project area. The USACE has been contacted about the project. A Clean Water Act Section 404 permit will not be required for construction of the Preferred Action since the project area does not include waters of the U.S.

During construction, coverage will be obtained under the NPDES general construction permit since the project area is larger than 1.0 acre. As part of the permit, a storm water pollution prevention plan will be prepared. The plan will include best management practices to minimize erosion and transport of sediment and contaminants.

The construction activities associated with the Preferred Action Alternative will likely involve the use of heavy equipment, thereby leading to the possibility of contaminant releases (such as fuel or hydraulic fluid) associated with malfunctions. Parties involved in the project are required to be aware of the discharge notification requirements contained in 20.6.2.1203 NMAC.

Sludge disposal will comply with all federal and state requirements to ensure that groundwater contamination does not occur. The Village of Los Lunas will ensure that federal sludge disposal requirements under 40 CFR 503 and NMED requirements are met.

Coastal Resources. No mitigation is required.

Air Quality. The project will not affect the attainment status for Valencia County or the greater Albuquerque area. No emissions will be generated at levels that would require a permit from NMED.

4.2 Biological Resource Measures

Disturbed areas will be seeded, as appropriate, and in conformance with he SWPPP for the project. Excavation and burying for trenching will occur simultaneously or within an 8-hour period to prevent trapping of small mammals and reptiles. As feasible, fill open trenches at the end of the workday. Escape ramps or trenches will be provided if trenches are left open. Cottonwood trees should be removed outside of the bird nesting season (March 15 – September 15). A biological survey will be conducted prior to initiating construction activities. The construction contractor will plant open disturbed areas with native vegetation once construction is complete.

4.3 Threatened and Endangered Species Measures

The Preferred Action Alternative will not adversely impact threatened and endangered species. If construction is scheduled to begin (land clearing and grubbing) within the bird nesting season (March 15 through September 15), surveys for nesting birds would be conducted prior to initiating construction activities. The Rio Grande silvery minnow has habitat in the Rio Grande. To prevent impacts, the Village of Los Lunas will: (1) implement BMPs specified in the SWPPP; (2) delay the use of heavy equipment during morning hours (from November 1 through March 31) if roosting bald eagles are visible from the project area; (3) inspect construction equipment for fuel, lubricant, and antifreeze leaks; and (4) ensure that discharges from the Village of Los Lunas Wastewater Treatment Plant meet standards under the villages's NPDES permit for the treatment plant to ensure that the there is no effect on the Rio Grande silvery minnow.

4.4 Socioeconomic/Environmental Justice Measures

No mitigation is required.

4.5 Archaeological, Cultural, and Historic Resource Measures

No archaeological or historic properties are located in the project area. In the event that culturally sensitive materials are encountered during construction, construction will stop immediately, and the New Mexico Historic Preservation Division will be contacted.

4.6 Environmentally Sensitive Areas

No environmentally sensitive areas are known to exist within the project area. No mitigation is required.

4.7 Other Resources

Public Health and Safety. The construction contractor will ensure that no hazardous materials are released during construction activities. Hazardous materials will be properly monitored, maintained, and stored while present at the construction site. If contaminated soil or groundwater is encountered during construction, actions will be taken immediately to protect workers and residents from exposure. The NMED will be contacted for guidance, and any contaminated materials will be properly handled.

Energy. Adequate energy sources are available for the life of the project. No mitigation required.

Transportation. Existing roadways are adequate for this truck traffic. No mitigation required.

Visual Impacts. The new facilities would not obstruct or modify any distinctive views in the southwest Los Lunas area, such as views of the Rio Grande or Manzano Mountains from parks or residential areas. The sludge disposal site activities are on-going and do not obstruct or modify any distinctive views. No mitigation required.

Noise. During construction, noise levels will be higher than normal due to the operation of construction equipment. Nevertheless, there are no noise receptors near the project area, and no mitigation measures are needed.

The existing centrifugal blowers at the activated sludge plant may produce noise in excess of 85 decibels at a distance of 30 feet from the unit. Hearing protection is required for individuals working near the blowers.

4.8 Cumulative Impact Measures

Proposed development in the Village of Los Lunas will be subject to standard zoning and subdivision reviews and approvals. The village will develop plans and coordinate with other infrastructure providers to ensure that adequate infrastructure is available to support anticipated growth. If additional land is required for sludge surface disposal, another EID would be prepared for this activity, and all needed environmental clearances will be obtained.

5.0 Consultation, Coordination, and Public Involvement

5.1 Agency Consultation

Consultation letters were mailed to federal, state, and local agencies in regard to the Recommended Action Alternative. Table 5.1 lists the dates for responses received and a brief summary of the response. An example of a consultation letter is provided in Appendix C; copies of the responses received are provided in Appendix B.

Table 5.1 Agency Consultation

Agency / Contact	Date of Letter	Date of Response	Comments
New Mexico Historic Preservation Division Attn: Jan Biella, Interim State Historic Preservation Officer, 470 Galisteo Street, Suite 236 Santa Fe, NM 87501	Sept. 7, 2012	Sept. 27, 2012	Concurred with findings of cultural resource investigations.
National Park Service Intermountain Region Attn: Roxanne Runkel 12795 Alameda Parkway Denver, CO 80225	Sept. 7, 2012	Oct. 17, 2012	The National Park Service reviewed this project, and determined that no parks will be affected; therefore, we have no comments.
US Fish and Wildlife Service Attn: Joel Lusk 2105 Osuna NE Albuquerque, NM 87113	Sept. 7, 2012	Nov. 27, 2012	The Service concurred with the NPDES permit for the expanded Los Lunas WWTP effluent discharges. Hopefully, the Los Lunas expansion will continue to ultraviolet light instead of chlorine residuals for its disinfection. If you determine that there are any negative effects to the Rio Grande silvery minnow or southwestern willow flycatcher from the Los Lunas WWTP expansion, please contact us further.
New Mexico Department of Game and Fish Attn: Dr. Matt Wunder, Conservation Services Division PO Box 25112 Santa Fe, NM 87504	Sept. 7, 2012	Oct. 1, 2012	In response to your letter dated 7 September, regarding the above referenced project, the Department of Game and Fish (Department) does not anticipate significant impacts to wildlife or sensitive habitats.
New Mexico Energy Conservation and Management Division New Mexico Energy, Minerals and Natural Resources Department Attn: Ms. Louise N. Martinez, Division Director 1220 S. St. Francis Santa Fe, NM 87505	August 2013	Sept. 4, 2013	There are two items regarding energy consumption of the Plant for which the Village of Los Lunas should be aware. Energy Usage – the need for fossil fuels for Plant operations can be reduced by including energy efficiency measures and renewable energy sources in the Plant expansion design. The investment in cost-effective measures will provide operational savings to the Village over its life-cycle. Because this project is a public facility, there is a state standard to be met: see *Energy Efficiency Standards for Public Buildings* [NMSA 1978, 15-3-36]. By this statute, the Plant expansion (if greater than 3,000 square feet) is to be designed and constructed to attain the energy star qualification of the US Environmental Protection Agency. Power Purchase Agreement – the village is eligible as a municipality to obtain private financing for energy efficiency and renewable energy measures. The *Public Facility Energy Efficiency and Water Conservation Act* [NMSA 1978, 6-23] is the statute that allows municipalities to engage in a long-term agreement with an energy services company (ESCO) who guarantees utility savings. The ESCO preforms an investment-grade energy audit, implements, the

Agency / Contact	Date of Letter	Date of Response	Comments
			measures, and verifies the utility savings. It is possible to include a PPA within the long-term agreement for the rate of electricity provided from a renewable energy system, such as a solar photovoltaic power plant. The Town of Silver City has successfully implemented a one-megawatt solar system at its existing wastewater treatment plant with the help of this private financing mechanism. The solar company is now delivering electricity to the Town for less than the established electricity rates of the utility company.
New Mexico Energy, Minerals and Natural Resources Department Attn: Daniela Roth 1220 S. St. Francis Santa Fe, NM 87505	Sept. 7, 2012	Oct. 10, 2012	Thank you for giving me the opportunity to review and comment on the Los Lunas Wastewater Treatment and Sludge Management Facilities Expansion Project in Valencia County, NM. I do not anticipate any impacts to state listed plant species from the expansion project as described.
US Army Corps of Engineers, Regulatory Branch Attn: Jennifer J. Lillard 4101 Jefferson Plaza NE Albuquerque, NM 87109-3435	Sept. 7, 2012	Oct. 3, 2012	A Department of the Army permit is required under Section 404 of the Clean Water Act for the placement of dredged or fill materials into waters of the United States. The project site may contain waters of the U.S. If the project proponent or any of its contractors work, or plan to work, in a river, stream, or wetland, they may be required to obtain a Section 404 Department of the Army permit.
US Army Corps of Engineers, Regulatory Branch Attn: Jennifer J. Lillard 4101 Jefferson Plaza NE Albuquerque, NM 87109-3435	Sept. 18, 2013	Sept. 18, 2013	The U.S. Army Corps of Engineers determined that a permit is not required since the project area consists entirely of uplands. This decision was based on the jurisdictional determination (JD) that there are no waters of the United States on the project site.
Natural Resources Conservation Service Attn: J. Xavier Montoya 6200 Jefferson NE Albuquerque, NM 87109	Sept. 7, 2012	Oct. 1, 2012	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 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 existing prior conversion urban land under the jurisdiction of the Village of Los Lunas. 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 Unique Farmlands to be converted to non-agricultural uses, and is not subject to the Act.
New Mexico Environment Department Attn: Morgan R. Nelson, Environmental Impact Review Coordinator PO Box 5469 Santa Fe, NM 87502-5469	Sept. 7, 2012	Oct. 18, 2012	Because this project appears to exceed one acre, it may require appropriate NPDES permit coverage prior to beginning construction. Among other things, this permit requires that a SWPPP be prepared and that appropriate BMPs be installed and maintained both during and after construction to prevent, to the extent practicable, pollutants (primarily sediment, oil & grease and construction materials from construction sites) in storm water runoff from entering waters of the U.S. This permit also requires that permanent stabilization measures (revegetation, paving, etc.), and permanent storm water measures (storm water detention/retention structures, velocity dissipation devices, etc.) be implemented post construction to minimize, in the long term, pollutants in storm water from entering these waters. In addition, permittees must ensure that there is no increase in sediment yield and flow velocity from the construction site. The Village of Los Lunas (Los Lunas) is proposing to implement improvements to their wastewater treatment plant (WWTP) and sludge management system. The sludge management system is

Agency / Contact	Date of Letter	Date of Response	Comments
			covered under Discharge Permit (DP-1053) issued and maintained by the GWQB. GWQB staff members are currently working with the Village and their consultants regarding possible permit modifications related to this project. Discharges to the Rio Grande from the WWTP are covered under a NPDES permit issued by the USEPA and managed by the SWQB. Current and future communications will continue to be addressed through agency regulatory channels. The proposed project area is located in Valencia County, New Mexico. Valencia County is currently not in nonattainment for any of the National Ambient Air Quality Standards. The Los Lunas Wastewater Treatment facility is presently operating under a "Notice of Exemption" (NOE) from the NMED Air Quality Bureau. The proposed project must comply with the requirements of NOE 4750. If air quality emissions from the wastewater treatment facility exceed those allowed under NOIE 4750, a New Source Review (NSR) air quality permit may be required.
Office of the State Engineer Attn: Jess Ward, District Supervisor 5550 San Antonio Drive NE Albuquerque, NM 87109-4127	Sept. 7, 2012	No response received	
New Mexico Department of Transportation Attn: Genevieve Head Environmental Development Section P.O. Box 1149 Santa Fe, NM 87504-1149	July 9, 2013	July 29, 2013	As presented the project does not appear to involve NMDOT permitting or funding. Should the project funding sources change to include NMDOT or FHWA, please provide us with the environmental documentation for our review. If the future the project will require a permit to access NMDOT right of way, please submit and environmental clearance request as part of the permit application process.
Federal Emergency Management Agency, Region VI Attn: Mayra G. Diaz, Floodplain Management and Insurance Branch, Mitigation Division 800 North Loop 288, Room 206 Denton, TX 76201-3698	Sept. 7, 2012	Sept. 18, 2012	We would request that the local floodplain administrator be contacted for the review and possible permit requirements for this project. If federally funded, we would request project to be in compliance with EO 11988 & EO 11990.
Valencia County Attn: Jacobo Martinez, Planner Floodplain Management P.O. Box 1119 Los Lunas, NM 87031-1119	Sept. 7, 2012	Oct. 15, 2012	Determination made that the project area is in a flood hazard area – Zone AE.
EPA Region 6 Air Guy Donaldson Internet Feedback (http://www.epa.gov/earth1rc)	Sept. 7, 2012	Oct. 4, 2012	You are generally correct (that Valencia County is in attainment status with the National Ambient Air Quality Standards). The designation is technically attainment/unclassifiable which just means we don't have monitors to say definitively. The attainment/unclassifiable is effectively the same as attainment for regulatory purposes.

5.2 Section 106 Tribal Consultation

The Village of Los Lunas completed Section 106 tribal consultation regarding Traditional Cultural Properties. A consultation letter was mailed to each of the five tribal governments identified in Table 5.2. An example of a consultation letter is provided in Appendix C; copies of the responses received are provided in Appendix B.

Table 5.2 Section 106 Tribal Consultation

Tribal Government	Date of Response	Comments
Jimmy W. Arterberry Tribal Historic Preservation Officer Comanche Indian Tribe P.O. Box 908 Lawton, OK 73502 jimmya@comanchenation.com	July 30, 2013	In response to your request, the above mentioned project has been reviewed by staff of this office. Based on the information provided and a search within the Comanche Nation Site Files, we have determined that there are *no properties* affected by the proposed undertaking.
Benjamin Nuvamsa, Chairman Hopi Tribe Attn: Leigh Kuwanwisiwma Director Cultural Preservation Office P.O. Box 123 Kykotsmovi, AZ 86039	July 16, 2013	No historic properties significant to the Hopi Tribe affected.
Governor Frank Lujan Pueblo of Isleta PO Box 1270 Isleta Pueblo, NM 87022	Sept. 18, 2012	I am pleased to inform you that this project will not have an impact on religious or cultural sites affiliated with the Pueblo of Isleta. However, in the event that discoveries are found during the expansion, we would appreciate being advised of such findings. Please forward all environmental assessment plans to our office.
President Ben Shelly Navajo Nation PO Box 9000 Window Rock, AZ 86515	No response received	
Ronnie Lupe, Chairman White Mountain Apache Tribal Council P.O. Box 700 Whiteriver, AZ 85941	No response received	

5.3 Public Involvement

This section will be revised after public involvement is completed.

5.4 Responsiveness Summary

This section will be revised after public involvement and agency consultation are completed.

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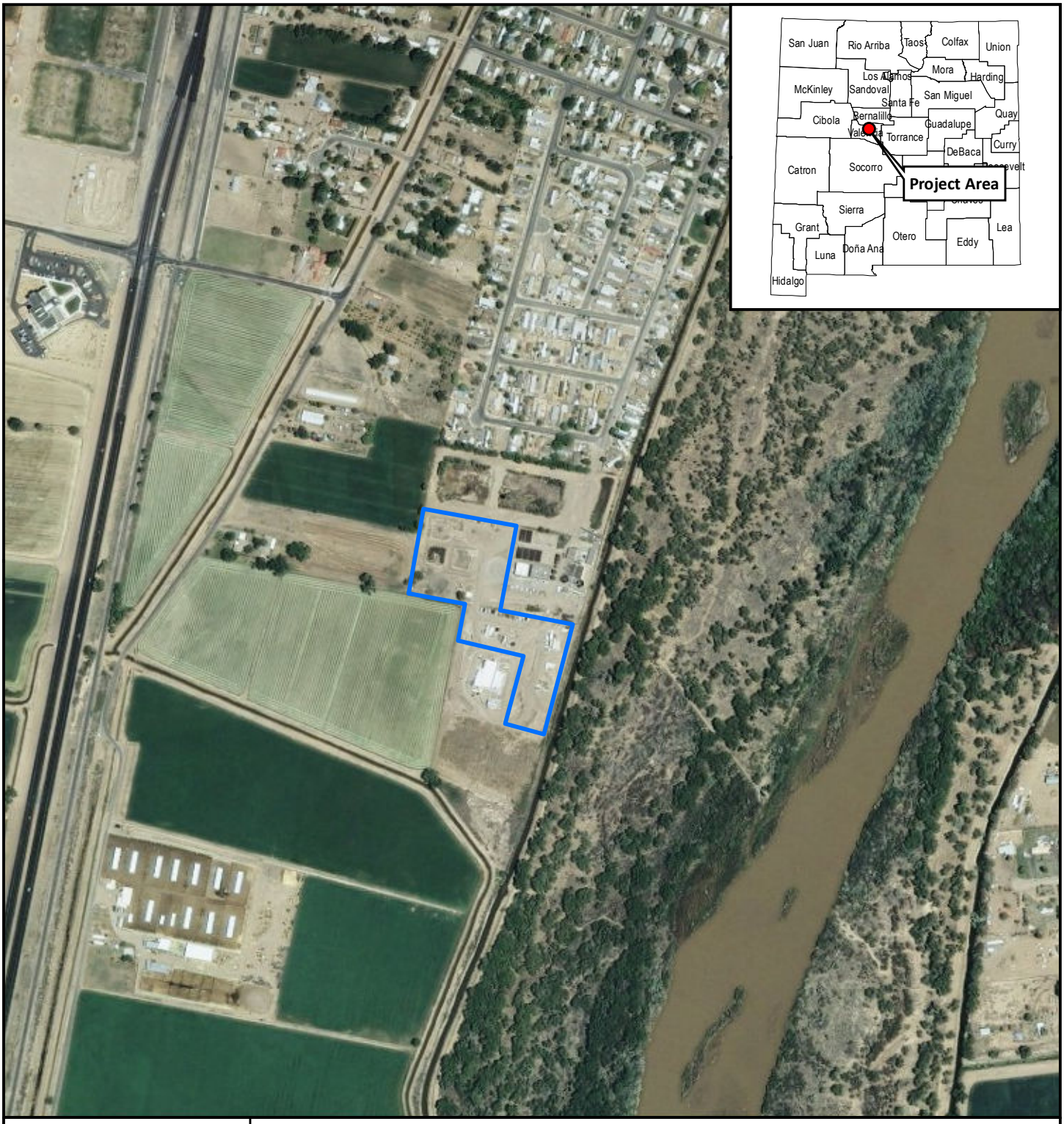
MAI Project 10087.01



MARRON and ASSOCIATES

Figure 1.2
Project Area Map
on Aerial Background

Project Area

Los Lunas, NM (1991)
USGS 7.5' Quadrangle

Nicolas Duran de Chavez Grant
Valencia County, New Mexico

Land Ownership

Private

0 85 170 340 Meters

0 337.5 675 1,350 Feet

N

1:8,000

Los Lunas WWTP, Valencia County, New Mexico

Appendix A

Project Area Maps and Plans

LAST MODIFIED: May 8
DWG. LOCATION: I:\
DWG. NAME: WLLFIG

1 - 7.55cm BY USER: dsalazar
\SSLL112-11 Wastewater and Sludge PER\FIGURES\

Village of Los Lunas

Planning Area Boundary (DSAZ and Existing Village Limits)

Village Limits

Village Limits

Planning Area Boundary (DSAZ and Existing Village Limits)

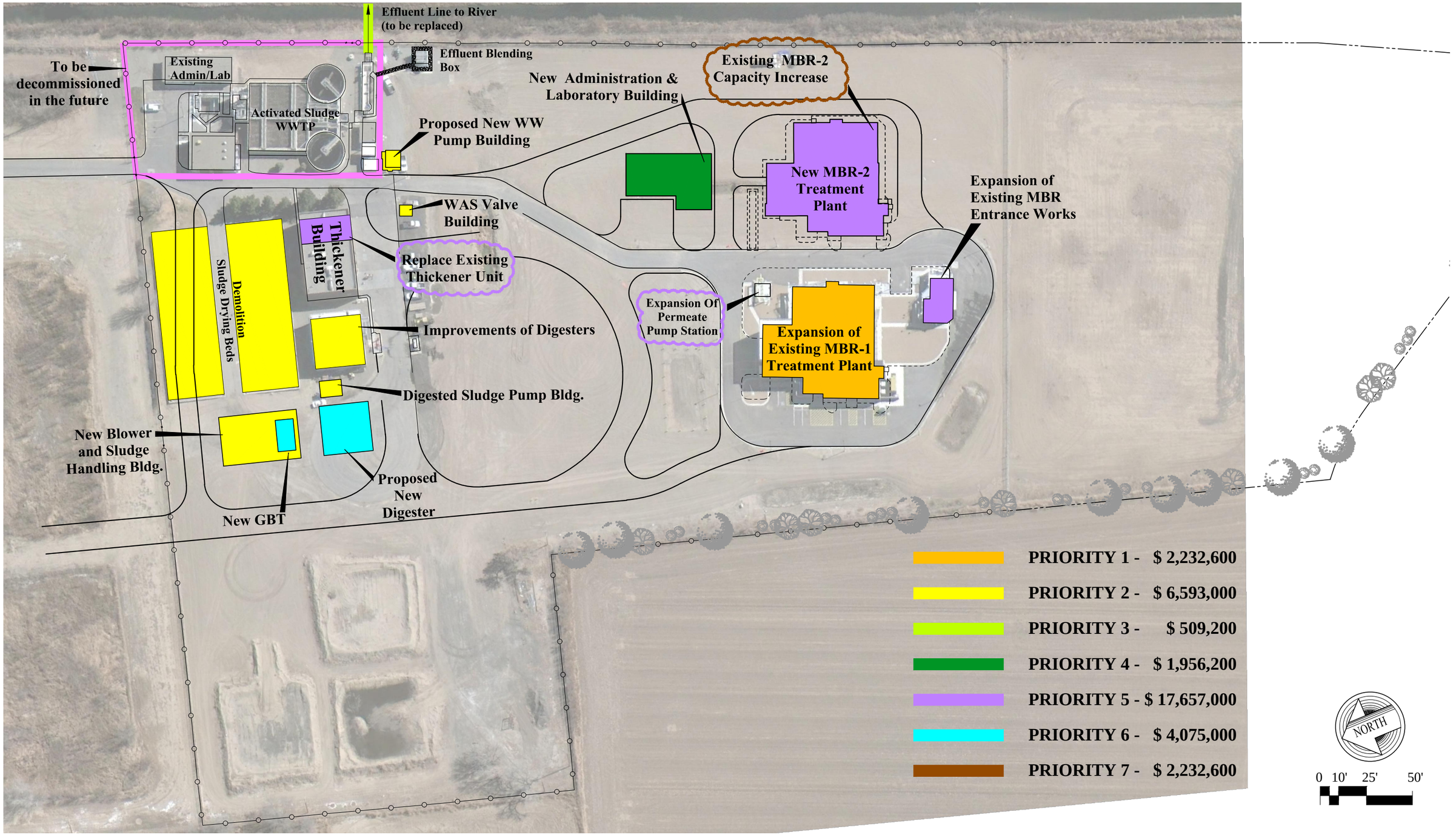
NORTH

0 2000' 4000'

MOLZENCORBIN

Los Lunas Wastewater Treatment and Sludge Management - PER

Figure 2-2
Planning Area

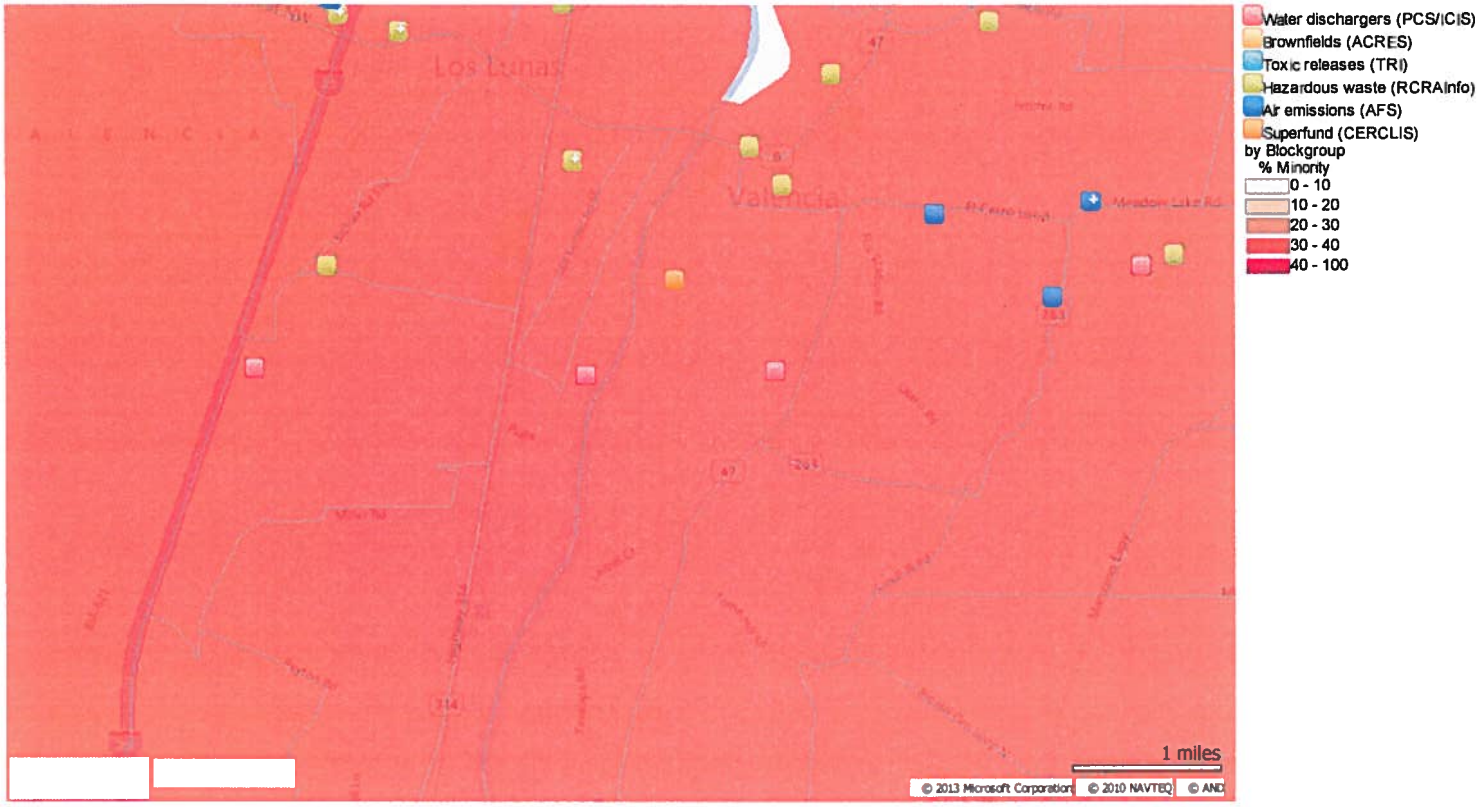


MOLZENCORBIN

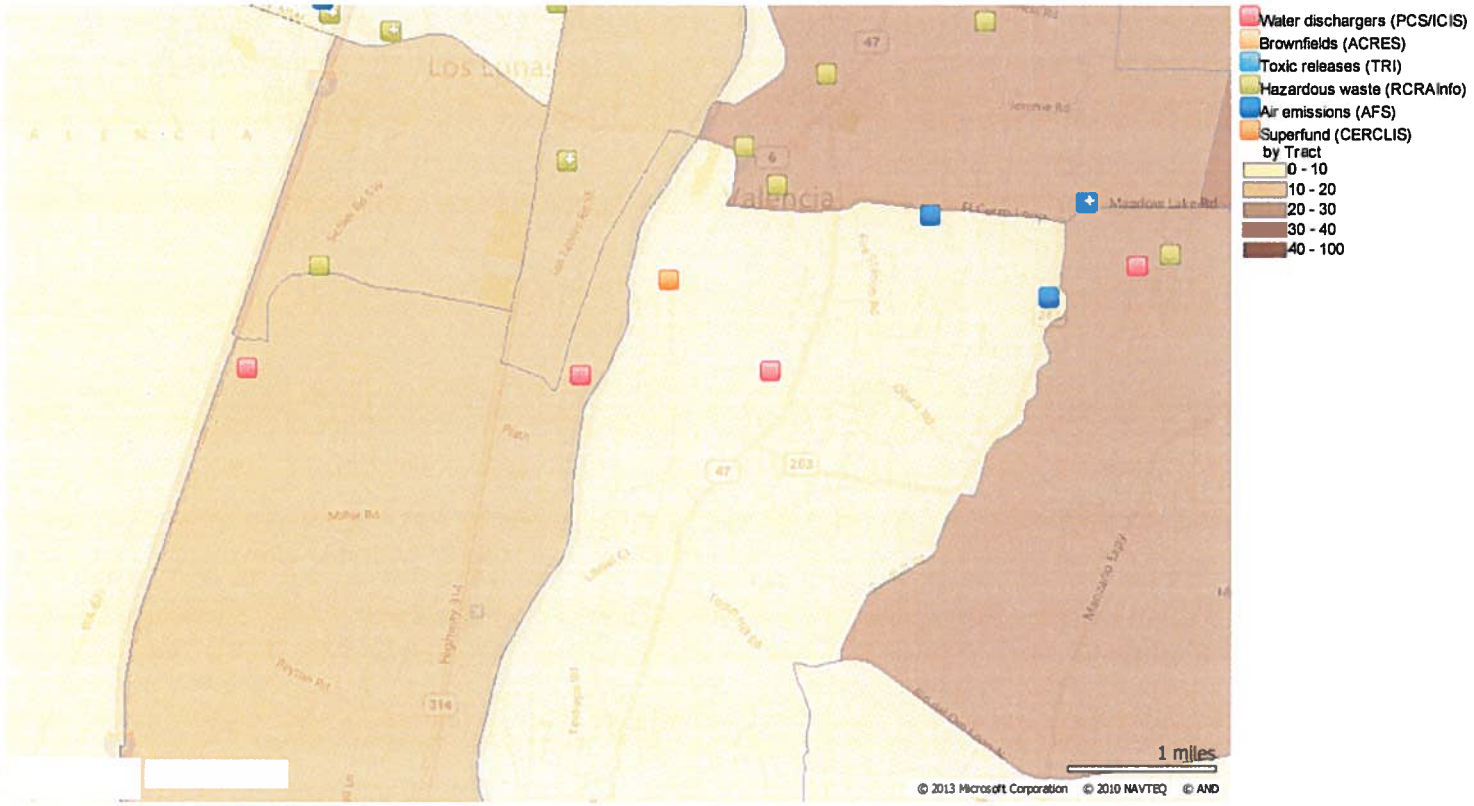
Figure 7-7

Liquid Treatment and Sludge Management Recommended Improvements

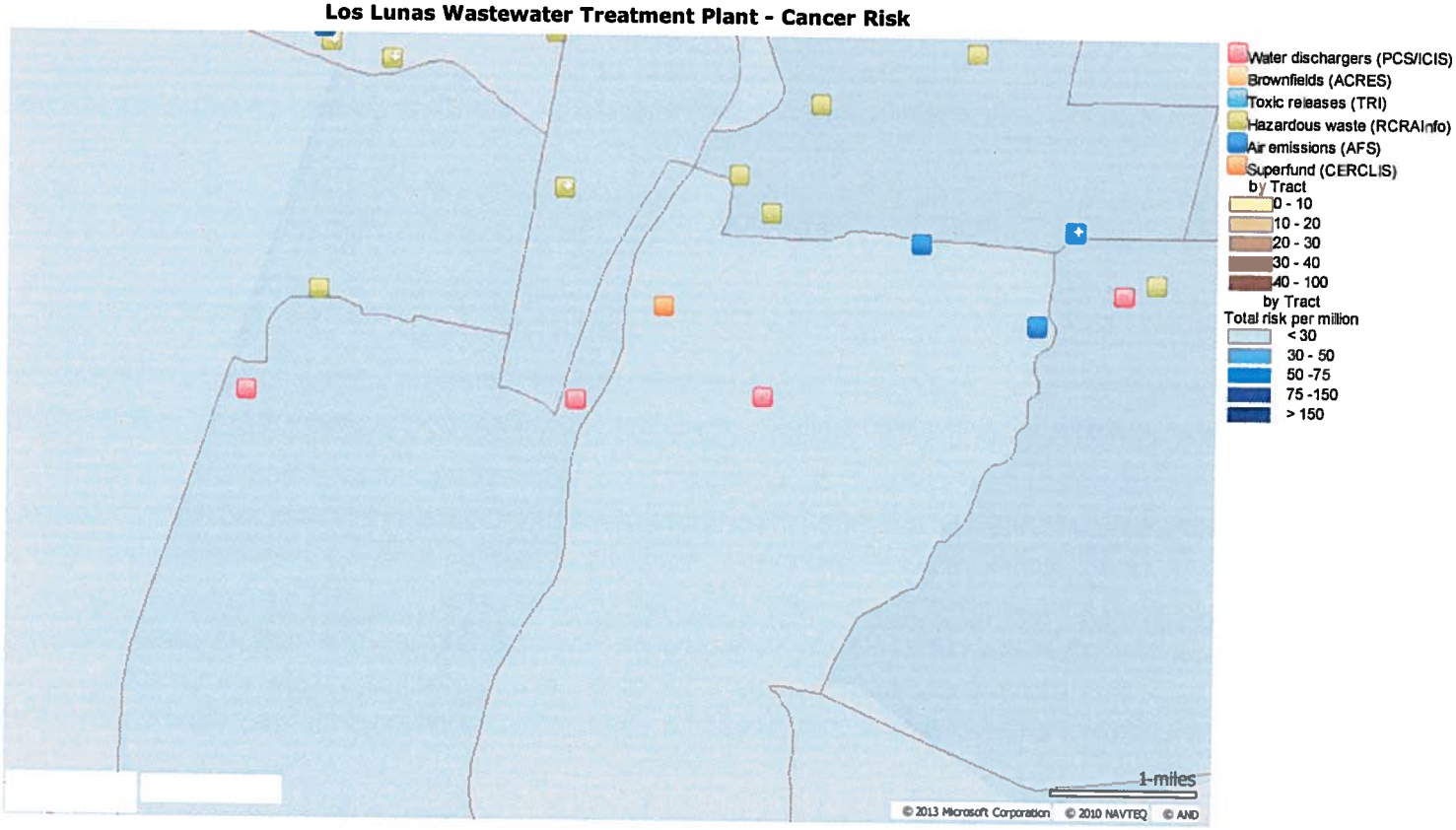
Los Lunas Wastewater Treatment Plant - >40% Minority



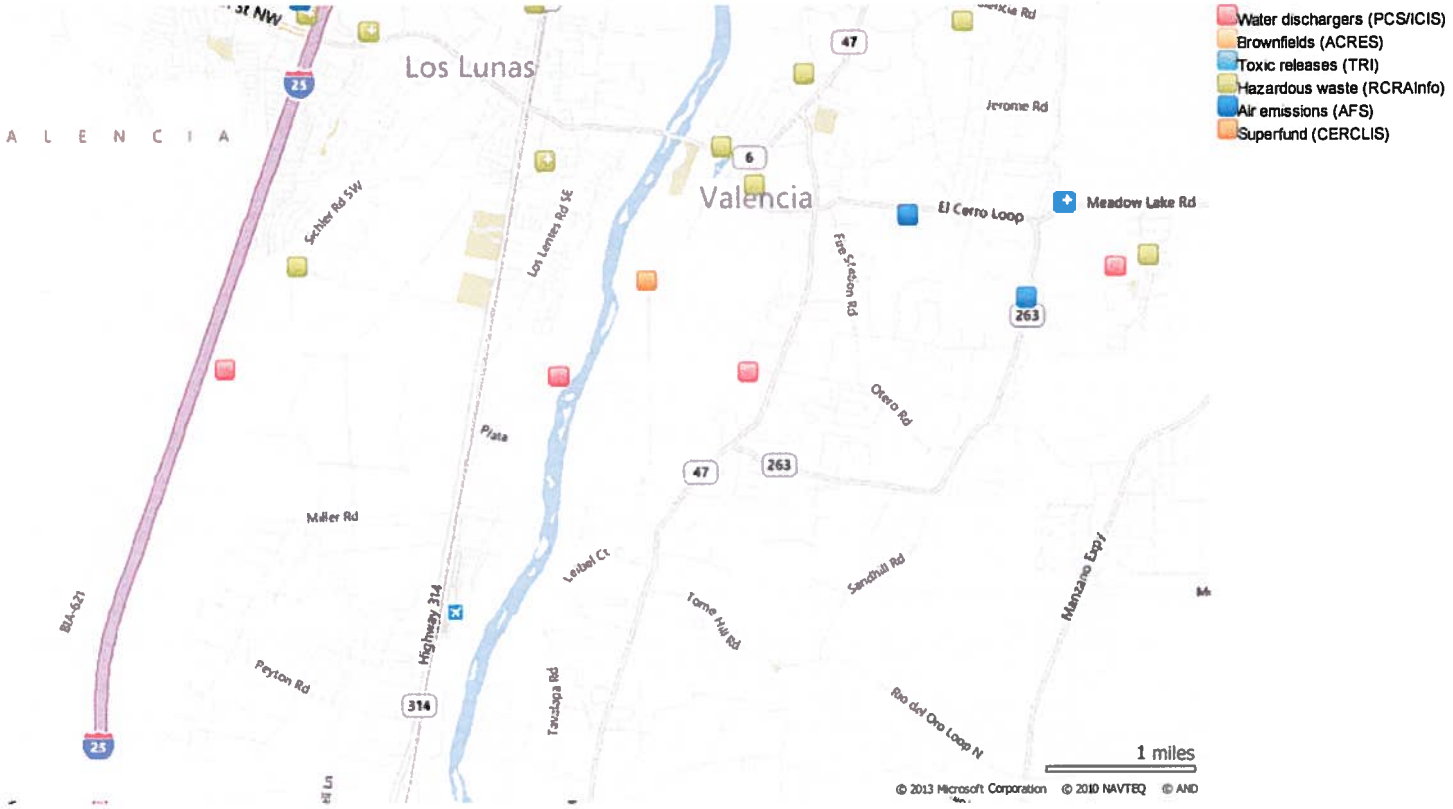
Poverty Levels



Los Lunas Wastewater Treatment Plant - Cancer Risk



Los Lunas Waste Water Treatment Plant - USEPA Sites



EPA United States Environmental Protection Agency

Envirofacts

Search Results

CERCLIS

<< Return

Site ID: Equal To: NMD980749980

CERCLIS Links

- Overview
- Search
- Model
- Law
- CERCLIS Search User Guide
- Contact Us
- Superfund Home

Report an Error

Results are based on data extracted on JUL-15-2013
Note: Click on the CORPORATE LINK value for links to that company's environmental web pages.
Click on the MAPPING INFO value to obtain mapping information for the facility.
Click on the RECORD OF DECISION value for a RODS Site Report.
Click on the "View Facility Information" link to view EPA Facility information for the facility.
Go To Bottom Of The Page

CERCLIS EPA ID:	NMD980749980	**SITE NAME:**	PAGANO SALVAGE
STREET ADDRESS:	UNKNOWN	**FACILITY INFORMATION**	View facility information
CITY NAME:	LOS LUNAS		
STATE ABBR:	NM	**FEDERAL FACILITY:**	N
ZIP CODE:	87031	**NPL STATUS:**	Deleted from the Final NPL
COUNTY NAME:	VALENCIA		
CORPORATE LINK:	No	**RECORD OF DECISION (ROD) INFO:**	Yes
LATITUDE:	34.7896	**EPA REGIONAL LINK:**	No
LONGITUDE:	-106.7205	**MAPPING INFO:**	MAP
SITE SMSA:			

Enforcement and Cleanup Actions

Action	Action ID	Actual Start Date	Actual End Date	Responsibility	Planned Outcome	Urgency
PFP/RAU EVALUATION CHECKLIST	001		09/30/2006	EPA In-House		
TECHNICAL ASSISTANCE	001	02/19/1993	06/30/1995	EPA In-House		
CONSENT DECREE	001	09/09/1993	10/28/1993	Federal Enforcement		
SECTION 107 LITIGATION	001	03/31/1993	10/28/1993	Federal Enforcement		
COST RECOVERY NEGOTIATIONS	001	10/01/1991	10/28/1993	Federal Enforcement		
DELETION FROM NPL	001	06/29/1992	10/14/1992	EPA Fund-Financed		
COMMUNITY INVOLVEMENT	001	02/10/1990	10/14/1992	EPA In-House		
STATE SUPPORT AGENCY COOP AGREEMENT	001	03/29/1990	09/30/1992	EPA In-House		
REMOVAL ASSESSMENT	003	06/12/1991	08/28/1991	EPA Fund-Financed		
RECORD OF DECISION	001		09/27/1990	EPA Fund-Financed	Final Remedy Selected at Site	
COMBINED RI/FS	001	06/28/1990	09/27/1990	EPA In-House		
REMOVAL ASSESSMENT	002	10/01/1989	06/26/1990	EPA Fund-Financed		
REMOVAL	001	06/21/1989	06/18/1990	EPA Fund-Financed	Cleaned up	Time Critical
FINAL LISTING ON NPL	001		10/04/1989	EPA Fund-Financed		

REMOVAL ASSESSMENT	001	06/21/1989	06/21/1989	EPA Fund-Financed		
UNILATERAL ADMIN ORDER	001		06/08/1989	Federal Enforcement		
PROPOSAL TO NPL	001		06/24/1988	EPA Fund-Financed		
HRS PACKAGE	001		06/24/1988	EPA Fund-Financed	Being considered for proposal to the NPL	
NPL RP SEARCH	001	10/01/1987	04/01/1988	Federal Enforcement		
SITE INSPECTION	001	08/01/1985	08/01/1985	State, Fund Financed	Higher priority for further assessment	
PRELIMINARY ASSESSMENT	001	09/01/1981	09/01/1981	State, Fund Financed	Low priority for further assessment	
DISCOVERY	001		02/01/1981	EPA Fund-Financed		

Site Description

Description Text

The Pagano Salvage site is located at 102 Edeal Road, Los Lunas, Valencia County, New Mexico. The site is used to operate a salvage business and as a residence for Mrs. Mary Pagano. The site covers approximately 1.4 acres and is bordered by Edeal Road to the east, residential property to the north, the Peralta Riverside Drain to the west, and the Wittwer Lateral to the south. The Peralta Riverside Drain converges with the Otero Drain approximately 1.5 miles north of the Pagano site. These drains are part of the Rio Grande drainage and flood control network. A 10-foot high flood control levee is located just west of the Pagano site, between the Rio Grande and Peralta Drain. The Wittwer Lateral is an interior irrigation return flow ditch. The Pagano site is generally flat with a ground slope of less than 5 percent. Surface water runoff from the site flows west to southwest into the Peralta Riverside Drain. The ground water table at the site is generally encountered at 5 to 6 feet below ground surface but varies seasonally with the water levels in the Wittwer Lateral. Ground water elevations taken from the monitoring wells, Wittwer Lateral, and Peralta Riverside Drain indicate that the ground water flow is generally from east to west towards the Peralta Drain. Additionally, the ground water readings indicate that the Wittwer Lateral acts as a ground water recharge to the area east and south of the site. The Pagano site is located on two major aquifers. The uppermost aquifer is located in a Rio Grande floodplain alluvium deposit approximately 120 feet in thickness and consisting of sands, silts, clays, and gravels. The Santa Fe Group aquifer underlies the floodplain alluvium deposit and is 500 to 5000 feet thick and composed of terrestrial sediments consisting of interbedded sand, silt, clay and conglomerate. Based on geological conditions, the two aquifers are apparently in complete hydraulic connection. Local private wells located near the Pagano site area typ **NOTE: More Description Text Exists. Click here to see a complete description report.**

Below is additional information for CERCLIS sites:

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- National Library of Medicine (NLM) EXIT Disclaimer TOXMAP

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Total Number of Facilities Displayed: 1

Last updated on 7/16/2013

http://ofmpub.epa.gov/enviro/ICIS_DETAIL_REPORTS_NPDESID.icis_tst?npdesid=NM0020303&npvalue=1&npvalue=13&npvalue=14&npvalue=3&npvalue=4&npvalue=5&npvalue=6&rvalue=13&npvalue=2&npvalue=7&npvalue=8&npvalue=11&npvalue=12

Envirofacts

Search Results

ICIS

ICIS Detailed Reports

<< Return

This page was created on JUL-16-2013
Results are based on data extracted on JUN-13-2013

Note: You are viewing results from the modernized data system, Integrated Compliance Information System (ICIS). The state reporting this data to EPA previously reported the data to a historic data system, Permit Compliance System (PCS). Use the following button to view the historic data from PCS. Run a PCS Search

PCS-ICIS Links

- Overview
- Search
  - Search User Guide
- Customized Search
  - Customized Search User Guide
- Operator Definition
- PCS Model
- ICIS Model
- Law
- Contact Us
- Office of Wastewater Management Home

Report an Error

Facility

FACILITY NAME (1)	LOS LUNAS WWTP	NPDES	NM0020303
STREET 1	1781 HEATON LOOP S.E.VALENCIA	SIC CODE	4952 = Sewerage Systems
CITY	LOS LUNAS	MAJOR / MINOR	
COUNTY NAME	Valencia	TYPE OF OWNERSHIP	Municipal or Water District
STATE	NM	ACTIVITY STATUS	Admin Continued
ZIP CODE	87031	INACTIVE DATE	
REGION	Region 6	TYPE OF PERMIT ISSUED	NPDES Individual Permit
LATITUDE	34.780028	ORIGINAL PERMIT ISSUE DATE	30-APR-1974
LONGITUDE	-106.730583	PERMIT ISSUED DATE	31-MAY-2007
LAT/LON CODE OF ACCURACY	3	PERMIT EXPIRED DATE	30-JUN-2012
LAT/LON METHOD	Interpolation-Map		
LAT/LON SCALE	24000	USGS HYDRO BASIN CODE	
LAT/LON DATUM	NAD27	FLOW	.9
RECEIVING WATERS	SEGMENT 2-105 OF THE RIO GRANDE	FEDERAL GRANT IND	Y
PRETREATMENT CODE		SLUDGE CLASS FAC IND	POTW
MAILING NAME	LOS LUNAS WASTEWATER FACILITY	SLUDGE RELATED PERMIT NUM	
MAILING STREET (1)	P.O. BOX 1209	ANNUAL DRY SLUDGE PROD	
MAILING STREET (2)			
MAILING CITY	LOS LUNAS		
MAILING STATE	New Mexico		
MAILING ZIP CODE	87031		
COGNIZANT OFFICIAL	BETTY BEHREND, UTILITIES DIR.	COGNIZANT OFFICIAL TEL	5053527629

Activity

FACILITY NAME (1)	LOS LUNAS WWTP	NPDES	NM0020303

ACTIVITY NAME	ACTIVITY TYPE DESCRIPTION	ACTIVITY STATUS DESCRIPTION	ACTIVITY STATUS DATE	ACTUAL BEGIN DATE	ACTUAL END DATE
NPDES Permit (CWA)	Permit				
NPDES Permit (CWA)	Permit				
NPDES Permit (CWA)	Permit				
NPDES Permit (CWA)	Permit				
NPDES Permit (CWA)	Permit				

EJView Census 2000 Summary Report

Location: -106.734066,34.784131

Study Area: 1.0 mile around the point location

Summary	Census 2000
Population	2,637
Population Density (per sq. mile)	1,512
Minority Population	NUM_MINORITY
% Minority	64%
Households	848
Housing Units	896
Housing Units Built Before 1950	61
Land Area (m^2)	4,515,637
% Land Area	100%
Water Area (m^2)	0
% Water Area	0%

Population by Race	Number	Percent
Total	2,637	-------
Population Reporting One Race	2,514	95%
White	1,544	59%
Black	62	2%
American Indian	60	2%
Asian	0	0%
Pacific Islander	0	0%
Some Other Race	848	32%
Population Reporting Two or More Races	122	5%
Total Hispanic Population	1,530	58%

Population by Sex	Number	Percent
Male	1,319	50%
Female	1,318	50%

Population by Age	Number	Percent
Age 0-4	258	10%
Age 0-17	880	33%
Age 18+	1,757	67%
Age 65+	162	6%

Population by Place of Birth for the Foreign-Born	Number	Percent
Total	N/A	-------
Europe	N/A	N/A
Asia	N/A	N/A
Africa	N/A	N/A
Americas	N/A	N/A

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race.
Source: U.S. Census Bureau, Census 2000 Summary File 3.

EJView Census 2000 Summary Report

Location: -106.734066,34.784131

Study Area: 1.0 mile around the point location

Population 25+ by Educational Attainment	Number	Percent
Total	1,502	-------
Less than 9th Grade	75	5%
9th - 12th Grade, No Diploma	238	16%
High School Graduate	614	41%
Some College, No Degree	367	24%
Associate Degree	48	3%
Bachelor's Degree or more	159	11%

Population Age 5+ Years by Ability to Speak English	Number	Percent
Total	2,422	-------
Speak only English	1,752	72%
Non-English at Home	670	28%
Speak English "very well"	498	21%
Speak English "well"	131	5%
Speak English "not well"	33	1%
Speak English "not at all"	9	0%
Speak English "less than well"	42	2%

Households by Household Income in 1999	Number	Percent
Household Income Base	848	-------
< $15,000	143	17%
$15,000 - $25,000	162	19%
$25,000 - $50,000	352	41%
$50,000 - $75,000	162	19%
$75,000 +	68	8%

Households by Tenure	Number	Percent
Total	848	-------
Owner Occupied	728	86%
Renter Occupied	120	14%

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race.
Source: U.S. Census Bureau, Census 2000 Summary File 3.

EJView Census 2010 Summary Report

Location: -106.734066,34.784131

Study Area: 1.0 mile around the point location

Summary	Census 2010
Population	1,521
Population Density (per sq. mile)	1,131
Minority Population	1,081
% Minority	71%
Households	583
Housing Units	665
Land Area (m^2)	3,482,798
% Land Area	96%
Water Area (m^2)	132,917
% Water Area	4%

Population by Race	Number	Percent
Total	1,521	-------
Population Reporting One Race	1,449	95%
White	1,010	66%
Black	17	1%
American Indian	44	3%
Asian	6	0%
Pacific Islander	4	0%
Some Other Race	370	24%
Population Reporting Two or More Races	72	5%
Total Hispanic Population	1,021	67%
Total Non-Hispanic Population	500	33%
White Alone	440	29%
Black Alone	10	1%
American Indian Alone	28	2%
Non-Hispanic Asian Alone	3	0%
Pacific Islander Alone	4	0%
Other Race Alone	4	0%
Two or More Races Alone	11	1%

Population by Sex	Number	Percent
Male	790	52%
Female	731	48%

Population by Age	Number	Percent
Age 0-4	106	7%
Age 0-17	392	26%
Age 18+	1,129	74%
Age 65+	167	11%

Households by Tenure	Number	Percent
Total	583	
Owner Occupied	443	76%
Renter Occupied	141	24%

Data Note: Detail may not sum to totals dues to rounding. Hispanic population can be of any race.
Source: U.S. Census Bureau, Census 2010 Summary File 1.

EJView Environmental Report

Location: -106.734066,34.784131

Study Area: 1.0 mile around the point location

Sites and Facilities	Count
Air Facility System (AFS)	0
Superfund Sites (NPL)	1
Toxic Releases (TRI)	0
Hazardous Waste (RCRAInfo)	0
Water Dischargers (PCS & ICIS)	1
Brownfields (ACRES)	0
Radiation Information Database (RADInfo)	0
Toxic Substances Control Act (TSCA)	0

Environmental Concerns	Count
National Water Information System (NWIS) sites	0
STOrage and RETrieval (STORET) sites	1
Impaired Streams	1
Impaired Waterbodies	0
National Parks	0

Places	Count
Schools	0
Hospitals	0
Worship Places	0

Data Note: Detail may not sum to totals due to rounding.

Source: Sites and facilities, EPA Envirofacts; NWIS, USGS; STORET, EPA; impaired streams and waterbodies, EPA NHD Plus; national parks, USGS National Atlas; schools, hospitals, and worship places; USGS GNIS.

Health Statistics

Health Service Area for *Bernalillo (Albuquerque), NM - Valencia, NM*

The health data statistics for this feature of the Environmental Justice Assessment are provided by the National Center for Health Statistics (NCHS) Centers for Disease Control (CDC) EXIT Disclaimer, the official source for vital statistics. Currently, this information has not been released for all ethnic groups by NCHS. When the health statistics are released, they will be provided in this feature broken down by geographic area and ethnicity. This information will be made available as soon as the data have been quality assured and released by NCHS in their entirety.

Since 1960, NCHS has received several legislative mandates and authorities, and it works closely with other federal agencies, as well as researchers and academic institutions, to provide health information. NCHS data systems include data on vital events, as well as information on health status, lifestyle and exposure to unhealthy influences, the onset and diagnosis of illness and disability, and the use of health care. This information is used by policymakers in Congress and the Administration, by medical researchers, and by others in the health community.

Additional information is available from the National Center for Health Statistics (NCHS) EXIT Disclaimer website.

Statistic\Disease †	Heart Disease	All Cancers	Chronic Obstructive Pulmonary Disease	Pneumonia and Influenza	Liver Disease
White Male Rate *	154.2	139.4	30.1	12.9	16.3
White Male Significance **	1	2	3	1	5
Black Male Rate *	164.4	156.8	28.3	21.3	3.4
Black Male Significance **	2	2	3	2	2
White Female Rate *	80	100.8	17.1	8.4	6.4
White Female Significance **	1	2	3	2	5
Black Female Rate *	85.4	116.9	9.3	1.1	10.7
Black Female Significance **	2	3	3	2	3

SOURCE: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics, Atlas of United States Mortality (1997) EXIT Disclaimer

† Rates based on deaths during 1988-92 in the United States due to the diseases listed.

* **Rate**: The age-adjusted death rate due to cause per 100,000 population.

** **Significance**: A description of whether the death rate of the group, due to cause, varies significantly from the U.S. death rate.

2005 NATA Risk Estimates

	Cancer Risk (Persons per Million)	Neurological Hazard Risk	Respiratory Hazard Risk

VALENCIA, NM	22.73 (27.7 Percentile)	.02 (35.3 Percentile)	.63 (43.7 Percentile)
New Mexico	27.84 (13.5 Percentile)	.03 (9.6 Percentile)	.89 (15.4 Percentile)

SOURCE: EPA Office of Air and Radiation (http://www.epa.gov/ttn/atw/nata2005/)
NOTES: Values are derived from 2005 National-Scale Air Toxics Assessment (NATA) Cancer Risk Estimates and Non-Cancer Hazard Index Scores. Percentiles are ranking of Counties and States from 0 (lowest) to 100 (highest).

2007 Asthma Prevalence By State

	White Non-Hispanic Persons	Black Non-Hispanic Persons	Multi-Racial Non-Hispanic Persons	Other Race Non-Hispanic Persons	Hispanic Persons
New Mexico					
Lifetime	15.3%	30.4%	8.7%	13.1%	11.8%
Current	9.9%	9.8%	6.2%	4.9%	7.7%

SOURCE: Centers for Disease Control and Prevention.
2007 Behavioral Risk Factor Surveillance System (BRFSS) (http://www.cdc.gov/asthma/brfss/07/brfssdata.htm)

2008 Mortality Rates

	Deaths per 1000
VALENCIA, NM	7.31
New Mexico	7.84

SOURCE: US Census Bureau http://www.census.gov/popest/
NOTES: Mortality rates are calculated using 7/1/2007 to 7/1/2008 deaths and estimated populations from the file, "County Population Estimates and Estimated Components of Change, April 1, 2000 to July 1, 2008".

Life Expectancy at Birth in 1999

	Male and Female	Male	Female
Valencia, New Mexico *	76.1	72.8	79.5

SOURCE: U.S. Census Bureau & National Center for Health Statistics

*** Combined County:** Life expectancy average was calculated using one or more other adjacent counties

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All Cancers Mortality Rates

	1950 - 1994		1970 - 1994							
	White Male Age 0 - 19	White Female Age 0 - 19	All White Male	All White Female	All Black Male	All Black Female	White Male Age 0 - 19	White Female Age 0 - 19	Black Male Age 0 - 19	Black Female Age 0 - 19
VALENCIA, NM	6.6467	6.451	185.4707	131.5037	290	85.9472				
New Mexico	6.3915	4.906	176.2282	123.6238	232.7052	133.5843	5.3343	3.8159	4.0466	2.1414

SOURCE: National Cancer Institute Cancer Mortality Maps & Graphs http://ratecalc.cancer.gov/ratecalc/archivedatlas/
NOTES: Mortality rates (number per 100,000) are extracted from the state and county mortality tables.

Childhood Leukemia Mortality Rates

	1950 - 1994		1970 - 1994							
	White Male Age 0 - 19	White Female Age 0 - 19	All White Male	All White Female	All Black Male	All Black Female	White Male Age 0 - 19	White Female Age 0 - 19	Black Male Age 0 - 19	Black Female Age 0 - 19
VALENCIA, NM	2.8992	2.808	9.5592	5.2241	0	0				
New Mexico	2.7781	2.2246	7.9332	4.7406	7.1348	1.8582	2.1673	1.595	0	2.1414

SOURCE: National Cancer Institute Cancer Mortality Maps & Graphs http://ratecalc.cancer.gov/ratecalc/archivedatlas/
NOTES: Mortality rates (number per 100,000) are extracted from the state and county Leukemia mortality tables.

Adult Lymphoma Mortality Rates

	1950 - 1994		1970 - 1994							
	White Male Age 20 - 49 Age 50 - 74 Age 75+	White Female Age 20 - 49 Age 50 - 74 Age 75+	All White Male	All White Female	All Black Male	All Black Female	White Male Age 20 - 49 Age 50 - 74 Age 75+	White Female Age 20 - 49 Age 50 - 74 Age 75+	Black Male Age 20 - 49 Age 50 - 74 Age 75+	Black Female Age 20 - 49 Age 50 - 74 Age 75+
VALENCIA, NM	1.5786 4.7589 35.7801	.3487 11.9198 35.8701	3.4661	4.7343	18.8655	0				
New Mexico	1.7706 13.014 38.6452	.9276 9.7311 34.1661	5.5021	3.978	5.3146	3.6743	1.9204 13.7231 45.4862	.9477 10.506 36.919	0 21.4833 15.0658	1.6494 12.6926 11.2438

SOURCE: National Cancer Institute Cancer Mortality Maps & Graphs http://ratecalc.cancer.gov/ratecalc/archivedatlas/
NOTES: Mortality rates (number per 100,000) are extracted from the state and county Non-Hodgkin's Lymphoma mortality tables.

Lung Cancers Mortality Rates

	1950 - 1994		1970 - 1994							
	White Male Age 0 - 19	White Female Age 0 - 19	All White Male	All White Female	All Black Male	All Black Female	White Male Age 0 - 19	White Female Age 0 - 19	Black Male Age 0 - 19	Black Female Age 0 - 19
VALENCIA, NM	0	0	55.1095	20.9796	102.7278	39.1595				
New Mexico	.0242	.0558	49.4622	20.1564	69.9306	19.8963	.0202	.0782	0	0

SOURCE: National Cancer Institute Cancer Mortality Maps & Graphs http://ratecalc.cancer.gov/ratecalc/archivedatlas/
NOTES: Mortality rates (number per 100,000) are extracted from the state and county mortality tables.

EJView ACS Summary Report

Location: -106.734066,34.784131

Study Area: 1.0 mile around the point location

Summary of ACS Estimates	2006 - 2010
Population	1,817
Population Density (per sq. mile)	1,351
Minority Population	1,426
% Minority	78%
Households	760
Housing Units	814
Housing Units Built Before 1950	19
Per Capita Income	18,059
Land Area (sq. miles) (Source: SF1)	1.34
% Land Area	96%
Water Area (sq. miles) (Source: SF1)	0.05
% Water Area	4%

	2006 - 2010 ACS Estimates	Percent	MOE (±)
Population by Race			
Total	1,817	100%	647
Population Reporting One Race	1,764	97%	1,547
White	921	51%	520
Black	4	0%	127
American Indian	162	9%	252
Asian	4	0%	127
Pacific Islander	0	0%	127
Some Other Race	673	37%	394
Population Reporting Two or More Races	53	3%	127
Total Hispanic Population	1,322	73%	512
Total Non-Hispanic Population	495		
White Alone	391	22%	467
Black Alone	4	0%	127
American Indian Alone	79	4%	181
Non-Hispanic Asian Alone	4	0%	127
Pacific Islander Alone	0	0%	127
Other Race Alone	1	0%	127
Two or More Races Alone	16	1%	127
Population by Sex			
Male	935	51%	435
Female	881	49%	468
Population by Age			
Age 0-4	177	10%	217
Age 0-17	468	26%	272
Age 18+	1,349	74%	382
Age 65+	191	11%	231

Data Note: Detail may not sum to totals dues to rounding. Hispanic population can be of any race. N/A means not available.
Source: U.S. Census Bureau, American Community Survey (ACS) 2006 - 2010.

EJView ACS Summary Report

Location: -106.734066,34.784131

Study Area: 1.0 mile around the point location

	2006 - 2010 ACS Estimates	Percent	MOE (±)
Population 25+ by Educational Attainment			
Total	1,134	100%	507
Less than 9th Grade	121	11%	198
9th - 12th Grade, No Diploma	139	12%	172
High School Graduate	353	31%	220
Some College, No Degree	380	34%	225
Associate Degree	92	8%	130
Bachelor's Degree or more	142	13%	197
POPULATION AGE 5+ YEARS BY ABILITY TO SPEAK ENGLISH			
Total	1,639	100%	612
Speak only English	1,003	61%	492
Non-English at Home[1+2+3+4]	636	39%	370
[1]Speak English "very well"	505	31%	297
[2]Speak English "well"	66	4%	162
[3]Speak English "not well"	31	2%	164
[4]Speak English "not at all"	34	2%	165
[3+4]Speak English "less than well"	65	4%	166
[2+3+4]Speak English "less than very well"	131	8%	232
POPULATION AGE 5+ YEARS BY LANGUAGE SPOKEN AT HOME			
Total	N/A	N/A	N/A
Speak only English	N/A	N/A	N/A
Non-English Speaking	N/A	N/A	N/A
Population by Place of Birth for the Foreign-Born			
Total	N/A	N/A	N/A
Europe	N/A	N/A	N/A
Asia	N/A	N/A	N/A
Africa	N/A	N/A	N/A
Oceania	N/A	N/A	N/A
Americas	N/A	N/A	N/A
Households by Household Income in 1999			
Household Income Base	760	100%	184
< $15,000	70	9%	128
$15,000 - $25,000	109	14%	127
$25,000 - $50,000	307	40%	186
$50,000 - $75,000	102	13%	127
$75,000 +	172	23%	158
Occupied Housing Units by Tenure			
Total	760	100%	184
Owner Occupied	575	76%	176
Renter Occupied	186	24%	138

Data Note: Detail may not sum to totals dues to rounding. Hispanic population can be of any race. N/A means not avialable.

2006-2010 ACS 5-year Estimates: The American Community Survey (ACS) summary files provide nation-wide population and housing characteristic data at all Census summary levels down to the Block Group level. This data was collected between January 1, 2006 and December 31, 2010. ACS replaces the decennial census sample data, and is not the 2010 Census population counts data. (http://www.census.gov/acs/www/#fragment-3)

Margin of error (MOE): The MOE provides a measure of the uncertainty in the estimate due to sampling error in the ACS survey. Applying the MOE value yields the confidence interval for the estimate. For example, an estimate value of 50 and +/- MOE of 5 means the true value is between 45 and 55 with a 90 percenet certainty (http://www.census.gov/acs/www/Downloads/data_documentation/Accuracy/MultiyearACSAccuracyofData2010.pdf). Maximum MOE is shown for each value within study area.

Source: U.S. Census Bureau, American Community Survey (ACS) 2006 - 2010.

Appendix B

Agency Response Letters

Village of Los Lunas

660 MAIN STREET N.W.
P.O. BOX 1209
LOS LUNAS, NEW MEXICO 87031

PHONE: (505) 839-3840
FAX: (505) 352-3580

95291

RECEIVED
SEP 13 2012
HISTORIC PRESERVATION DIVISION

September 7, 2012

Ms. Jan Biella
Interim State Historic Preservation Officer
New Mexico Historic Preservation Division
470 Gallisteo Street, Suite 236
Santa Fe, New Mexico 87501

RE: Los Lunas Wastewater Treatment and Sludge Management Facilities Expansion Project
Village of Los Lunas, Valencia County, New Mexico

Dear Ms. Biella:

To provide for future wastewater treatment demand, the Village of Los Lunas proposes to make improvements to its wastewater treatment plant (WWTP) and sludge management system. As part of the planning process, the Village has conducted a cultural resource survey of the project area (see enclosed report).

The Los Lunas Wastewater Treatment Plant is located at the south edge of Los Lunas on Heaton Loop south of Desert Flower Avenue (see attached figures). The purpose of the Los Lunas Wastewater Treatment and Sludge Management Facilities Expansion Project is to ensure that the plant has sufficient treatment capacity through the year 2041. At the end of the 30-year planning period used for this project, the facilities will have a treatment capacity of 4.7 MGD, but the projects will be constructed in several phases.

Based on the analysis presented in the Preliminary Engineering Report, the existing membrane bioreactor (MBR) plant would be expanded, and in the future, the existing activated sludge treatment plant would be replaced by another MBR plant. One of the advantages of MBR technology is the ease of expansion through phased improvements. Specific improvements related to the sludge management process would also be developed. Among the improvements are: modification and capacity expansion of the aerobic digestion system, improvements to the sludge thickening system and new sludge dewatering facilities. Sludge would continue to be disposed of at the Village's existing sludge disposal site located nine miles southwest of Los Lunas, and in the future, sludge would also be disposed of at a landfill to reduce the need to acquire a significant amount of land for sludge disposal and to improve operational flexibility at the WWTP.

The project area covers approximately 6.8 acres on a property owned by the Village of Los Lunas, where the existing facilities are located. This property has been previously disturbed. Project area components include wastewater and sludge treatment/handling facilities (4.0 acres), laboratory/ administrative facility (1.6 acres), and contractor staging area (1.2 acres). The first phase of the liquid treatment improvements, which is the expansion of the existing MBR plant, would be housed in the MBR building and would not result in land disturbance.

ROBERT E. VIALPANDO
MAYOR

GREGORY MARTIN
VILLAGE ADMINISTRATOR

CHARLES GRIEGO
COUNCILMAN

RICHARD LOVATO
COUNCILMAN

GERARD SAIZ
COUNCILMAN

AMANDA PEREA
COUNCILWOMAN

In terms of regulatory requirements, the blended effluent discharged into the Rio Grande currently meets standards and limits for pollutants established in the existing National Pollutant Discharge Elimination System (NPDES) permit. In the future, the existing activated sludge plant would be replaced with the MBR system. As a result, all of the effluent will be produced by MBR plants; thus, it will be of higher quality than the current blended effluent from the activated sludge and the MBR plants.

As part of the EID process, the New Mexico Environment Department requires that we consult with your agency. We request your concurrence on the findings of the enclosed Cultural Resource Report. If you have any questions on this report, please contact the project archaeologist, Toni Goar, at Marron and Associates, by calling (505) 898-8848 or sending an email to tgoar@marroninc.com .

Thank you.

Sincerely,

VILLAGE OF LOS LUNAS

Gregory D Martin

Gregory Martin
Village Administrator

Attachments/Enclosure

Concurrence: Michelle Ensey for State Historic Preservation Officer Date: 9/27/12

Village of Los Lunas

660 MAIN STREET N.W.
P.O. BOX 1209
LOS LUNAS, NEW MEXICO 87031

PHONE: (505) 839-3840
FAX: (505) 352-3580

September 7, 2012

Ms. Roxanne Runkel
National Park Service
Intermountain Region
12795 Alameda Parkway
Denver, Colorado 80225

RE: Los Lunas Wastewater Treatment and Sludge Management Facilities Expansion Project
Village of Los Lunas, Valencia County, New Mexico

Dear Ms. Runkel:

To provide for future wastewater treatment demand, the Village of Los Lunas proposes to make improvements to its wastewater treatment plant (WWTP) and sludge management system. As part of the planning process, the Village is preparing an Environmental Information Document (EID) and is requesting comments from the National Park Service on this proposed project.

The Los Lunas Wastewater Treatment Plant is located at the south edge of Los Lunas on Heaton Loop south of Desert Flower Avenue (see attached figures). The purpose of the Los Lunas Wastewater Treatment and Sludge Management Facilities Expansion Project is to ensure that the plant has sufficient treatment capacity through the year 2041. At the end of the 30-year planning period used for this project, the facilities will have a treatment capacity of 4.7 MGD, but the projects will be constructed in several phases.

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ROBERT E. VIALPANDO
MAYOR

GREGORY MARTIN
VILLAGE ADMINISTRATOR

CHARLES GRIEGO
COUNCILMAN

RICHARD LOVATO
COUNCILMAN

GERARD SAIZ
COUNCILMAN

AMANDA PEREA
COUNCILWOMAN

In terms of regulatory requirements, the blended effluent discharged into the Rio Grande currently meets standards and limits for pollutants established in the existing National Pollutant Discharge Elimination System (NPDES) permit. In the future, the existing activated sludge plant would be replaced with the MBR system. As a result, all of the effluent will be produced by MBR plants; thus, it will be of higher quality than the current blended effluent from the activated sludge and the MBR plants.

As part of the EID process, the New Mexico Environment Department requires that we consult with your agency. We request a response in 30 days in order to meet project schedule requirements. If you have any questions on this project, please contact the project engineer, Clayton Ten Eyck at Molzen Corbin, by calling (505) 242-5700 or sending an email to cteneyck@molzencorbin.com .

Thank you.

Sincerely,

VILLAGE OF LOS LUNAS

Gregory D. Martin

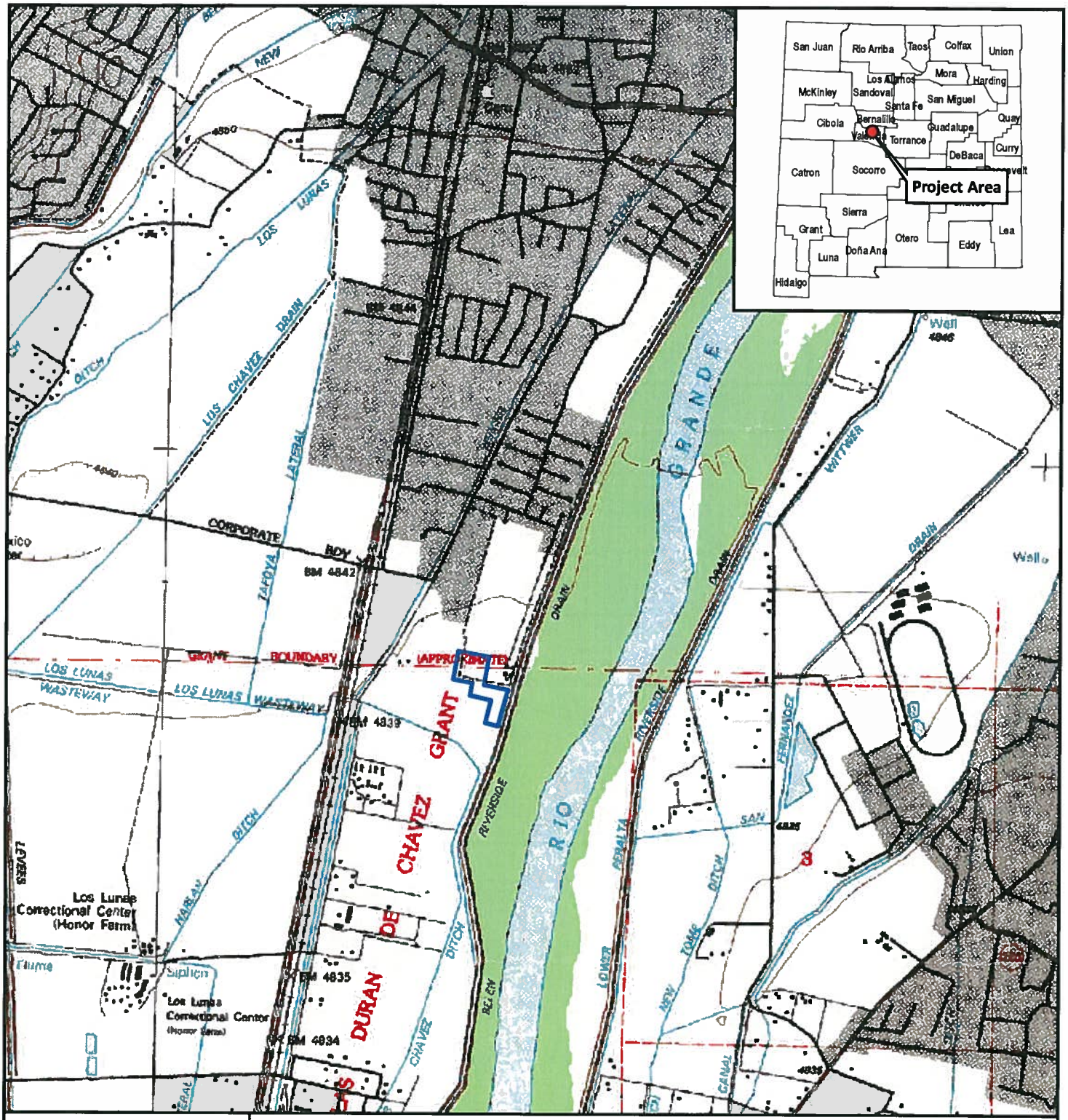
Gregory Martin
Village Administrator

Attachments

NATIONAL PARK SERVICE

The National Park Service reviewed this project, and determined that no parks will be affected; therefore, we have no comments.

Signed: _____ Date: 10/17/12



MARRON and ASSOCIATES

Figure 1.1
Project Area Map

Project Area

Los Lunas, NM (1991)
USGS 7.5' Quadrangle

Nicolas Duran de Chavez Grant
Valencia County, New Mexico

Land Ownership

Private

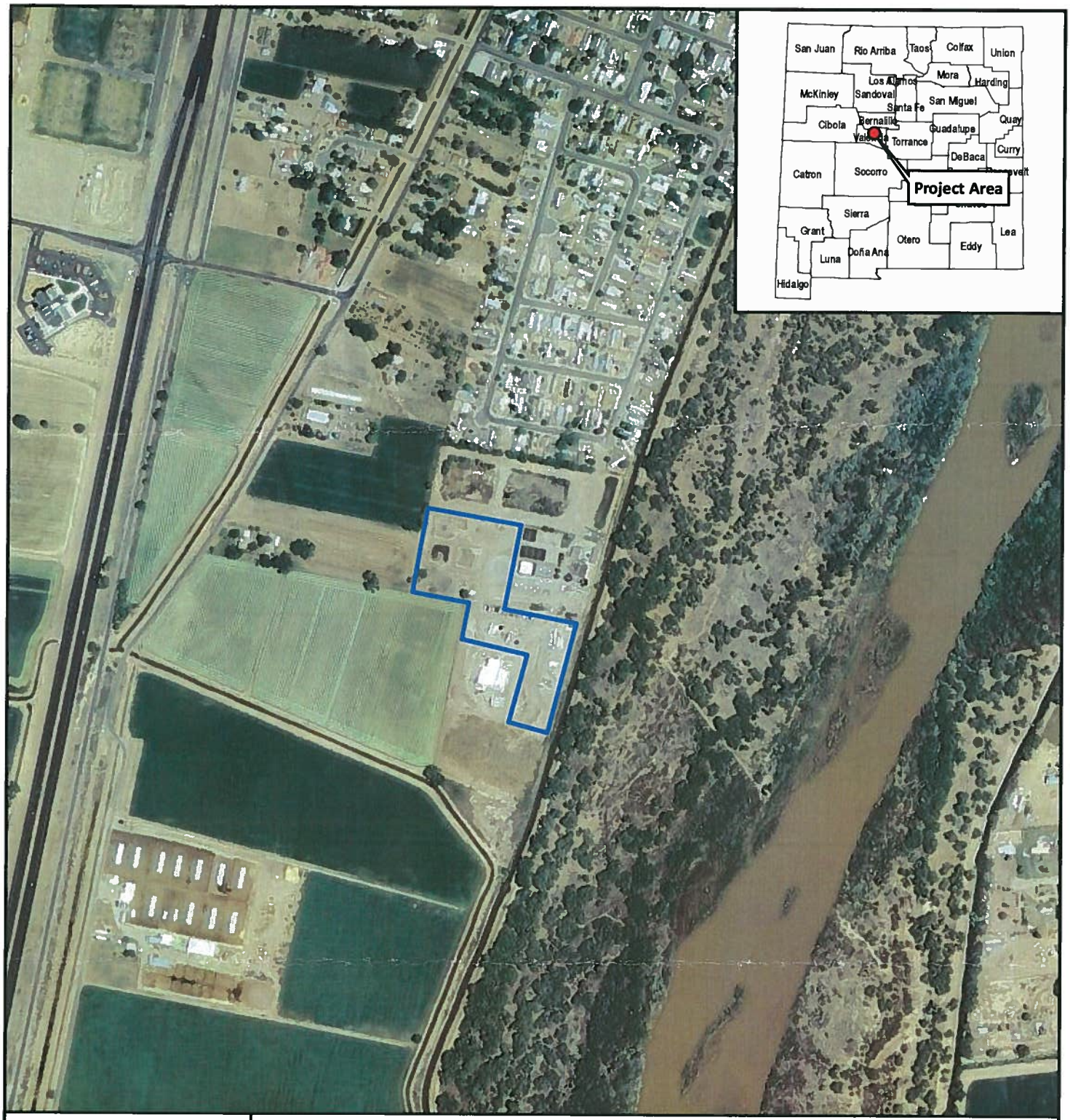
0 255 510 1,020 Meters

0 1,000 2,000 4,000 Feet

N

1:24,000

Los Lunas WWTP, Valencia County, New Mexico



MARRON and ASSOCIATES

Figure 1.2
Project Area Map
on Aerial Background

Project Area

Los Lunas, NM (1991)
USGS 7.5' Quadrangle

Nicolas Duran de Chavez Grant
Valencia County, New Mexico

Land Ownership

Private

0 85 170 340 Meters

0 337.5 675 1,350 Feet

N

1:8,000

Los Lunas WWTP, Valencia County, New Mexico

Subject: Fw: regarding your Sept 7, 2012, scoping letter for alterations to the Los Lunas, NM, WWTP expansion

Date: Tuesday, November 27, 2012 2:27:34 PM MT

From: Joel_Lusk@fws.gov

To: cteneyck@molzencorbin.com, eric@marroninc.com

FYI, the Service concurred with the NPDES permit for the expanded Los Lunas WWTP effluent discharges.

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Joel D. Lusk, Senior Fish and Wildlife Biologist
US Fish and Wildlife Service, New Mexico Ecological Services
2105 Osuna Road NE, Albuquerque, NM 87113-1001
T: 505-761-4709 F: 505-346-2542 Email: joel_lusk@fws.gov
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The Rio Grande begins on our streets and includes our yards and homes.
We can all help protect it by conserving water and reducing our wastes.

----- Forwarded by Joel Lusk/R2/FWS/DOI on 11/27/2012 02:25 PM -----

Joel Lusk/R2/FWS/DOI

10/22/2012 05:34 PM

To cteneyck@molzencorbin.com, eric@marroninc.com

cc

Subject regarding your Sept 7, 2012, scoping letter for alterations to the Los Lunas, NM, WWTP expansion

Regarding your request for federally listed species information that may be associated with the WWTP alterations in Los Lunas, NM, the US Fish and Wildlife Service, New Mexico Ecological Services Field Office, generally provides the following attached general species list letter with additional sources of information for such scoping requests.

Our office does provide general recommendations for wastewater facilities on our webpage at the URL:
http://www.fws.gov/southwest/es/newmexico/SBC_NM_rec.cfm?pr=wf

Hopefully, the Los Lunas expansion will continue using Ultraviolet light instead of chlorine residuals for its disinfection.

If you determine that there are any negative effects on the Rio Grande silvery minnow or southwestern willow flycatcher from the Los Lunas WWTP expansion, please contact us further. Thank you

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Joel D. Lusk, Senior Fish and Wildlife Biologist
US Fish and Wildlife Service, New Mexico Ecological Services
2105 Osuna Road NE, Albuquerque, NM 87113-1001
T: 505-761-4709 F: 505-346-2542 Email: joel_lusk@fws.gov
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"Le mieux est l'ennemi du bien." Voltaire (1764) "Don't let the perfect be the enemy of the good." Interpretation: Pursuit of "best" solution may end up doing less good than accepting a solution that, while not perfect, is effective.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New Mexico Ecological Services Field Office
2105 Osuna NE
Albuquerque, New Mexico 87113
Phone: (505) 346-2525 Fax: (505) 346-2542

Thank you for your recent request for information on threatened or endangered species or important wildlife habitats that may occur in your project area. The New Mexico Ecological Services Field Office has posted lists of the endangered, threatened, proposed, candidate and species of concern occurring in all New Mexico Counties on the Internet. Please refer to the following web page for species information in the county where your project occurs: http://www.fws.gov/southwest/es/newmexico/SBC_intro.cfm. If you do not have access to the Internet or have difficulty obtaining a list, please contact our office and we will mail or fax you a list as soon as possible.

After opening the web page, find New Mexico Listed and Sensitive Species Lists on the main page and click on the county of interest. Your project area may not necessarily include all or any of these species. This information should assist you in determining which species may or may not occur within your project area.

Under the Endangered Species Act, as amended (Act), 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 us further. Similarly, it is their responsibility to determine if a proposed action has no effect to endangered, threatened, or proposed species, or designated critical habitat. If your action area has suitable habitat for any of these 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. Please keep in mind that the scope of federally listed species compliance also includes any interrelated or interdependent project activities (e.g., equipment staging areas, offsite borrow material areas, or utility relocations) and any indirect or cumulative effects.

Candidates and species of concern have no legal protection under the Act and are included on the web site for planning purposes only. We monitor the status of these species. If significant declines are detected, these species could potentially be listed as endangered or threatened. Therefore, actions that may contribute to their decline should be avoided. We recommend that candidates and species of concern be included in your surveys.

Also on the web site, we have included additional wildlife-related information that should be considered if your project is a specific type. These include communication towers, power line safety for raptors, road and highway improvements and/or construction, spring developments and livestock watering facilities, wastewater facilities, and trenching operations.

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. We 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. These habitats should be conserved through avoidance, or mitigated to ensure no net loss of wetlands function and value.

The Migratory Bird Treaty Act (MBTA) prohibits the taking of migratory birds, nests, and eggs, except as permitted by the U.S. Fish and Wildlife Service. To minimize the likelihood of adverse impacts to all birds protected under the MBTA, we recommend construction activities occur outside the general migratory bird nesting season of March through August, or that areas proposed for construction during the nesting season be surveyed, and when occupied, avoided until nesting is complete.

We 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 fish, wildlife, and plants of State concern.

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.

Sincerely,

Wally Murphy
Field Supervisor

GOVERNOR
Susana Martinez

DIRECTOR AND SECRETARY
TO THE COMMISSION
James S. Lane, Jr.

Daniel E. Brooks, Deputy Director

STATE OF NEW MEXICO
DEPARTMENT OF GAME & FISH

One Wildlife Way
Santa Fe, NM 87507
Post Office Box 25112
Santa Fe, NM 87504
Phone: (505) 476-8008
Fax: (505) 476-8124

Visit our website at www.wildlife.state.nm.us
For information call: (888) 248-6866
To order free publications call: (800) 862-9310

STATE GAME COMMISSION

JIM McCLINTIC
Chairman
Albuquerque, NM

THOMAS "DICK" SALOPEK
Vice-Chairman
Las Cruces, NM

DR. TOM ARVAS
Albuquerque, NM

SCOTT BIDEGAIN
Tucumcari, NM

ROBERT ESPINOZA, SR.
Farmington, NM

PAUL M. KIENZLE III
Albuquerque, NM

BILL MONTOYA
Alto, NM

October 1, 2012

Gregory Martin, Village Administrator
Village of Los Lunas
660 Main Street N.W.
P.O. Box 1209
Los Lunas, New Mexico 87031

Los Lunas Wastewater Treatment and Sludge Management Facilities Expansion Project, Village of Los Lunas, Valencia County, New Mexico; NMDGF No. 15303

Dear Mr. Martin:

In response to your letter dated 7 September, 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 occur in Valencia County.

For more information on listed and other species of concern, contact the following sources:

1. BISON-M Species Accounts, Searches, and County lists: http://www.bison-m.org
2. Habitat Handbook Project Guidelines: http://wildlife.state.nm.us/conservation/habitat_handbook/index.htm
3. For custom, site-specific database searches on plants and wildlife, go to http://nhnm.unm.edu, then go to Data, then to Free On-Line Data, and follow the directions
4. New Mexico State Forestry Division (505-476-3334) or http://nmrareplants.unm.edu/index.html for state-listed plants
5. For the most current listing of federally listed species **always** check the U.S. Fish and Wildlife Service at (505-346-2525) or http://www.fws.gov/southwest/es/NewMexico/SBC.cfm.

NEW MEXICO WILDLIFE OF CONCERN
VALENCIA COUNTY

For complete up-dated information on federal-listed species, including plants, see the US Fish & Wildlife Service NM Ecological Services Field Office website at http://www.fws.gov/southwest/es/NewMexico/SBC.cfm. For information on state-listed plants, contact the NM Energy, Minerals and Natural Resources Department, Division of Forestry, or go to http://nmrareplants.unm.edu/. If your project is on Bureau of Land Management, contact the local BLM Field Office for information on species of particular concern. If your project is on a National Forest, contact the Forest Supervisor's office for species information. E = Endangered; T = Threatened; s = sensitive; SOC = Species of Concern; C = Candidate; Exp = Experimental non-essential population; P = Proposed

Common Name	Scientific Name	NMGF	US FWS	critical habitat
Rio Grande Silvery Minnow	Hybognathus amarus	E	E	Y
Neotropic Cormorant	Phalacrocorax brasilianus	T		
Bald Eagle	Haliaeetus leucocephalus	T		
Northern Goshawk	Accipiter gentilis	s	SOC	
Common Black-Hawk	Buteogallus anthracinus	T	SOC	
Peregrine Falcon	Falco peregrinus	T	SOC	
Mountain Plover	Charadrius montanus	s	SOC	
Common Ground-Dove	Columbina passerina	E		
Yellow-billed Cuckoo	Coccyzus americanus	s	C	
Mexican Spotted Owl	Strix occidentalis lucida	s	T	Y
Burrowing Owl	Athene cunicularia		SOC	
Broad-billed Hummingbird	Cynanthus latirostris	T		
Southwestern Willow Flycatcher	Empidonax traillii extimus	E	E	Y
Loggerhead Shrike	Lanius ludovicianus	s		
Bell's Vireo	Vireo bellii	T	SOC	
Baird's Sparrow	Ammodramus bairdii	T	SOC	
Sprague's Pipit	Anthus spragueii		C	
Western Small-footed Myotis Bat	Myotis ciliolabrum melanorhinus	s		
Yuma Myotis Bat	Myotis yumanensis yumanensis	s		
Long-legged Myotis Bat	Myotis volans interior	s		
Fringed Myotis Bat	Myotis thysanodes thysanodes	s		
Long-eared Myotis Bat	Myotis evotis evotis	s		
Spotted Bat	Euderma maculatum	T		
Big Free-tailed Bat	Nyctinomops macrotis	s		
Gunnison's Prairie Dog (prairie)	Cynomys gunnisoni	s		
Pecos River Muskrat	Ondatra zibethicus ripensis	s	SOC	
New Mexican Jumping Mouse	Zapus hudsonius luteus	E	C	
Black-footed Ferret	Mustela nigripes		E	
Western Spotted Skunk	Spilogale gracilis	s		
Slate Millipede	Comanchelus chihuanus		SOC	

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

John H. Bemis
Cabinet Secretary

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

Tony Delfin, Division Director
State Forestry Division

Gregory Martin
Village of Los Lunas
660 Main St. N.W.
P.O. Box 1209
Los Lunas, NM 87031

October 10, 2012

RE: Los Lunas Wastewater Treatment and Sludge Management Facilities Expansion Project

Dear Gregory Martin:

Thank you for giving me the opportunity to review and comment on the Los Lunas Wastewater Treatment and Sludge Management Facilities Expansion Project in Valencia County, NM. I do not anticipate any impacts to state listed plant species from the expansion project as described.

Please let me know if I can be of further help.

Sincerely,

Daniela Roth

Daniela Roth

BOTANY PROGRAM COORDINATOR
EMNRD-Forestry Division
1220 S. St. Francis Dr.
Santa Fe, NM 87505
(505)476-3347 (Phone)
(505)476-3330 (Fax)

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary-Designate

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

Louise N. Martinez, Division Director
Energy Conservation and Management Division

September 4, 2013

By Email: marting@loslunasnm.gov; cteneyck@molzencorbin.com

Gregory D. Martin, Village Administrator
Village of Los Lunas
660 Main Street, NW
PO Box 1209
Los Lunas, NM 87031

SUBJECT: **Los Lunas Wastewater Treatment Plant Expansion**

Dear Mr. Martin:

The Energy Conservation and Management Division (ECMD) of the New Mexico Energy, Minerals and Natural Resources Department has reviewed the Draft Environmental Information Document, dated August 2013, for expansion of the Los Lunas Wastewater Treatment Plant. ECMD was asked to provide comments on energy issues. The following comments are provided for inclusion in Section 3.11.2, Energy, and Table 5.1, Agency Consultation.

There are two items regarding energy consumption of the Plant for which the Village of Los Lunas should be aware.

1. Energy Usage – the need for fossil fuels for Plant operations can be reduced by including energy efficiency measures and renewable energy sources in the Plant expansion design. The investment in cost-effective measures will provide operational savings to the Village over its life-cycle. Because this project is for a public facility, there is a state standard to be met: see *Energy Efficiency Standards for Public Buildings* [NMSA 1978, § 15-3-36]. By this statute, the Plant expansion (if greater than 3,000 square feet) is to be designed and constructed to attain the energy star qualification of the US Environmental Protection Agency.

2. Power Purchase Agreement (PPA) – the Village is eligible as a municipality to obtain private financing for energy efficiency and renewable energy measures. The *Public Facility Energy Efficiency and Water Conservation Act* [NMSA 1978, § 6-23] is the statute that allows municipalities to engage in a long-term agreement with an energy services company (ESCO) who guarantees utility savings. The ESCO performs an investment-grade energy audit, implements the measures, and verifies the utility savings. It is possible to include a PPA within the long-term agreement for the rate of electricity provided from a renewable energy system, such as a solar photovoltaic power plant. The Town of Silver City has successfully implemented a one-megawatt solar system at its existing wastewater treatment plant with the help of this private financing mechanism. The solar company is now delivering electricity to the Town for less than the established electricity rates of the utility company.

These two items can help to counter the expected long-term gradual increase in fossil fuel energy usage and its costs, due to the projected population growth. If there are any questions on the above comments, please contact Brian Johnson (brian.k.johnson@state.nm.us, 505-476-3313).

Sincerely,

Louise N. Martinez

Louise N. Martinez, Director
Energy Conservation and Management Division (ECMD)

cc: Brian Johnson, Bureau Chief, ECMD Energy Technology & Engineering
Clayton Ten Eyck, Project Engineer, Molzen-Corbin

DEPARTMENT OF THE ARMY
ALBUQUERQUE DISTRICT, CORPS OF ENGINEERS
4101 Jefferson Plaza NE
Albuquerque, New Mexico 87109
505-342-3185
Fax 505-342-3498

October 3, 2012

REPLY TO
ATTENTION OF:

Regulatory Division
New Mexico/Texas Branch

SUBJECT: Action No. SPA-2012-00414-ABQ, Village of Los Lunas Wastewater Treatment and Sludge Management Facilities Expansion Project, Valencia County, New Mexico.

Mr. Gregory Martin
Village of Los Lunas
660 Main Street N.W.
P.O. Box 1209
Los Lunas, NM 87031

Dear Mr. Martin:

The U.S. Army Corps of Engineers (Corps) is in receipt of your letter dated September 7, 2012, concerning the proposal to make improvements to the Village of Los Lunas' Wastewater Treatment Plant (WWTP) and sludge management system located in Valencia County, New Mexico. The activities involved include expansion of the existing membrane bioreactor (MBR), improvements to the aerobic digestion system through modification and capacity expansion, improvements to the sludge thickening system and lastly, new sludge dewatering facilities. We have assigned Action No. SPA-2012-00414-ABQ to this activity. To avoid delay, please include this number in all future correspondence concerning this project.

A Department of the Army permit is required under Section 404 of the Clean Water Act for the placement of dredged or fill materials into waters of the United States. The project site may contain waters of the U.S. If the project proponent or any of its contractors work, or plan to work, in a river, stream, or wetland, they may be required to obtain a Section 404 Department of the Army permit.

I have enclosed a brochure describing the Corps regulatory program for your information. A series of nationwide permits are available which may be sufficient for some work, if all terms and conditions are met. Many of the nationwide permits require pre-construction notification to the Corps of Engineers and regional conditions may apply. In many cases, a water quality certification is required from the appropriate water quality authority.

We will provide a letter of determination of permit requirements on request, provided that we are furnished with information sufficient to determine whether waters of the United States would be affected by the proposed project. Summaries of the nationwide permits and information about the regulatory program are available on our web page at http://www.spa.usace.army.mil/Missions/RegulatoryProgramandPermits.aspx

If you have any questions concerning our regulatory program, please contact me at 505-342-3185 or by e-mail at Jennifer.J.Lillard@usace.army.mil. At your convenience, please complete a Customer Service Survey available on-line at http://per2.nwp.usace.army.mil/survey.html.

Sincerely,

Jennifer J. Lillard
Regulatory Specialist

Enclosure:

Regulatory Program Brochure

Copies Furnished (via email):

Mr. Ten Eyck, Molzen-Corbin
ctenecyk@molzencorbin.com

DEPARTMENT OF THE ARMY
ALBUQUERQUE DISTRICT, CORPS OF ENGINEERS
4101 JEFFERSON PLAZA NE
ALBUQUERQUE, NEW MEXICO 87109
505-342-3185
FAX 505-344-1514

REPLY TO ATTENTION OF

September 18, 2013

Regulatory Division

SUBJECT: No Permit Required – Action No. SPA-2013-00431-ABQ, Los Lunas Wastewater Treatment Plant Improvements, Valencia County, New Mexico.

Heather Parmeter
Marron and Associates, Incorporated
7511 Fourth Street NW
Albuquerque, NM 87107

Dear Ms. Parmeter:

I am writing this letter in response to your request for a determination of Department of the Army permit requirements for the proposed Los Lunas Wastewater Treatment Plant Improvements, located at approximately latitude 34.783415, longitude -106.735229, in Valencia County, New Mexico. The proposed improvements consist of constructing a laboratory, mechanical storage area, and additional offices.We have assigned Action No. SPA-2013-00431-ABQ to this project. Please reference this number in all future correspondence concerning the project.

Based on the information provided, we have determined that a Department of the Army permit is not required since {the project site consists entirely of uplands. However, please be advised that there are potential jurisdictional waters of the U.S. located in the vicinity of the project site and it is incumbent upon you to remain informed of any changes in the Corps Regulatory Program regulations and policy as they relate to your project. If your plans change such that waters of the U.S. could be impacted by the proposed project, please contact our office for a reevaluation of permit requirements.

This decision is based on an approved jurisdictional determination (JD) (attached) that there are no waters of the United States on the project site. The basis for this JD is that the project site contains entirely uplands. A copy of this JD is also available at http://www.spa.usace.army.mil/reg/JD. This approved JD is valid for five years unless new information warrants revision of the determination before the expiration date.

You may accept or appeal this approved JD or provide new information in accordance with the attached Notification of Administration Appeal Options and Process and Request for Appeal (NAAOP-RFA). If you elect to appeal this approved JD, you must complete Section II of

the form and return it to the Army Engineer Division, South Pacific, CESPD-PDS-O, Attn: Tom Cavanaugh, Administrative Appeal Review Officer, 1455 Market Street, Room 1760, San Francisco, CA 94103-1399 within 60 days of the date of this notice. Failure to notify the Corps within 60 days of the date of this notice means that you accept the approved JD in its entirety and waive all rights to appeal the approved JD.

If you have any questions concerning our regulatory program, please contact me at 505-342-3185 or by e-mail at Jennifer.J.Lillard@usace.army.mil. At your convenience, please complete a Customer Service Survey on-line available at http://per2.nwp.usace.army.mil/survey.html.

Sincerely,

Jennifer J. Lillard
Regulatory Project Manager

United States Department of Agriculture

NRCS
Natural Resources Conservation Service
6200 Jefferson NE, Room 305
Albuquerque, NM 87109
Phone: (505) 761-4400 **Fax:** (505) 761-4462
Website: www.nm.nrcs.usda.gov

October 1, 2012

Mr. Eric R. Johnson,
Environmental Project Manger
Marron and Associates
7511 Fourth Street N. W.
Albuquerque, New Mexico 87107

Dear Mr. Johnson:

Thank you for providing the Natural Resources Conservation Service (NRCS) the opportunity to review the proposed Wastewater Treatment Plant Expansion, Los Lunas, Valencia 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 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 existing prior conversion urban land under the jurisdiction of the Village of Los Lunas. 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 Unique Farmlands to be converted to non-agricultural uses, and is not subject to the Act.

If you have any questions concerning soils information, please contact Clarence Chavez, Soil Data Quality Specialist, at (505) 761-4435 or email at clarence.chavez@nm.usda.gov.

Sincerely,

J. XAVIER MONTOYA
State Conservationist

cc:
Clarence Chavez, Soil Data Quality Scientist, NRCS, Albuquerque, NM

NEW MEXICO
ENVIRONMENT DEPARTMENT

Office of the Secretary

Harold Runnels Building
1190 Saint Francis Drive (87505)
PO Box 5469, Santa Fe, NM 87502-5469
Phone (505) 827-2855 Fax (505) 827-2836
www.nmenv.state.nm.us

SUSANA MARTINEZ
Governor
JOHN A. SANCHEZ
Lieutenant Governor

DAVE MARTIN
Cabinet Secretary
BUTCH TONGATE
Deputy Secretary

October 18, 2012

Village of Los Lunas
ATTN: Gregory Martin, Village Administrator
660 Main Street NW
P.O. Box 1209
Los Lunas, NM 87031
marting@loslunasnm.gov

RESPONSE BY EMAIL

RE: Los Lunas Wastewater Treatment and Sludge Management Facilities Expansion Project

Dear Mr. Martin:

Your letter regarding the above named project was received in the New Mexico Environment Department (NMED) and was sent to various Bureaus for review and comment. Comments were provided by the Surface Water Quality Bureau, Ground Water Quality Bureau, Air Quality Bureau, Petroleum Storage Tanks Bureau, and Construction Programs Bureau and are as follows.

Surface Water Quality Bureau
The U.S. Environmental Protection Agency (USEPA) requires National Pollutant Discharge Elimination System (NPDES) Construction General Permit (CGP) coverage for storm water discharges from construction projects (common plans of development) that will result in the disturbance (or re-disturbance) of one or more acres, including expansions, of total land area. Because this project appears to exceed one acre (including staging areas, etc.), it may require appropriate NPDES permit coverage prior to beginning construction (small, one - five acre, construction projects may be able to qualify for a waiver in lieu of permit coverage - see Appendix C).

Among other things, this permit requires that a Storm Water Pollution Prevention Plan (SWPPP) be prepared for the site and that appropriate Best Management Practices (BMPs) be installed and maintained both during and after construction to prevent, to the extent practicable, pollutants (primarily sediment, oil & grease and construction materials from construction sites) in storm water runoff from entering waters of the U.S. This permit also requires that permanent stabilization measures (revegetation, paving, etc.), and permanent storm water management measures (storm water detention/retention structures, velocity dissipation devices, etc.) be implemented post construction to minimize, in the long term, pollutants in storm water runoff from entering these waters. In addition, permittees must ensure that there is no increase

in sediment yield and flow velocity from the construction site (both during and after construction) compared to pre-construction, undisturbed conditions (see Subpart 9.4.1.1)

You should also be aware that EPA requires that all "operators" (see Appendix A) obtain NPDES permit coverage for construction projects. Generally, this means that at least two parties will require permit coverage. The owner/developer of this construction project who has operational control over project specifications, the general contractor who has day-to-day operational control of those activities at the site, which are necessary to ensure compliance with the storm water pollution plan and other permit conditions, and possibly other "operators" will require appropriate NPDES permit coverage for this project.

The CGP was re-issued effective February 16, 2012. The CGP, Notice of Intent (NOI), Fact Sheet, and Federal Register notice can be downloaded at:
http://cfpub.epa.gov/npdes/stormwater/cgp.cfm

In addition, movement of the outfall location, increased design capacity and other design changes will likely require major modification(s) to the facility's NPDES permit #NM0020303. This process may take six months or longer to complete.

Ground Water Quality Bureau
New Mexico Environment Department (NMED) Ground Water Quality Bureau (GWQB) staff reviewed the above-referenced letter as requested, focusing specifically on the potential effect to ground water resources in the area of the proposed project.

The Village of Los Lunas (Los Lunas) is proposing to implement improvements to their wastewater treatment plant (WWTP) and sludge management system. The sludge management system is covered under Discharge Permit 1053 (DP-1053) issued and maintained by the GWQB. GWQB staff members are currently working with the Village and their consultants regarding possible permit modifications related to this project. Discharges to the Rio Grande River from the WWTP are covered under a National Pollutant Discharge Elimination System (NPDES) permit issued by the U.S. Environmental Protection Agency (EPA) and managed by the Surface Water Quality Bureau (SWQB). Current and future communications will continue to be addressed through agency regulatory channels.

Air Quality Bureau
A review was conducted of the Village of Los Lunas proposed Los Lunas Wastewater Treatment facility and Sludge Management expansion project.

The proposed project area is located in Valencia County, New Mexico. Valencia County is currently not in nonattainment for any of the National Ambient Air Quality Standards. The Los Lunas Wastewater Treatment facility is presently operating under a "Notice of Exemption" (NOE) from the State of New Mexico Environment Department Air Quality Bureau. The proposed project must comply with the requirements of NOE 4750. If air quality emissions from the wastewater treatment facility exceed those allowed under NOE 4750, a New Source Review (NSR) air quality permit may be required. For more information on NSR permitting requirements, please refer to 20.2.72 NMAC.

To ensure air quality standards are met, applicable local or county regulations requiring noise and/or dust control must be followed; if none are in effect, controlling construction-related air quality impacts during projects should be considered to reduce the impact of fugitive dust and/or noise on community members.

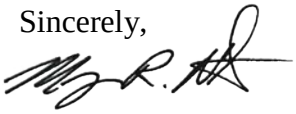
Petroleum Storage Tanks Bureau
The Petroleum Storage Tank Bureau finds no storage tank issues or requirements associated with the proposed Los Lunas Treatment and Sludge Management Facilities Expansion Project in Los Lunas, New Mexico.

Construction Programs Bureau
CPB staff has reviewed the above-referenced letter as requested.

The letter states that the project area components include wastewater and sludge treatment/handling facilities, laboratory/administrative facility, and contractor staging area. CPB is providing the funding for this project through the Clean Water State Revolving Loan Fund and does not anticipate any adverse impacts.

I hope this information is helpful to you.

Sincerely,



Morgan R. Nelson
Environmental Impact Review Coordinator
NMED File Number: EIR 3785

U. S. Department of Homeland Security
FEMA Region 6
800 North Loop 288
Denton, TX 76209-3698

FEMA

RECEIVED
SEP 24 2012
ADMINISTRATION

FEDERAL EMERGENCY MANAGEMENT AGENCY
REGION VI
MITIGATION DIVISION

NOTICE REVIEW/ENVIRONMENTAL CONSULTATION

☐ We have no comments to offer. ☒ We offer the following comments:

WE WOULD REQUEST THAT THE LOCAL FLOODPLAIN ADMINISTRATOR BE CONTACTED FOR THE REVIEW AND POSSIBLE PERMIT REQUIREMENTS FOR THIS PROJECT. IF FEDERALLY FUNDED, WE WOULD REQUEST PROJECT TO BE IN COMPLIANCE WITH EO11988 & EO 11990.

Adolph Lopez
Code Enforcement Supervisor/ FPA
Village of Los Lunas
P.O. Box 1209
Los Lunas, NM 87031
lopeza@loslunasnm.gov
505-352-7623

REVIEWER:

Mayra G. Diaz
Floodplain Management and Insurance Branch
Mitigation Division
(940) 898-5541

DATE: September 18, 2012

Village of Los Lunas

660 MAIN STREET N.W.
P.O. BOX 1209
LOS LUNAS, NEW MEXICO 87031

PHONE: (505) 839-3840
FAX: (505) 352-3580

RECEIVED FEMA MAIL ROOM
FEMA, REGION VI
2012 SEP 17 AM 11 22

12-09-5023

Date Rec'd: 9/14/12		
Rec'd by: VB		
	Action	Info
RA		X
Deputy RA		
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Analyst		
RES		
REC		
MIT	X	
MSD		
NP		
File		X
Suspense Date: 9/27/2012		

2907

MT DIVISION - Region VI
LOG # Received 9,17,12
BY
DE-LOG 9,18,12
BY

September 7, 2012

Mr. Tony Robinson
Acting Regional Administrator
Federal Emergency Management Agency
800 North Loop 288, Room 206
Denton, Texas 76201-3698

RE: Los Lunas Wastewater Treatment and Sludge Management Facilities Expansion Project
Village of Los Lunas, Valencia County, New Mexico

Dear Mr. Robinson:

To provide for future wastewater treatment demand, the Village of Los Lunas proposes to make improvements to its wastewater treatment plant (WWTP) and sludge management system. As part of the planning process, the Village is preparing an Environmental Information Document (EID) and is requesting comments from the Federal Emergency Management Agency on this proposed project.

The Los Lunas Wastewater Treatment Plant is located at the south edge of Los Lunas on Heaton Loop south of Desert Flower Avenue (see attached figures). The purpose of the Los Lunas Wastewater Treatment and Sludge Management Facilities Expansion Project is to ensure that the plant has sufficient treatment capacity through the year 2041. At the end of the 30-year planning period used for this project, the facilities will have a treatment capacity of 4.7 MGD, but the projects will be constructed in several phases.

Based on the analysis presented in the Preliminary Engineering Report, the existing membrane bioreactor (MBR) plant would be expanded, and in the future, the existing activated sludge treatment plant would be replaced by another MBR plant. One of the advantages of MBR technology is the ease of expansion through phased improvements. Specific improvements related to the sludge management process would also be developed. Among the improvements are: modification and capacity expansion of the aerobic digestion system, improvements to the sludge thickening system and new sludge dewatering facilities. Sludge would continue to be disposed of at the Village's existing sludge disposal site located nine miles southwest of Los Lunas, and in the future, sludge would also be disposed of at a landfill to reduce the need to acquire a significant amount of land for sludge disposal and to improve operational flexibility at the WWTP.

The project area covers approximately 6.8 acres on a property owned by the Village of Los Lunas, where the existing facilities are located. This property has been previously disturbed. Project area components include wastewater and sludge treatment/handling facilities (4.0 acres), laboratory/ administrative facility (1.6 acres), and contractor staging area (1.2 acres). The first phase of the liquid treatment improvements, which is the expansion of the existing MBR plant, would be housed in the MBR building and would not result in land disturbance.

ROBERT E. VIALPANDO
MAYOR

GREGORY MARTIN
VILLAGE ADMINISTRATOR

CHARLES GRIEGO
COUNCILMAN

RICHARD LOVATO
COUNCILMAN

GERARD SAIZ
COUNCILMAN

AMANDA PEREA
COUNCILWOMAN

RECEIVED FRC MAIL RM
FEMA, REGION VI

2012 SEP 14 P 1:25

In terms of regulatory requirements, the blended effluent discharged into the Rio Grande currently meets standards and limits for pollutants established in the existing National Pollutant Discharge Elimination System (NPDES) permit. In the future, the existing activated sludge plant would be replaced with the MBR system. As a result, all of the effluent will be produced by MBR plants; thus, it will be of higher quality than the current blended effluent from the activated sludge and the MBR plants.

As part of the EID process, the New Mexico Environment Department requires that we consult with your agency. We request a response in 30 days in order to meet project schedule requirements. If you have any questions on this project, please contact the project engineer, Clayton Ten Eyck at Molzen Corbin, by calling (505) 242-5700 or sending an email to cteneyck@molzencorbin.com .

Thank you.

Sincerely,

VILLAGE OF LOS LUNAS

Gregory Martin
Village Administrator

Attachments

DEPARTMENT OF HOMELAND SECURITY
FEDERAL EMERGENCY MANAGEMENT AGENCY

STANDARD FLOOD HAZARD DETERMINATION FORM (SFHDF)

See The Attached Instructions

O.M.B. No. 1660-0040
Expires May 30, 2015

SECTION I - LOAN INFORMATION

1. LENDER NAME AND ADDRESS	2. COLLATERAL (Building/Mobile Home/Property) PROPERTY ADDRESS AND PARCEL NUMBER (See Instructions section for more information) UPC# 1-009-036-35465 TRACT A LAND OF VILLAGE OF LOS LUNAS

3. LENDER ID NO.	4. LOAN IDENTIFIER	5. AMOUNT OF FLOOD INSURANCE REQUIRED

SECTION II

A. NATIONAL FLOOD INSURANCE PROGRAM (NFIP) COMMUNITY JURISDICTION

1. NFIP Community Name	2. County(ies)	3. State	4. NFIP Community Number
VILLAGE OF LOS LUNAS	VALENCIA	NM	350144

B. NATIONAL FLOOD INSURANCE PROGRAM (NFIP) DATA AFFECTING BUILDING/MOBILE HOME

1. NFIP Map Number or Community-Panel Number (Community name, if not the same as "A")	2. NFIP Map Panel Effective/ Revised Date	3. LOMA/LOMR Number	4. Flood Zone	5. No NFIP Map
35601C0220E	AUGUST 19 2010		AE	

C. FEDERAL FLOOD INSURANCE AVAILABILITY (Check all that apply)

1. ☒ Federal flood Insurance is available (community participates in the NFIP). ☐ Regular Program ☒ Emergency Program of NFIP
2. ☐ Federal flood insurance is not available because community is not participating in the NFIP.
3. ☐ Building/Mobile Home is in a Coastal Barrier Resources Area (CBRA) or Otherwise Protected Area (OPA). Federal Flood Insurance may not be available.

CBRA/OPA Designation Date: _____

D. DETERMINATION

IS BUILDING/MOBILE HOME IN SPECIAL FLOOD HAZARD AREA (ZONES CONTAINING THE LETTERS "A" OR "V")? ☒ **YES** ☐ **NO**

If yes, flood insurance is required by the Flood Disaster Protection Act of 1973.
If no, flood insurance is not required by the Flood Disaster Protection Act of 1973. Please note, the risk of flooding in this area is only reduced, not removed.

E. COMMENTS (Optional)

This determination is based on examining the NFIP map, any Federal Emergency Management Agency revisions to it, and any other information needed to locate the building/mobile home on the NFIP map.

F. PREPARER'S INFORMATION

NAME, ADDRESS, TELEPHONE NUMBER (If other than Lender)	DATE OF DETERMINATION
ADOLPH LOPEZ VILLAGE OF LOS LUNAS P O BOX 1209 LOS LUNAS NM 87031 505 839 3840	OCTOBER 15 2012

STANDARD FLOOD HAZARD DETERMINATION FORM INSTRUCTIONS
PAPERWORK BURDEN DISCLOSURE NOTICE

Public reporting burden for this form is estimated to average 20 minutes per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and submitting the form. This collection of information is mandatory. You are not required to respond to this collection of information unless a valid OMB control number is displayed in the upper right corner of this form. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing the burden to: Information Collections Management, Department of Homeland Security, Federal Emergency Management Agency, 1800 South Bell Street, Arlington VA 20598-3005, Paperwork Reduction Project (1660-0040). **NOTE: DO NOT SEND YOUR COMPLETED FORM TO THIS ADDRESS.**

SECTION 1

1. LENDER NAME: Enter lender name and address.

2. COLLATERAL (Building/Mobile Home/Personal Property) PROPERTY ADDRESS: Enter property address for the insurable collateral. In rural areas, a postal address may not be sufficient to locate the property. In these cases, legal property descriptions may be used and may be attached to the form if space provided is insufficient. If other identifiers are available, such as Longitude/Latitude, please use any that will help describe the collateral location properly. Additional information may be attached.

3. LENDER ID NO: The lender funding the loan should identify itself as follows: FDIC-insured lenders should indicate their FDIC Insurance Certificate Number; Federally-insured credit unions should indicate their charter/insurance number; Farm Credit institutions should indicate their UNINUM number. Other lenders who fund loans sold to or securitized by FNMA or FHLMC should enter FNMA or FHLMC seller/service number.

4. LOAN IDENTIFIER: Optional. May be used by lenders to conform with their individual method of identifying loans.

5. AMOUNT OF FLOOD INSURANCE REQUIRED: Optional. The minimum federal requirement for this amount is the lesser of: the outstanding principal loan balance; the value of the improved property, mobile home and/or personal property used to secure the loan; or the maximum statutory limit of flood insurance coverage. Lenders may exceed the minimum federal requirements. National Flood Insurance Program (NFIP) policies do not provide coverage in excess of the insured value of the building/mobile home/personal property.

SECTION 2

A. NATIONAL FLOOD INSURANCE PROGRAM (NFIP) COMMUNITY JURISDICTION

1. NFIP Community Name. Enter the complete name of the community (as indicated on the NFIP map) in which the building or mobile home is located. Under the NFIP, a community is the political unit that has authority to adopt and enforce floodplain management regulations for the areas within its jurisdiction. A community may be any State or area or political subdivision thereof, or any Indian tribe or authorized tribal organization, or Alaska Native village or authorized native organization. (Examples: Brewer, City of; Washington, Borough of; Worchester, Township of; Baldwin County; Jefferson Parish) For a building or mobile home that may have been annexed by one community but is shown on another community's NFIP map, enter the Community Name for the community with land-use jurisdiction over the building or mobile home.

2. County(ies). Enter the name of the county or counties in which the community is located. For unincorporated areas of a county, enter "unincorporated areas." For independent cities, enter "independent city."

3. State. Enter the two-digit state abbreviation. (Examples: VA, TX, CA)

4. NFIP Community Number. Enter the 6-digit NFIP community number. This number can be determined by consulting the NFIP Community Status Book or can be found on the NFIP map; copies of either can be obtained from FEMA's Website http://msc/fema.gov or by calling 1-800-358-9616. If no NFIP Community Number exists for the community, enter "none."

B. NFIP DATA AFFECTING BUILDING/MOBILE HOME

The information in this section (excluding the LOMA/LOMR information) is obtained by reviewing the NFIP map on which the building/mobile home is located. The current NFIP map may be obtained from FEMA by calling 1-800-358-9616. Scanned copies of the NFIP maps can be viewed on FEMA's website at http://msc.fema.gov. Note that even when an NFIP map panel is not printed, it may be reflected on a community's NFIP map index with its proper number, date, and flood zone indicated; enter these data accordingly.

1. NFIP Map Number or Community-Panel Number. Enter the 11-digit number shown on the NFIP map that covers the building or mobile home. (Examples: 480214 0022C; 58103C0075F). Some older maps will have a 9-digit number (Example: 12345601A). Note that the first six digits will not match the NFIP Community Number when the sixth digit is a "C" or when one community has annexed land from another but the NFIP map has not yet been updated to reflect this annexation. When the sixth digit is a "C", the NFIP map is in countywide format and shows the flood hazards for the geographic areas of the county on one map, including flood hazards for incorporated communities and for any unincorporated county contained within the county's geographic limits. Such countywide maps will list an NFIP Map Number. For maps not in such countywide format, the NFIP will list a Community-Panel Number on each panel. If no NFIP map is in effect for the location of the building or mobile home, enter "none."

2. NFIP Map Panel Effective/Revised Date. Enter the map effective date or the map revised date shown on the NFIP map. (Example: 6/15/93) This will be the latest of all dates shown on the map.

3. LOMA/LOMR. If a Letter of Map Amendment (LOMA) or Letter of Map Revision (LOMR) has been issued by FEMA since the current Map Panel Effective/Revised Date that revises the flood hazards affecting the building or mobile home, check "yes" and specify the date of the letter; otherwise, no entry is required. Information on LOMAs and LOMRs is available from the following sources:
* The community's official copy of its NFIP map should have a copy of all subsequently-issued LOMAs and LOMRs attached to it.
* For LOMAs and LOMRs issued on or after October 1, 1994, FEMA publishes a list of these letters twice a year as a compendium in the Federal Register. This information is also available on FEMA's website at http://msc.fema.gov.
* A subscription service providing digitized copies of these letters on CD-ROM is also available by calling 1-800-358-9616.

4. Flood Zone. Enter the flood zone(s) covering the building or mobile home. (Examples: A, AE, A4, AR, AR/A, AR/AE, AR/AO, V, VE, V12, AH, AO, B, C, X, D) If any part of the building or mobile home is within the Special Flood Hazard Area (SFHA), the entire building or mobile home is considered to be in the SFHA. All flood zones beginning with the letter "A" or "V" are considered Special Flood Hazard Areas (SFHAs). Each flood zone is defined in the legend of the NFIP map on which it appears. If there is no NFIP map for the subject area, enter "none."

5. No NFIP Map. If no NFIP map covers the area where the building or mobile home is located, check this box.

C. FEDERAL FLOOD INSURANCE AVAILABILITY. Check all boxes that apply; however, note that boxes 1 (Federal Flood Insurance is available ...) and 2 (Federal Flood Insurance is not available ...) are mutually exclusive. Federal flood insurance is available to all residents of a community that participates in the NFIP. Community participation status can be determined by consulting the NFIP Community Status Book, which is available from FEMA and at http://www.fema.gov/fema/csb.shtm . The NFIP Community Status Book will indicate whether or not the community is participating in the NFIP and whether participation is in the Emergency or Regular Program. If the community participates in the NFIP, check either Regular Program or Emergency Program. To obtain Federal flood insurance, a copy of this completed form may be provided to an insurance agent.

Federal flood insurance is prohibited in designated Coastal Barrier Resources Areas (CBRA) and Otherwise Protected Areas (OPAs) for buildings or mobile homes built or substantially improved after the date of the CBRA or OPA designation. Information about the Coastal Barrier Resources System may be obtained on FEMA's website at http://www.fema.gov/plan/prevent/floodplain/nfipkeywords/cbrs.shtm

D. DETERMINATION. If any portion of the building/mobile home is in an identified Special Flood Hazard Area (SFHA), check yes (flood insurance is required). If no portion of the building/mobile home is in an identified SFHA, check no. If no NFIP map exists for the community, check no. If no NFILP map exists, Section B5 should also be checked.

E. COMMENTS. Optional.

F. PREPARER'S INFORMATION. If other than the lender, enter the name, address, and telephone number of the company or organization performing the flood hazard determination. An individual's name may be included, but is not required.

Date of Determination. Enter date on which flood hazard determination was completed.

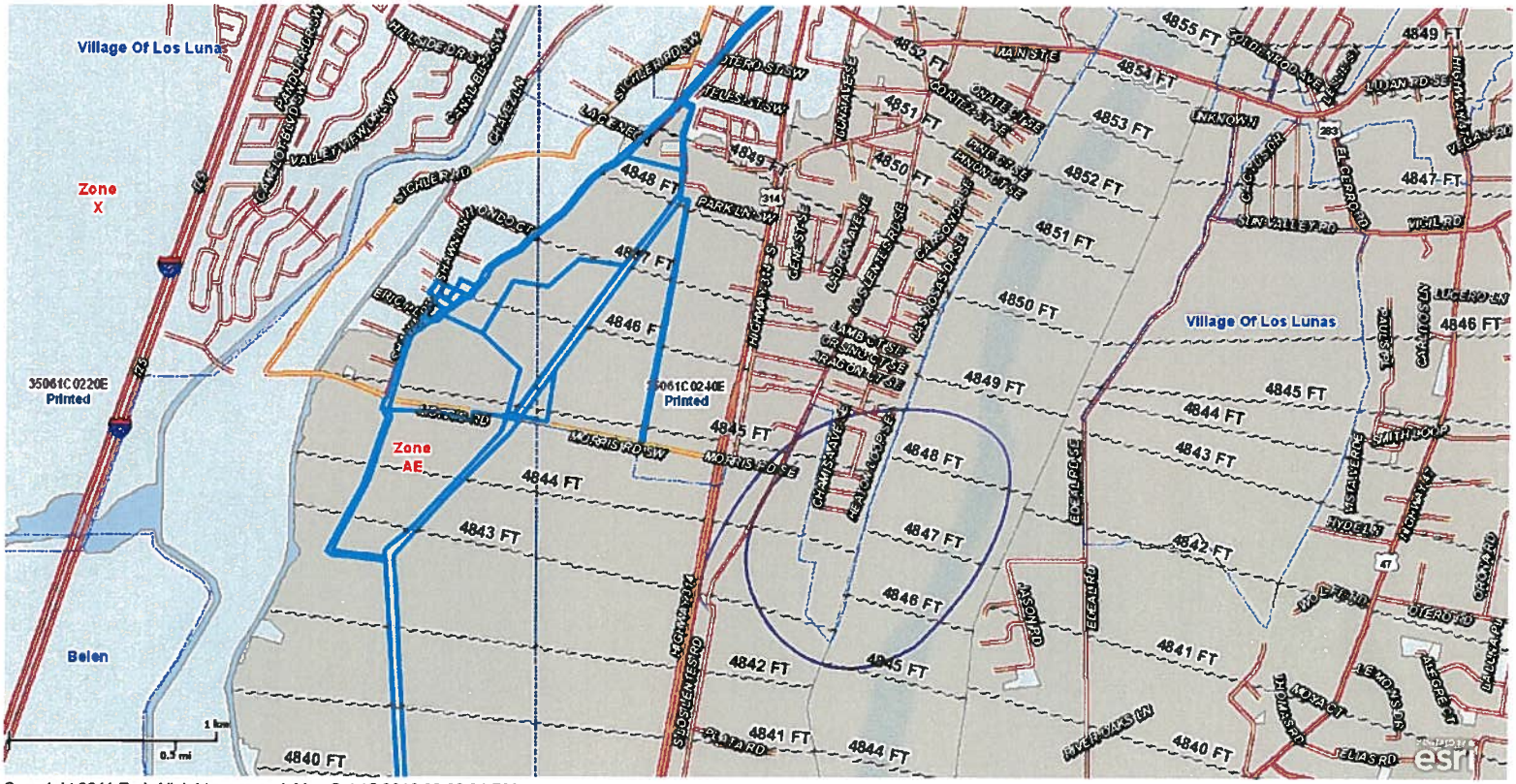
MULTIPLE BUILDINGS: If the loan collateral includes more than one building, a schedule for the additional buildings/mobile homes indicating the determination for each may be attached. Otherwise, a separate form must be completed for each building or mobile home. Any attachments should be noted in the comment section. A separate flood insurance policy is required for each building or mobile home.

GUARANTEES REGARDING INFORMATION: Determinations on this form made by persons other than the lender are acceptable only to the extent that the accuracy of the information is guaranteed.

FORM AVAILABILITY: Copies of this form are available from the FEMA fax-on-demand line by calling (202) 646-FEMA and requesting form #23103. Guidance on using the form in a printed, computerized, or electronic format is contained in form #23110. This information is also available on FEMA's website http://www.fema.gov/plan/prevent/fhm/frm_form.shtm).

PURPOSE OF FORM: In accordance with P.L. 103-325, Sec. 1365, (b) (1), this form has been designated to facilitate compliance with the flood insurance purchase requirements of the National Flood Insurance Reform Act of 1994.

My Map



Copyright 2011 Esri. All rights reserved. Mon Oct 15 2012 03:08:31 PM.

1-009-036 354 4 5
Village of Los Lunas
Tract A - Land of Village of Los Lunas

Subject: NAAQS Attainment Status - Valencia Co. NM-Reply

Date: Thursday, October 4, 2012 11:16:29 AM MT

From: Guy Donaldson

To: ejohnson@marroninc.com

Priority: High

EPA Region 6 Internet Feedback (http://www.epa.gov/earth1r6)
Original Message: I want to confirm that Valencia County, New Mexico, is in attainment status with the National Ambient Air Quality Standards (NAAQS) under the Clean Air Act.

Response by EPA: You are generally correct. The designation is technically attainment/unclassiable which just means we don't have monitors to say definitively. The attainment/unclassifiable is effectively the same as attainment for regulatory purposes. You can find the designation in 40 CFR 81.332.

http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=aa4e1080c03bb7b1614e81218018d7bf&rgn=div8&view=text&node=40:18.0.1.1.1.3.1.35&idno=40

The listing for Valencia is confusing because apparently the county in three separate Air Quality Control Regions so portions of the county are list in three separate places for many of the pollutants.

ENVIRONMENTAL DEVELOPMENT SECTION

To: Gregory D. Martin, Village Administrator
Village of Los Lunas

From: Genevieve Head, Cultural Resources Analyst, Permitted Projects Coordinator

Project: Los Lunas Wastewater Treatment Plant Expansion, Valencia County

Date: July 29, 2013

Dear Mr. Martin:

Thank you for informing the New Mexico Department of Transportation Environmental Development Section of the Village of Los Lunas' Wastewater Treatment Plant Expansion project. Your letter was received here on July 10, 2013. As presented the project does not appear to involve NMDOT permitting or funding. Should the project funding sources change to include NMDOT or FHWA, please provide us with the environmental documentation for our review. If in the future the project will require a permit to access NMDOT right of way, please submit an environmental clearance request as part of the permit application process.

Thank you, and if you have any questions please feel free to contact me at 505-827-5356 or genevieve.head@state.nm.us.

cc: Clayton Ten Eyck, Molzen-Corbin via electronic mail

OFFICE OF THE GOVERNOR

505 869-3111 / 6333
FAX: 505 869-4236

RECEIVED
SEP 20 2012
ADMINISTRATION

PUEBLO OF ISLETA

P. O. BOX 1270, ISLETA, NM 87022

September 18, 2012

Gregory Martin, Village Administrator
Village of Los Lunas
660 Main Street NW
P.O. Box 1209
Los Lunas, NM 87031

Dear Mr. Martin:

This letter is in response to your letter regarding the proposed Wastewater Treatment Plant and Sludge Management Facilities Expansion project located at the south edge of Los Lunas on Heaton Loop south of Desert Flower Avenue, Valencia County, NM.

I am pleased to inform you that this project will not have an impact on religious or cultural sites affiliated with the Pueblo of Isleta.

However, in the event that discoveries are found during the expansion, we would appreciate being advised of such findings. Please forward all environmental assessment plans to our office.

Thank you for your consideration in contacting this office to express our concerns.

Sincerely,

PUEBLO OF ISLETA

Frank E. Lujan
Governor

VILLAGE of LOS LUNAS
Small Community, Big Possibilities
INCORPORATED 1928 NEW MEXICO

ADMINISTRATION DEPARTMENT

RECEIVED
AUG 16 2013
BY: UPD

July 8, 2013

LeRoy Shingoitewa
Mr. ~~Benjamin Nuvamsa~~, Chairman
Attn: Mr. Leigh Kuwanwisiwma, Director, Cultural Preservation Office
Hopi Tribe
P.O. Box 123
Kykotsmovi, AZ 86039

RE: Traditional Cultural Property Consultation
Los Lunas Wastewater Treatment Plant Expansion - Los Lunas, Valencia County, New Mexico

Shingoitewa
Dear Mr. ~~Nuvamsa~~:

To provide for future wastewater treatment demand, the Village of Los Lunas proposes to make improvements to its wastewater treatment plant. As part of the planning process, the village is preparing an Environmental Information Document (EID) and is requesting that the Hopi Tribe identify any Traditional Cultural Properties that may be affected by the proposed Los Lunas Wastewater Treatment Plant Expansion project.

The Los Lunas Wastewater Treatment Plant is located at the south edge of Los Lunas on Heaton Loop south of Desert Flower Avenue (see attached figures). The purpose of the Los Lunas Wastewater Treatment Plant Expansion Project is to ensure that the plant has sufficient treatment capacity through the year 2041. In addition, the project would ensure short-term reliability of the wastewater treatment plant.

Based on the analysis in the Preliminary Engineering Report, the existing membrane bioreactor (MBR) plant would be expanded. One of the advantages of MBR technology is the ease of expansion through phased improvements. The project area covers approximately 6.8 acres on a property owned by the Village of Los Lunas. This property has been previously disturbed. Project area components include sludge treatment/handling facilities (4.0 acres), laboratory/ administrative facility (1.6 acres), and contractor staging area (1.2 acres). Remaining project activities would be housed in the new membrane bioreactors treatment facilities (MBR plant), which would not result in land disturbance as part of this project. In the future, the existing activated sludge plant would be replaced with the MBR system. As a result, the MBR plants would provide all treatment, and the treatment would be higher quality than the current blended effluent. Specific improvements related to pre-digestion thickening, digestion, post-digestion processing would also be developed. Sludge would continue to be disposed of at the village's existing sludge disposal site located 9 miles southwest of Los Lunas, and in the future, sludge would be disposed of at a landfill to reduce the need for additional land for sludge disposal.

As part of the EID process, the New Mexico Environment Department requires that we consult with you regarding Traditional Cultural Properties. We request a response in 30 days in order to meet project schedule requirements. If you have any questions on this project, please contact the project engineer Clayton Ten Eyck, at Molzen-Corbin, by calling (505) 242-5700 or sending an email to cteneyck@molzencorbin.com .

Thank you,

Gregory D. Martin

Gregory D. Martin
Village Administrator

no historic properties significant to the Hopi Tribe affected
Margaret for Kuwanwisiwma
8-16-13

ROBERT E. VIALPANDO, MAYOR | CHARLES GRIEGO, COUNCILMAN | RICHARD LOVATO, COUNCILMAN | GERARD SAIZ, COUNCILMAN | AMANDA PEREA, COUNCILWOMAN | GREGORY D. MARTIN, VILLAGE ADMINISTRATOR

Subject: FW: Los Lunas Wastewater Treatment Plant Expansion-Los Lunas, Valencia County, New Mexico
Date: Tuesday, July 30, 2013 12:33:36 PM MT
From: Clayton TenEyck
To: Eric Johnson
CC: Lauren Jaramillo

FYI

From: Jimmy Arterberry [mailto:jimmya@comanchenation.com]
Sent: Tuesday, July 30, 2013 12:13 PM
To: Clayton TenEyck
Subject: Los Lunas Wastewater Treatment Plant Expansion-Los Lunas, Valencia County, New Mexico

In response to your request, the above referenced project has been reviewed by staff of this office. Based on the information provided and a search within the Comanche Nation Site Files, we have determined that there are ***no properties*** affected by the proposed undertaking.
If you require additional information or are in need of further assistance, please contact this office at (580) 595-9960 or 9618.
This review is performed in order to identify and preserve the Comanche Nation and State's cultural heritage, in conjunction with the State Historic Preservation Office.

Jimmy W. Arterberry, THPO
Comanche Nation
P.O. Box 908
Lawton, Oklahoma 73502
(580) 595-9960 or 9618
(580) 595-9733 FAX

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Appendix C

Sample of Agency Consultation Letter

Village of Los Lunas

660 MAIN STREET N.W.
P.O. BOX 1209
LOS LUNAS, NEW MEXICO 87031

PHONE: (505) 839-3840
FAX: (505) 352-3580

September 7, 2012

Mr. Jacobo Martinez
Planner
Floodplain Management
Valencia County
P.O. Box 1119
Los Lunas, New Mexico 87031-1119

RE: Los Lunas Wastewater Treatment and Sludge Management Facilities Expansion Project
Village of Los Lunas, Valencia County, New Mexico

Dear Mr. Martinez:

To provide for future wastewater treatment demand, the Village of Los Lunas proposes to make improvements to its wastewater treatment plant (WWTP) and sludge management system. As part of the planning process, the Village is preparing an Environmental Information Document (EID) and is requesting comments from the Valencia County Floodplain Management office on this proposed project. The project will not modify any floodplains.

The Los Lunas Wastewater Treatment Plant is located at the south edge of Los Lunas on Heaton Loop south of Desert Flower Avenue (see attached figures). The purpose of the Los Lunas Wastewater Treatment and Sludge Management Facilities Expansion Project is to ensure that the plant has sufficient treatment capacity through the year 2041. At the end of the 30-year planning period used for this project, the facilities will have a treatment capacity of 4.7 MGD, but the projects will be constructed in several phases.

Based on the analysis presented in the Preliminary Engineering Report, the existing membrane bioreactor (MBR) plant would be expanded, and in the future, the existing activated sludge treatment plant would be replaced by another MBR plant. One of the advantages of MBR technology is the ease of expansion through phased improvements. Specific improvements related to the sludge management process would also be developed. Among the improvements are: modification and capacity expansion of the aerobic digestion system, improvements to the sludge thickening system and new sludge dewatering facilities. Sludge would continue to be disposed of at the Village's existing sludge disposal site located nine miles southwest of Los Lunas, and in the future, sludge would also be disposed of at a landfill to reduce the need to acquire a significant amount of land for sludge disposal and to improve operational flexibility at the WWTP.

The project area covers approximately 6.8 acres on a property owned by the Village of Los Lunas, where the existing facilities are located. This property has been previously disturbed. Project area components include wastewater and sludge treatment/handling facilities (4.0 acres), laboratory/ administrative facility (1.6 acres), and contractor staging area (1.2 acres). The first phase of the liquid treatment improvements, which is the expansion of the existing MBR plant, would be housed in the MBR building and would not result in land disturbance.

ROBERT E. VIALPANDO
MAYOR

GREGORY MARTIN
VILLAGE ADMINISTRATOR

CHARLES GRIEGO
COUNCILMAN

RICHARD LOVATO
COUNCILMAN

GERARD SAIZ
COUNCILMAN

AMANDA PEREA
COUNCILWOMAN

In terms of regulatory requirements, the blended effluent discharged into the Rio Grande currently meets standards and limits for pollutants established in the existing National Pollutant Discharge Elimination System (NPDES) permit. In the future, the existing activated sludge plant would be replaced with the MBR system. As a result, all of the effluent will be produced by MBR plants; thus, it will be of higher quality than the current blended effluent from the activated sludge and the MBR plants.

As part of the EID process, the New Mexico Environment Department requires that we consult with your agency. We request a response in 30 days in order to meet project schedule requirements. If you have any questions on this project, please contact the project engineer, Clayton Ten Eyck at Molzen Corbin, by calling (505) 242-5700 or sending an email to cteneyck@molzencorbin.com .

Thank you.

Sincerely,

VILLAGE OF LOS LUNAS

Gregory D Martin

Gregory Martin
Village Administrator

Attachments

Appendix D

Public Hearing Summary and Materials

Information will be added to this appendix after public involvement activities have been conducted.

Appendix E

Cultural Resource Survey

NMCRIS INVESTIGATION ABSTRACT FORM (NIAF)

1. NMCRIS Activity No.:	2a. Lead (Sponsoring) Agency:	2b. Other Permitting Agency(ies):	3. Lead Agency Report No.:
123188	City of Los Lunas		

4. Title of Report: Cultural Resource Survey for Proposed Improvements at the Los Lunas Wastewater Treatment Plant, Valencia County, New Mexico

Author(s) Maria Hroncich-Conner

5. Type of Report
☒ **Negative** ☐ **Positive**

6. Investigation Type
☐ Research Design ☒ Survey/Inventory ☐ Test Excavation ☐ Excavation ☐ Collections/Non-Field Study
☐ Overview/Lit Review ☐ Monitoring ☐ Ethnographic study ☐ Site specific visit ☐ Other

7. Description of Undertaking (what does the project entail?):
The City of Los Lunas is considering improvements to their existing wastewater treatment plant facility. Marron surveyed three areas west and south of the existing plant, which totaled 7.85 acres. No cultural resources were found during the survey. Part of the survey area has also been recently surveyed for proposed treatment plant improvements by Gerry Raymond and Teresa Hurt (2003, A Cultural Resource Survey for a Proposed Wastewater Facility Expansion in Los Lunas, Valencia County, New Mexico, NMCRIS 83219). Raymond and Hurt found no archaeological sites within their project area. Given the small area involved, the overlapping portion of the previous project area was re-surveyed during the present investigation.

The project area is located on private land. Funding sources have not been identified yet, but future funding may include federal sources.

8. Dates of Investigation: (from: 2/23/2012 **to:** 2/23/2012**)**

9. Report Date: 3/1/2012

10. Performing Agency/Consultant: Marron and Associates
Principal Investigator: Scott Walley
Field Supervisor: Maria Hroncich-Conner
Field Personnel Names: Maria Hroncich-Conner

11. Performing Agency/Consultant Report No.: 11087.01

12. Applicable Cultural Resource Permit No(s):
12-160-S

13. Client/Customer (project proponent): MolzenCorbin
Contact: Clayton Ten Eyck, P.E.
Address: 2701 Miles RD SE
Albuquerque, NM 87106
Phone: (505) 242-5700

14. Client/Customer Project No.: LL112-11

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

Land Owner	Acres Surveyed	Acres in APE
Private	7.85	7.85
TOTALS	7.85	7.85

16 Records Search(es):

Date(s) of ARMS File Review 2-20-2012	**Name of Reviewer(s)** Daryl Del Frate	
Date(s) of NR/SR File Review 2-20-2012	**Name of Reviewer(s)** Daryl Del Frate	
Date(s) of Other Agency File Review	**Name of Reviewer(s)**	**Agency**

17. Survey Data:

a. Source Graphics ☐ **NAD 27** ☒ **NAD 83**

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

☒ **GPS Unit** **Accuracy** ☒**<1.0m** ☐ **1-10m** ☐ **10-100m** ☐ **>100m**

b. USGS 7.5' Topographic Map Name **USGS Quad Code**

Los Lunas	34106-G6

c. County(ies): Valencia

17. Survey Data (continued):

d. Nearest City or Town: Los Lunas

e. Legal Description:

Township (N/S)	Range (E/W)	Section	¼ ¼ ¼
			, , .
			, , .
			, , .
			, , .
			, , .
			, , .
			, , .
			, , .

Projected legal description? Yes ☐ **, No** ☐ **Unplatted** ☒

f. Other Description (e.g. well pad footages, mile markers, plats, land grant name, etc.): The entire project area is located within the Nicolas Duran de Chavez and San Clemente Land Grants

18. Survey Field Methods:

Intensity: ☒ 100% coverage ☐ <100% coverage

Configuration: ☒ block survey units ☐ linear survey units (l x w): ☐ other survey units (specify):

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

Coverage Method: ☒ systematic pedestrian coverage ☐ other method (describe)

Survey Interval (m): 15 **Crew Size:** 1 **Fieldwork Dates:** 2-23-2012

Survey Person Hours: 1.5 **Recording Person Hours:** 0 **Total Hours:** 1.5

Additional Narrative:

19. Environmental Setting (NRCS soil designation; vegetative community; elevation; etc.): The project area was located in the Rio Grande valley at an elevation of 4,850 feet amsl in a heavily disturbed/bladed area that contained very little vegetation. Some cottonwoods and desert grasses are present along the property fence line. The area has a long history of agricultural use and the vegetation association is depicted as Urban, Farmland, or Open Water on the Earth Data Analysis Center General Vegetation Map of New Mexico (http://rgis.unm.edu, electronic data accessed January 2012). The soils within the project area are classified as 86% Glendale Soils, slightly saline, with the remaining 14% categorized as Mixed Alluvial Land (United States Department of Agriculture Natural Resources Conservation Service, Web Soil Survey. http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm, electronic document accessed January 2012).

20. a. Percent Ground Visibility: 95 to 100 **b. Condition of Survey Area (grazed, bladed, undisturbed, etc.):** The survey area was located around a working wastewater treatment plant in an area that was heavily disturbed from previous use and/or mechanical stripping and blading.

21. CULTURAL RESOURCE FINDINGS ☐ **Yes, See Page 3** ☒ **No, Discuss Why:** The survey area was small and heavily disturbed. No known sites are located nearby.

22. Required Attachments (check all appropriate boxes):	23. Other Attachments:
☒ USGS 7.5 Topographic Map with sites, isolates, and survey area clearly drawn ☒ Copy of NMCRIS Mapserver Map Check ☐ LA Site Forms - new sites (*with sketch map & topographic map*) ☐ LA Site Forms (update) - previously recorded & un-relocated sites (*first 2 pages minimum*) ☐ Historic Cultural Property Inventory Forms ☐ List and Description of isolates, if applicable ☐ List and Description of Collections, if applicable	☐ 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/Responsible Archaeologist: Scott Walley

Signature _____ **Date** 3-2-2012 **Title (if not PI):**

25. Reviewing Agency:	26. SHPO Reviewer's Name/Date:
Reviewer's Name/Date Accepted ( ) Rejected ( ) Tribal Consultation (if applicable): ☐ Yes ☐ No	HPD Log #: SHPO File Location: Date sent to ARMS:

CULTURAL RESOURCE FINDINGS

[fill in appropriate section(s)]

1. NMCRIS Activity No.:	2. Lead (Sponsoring) Agency:	3. Lead Agency Report No.:
123188	City of Los Lunas	

SURVEY RESULTS:

Sites discovered and registered: 0
Sites discovered and NOT registered: 0
Previously recorded sites revisited (*site update form required*): 0
Previously recorded sites not relocated ***(site update form required):*** 0
TOTAL SITES VISITED: 0
Total isolates recorded: 0 **Non-selective isolate recording?** ☒
Total structures recorded (*new and previously recorded, including acequias*): 0

MANAGEMENT SUMMARY: Marron conducted a full-covereage cultural resource survey on February 23, 2012 for proposed improvements to the Los Lunas Wastewater Treatment Facility. The survey area measures 7.85 ac, all to the west and south of the existing plant. The area is extremely disturbed as a result of previous use and mechanical blading. Visibility was 100 percent in most areas, and approximately 95 percent in areas near the fenceline where some vegetation was present. No cultural resources were present.

If federal funds, permits, or licenses are obtained for this project, then the federal agency and the New Mexico State Historic Preservation Officer must be contacted in the event that there is a discovery of archaeological material during construction.

IF REPORT IS NEGATIVE YOU ARE DONE AT THIS POINT.

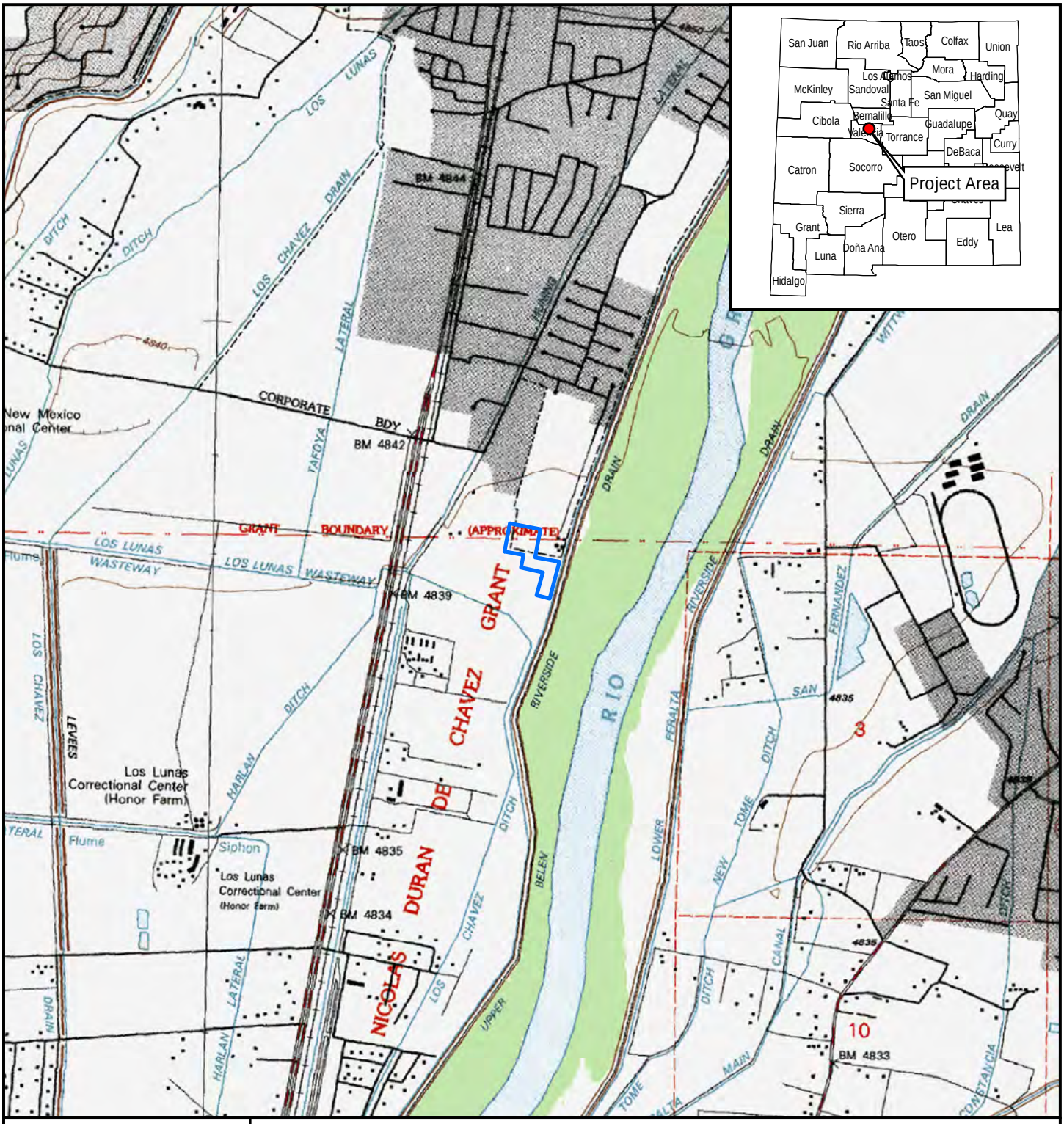
SURVEY LA NUMBER LOG

Sites Discovered:

LA No.	Field/Agency No.	Eligible? (Y/N, applicable criteria)

Previously recorded revisited sites:

LA No.	Field/Agency No.	Eligible? (Y/N, applicable criteria)



MARRON and ASSOCIATES

Figure 1
Project Area Map

Project Area

Land Ownership

Private

Los Lunas, NM (1991)
USGS 7.5' Quadrangle

Nicolas Duran de Chavez Grant
San Clemente Grant
Valencia County, New Mexico

0 250 500 1,000 Meters

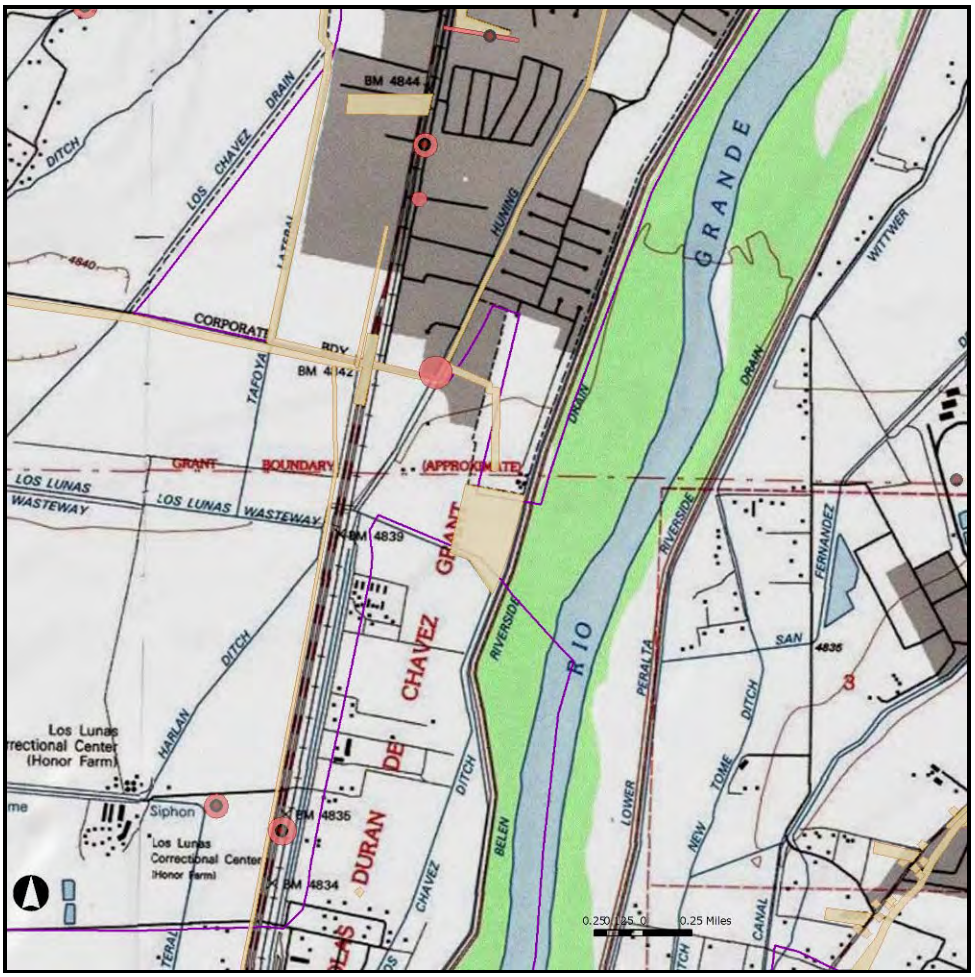
0 1,000 2,000 4,000 Feet

N

1:24,000

Los Lunas WWTP, Valencia County, New Mexico

Map



Geography Names

Site Labels

Site Boundaries (Edit)

Site Boundaries

- Not Defined
- Proposed
- Approved

Building Labels

Object Labels

Linear Resource Labels

Historic Structure Labels

Historic Structures (Edit)

Buildings (Edit)

Historic Structures

- Not Defined
- Proposed
- Approved

Buildings

- Not Defined
- Proposed
- Approved

Objects

- Not Defined
- Proposed
- Approved

Linear Resources

- Not Defined
- Proposed
- Approved

District Labels

Districts (Edit)

Districts

Register Properties

- Not Defined
- Proposed
- Approved

Archaeological Surveys (Edit)

Archaeological Surveys

- Not Defined
- Proposed
- Approved

Highways

- Primary Limited Access or Interstate
- Primary US and State Highways
- Secondary State and County
- Local - Rural
- Ramp, other

New Mexico

Counties

Towns

Appendix F

Biological Survey

BIOLOGICAL TECHNICAL MEMORANDUM

Los Lunas Wastewater Treatment Plant
Valencia County, New Mexico

Prepared by Marron and Associates
October 2013

INTRODUCTION

The City of Los Lunas proposes to improve an existing Wastewater Treatment Plant Facility in Valencia County, New Mexico. The proposed improvements would consist of constructing a laboratory, mechanical storage area, and additional offices. The survey area covers approximately 6.8 acres and occurs on the *Los Lunas, New Mexico* US Geological Survey 7.5- minute quadrangle map.

The elevation of the project area is 4,840 feet above mean sea level. Soils present within the project area include Glendale soils, slightly saline, and Mixed alluvial land (US Department of Agriculture 2011).

In Los Lunas, New Mexico, the average maximum temperature is 72.8 degrees Fahrenheit (˚F); the average minimum temperature is 37 degrees ˚F; and the average precipitation 9.09 inches (Western Regional Climate Center 2005 data).

BIOLOGICAL SURVEY

Marron and Associates (Marron) conducted an initial biological survey of the project area on December 8, 2011 and a follow up survey on October 4, 2013. The purpose of these surveys was to identify biological resources occurring within the project area, including general vegetation, wildlife, migratory birds, and protected species. Federal and state management agency lists and databases containing information on biological resources within Valencia County were reviewed prior to the survey. The second survey was conducted to verify that the previously documented conditions had not drastically changed, bird nests had not been built in the area, wetlands had not developed where they had not previously been observed, and invasive weeds had not recently become established in the property. The updated NMDGF, NMRPTC and USFWS lists were also reviewed prior to the survey.

Vegetation

The project area occurs at the existing City of Los Lunas Wastewater Treatment Plant. The site consists of existing plant facilities and undeveloped parcels. Improvements are proposed on three undeveloped parcels on a total area of approximately 6.8 acres located adjacent to existing facilities. Historically, this area supported a Riparian and Plains Mesa Sand Scrub vegetation community (Dick-Peddie, 1993). However, the site is now mostly un-vegetated. Vegetation present consists primarily of weedy species such as tumbleweed (*Salsola tragus*), summer cypress (*Kochia scoparia*), silverleaf nightshade (*Solanum* sp.) and bindweed (*Convolvulus arvensis*). Saltgrass (*Distichlis spicata*) and muhly grass (*Muhlenbergia* sp.) are also common. Approximately 90 percent of the project area is un-vegetated. It is recommended that open disturbed areas be re-vegetated after construction to provide soils stabilization. Several mature Rio Grande cottonwoods (*Populus deltoides* ssp. *wislizeni*) occur in the project area. The vegetation had not changed during the follow-up survey visit.

Wetlands and Waterways

No wetlands or waterways are present within the proposed project area. A potential wetland is present nearby where water accumulates within the treatment plant property but occurs outside of the currently proposed construction areas. The site is located adjacent the Upper Riverside Drain just outside of the Eastern property boundary. Under current design, no impacts to this drain are expected. It is recommended that best management practices be utilized during construction to prevent potential surface water quality impacts to the drain and nearby Rio Grande.

Noxious Weeds

No New Mexico noxious weeds were observed in the project area during the two survey periods.

Wildlife

The following animal species or their sign were observed within the project area during the two survey visits: American crow (*Corvus brachyrhynchos*), Sandhill Crane (*Grus canadensis*), Swainson's hawk (*Buteo swainsoni),*Canada geese *(Branta canadensis),*desert cottontail (*Sylvilagus audubonii*), Red-tailed hawk (*Buteo jamaicensis*), Cooper's hawk (*Accipiter cooperii*), house finch (*Carpodacus mexicanus*), kangaroo rat (*Dipodymis* sp.), and black-tailed jack rabbit (*Lepus californicus*).

Measures recommended to reduce effects to wildlife include replanting disturbed areas with certified weed-free native vegetation and burying any trenching concurrently to reduce trapping of reptiles and small mammals during development.

PROTECTED AND MONITORED SPECIES

A review of plants and wildlife protected or monitored by the U.S. Fish and Wildlife Service and the State of New Mexico in Valencia County indicated that several listed species could occur transiently within or near to the project area. No suitable habitat for other species is present. Protected or monitored birds that could pass over the project area include American peregrine falcon (*Falco peregrinus anatum*), whooping crane (*Grus Americana*), arctic peregrine falcon (*Falco peregrinus tundrius*), Baird's sparrow (*Ammodramus bairdii*), southwestern willow flycatcher (*Empidonax traillii extimus*), Common black-hawk (*Buteogallus anthracinus anthracinus*), Broad billed hummingbird (*Cynanthus latirostris*), and yellow-billed cuckoo (*Coccyzus americanus*). These species would pass over the project area en route to the Rio Grande and other habitats, but would be unlikely to remain there, as it supports little suitable habitat for nesting, roosting, or feeding.

Other species were not considered because no potentially suitable habitat for them is present within the project area. Such habitats include forests, cliffs, grasslands, pinyon juniper woodlands, riparian corridors, moist meadows, and aquatic sites.

Spotted bat (*Euderma maculatum*) – This is a state protected species in Valencia County. It is often collected near water and presumed to be foraging. It uses crevices in nearby cliffs and sometimes trees for roosting. No suitable roosting habitat is located within the project area, and any individuals present there would likely be hunting near the river during the evening and early morning hours. No impact to this species is expected to result from the proposed project.

Gunnison's prairie dog (*Cynomys gunnisoni*) – This is a recent USFWS candidate species listing, which applies to montane populations. Prairie dogs could occur within the vicinity, but this species is not present within or adjacent to the project area.

Black-footed ferret (*Mustela nigripes*) – This federal endangered species has not been observed (with the exception of experimental animals) in New Mexico since the 1940s and is believed by many to be extirpated from the state. Black-footed ferret relies on large prairie dog towns as a prey-base, which do not occur within the project area.

Townsend's big eared bat (*Corynorhinus townsendii*) –This is a federal species of concern. It could forage throughout the project area because of the proximity to the river, but there were no suitable roosting habitats for this species present either within or adjacent to the project area during either of the survey visits.

Bald Eagle (*Haliaeetus leucocephalus*) – This is a State of New Mexico threatened species that is protected under the Bald and Golden Eagle Protection Act. No roosting eagles were observed within the vicinity of the project area during surveys. However, they are known to winter within the Middle Rio Grande Valley within the vicinity, and large cottonwoods near the Rio Grande adjacent to the project area suitable roost habitat. It is recommended that if roosting eagles are visible from the site during wintertime construction, the use of heavy equipment be delayed during morning hours until eagles leave roost sites.

Rio Grande Silvery Minnow (*Hybognathus amarus*) – This is a federal and state endangered species within Valencia County. The USFWS determined 212 miles of the Rio Grande be designated as critical habitat for the silvery minnow. The width of critical habitat along the Rio Grande is defined as those areas bound by existing levees or, in areas without levees, 300 feet of the riparian zone adjacent to the bankfull stage of the river. Critical habitat is designated from Cochiti Dam to the utility line crossing the Rio Grande in Socorro County (USFWS 2003). The project area boundaries are not located within designated silvery minnow critical habitat. Potential indirect impacts such as siltation or other surface water quality impacts should be prevented by the implementation of best management practices outlined in appropriate National Pollutant Discharge Elimination System permitting for the project.

Western burrowing owl (*Athene cunicularia hypugaea*) is a federal species of concern and is protected under the Migratory Bird Treaty Act. It occurs on plains, treeless valleys, and mesas and prefers areas that provide empty prairie dog or other rodent burrows that it can use for nesting and shelter, but can excavate its own burrows. Potential suitable habitat for this species occurs within the boundaries of the treatment plant property. However, no western burrowing owls were observed within the project area and no mammal burrows are present. Since treatment plant workers are present within the area regularly, it is unlikely that burrowing owl will establish nests within the project area.

No protected or monitored species or their sign were observed during the biological surveys of the project area.

Migratory Birds

Occupied migratory birds nests, eggs and nesting birds are protected by the Migratory Bird Treaty Act. No migratory bird nests were observed within the project area and little suitable nesting habitat is present. Several small cottonwood trees occur within the proposed construction area. While no nests

were observed within these trees, they provide suitable nesting habitat to migratory birds. It is recommended that if they are to be removed as part of construction activities, the removal take place outside of the area nesting season (March 15 – September 15), or that a preconstruction nest survey be completed. Impacts to nesting migratory birds are unlikely within the remaining portions of the proposed project area.

CONCLUSIONS

The project would affect approximately 6.8 acres of poor quality previously disturbed habitat located adjacent to the existing Los Lunas WWTP facilities. Marron recommends the following measures to reduce effects to biological resources:

1) Remove cottonwood trees outside of the area nesting season (March 15 – September 15) or provide preconstruction nest surveys to ensure compliance with the MBTA;

2) Delay the use of heavy equipment during morning hours if roosting eagles are visible from the site during wintertime construction;

3) Plant open disturbed areas with native vegetation once construction is complete; and,

4) Bury any trenching concurrently to reduce trapping of small mammals and reptiles.

11087.01

PHOTOS

Photo A – Representative habitat within the western portion of the project area

Photo B – Representative habitat at the eastern portion of the project area

Photo C – Representative habitat at the southeastern portion of the project area during the follow-up visit.

Photo – Representative habitat at the western portion of the project area facing south during the follow-up visit.

REFERENCES

Dick-Peddie, W. A. (1993). *New Mexico vegetation: past, present, and future*. Albuquerque: University of New Mexico Press.

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New Mexico Department of Game and Fish. 2012 and 2013. Bison-M Database. Santa Fe, NM: NMDGF. Web site: http://www.bison-m.org/.

New Mexico Native Plant Protection Advisory Committee. 2010. *New Mexico Rare Plants.* Website: http://nmrareplants.unm.edu.

US Fish and Wildlife Service. 1998. *Threatened and Endangered Species of New Mexico 1998*. Albuquerque, NM: USFWS, Ecological Services Field Office.

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