ENVIRONMENTAL ASSESSMENT

for the

Las Vegas Paiute Tribe

Snow Mountain Reservation

Public Water System Improvement Project

United States Environmental Protection Agency

Region 9

75 Hawthorne Street

San Francisco, California 94105

FINAL DRAFT

August, 2017

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Acronyms

$\mu g/m^3$	Micrograms per cubic meter
APE	Area of potential effect
AQCR	Air quality control region
BLM	United States Bureau of Land Management
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CO	Carbon monoxide
CO_2	Carbon dioxide
EO	Executive Order
EPA	United States Environmental Protection Agency
GCR	General Conformity Rule
GHG	Greenhouse gas
GPM	Gallons per minute
NAAQS	National Ambient Air Quality Standards
NDEP	Nevada Division of Environmental Protection
NEPA	National Environmental Policy Act
NO_x	Oxides of nitrogen
NVCRIS	Nevada Cultural Resource Information System
PCPI	Per capita personal income
PM_{10}	Particulate matter less than 10 microns in diameter
$PM_{2.5}$	Particulate matter less than 2.5 microns in diameter
ppb	Parts per billion
ppm	Parts per million
PWS	Potable water supply
SHPO	Nevada State Historic Preservation Officer
SO_x	Oxides of sulfur
Tpy	Tons per year
VOC	Volatile organic compound
U.S.	United States
USFWS	United States Fish and Wildlife Service

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SECTION 1. Proposed Project and Funding Status

1. Project Purpose and Need

a. Public Health Concerns and Inadequate System or System Components

The potable water supply (PWS) system owned and operated by the Las Vegas Paiute Tribe (the Tribe) at the Tribe's Snow Mountain Reservation northwest of Las Vegas, Nevada (Figure 1), was constructed in the 1980s and has had no appreciable improvements, additions, or expansions since it was installed. Problems with the system occur annually and are routine, to the point that the Tribe now accounts for regularly recurring breaks and other system problems in its annual budget.

Repairs to the system are difficult to make because of the inferior materials used when the system was built, system deterioration, and the lack of shut-off valves and metering on the system. There is no backup for the system. The water tank is not cleaned regularly and was last successfully cleaned in 2013. The Tribe is concerned that the water system will have a major problem and the lack of a backup well and storage tank will jeopardize the public health of the Snow Mountain Reservation's residents and guests.

2. Project Description

a. Project Summary

The Tribe proposes to install a new well and water tank to add redundancy to its PWS system on the Snow Mountain Reservation. A pump, shut-off valves, connection piping, and other essential system components also would be installed. The Snow Mountain Reservation occupies approximately 4,000 acres northwest of Las Vegas, Nevada, off United States (U.S.) Route 95 (Figure 1). Upon completion of the project, the reservation would have two functioning water tanks and wells for potable water. During emergencies, and when one of the tanks or pumps needs to be shut down for maintenance, the other would serve as a backup water supply. The well serving the existing PWS is 950 feet deep and the water tank has a capacity of 216,000 gallons. It is anticipated that the new well would be of approximately the same depth and the new water storage capacity would be approximately 250,000 gallons.

b. Planning Area Description (including a map with facilities):

The planning area for consideration of environmental consequences is the locations of the existing water tank and the existing well (Figure 2). The new well would be installed on the western portion of the reservation near the existing well and the new tank constructed near the existing tank. Existing roads will be used to access the site and the well and tank will be constructed within previously disturbed areas to the extent practical.

c. Planning Period (time period)

Formal consideration of this project began in 2011. Project design has not yet occurred. Pending receipt of funding, it is anticipated that installation of the second PWS would occur in 2017 or 2018.

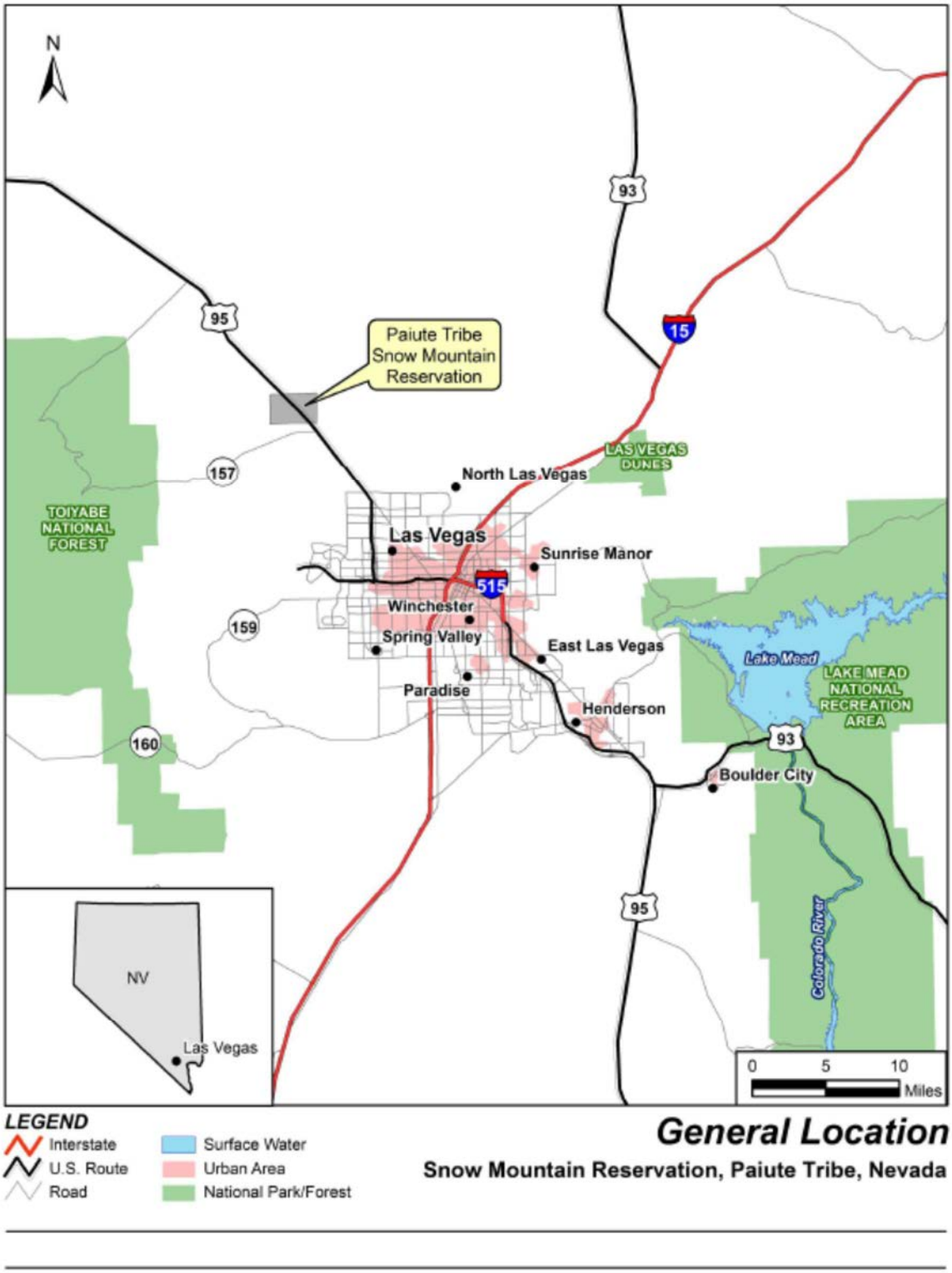

Figure 1. Project Location at Snow Mountain Reservation.

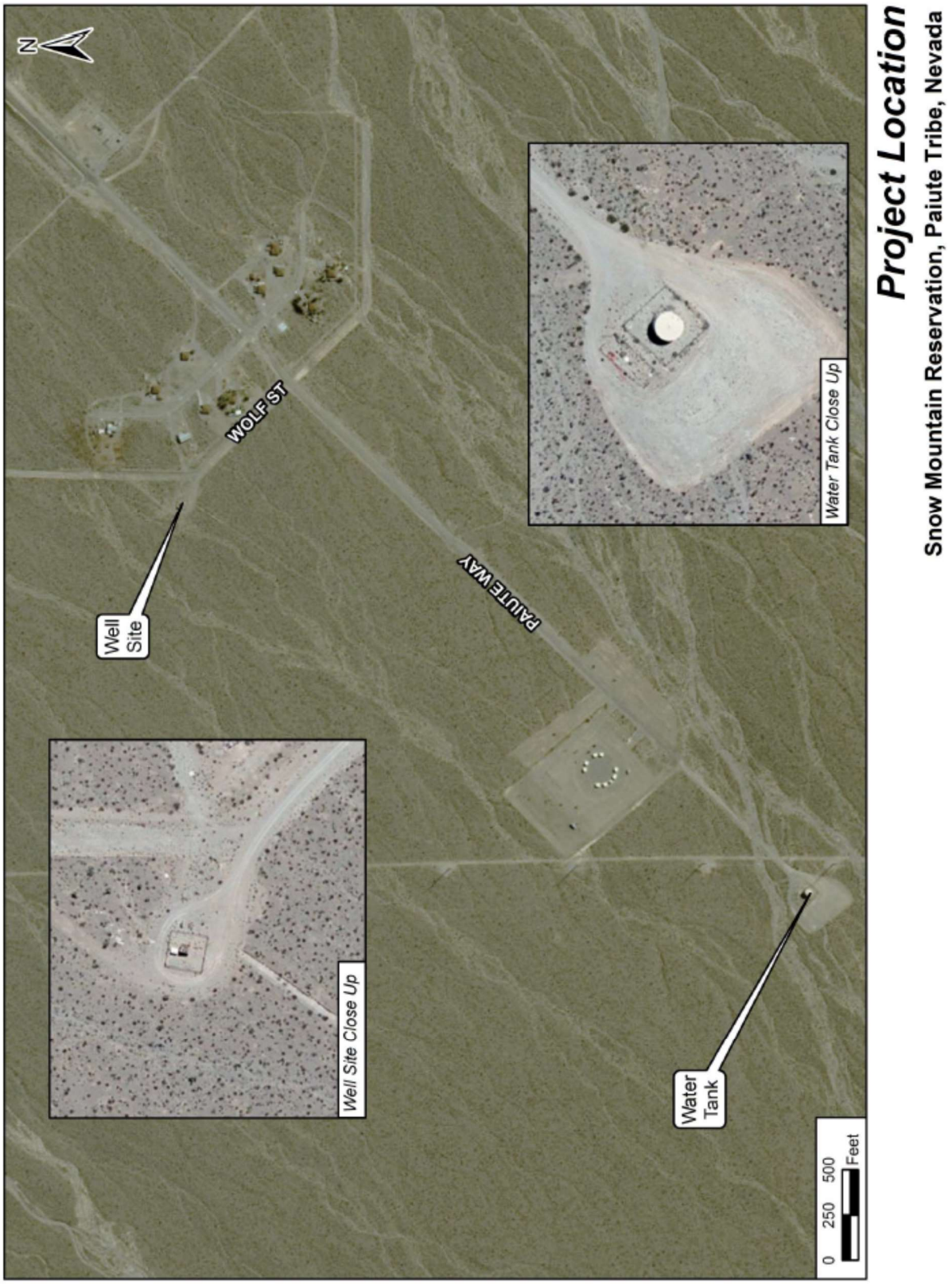

Figure 2. Well Site and Water Tank locations within the Project Area.

d. Description of Project Construction Phases

Construction phases will remain unknown until project design occurs.

e. Owner and Operator of the Facilities

The Tribe owns and operates the existing PWS on the Snow Mountain Reservation.

f. Location of the Facilities:

The existing PWS components are located on the Snow Mountain Reservation west of U.S. Route 95. The existing water tank is located along the western boundary of the reservation at the end of Paiute Way. The existing well is located approximately 3,500 feet (0.7 mile) northeast of the water tank at the northern end of Wolf Street near residences.

g. Project Location Map

Figure 2 shows the location of the existing water tank and well.

3. Relevant Design Parameters

Design parameters for the system components and locations have not been determined. However, it can be assumed that the new well will be approximately as deep as the existing well (950 feet) enclosed in a pump house measuring approximately 8 feet by 8 feet and surrounded by a fence enclosing a larger area (approximately 30 feet by 30 feet). The new water tank will be approximately the same size as the existing water tank (approximately 40 feet in diameter and 24 feet high) within a fenced enclosure measuring approximately 60 feet by 60 feet. When funding has been assured, a licensed and registered design firm will be hired and will be obligated to design a system to accommodate the anticipated use that meets all applicable state and federal requirements for community water systems.

At this time, however, it is anticipated that the new system would function much like the existing system does: water would be pumped from the new well to the new storage tank, and the new tank would tie into the existing distribution system. Water would be gravity fed through the system as it is in the existing system. (Because the reservation land slopes gently downward from west to east, the new well would most likely be installed on the western portion of the reservation near the existing water tank and the new tank would be connected to the existing distribution lines from the existing water tank.) System components would be selected based on anticipated flow and modern system design parameters. Shut-off valves would be installed to permit switching between the new and existing systems and for system maintenance.

4. Project Cost

a. Proposed Total Project Cost

At the time of the application for U.S. Environmental Protection Agency (EPA) grant funds in circa March 2011, the project cost was estimated as $346,800.00. This preliminary estimate of the total project cost will likely change and will be updated after the design is finalized.

b. Portion of Total Project Cost Funded by the U.S. Environmental Protection Agency (EPA) (55%)

Federal funding is limited to 55.00 percent of the finalized total project cost, up to a maximum amount to be determined once projects costs are finalized.

c. List of Amount, Sources, and Status of All Funding Sources

Paiute Tribe: $346,800; status unknown/unsecured (subject to change).

EPA: $144,889 (Federal funds remaining and not yet awarded).

SECTION 2. Existing Environment as Pertains to Project

1. Public Health Problems Due to Water Quality

Water from the well and water tank is untreated but is reported to be of excellent quality with no water quality concerns. The source water is subject to regular review and inspection by EPA for coliform bacteria (total coliform and *E. coli*). The most recent water quality monitoring conducted at the golf club resort clubhouse, which is on the PWS distribution system, resulted in non-detection of coliform bacteria (SilverState 2015).

2. Water Quality Problems, Fish Kills, etc.

Water from the existing well is of good quality with no water quality concerns. The water tank was cleaned in 2013 and found to be relatively clean and free of any major defects or problems (Gill 2014). This was attributed to the excellent quality of the aquifer water.

3. Surface & Ground Water Hydrology

Ephemeral washes drain generally from southwest to northeast to a large ephemeral drainage just beyond the northeast corner of the reservation. That drainage flows northwest to southeast toward the city of Las Vegas. The Snow Mountain Reservation is located in the Las Vegas Valley geologic area.

The regional aquifer is the Basin and Range aquifer, which consists mostly of unconsolidated deposits of alluvium (Planert and Williams 1995). Groundwater flow in the Basin and Range area is generally within individual basins that are separated by the alternating valleys and low mountain ranges of Nevada (Planert and Williams 1995). Groundwater in the Las Vegas Valley comes from three major aquifer zones generally located from 300 to 1,500 feet below land surface (SNWA 2016c). This drinking-water supply is protected from surface contamination by a layer of clay and fine-grained sediments throughout most of the valley. Most of the wells in the Las Vegas area draw water from the confined aquifer system, called the *principal* aquifer, which is several hundred feet thick. Water quality in the principal aquifer is generally very good, with contaminants such as pesticides and fertilizers being trapped in the shallow groundwater system, which lies within 50 feet of land surface. The shallow system is separated from the primary producing aquifers by thick layers of clay and fine-grained sediments and is not used for drinking water (SNWA 2016c).

4. Drinking Water Sources and Supply

The Paiute Tribe pumps groundwater from a single well. Water is retrieved from the regional principal aquifer, as described above. The permitted use of water from a quasi-municipal well (public supply wells or community wells; a well serving two or more homes) in the Las Vegas Valley is based on an average of 1,000 gallons per day per home, not to exceed 365,000 gallons per year per home (SNWA 2016b).

5. Physiography, Topography, Geology & Soils

The Snow Mountain Reservation lies within the Basin and Range physiographic province (Planert and Williams 1995). The climate of the region is desert/arid. The area is generally flat desert terrain that slopes from the southwest corner at approximately 1,000 feet above mean sea level to the northeast corner at approximately 825 feet above mean sea level (USGS 1986). The average annual precipitation in the region is from 4 to 8 inches, and the average annual runoff is between 0.2 and 5 inches. The area experiences an annual moisture deficit (potential evapotranspiration exceeds precipitation). Vegetation of the region is characterized as desert shrubland.

6. Federally Endangered & Threatened Species

The Snow Mountain Reservation lies in the Mojave Basin and Range ecoregion, which is an area with broad basins and scattered mountains that are generally lower, warmer, and drier than those further north in the state. The ecoregion has a shrub community dominated by creosote bush (*Larrea tridentata*). Creosote bush, white bursage (*Ambrosia dumosa*), and galleta grass (*Pleuraphis jamesii*) characterize the plant community of the ecoregion. Pocket mice (*Chaetodipus penicillatus*), kangaroo rats (*Dipodomys deserti*), and desert tortoise (*Gopherus agassizii*) are typical fauna of this area of desert.

The U.S. Fish and Wildlife Service (USFWS) reports four federally listed species as potentially occurring on the reservation land (USFWS 2016a). Three of the species, however, have specific habitat requirements that are not met within the proposed project area. Pertinent information on the four species is presented below.

- Southwestern willow flycatcher (*Empidonax traillii extimus*; Endangered) (USFWS 2016b):
  - For nesting, the species requires dense riparian habitats (cottonwood/willow and tamarisk vegetation). Saturated soils, standing water, or nearby streams, pools, or spring-fed marshy areas are a component of nesting habitat. Habitat not suitable for nesting can be used for migration and foraging. Breeds in the summer in the United States and winters in Central America.
- Yellow-billed cuckoo (*Coccyzus americanus*; Threatened) (USFWS 2016c):
  - The species uses wooded habitat with dense cover and water nearby, including woodlands with low, scrubby, vegetation, overgrown orchards, abandoned farmland, and dense thickets along streams and marshes. They breed throughout much of the eastern and central United States and winter almost entirely in South America.
- Pahrump poolfish (*Empetrichthys latos*; Endangered) (USFWS 2014b):
  - Three populations of the species exist, one in Corn Creek Spring on the Desert National Wildlife Range, north of Las Vegas, Nevada; one in Shoshone Springs southeast of Ely, Nevada; and one in an irrigation reservoir at Spring Mountains Ranch State Park west of Las Vegas, Nevada.
- Desert tortoise (*Gopherus agassizii*; Threatened) (USFWS 2014a):
  - The desert tortoise lives in a variety of habitats from sandy flats to rocky foothills, including alluvial fans, washes and canyons where suitable soils for den construction might be found. They spend up to 95 percent of their lives underground.

The desert tortoise is a potential concern on the Snow Mountain Reservation. During field surveys conducted for a proposed electrical transmission line that would pass along the western boundary of the Snow Mountain Reservation, tortoise signs and tortoises were observed (Electrical Consultants 2011).

7. Air Quality

EPA Region 9 and the Nevada Division of Environmental Protection (NDEP), Bureau of Air Pollution Control regulate air quality in Nevada. EPA established primary and secondary National Ambient Air Quality Standards (NAAQS) (Title 40 of the *Code of Federal Regulations* [CFR] part 50) that specify acceptable concentration levels of six criteria pollutants: particulate matter (measured as both particulate matter less than 10 microns in diameter [PM_{10}] and particulate matter less than 2.5 microns in diameter [$PM_{2.5}$]), sulfur dioxide, carbon monoxide, oxides of nitrogen, ozone, and lead. Short-term NAAQS (i.e., 1-, 8-, and 24-hour periods) have been established for pollutants contributing to acute health effects, and long-term NAAQS (annual

averages) have been established for pollutants contributing to chronic health effects. Each state has the authority to adopt standards stricter than those established under the federal program; the state of Nevada/Clark County has adopted the federal standards.

Federal regulations designate air quality control regions (AQCRs) in violation of the NAAQS as nonattainment areas. Federal regulations designate AQCRs with levels below the NAAQS as attainment areas. Maintenance areas are AQCRs that have previously been designated as nonattainment and have been re-designated to attainment for a probationary period through implementation of maintenance plans. Clark County, which includes all areas associated with the proposed project, is within the Las Vegas Intrastate Air Quality Control Region AQCR (AQCR 81) (40 CFR 81.12). EPA designated the portion of Clark County where the action is located as a maintenance area for the carbon monoxide, ozone, and PM_{10} NAAQS, and an attainment area for all other NAAQS. Table 1 shows the monitored concentrations of criteria pollutants for Clark County.

Table 1.
Air Quality Standards and Monitored Data

Pollutant	Air Quality Standard		Monitored Concentrations		
	Level	**Averaging Period**	**2013**	**2014**	**2015**
Carbon monoxide					
1-hour (ppm)	35	Not to be exceeded more than once per year	4	3.7	3.2
8-hour (ppm)	9		2.9	2.8	2.6
Nitrogen dioxide					
1-hour (ppb)	100	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years	54	51	71
Ozone					
8-hour (ppm)	0.075	3-year average of the fourth highest daily maximum	0.082	0.081	0.075
Sulfur dioxide					
1-hour (ppb)	75	99th percentile, averaged over 3 years	7	7	7
3-hour (ppm)	0.5	Not to be exceeded more than once per year	*<no data>*		
$PM_{2.5}$					
24-hour ($\mu g/m^3$)	35	98th percentile, averaged over 3 years	26	26	26
Annual mean ($\mu g/m^3$)	15	Averaged over 3 years	10.8	10.4	9.8
PM_{10}					
24-hour ($\mu g/m^3$)	150	Not to be exceeded more than once per year over 3 years	169	105	87
Annual mean ($\mu g/m^3$)	50	Averaged over 3 years	29	29	25

Source: Nevada Administrative Code 445B.22097, EPA 2016d.
$\mu g/m^3$ = micrograms per cubic meter; ppb = parts per billion; ppm = parts per million

The proposed project would occur within a region EPA has designated as a maintenance area for ozone, PM_{10}, and carbon monoxide (EPA 2016c), and the General Conformity Rule (GCR) applies. The GCR ensures that federal actions comply with the NAAQS.

Greenhouse Gases and Climate Change: Greenhouse gases (GHGs) are components of the atmosphere that trap heat relatively near the surface of the earth and therefore contribute to the greenhouse effect and climate change. Most GHGs occur naturally in the atmosphere, but increases in their concentration result from human activities such as the burning of fossil fuels.

Global temperatures are expected to continue to rise as human activities continue to add carbon dioxide (CO_2), methane, nitrous oxide, and other greenhouse (or heat-trapping) gases to the atmosphere. Whether rainfall will increase or decrease remains difficult to project for specific regions (EPA 2016b). The Council on Environmental Quality (CEQ) recently released draft guidance on when and how federal agencies should consider GHG emissions and climate change in National Environmental Policy Act (NEPA) analyses. The draft guidance includes a presumptive effects threshold of 27,563 tons per year (25,000 metric tons per year) of CO_2 equivalent emissions from a Federal action (CEQ 2010).

8. Environmental Justice Information

a. Conditions, Minority & Low Income Areas (include median family income)

Income. Clark County income levels were similar to state and national levels. The county's median family income of $60,168 was 99 percent of the state median family income of $61,081 and 92 percent of the national median family income of $65,443. The county's per capita personal income (PCPI) of $26,040 was 98 percent of the Nevada PCPI of $26,515 and 91 percent of the United States PCPI of $28,555. The Las Vegas Paiute Indian Colony (in downtown Las Vegas) median family income was similar to county, state, and national family income levels, but PCPI was lower than that of Clark County, Nevada, and the United States, with a median family income of $65,179 and a PCPI of $17,551 (Census 2015a).

*Environmental Justice***.** Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations*, was issued by President Clinton on February 11, 1994. The EO requires that federal agencies take into consideration disproportionately high and adverse environmental effects of governmental decisions, policies, projects, and programs on minority and low-income populations.

Per CEQ environmental justice guidance, minority populations should be identified where either the minority population of the affected area exceeds 50 percent or the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis (CEQ 1997). The U.S. Census Bureau identifies minority populations as Black or African American; American Indian and Alaska Native; Asian; Native Hawaiian and other Pacific Islander; persons of two or more races; and persons of Hispanic or Latino origin.

Per CEQ guidance, poverty thresholds established by the U.S. Census Bureau are used to identify low-income populations (CEQ 1997). Poverty status is reported as the number of persons or families with income below a defined threshold level. As of 2014, the U.S. Census Bureau defined the poverty threshold level as $12,071 of annual income, or less, for an individual and $24,008 of annual income, or less, for a family of four (Census 2015b).

EJSCREEN was used for this environmental justice analysis to identify minority and low-income populations. EJSCREEN is an environmental justice mapping and screening tool developed by EPA (available on the internet) to provide a nationally consistent dataset and approach that combines environmental and demographic indicators in maps and reports (EPA 2015). Using the tool, a 2-mile radius (to capture the entire Snow Mountain Reservation) was drawn around the proposed water system project site, generating a report on the populations within this boundary. The EJSCREEN report provided in Appendix A, shows the boundary map, lists selected demographic and environmental indicators within the defined boundary, and provides the state, regional, and national averages for each indicator for comparison.

The EJSCREEN report for demographic indicators shows that within the defined 2-mile project radius the population is comprised of 39 percent minorities, which is lower compared to the state average of 46 percent and the EPA region average of 57 percent but higher than the U.S. average of 36 percent. Considering that the defined project area includes the Snow Mountain Reservation, U.S. Census data was also reviewed which showed that the population of the Las Vegas Indian Colony/Snow Mountain Reservation is 95 percent minority (Census 2015a).

The percent of the population within the defined project boundary identified as low-income (i.e., living below the poverty threshold) is 27 percent, lower than the state average of 34 percent, the EPA region average of 35 percent, and the U.S. average of 34 percent. The EJSCREEN demographic indicators for those linguistically isolated, or with less than a high-school education, in the project area is lower or about the same as the state, EPA region, and U.S. averages.

9. Land Use & Development, Percent Impervious Cover, Pollutant Sources:

Nearly all of the approximately 4,000 acres of the Snow Mountain Reservation is pervious ground. All land is reservation land. U.S. Route 95 passes through the reservation diagonally from its southeast corner to near the western edge of its northern boundary. The Snow Mountain Reservation, on the north side of US Route 95 is home to the Paiute Golf Resort, consisting of 3 golf courses and a large, permanent clubhouse. In addition to the golf resort, the tribe has a small convenience store/gas station and a Smoke Shop at the highway off ramp.

To the south of U.S. Route 95 is a small residential area (approximately 11 houses) and infrastructure elements (the water tank, a small enclosure for the well) which are the only impervious ground in the project area.

Land bordering the reservation on the east, north, and west is owned and managed by the U.S. Bureau of Land Management (BLM). Land south of the reservation is primarily private land interspersed with more BLM land. The BLM land west of the reservation is part of the Red Rock Canyon National Conservation Area. Land bordering the reservation at the northeast corner is part of the Tule Springs Fossil Beds National Monument. Pollutant sources in the area include airborne dust and exhaust fumes from vehicles on roads.

10. Identification of Floodplains and Wetlands:

The project area is not within a Federal Emergency Management Agency designated 100- or 500-year floodplain. No wetlands are within the project area or on the Snow Mountain Reservation.

SECTION 3. Existing Drinking Water System

1. Existing Drinking Water System (drinking water only)

a. Description of Treatment and Distribution System:

No treatment is provided to the water pumped from the aquifer on the Snow Mountain Reservation. The well pumps water directly to the storage tank, from which it is gravity fed to the distribution system. The PWS has 11 residential connections serving a population of approximately 45 (Fraser and May 2013). It also has four non-residential connections that serve the reservation's smoke shop, a police substation, the golf club, and the golf club's maintenance shop. An average daily transient population of 100 people reflects the usage of the golf course and related facilities (Fraser and May 2013).

The PWS is classified as a community public water system and is regulated for both acute and chronic drinking water contaminants (Fraser and May 2013). A marking on the well house wall notes that the well produces 140 gallons per minute (GPM). The facilities superintendent, however, noted that the well produces approximately 100 GPM (Fraser and May 2013). A 100 horsepower pump with a capacity of 600 GPM serves the system. The pump appears to have adequate capacity for the current water demands. It is controlled by radio signals sent from probes in the storage tank. The controls auto-dial the facilities superintendent and a backup operator (when available) in the event of an equipment or power failure.

b. Water Demand: Average, Peak

The Snow Mountain Reservation PWS is not metered. The permitted use of water from a quasi-municipal well (public supply wells or community wells; a well serving two or more homes) in the Las Vegas Valley is based on an average of 1,000 gallons per day per home, not to exceed 365,000 gallons per year per home. Data from the U.S. Geological Survey indicates that the domestic per capita use in Clark County, Nevada (which includes the city of Las Vegas), is 126 gallons/person/day (USGS 2016). Based on this, a permanent population of 45, and a transient population of 100 persons daily, peak usage on the reservation would be estimated as 18,270 gallons/day (145 people using 126 gallons/day) and average use would be estimated as 9,198 gallons/day (73 people using 126 gallons/day). Because the average for Clark County includes domestic use in the city of Las Vegas, peak and average uses on the Snow Mountain Reservation are possibly lower than the estimates provided above.

c. Surface Water Source (intake locations, permitted and actual withdrawal)

Surface water is not used as a source of potable water at the Snow Mountain Reservation (Fraser and May 2013).

d. Ground Water Source (wells & well fields)

The Basin and Ridge aquifer is the principal regional drinking water aquifer (SNWA 2016c). The principal aquifer system in the region, the Basin and Range Aquifer, extends from about 200–300 feet below ground surface to more than 1,000 feet. Three major aquifer zones within this principal aquifer are generally located from 300 to 1,500 feet below land surface (SNWA 2016c). Well AZ#0 is the well serving the PWS on the Snow Mountain Reservation. It is located on the western portion of the reservation to the west of U.S. Route 95 and is drilled to a depth of 950 feet.

As described in the grant application and in the application for categorical exclusion for the proposed projects included in the special appropriations grant "Las Vegas Paiute Water Infrastructure Earmark" #XP-OOT73601, the public water system at Snow Mountain Reservation

has only one well (AZ#0). AZ#0 (referred to as GW001/Well#0 in Fraser and May 2013) was reportedly drilled to a depth of 950 feet with a 12-inch casing depth of 600 feet. Fraser and May reported that the accuracy of the well drilling information and well's construction are unknown because the driller's log and as-built plans for the system are not available (Fraser and May 2013).

e. Water Storage

The public water system at Snow Mountain has one storage tank with a capacity of 216,000 gallons. The tank was installed in 1986 and remains today with no appreciable improvements, additions or expansion (Fraser and May 2013).

f. Raw Water Characteristics

Water is pumped directly from the aquifer and receives no treatment. The source water is subject to regular review and inspection by EPA, and water from AZ#0 is of good quality with no water quality concerns. The drinking water is tested regularly in compliance with EPA standards and the Paiute Tribe publishes the results annually. The water is monitored regularly for total coliform (monthly), lead and copper (every 3 years), nitrate (annually), and radionuclides (every 6 years). Total coliform sampling conducted at the golf club resort clubhouse in November 2015 resulted in non-detection of coliform bacteria (SilverState 2015).

g. Residuals (sludge) and Backwash Disposal

Because the water from well AZ#0 is untreated, the system produces no residuals (sludge) or backwash.

h. Service Area

The PWS has 11 residential connections serving a population of approximately 45 and four non-residential connections that serve the smoke shop, a police substation, the golf club, and the golf club's maintenance shop. An average daily transient population of 100 people reflects the usage of the golf course and related facilities (Fraser and May 2013). These facilities are all located in the northern third of the reservation area.

2. Existing System Performance

a. Safe Drinking Water Act Violations

The source water is subject to regular review and inspection by EPA for coliform bacteria (total coliform and *E. coli*). The Tribe is required to test the water regularly in compliance with EPA standards and publish the results annually, and the source water is subject to regular review and inspection by EPA. The most recent water quality monitoring (November 2015), conducted at the golf club resort clubhouse, resulted in non-detection of coliform bacteria (SilverState 2015). No Safe Drinking Water Act violations are known to be associated with the system, although prior inspections have pointed out problem areas with the public water system (i.e., it has only a single source, an age of approximately 30 years, and difficulty maintaining the tank because of the lack of a backup supply and system).

b. Other System Problems

The system has no problems other than those described above.

SECTION 4. Need for Proposed Project

1. Expanded Description of Need

The Snow Mountain Reservation is home to approximately 100 Native Americans, employs 325 employees, has 100,000 customers and visitors to the smoke shop each year, and has another 75,000 customers and visitors to the golf resort each year. The PWS serves all of these people. The PWS is more than 30 years old and maintenance issues manifest themselves annually, to the point that the Tribe now accounts for regularly recurring breaks and problems in its annual budget process. Repairs are difficult to make because the materials used when the system was installed are inferior by today's standards and the system has no shut-off valves or metering. The system has had no appreciable improvements, additions, or expansions since it was installed. If a major problem was to occur, the residential homes, smoke shop, and golf club would have no water because no backup system exists. The lack of a backup water supply makes conducting extensive repairs on the system difficult. In the event that the PWS needed to be shut down for an extended time, residents would be left without water and the smoke shop and golf course would likely be shut down.

2. Land Use Projections/Impervious Cover/Pollutant Sources:

No land use changes would occur as a result of the project. A negligible increase in impervious cover would result from constructing an enclosure for the new well and installing a new water tank. The project would not create a new pollutant source.

3. Population Forecast/Projections:

The project would not result in a change in population, and a recent or anticipated change in population is not a reason that the project is being considered.

4. Future Environment without the Project

No change in the natural or human environments would result if the project was not undertaken. However, the Snow Mountain Reservation population and employees of and visitors to the smoke shop and golf club would remain at risk of a water system failure.

SECTION 5. Analysis of Alternatives

1. Development of Alternatives

a. No-action

Under the no action alternative, the water system infrastructure project would not be funded or implemented.

b. Optimum Utilization of existing facility

(a.) Flow Reduction and Water Conservation

Optimum use of the existing system is not a viable solution to the water infrastructure problem on the Snow Mountain Reservation. A lack of water or an insufficient quantity of water in the well is not at issue. The reasons for the project are because the lack of a backup water supply makes it difficult to maintain the system, and the PWS is old, constructed with outdated materials, and does not have proper system components (e.g., shut-off valves). Therefore, flow reduction or water conservation are not solutions to this infrastructure problem.

c. New Well and Storage Tank Alternative

Install one new well at a depth approximately equal to that of the existing well (950 feet) to draw water from the same aquifer from which the existing well draws water, and install one additional water storage tank with a capacity of approximately 250,000 gallons. New piping would be limited to that necessary to connect the new well to the new tank and the new tank to the existing distribution system. The system would be configured such that if one system needed to be taken off line, the other system could still be used. It is assumed that the new water tank would be installed near the existing 216,000 gallon tank so that the new system could also be gravity fed to the distribution system. The location of the new well will be determined based on a thorough analysis of soils, aquifer levels, and other properties.

d. Identification of Preferred Alternative

At this time the preferred alternative is the New Well and Storage Tank Alternative.

SECTION 6. Environmental Consequences and Mitigation Measures for Selected Alternative

1. Direct

Direct impacts of the preferred alternative on the environment would be expected to aesthetics and visual resources, air quality, noise, soils, socioeconomics, and the Snow Mountain Reservation PWS. No impacts would be expected to result from the project on land use, water resources, biological resources, cultural resources, transportation resources, or hazardous materials and toxic substances. Table 2 below summarizes the expected environmental and human health effects of the proposed action.

Table 2.
Summary of Potential Environmental Effects

Resource Area	Environmental Effect(s) of Proposed Action	Note
Land Use	No effect	Land use on the reservation would not be affected by the proposed action.
Climate	No effect	No change in the local or regional climate would result from implementing the proposed action, and climate change would not have a discernible effect on the project.
Air Quality	Short-term minor adverse effect	Minor amounts of air pollutants would be emitted from vehicles used to transport the system components to the reservation and equipment used for system installation. The effects would end upon completion of construction.
Noise	Short-term minor adverse effect	Construction noise would be associated with the project. However, the noise would cease upon completion of construction. Dust from vehicles and ground disturbance would be minimized by applying water to ground surfaces that must be disturbed, as necessary.
Earth Resources		
Topography	No effect	No topographic changes would result from implementing the proposed action.
Soils	Short-term minor adverse effect	Some soil disturbance would occur during well and water tank installation. The disturbance would be limited to the small areas within which the system components would be installed. Because the area is desert/arid, no post-construction soil stabilization would be required.
Geology	No effect	No changes in the local geology would result from implementing the proposed action.
Water Resources		
Groundwater	No effect	Groundwater would be unaffected by the proposed action. The new well would not create additional demand on the groundwater supply beyond an initial filling of the new water storage tank. No pollutants would be introduced into the groundwater during project implementation.
Surface waters	No effect	No surface waters are near the proposed project. If required, best management practices would be implemented to minimize soil erosion and stormwater runoff from the project locations.
Wetlands	No effect	No wetlands occur within the project area. No wetlands would be affected by implementing the proposed action.
Floodplains	No effect	No floodplains occur within the project area. No floodplains would be affected by implementing the proposed action.
Stormwater	No effect	No increase in the quantity of stormwater would be expected from implementing the proposed action. The increase in impervious area from implementing the project would be very small in an area that is dominated by pervious ground. No change in the quality of stormwater would result from the project.

Resource Area	Environmental Effect(s) of Proposed Action	Note
Biological Resources		
Flora	No effect	No adverse effects on local flora would result from implementing the proposed action. Some vegetation would likely be disturbed for well and water tank installation, but the disturbance would not appreciably affect flora populations or viability.
Fauna	No effect	No adverse effects on local fauna would result from implementing the proposed action. Some are of disturbance would be associated with well and water tank installation, but no local fauna would be expected to be affected.
Threatened and Endangered Species	Not likely to jeopardize the continued existence of the threatened Mojave desert tortoise	EPA concluded formal consultation with the US Fish and Wildlife Service on July 17, 2017. EPA proposes to minimize potential adverse effects to desert tortoise from the proposed action by implementing eleven conservation measures.
Cultural Resources	No effect	No effects on cultural resources would be expected from implementing the proposed action. The Nevada SHPO concurred with the 'no effect' determination. See Appendix B.
Socioeconomics		
Economic environment	Short-term minor beneficial effect	Beneficial effects would be expected on the regional economy. The expenditures and employment associated with the proposed action would increase regional employment, income, and sales volume in the local construction industry and related industries. The economic benefits would be short-term, lasting for the duration of the construction period.
Environmental justice	Long-term minor beneficial effect	The proposed action would positively affect environmental justice populations (covered by EO 12898) residing in the project area by providing the benefit of an improved water supply system, with a backup system in case of failure of the existing system.
Protection of children	No effect	No environmental health risks and safety risks that could disproportionately affect children are associated with the proposed project.
Transportation	No effect	The small number of trucks that would be needed to deliver the system components and equipment necessary to implement the project, and trips associated with personally owned vehicles for construction worker transport would not appreciably affect the flow of area traffic or road conditions.
Infrastructure and Utilities (PWS)	Long-term minor beneficial effect	Residents of the reservation and guests at the golf course and clubhouse, smoke shop, and police station would have a more secure and reliable source of potable water upon completion of the proposed project.
Hazardous and Toxic Materials and Waste	No effect	No hazardous or toxic substances would be transported, used, stored, or disposed of during project implementation. Any lubricants, oils, or petroleum products used would be those only for normal equipment operation and maintenance.
Safety and Occupational Health	No effect	No change in safety or occupational health would result from implementing the proposed action. All contractors would be required to comply with normal industry standards of safety or occupational health during project implementation, and the project area would be off limits to visitors and tribal members, other than those associated with the project, during well and water tank installation.

2. Secondary Impacts of Future Growth and Development

At the present time no future growth of the Snow Mountain Reservation population is anticipated, and no new development is planned.

3. Unavoidable Adverse Impacts (outside the Cross-cutter Environmental Laws Listed Below)

Unavoidable short-term adverse impacts associated with undertaking the Paiute Tribe's proposed water system improvement project would include soil disturbance and possibly some soil erosion, a temporary increase in fugitive dust and air emissions during construction, localized and temporary increases in noise, and a minor addition of traffic on local roads. Most of these effects would be minor and confined to the immediate area of the project work.

4. Minimization of Adverse Impacts (outside the Cross-cutter Environmental Laws Listed Below)

The project would be undertaken in an arid environment. Stormwater runoff, erosion, and soil loss from the project would not be expected. Use of environmental controls, such as watering the soil to minimize dust and operating loud equipment only during working hours, would minimize the potential unavoidable adverse impacts. However, if the project would disturb 1 acre or more of total area, the Tribe or its selected contractor would obtain a Construction Stormwater General Permit from EPA. Implementation of the conditions of the permit, including preparation of a stormwater pollution prevention plan and erosion and sediment control plan that incorporate best management practices accepted by NDEP for stormwater control would minimize the possibility of sediment runoff to the wash in the Las Vegas Valley northeast of the reservation boundary.

5. Mitigation (outside the Cross-cutter Environmental Laws Listed Below)

No mitigation for adverse impacts listed in 3. above is anticipated to be needed for project implementation.

6. Cross-cutter Environmental Laws and Coordination and Consultation Process

a. Archeological Resources

EPA has defined the area of potential effect (APE) for archeological resources as the surfaces and depths that would be disturbed by excavation and water line installation, well drilling, and water tank installation activities that would be funded by EPA's SAAP grant. EPA conducted a records search of the APE and surrounding areas via the Nevada Cultural Resource Information System (NVCRIS) online database of the Nevada State Museum, Carson City, Nevada. The study area of the records search included a 1-mile buffer around the APE for archaeological resources and above-ground/built environment resources. Results of the records search are provided in Appendix C.

The record search revealed that ten previous surveys have been conducted within 1-mile of the project APE. No cultural resources were identified by the records search as within the APE or study area.

The APE is within an alluvial fan, has been previously disturbed by the construction of Paiute Way, and several previously conducted surveys within the APE and study area did not identify any previously recorded cultural resources. The archaeological sensitivity within the APE is considered low. No historic properties were identified within the APE. The likelihood for undocumented cultural resources to be present within the APE is considered low. Consistent with substantive portions of Section 106 of NHPA (36 CFR 800.4[d][1]), EPA applied the criteria for evaluation of adverse effects and found that the proposed undertaking would not affect historic properties ("no historic properties affected"). The Nevada SHPO concurred with the finding of no effect in a letter dated May 26, 2016 (see Appendix B). If any buried or previously unidentified resources were located during project activities, all work in the vicinity of the find would cease and

the Nevada SHPO would be contacted for additional consultation, in accordance with 36 CFR 800.13(b)(3).

b. Air Quality

No significant adverse effects on air quality would be expected if the proposed action was implemented. Short-term minor adverse effects would be expected. The short-term effects would be due to airborne dust and other pollutants generated during well and water tank construction and installation. Air quality effects would be minor unless the emissions exceeded the GCR *de minimis* (of minimal importance) threshold values, exceeded the GHG threshold in the draft CEQ guidance, or contributed to a violation of any federal, state, or local air regulation. Table 3 summarizes calculated emissions data for the proposed project. All criteria emissions are well below the GCR *de minimis* threshold values. Calculations for air pollutant emissions are provided in Appendix D.

Greenhouse Gases and Climate Change. All construction activities combined are estimated to generate 1,524 tons (1,383 metric tons) of CO_2, which would be below the CEQ threshold. There would be no changes in operational GHG emissions. These effects would be minor.

Table 3.
Estimated air emissions compared to *de minimis* thresholds

Activity/Source	CO	NO_x	VOC	SO_x[a]	PM_{10}	$PM_{2.5}$[a]	*De minimis* threshold (tpy)	Exceeds *de minimis* threshold? (yes/no)
Construction emissions	9.2086	17.4615	3.9116	0.0236	1.3826	1.3227	100	No

Notes:
CO = carbon monoxide, *de minimis* = of minimal importance, NO_x = oxides of nitrogen, $PM_{2.5}$ = particulate matter less than 2.5 microns in diameter, PM_{10} = particulate matter less than 10 microns in diameter, SO_x = oxides of sulfur, tpy = tons per year, VOC = volatile organic compound.
[a] Although the general conformity rule does not apply to these pollutants, they have been compared to the applicability thresholds to determine the level of effects under NEPA.

c. Coastal Barrier Resources

The project would not affect coastal barrier resources.

d. Coastal Zones

The project would not occur within a state coastal zone. No adverse effects on the coastal zone would result.

e. Endangered Species

The Tribe contacted the U.S. Fish and Wildlife Service (USFWS) in April, 2016 regarding potential, listed threatened and endangered species. The USFWS responded indicating that the project action area occurs within the Northeastern Mojave Recovery Unit, outside the critical habitat. At the direction of the U.S. Fish and Wildlife Service, biologists performed desert tortoise surveys of the action area the week of September 26, 2016, in accordance with USFWS (2010) protocol. Results of the pre-project survey did not identify any desert tortoise presence within the project action area. Six burrows, three scats, and five tortoise carcasses were found on the 400 meter and 600 meter buffer transect for the water well site and 10 tortoise burrows were found on the 200 meter, 400 meter, and 600 meter buffer transects for the water tank site.

EPA initiated formal consultation for the Mojave desert tortoise with the U.S. Fish and Wildlife Service on April 25, 2017. EPA proposed 11 minimization measures to be included in the project design for the Mojave desert tortoise. On July 17, 2017, the U.S. Fish and Wildlife Service issued the Biological Opinion to EPA for the Mojave desert tortoise. The USFWS's biological opinion is that the Project, as proposed and analyzed, is not likely to jeopardize the continued existence of the threatened Mojave desert tortoise. The Services biological opinion is included as Appendix E.

Mitigation Measures:
The following minimization measures will be included in the project design and construction:

1. A desert tortoise education program shall be presented to all personnel onsite during construction. This program will contain information concerning the biology and distribution of the desert tortoise, its legal status and potential occurrence near the proposed project area, the definition of "take" and associated penalties, measures designed to minimize the effects of construction activities, the means by which employees can facilitate this process, and reporting requirements to be implemented in the event that desert tortoises are encountered.

2. An authorized desert tortoise biologist or environmental monitor shall be required to be onsite or on-call during project construction unless determined otherwise by the Service. Potential authorized desert tortoise biologists shall be approved by the Service. Workers will be required to be watchful of tortoises when working.

3. All project vehicles will not exceed 15 miles per hour within project boundaries March 15 through November 15 and 25 miles per hour at other times.

4. Project personnel shall halt activities when the continuation of such activities may endanger a desert tortoise or if a tortoise is found on a project site. Project activities may resume after the tortoise moves out of the work area or is relocated by an authorized desert tortoise biologist.

5. Project personnel shall exercise caution when commuting to the project area and obey speed limits to minimize any chance for the inadvertent injury or mortality of species encountered on roads leading to and from the project site. All desert tortoise observations, including mortalities, shall be reported directly to the Service.

6. Any vehicle or equipment within desert tortoise habitat shall be checked underneath before moving, including the morning before any construction activity begins. If a desert tortoise is observed, an authorized desert tortoise biologist will be contacted.

7. A litter-control program shall be implemented that includes the use of covered, raven-proof trash receptacle, disposal of edible trash in trash receptacles following the end of each work day.

8. All project activity will be confined to designated areas. All work shall be located on previously-disturbed areas.

9. All fuel, transmission or brake fluid leaks, or other hazardous materials shall not

be drained onto the ground or into drainage areas. All petroleum products and other potentially hazardous materials shall be removed to a disposal facility authorized to accept such materials. Waste leaks, spills or releases shall be reported immediately to EPA and the Service. Servicing of construction equipment will take place only at a designated area. All fuel or hazardous waste leaks, spills, or releases will be stopped or repaired immediately and cleaned up at the time of occurrence. Service and maintenance vehicles will carry a bucket and pads to absorb leaks or spills.

10. Cross-country travel and travel outside construction zones and fenced areas shall be prohibited.

11. An authorized desert tortoise biologist shall record each observation of handled desert tortoises including those moved roads. Data will be collected, including: location, date, time of observation, whether the tortoise was handled, the general health of the tortoise, whether it voided its bladder, the location the tortoise moved from and the location it moved to, and any unique physical characteristics. The authorized desert tortoise biologist shall also include the names of all monitors approved for the project, and the activities and level of involvement during the project. The Tribe and EPA are responsible for collecting all tortoise-related information and submitting it to the Service.

f. Environmental Justice

Long-term beneficial effects would be expected. The proposed action of improving the Snow Mountain Reservation water system would positively affect environmental justice populations (covered by EO 12898) residing in the project area by providing them the benefit of an improved water supply system that includes a backup system in case of failure of the existing system.

g. Floodplains

The project would have no adverse effects on floodplains.

h. Wetlands

The project would have no adverse effects on wetlands.

i. Protected Farmlands

The project would have no adverse effects on farmlands.

j. Fish and Wildlife

The project would have no adverse effects on fish and wildlife.

k. National Historic Resources

Refer to section 6(a) above. A record search for archeological resources in the vicinity of the proposed project revealed that ten previous surveys have been conducted within 1-mile of the project APE and that no cultural or historic resources have been identified in the proposed project area. The archaeological sensitivity within the APE is considered low. The likelihood for undocumented cultural resources to be present within the APE is considered low. EPA found that the proposed undertaking would not affect historic properties, and the Nevada SHPO concurred with the finding of no effect in a letter dated May 26, 2016 (see Appendix B). If, however, any

buried or previously unidentified resources were located during project activities, all work in the vicinity of the find would cease and the Nevada SHPO would be contacted for additional consultation, in accordance with 36 CFR 800.13(b)(3).

l. Drinking Water Supplies

The project would have no adverse effects on drinking water supplies. Although a new well and water tank would be installed, the only additional demand on the water supply would be a one-time filling of the new water storage tank(s). No additional demand on the water supply would result from the project because no increase in population using the water system is associated with the project.

m. Wild and Scenic Rivers

The project would have no adverse effects on wild and scenic rivers.

n. Essential Fish Habitat

The project would have no adverse effects on essential fish habitat.

7. Intergovernmental Review per Executive Order 12372

Applications from federally recognized tribes are exempt from Executive Order 12372.

8. Necessary Permits (NPDES, wetlands, etc.) Issued

The Tribe or its contractor would obtain a Construction Stormwater Permit from EPA, if necessary, to install the well and water tank(s). The well would be drilled by a licensed well driller pursuant to Nevada Revised Statutes 534.160.

9. Necessary Intermunicipal Agreements Executed

No intermunicipal agreements would be required to be executed to implement the proposed project.

SECTION 7. References

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APPENDIX A

Environmental Justice EJSCREEN Analysis

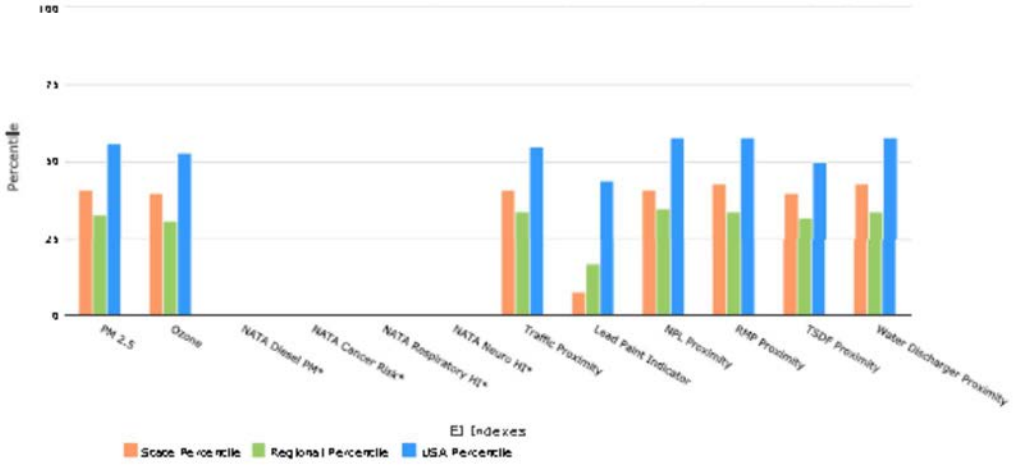
http://ejscreen.epa.gov/mapper/ejscreen_SOE.aspx

Save as PDF

2 mile Ring Centered at 36.351202,-115.342652
NEVADA, EPA Region 9
Approximate Population: 28
Las Vegas Indian Colony/Snow Mtn Reservation 2 mile radius

Selected Variables	Percentile in State	Percentile in EPA Region	Percentile in USA
EJ Indexes			
EJ Index for Particulate Matter (PM2.5)	41	33	56
EJ Index for Ozone	40	31	53
EJ Index for NATA Diesel PM*	N/A	N/A	N/A
EJ Index for NATA Air Toxics Cancer Risk*	N/A	N/A	N/A
EJ Index for NATA Respiratory Hazard Index*	N/A	N/A	N/A
EJ Index for NATA Neurological Hazard Index*	N/A	N/A	N/A
EJ Index for Traffic Proximity and Volume	41	34	55
EJ Index for Lead Paint Indicator	8	17	44
EJ Index for NPL Proximity	41	35	58
EJ Index for RMP Proximity	43	34	58
EJ Index for TSDF Proximity	40	32	50
EJ Index for Water Discharger Proximity	43	34	58

EJ Index for the Selected Area Compared to All People's Block Groups in the State/Region/US



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

http://ejscreen.epa.gov/mapper/ejscreen_SOE.aspx

Selected Variables	Raw data	State Average	%ile in State	EPA Region Average	%ile in EPA Region	USA Average	%ile in USA
Environmental Indicators							
Particulate Matter (PM 2.5 in µg/m³)	5.73	7.92	2	9.95	0	9.78	0
Ozone (ppb)	59.2	55.5	98	49.7	83	46.1	97
NATA Diesel PM (µg/m³)*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NATA Air Toxics Cancer Risk (risk per MMM)*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NATA Respiratory Hazard Index*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NATA Neurological Hazard Index*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Traffic Proximity and Volume (daily traffic count/distance to road)	4.7	89	12	190	6	110	11
Lead Paint Indicator (% pre-1960s housing)	0.19	0.056	90	0.25	54	0.3	47
NPL Proximity (site count/km distance)	0.0038	0.0093	33	0.11	2	0.096	0
RMP Proximity (facility count/km distance)	0.02	0.19	5	0.41	2	0.31	2
TSDF Proximity (facility count/km distance)	0.019	0.069	26	0.12	16	0.054	44
Water Discharger Proximity (count/km)	0.018	0.18	6	0.19	2	0.25	1
Demographic Indicators							
Demographic Index	33%	40%	41	46%	32	35%	56
Minority Population	39%	46%	42	57%	30	36%	61
Low Income Population	27%	34%	44	35%	43	34%	44
Linguistically Isolated Population	0%	7%	28	9%	20	5%	45
Population with Less Than High School Education	15%	16%	58	18%	53	14%	63
Population under Age 5	2%	7%	13	7%	12	7%	12
Population over Age 64	11%	12%	56	12%	56	13%	45

*The National-Scale Air Toxics Assessment (NATA) environmental indicators and EJ indexes, which include cancer risk, respiratory hazard, neurodevelopment hazard, and diesel particulate matter will be added into EJSCREEN during the first full public update after the soon-to-be-released 2011 dataset is made available. The National-Scale Air Toxics Assessment (NATA) is EPA's ongoing, comprehensive evaluation of air toxics in the United States. EPA developed the NATA to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that NATA provides broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the NATA analysis can be found at: http://www.epa.gov/ttn/atw/nata2005/index.html.

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

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

provide data on every environmental impact and demographic factor that may be relevant for a particular location. EJSCREEN outputs should be supplemented with additional information and local knowledge before taking any action to address potential EJ concerns.

APPENDIX B

Nevada State Historic Preservation Office Review of the Subject Undertaking in Compliance with Section 106 of the National Historic Preservation Act

NEVADA
STATE HISTORIC
PRESERVATION OFFICE

Department of Conservation and Natural Resources

Brian Sandoval, Governor
Leo M. Drozdoff, P.E., Director
Rebecca L. Palmer, SHPO

May 26, 2016

Ms. Stephanie L. Wilson
U.S. Environmental Protection Agency, Region 9
Tribal Water Section, WTR-3-4
P.O. Box 11
Carson City, NV 89702

Re: Section 106 Consultation Regarding the U.S. Environmental Protection Agency Special Appropriation Act Projects Grant Funding of a Water Infrastructure Improvement Project for the Las Vegas Paiute Tribe, Nevada
Undertaking #2016-4350

Dear Ms. Wilson:

The Nevada State Historic Preservation Office (SHPO) has reviewed the subject undertaking in compliance with Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended.

Project Description
The SHPO understands this undertaking to be the expenditure of federal monies from the Special Appropriation Act Program (SAAP) grant, administered by the U.S. Environmental Protection Agency (EPA), to augment the existing water infrastructure system at Snow Mountain. This will include the following actions:

1. the installation of a new water tank (approximately 20 feet in height),
2. the drilling of a new well,
3. the digging of trenches to lay water lines connecting the new system with the existing infrastructure,
4. access to the construction area, and
5. staging areas for the equipment noted in the transmittal letter.

Area of Potential Effect (APE)
The SHPO concurs with the EPA's determination that the area of potential effect (APE) is adequate and accounts for all potential direct, indirect, and cumulative effects that may result from this undertaking in keeping with 36 CFR §800.4(a)(1) and 36 CFR §800.16(d).

Identification Effort for Historic Properties
The SHPO concurs with the EPA's determination that the identification efforts are adequate for the APE and actions outline for this undertaking under NHPA. This effort did not result in the identification of historic properties within the APE.

Finding of Effect
The SHPO concurs with the EPA's finding of No Historic Properties Affected for this undertaking.

Native American Consultation
The SHPO acknowledges receipt of documentation that consultation with the affected Native American tribes has been concluded per 36 CFR §800.3(f)(2). This consultation did not result in the identification of properties of religious and/or cultural significance that could be affected by the undertaking.

Unanticipated Discovery
If any buried and/or previously unidentified resources are located during the project activities, the SHPO recommends that all work in the vicinity of the find cease and this office be contacted for additional consultation per 36 CFR §800.13(b)(3).

The SHPO commends the EPA for a clear and complete submission under NHPA, which allowed for an expeditious review of this undertaking and the federal agency determinations.

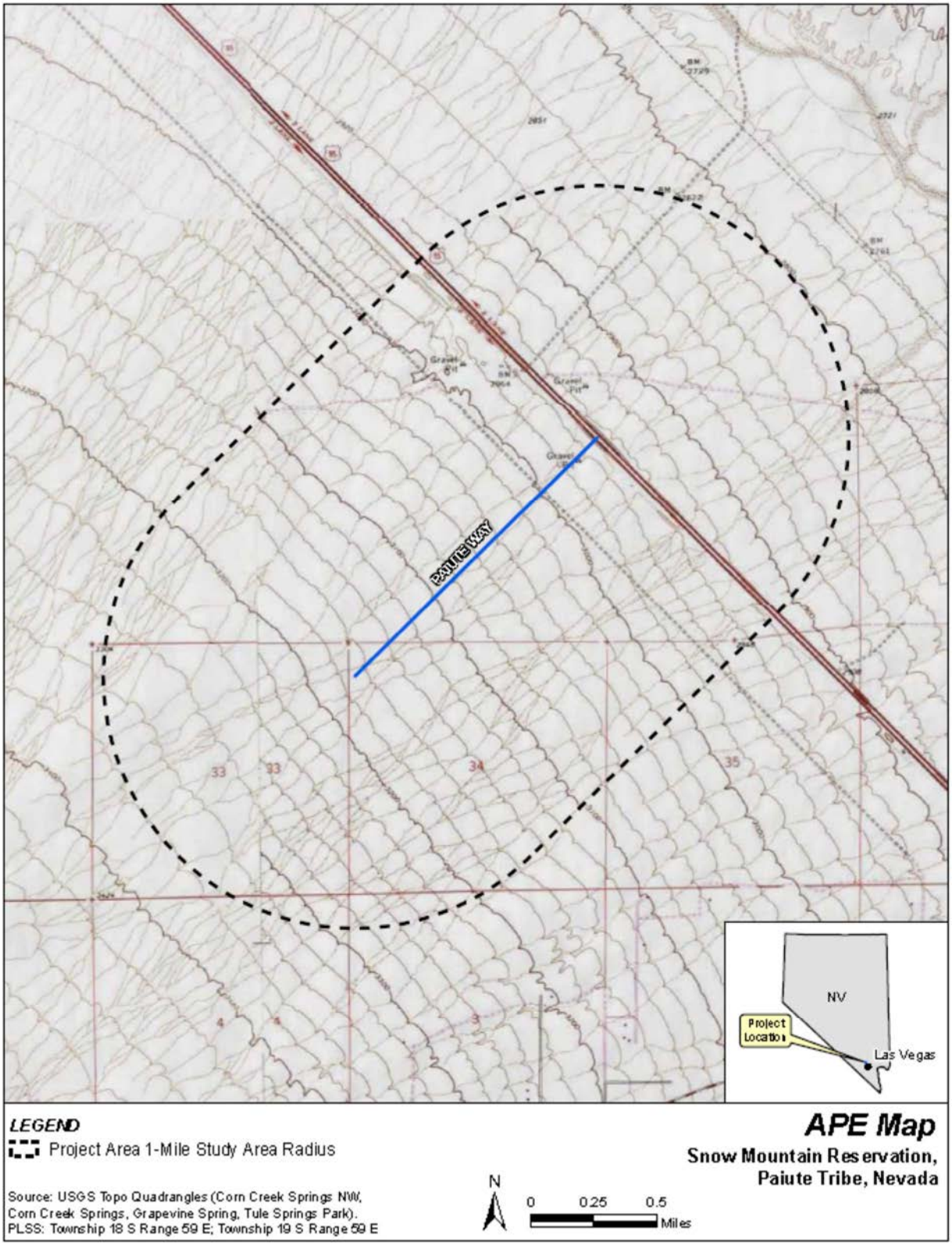
Should you have any questions concerning this correspondence, please contact Jessica Axsom at (775)684-3445 or by e-mail at jaxsom@shpo.nv.gov.

Sincerely,

Rebecca Lynn Palmer
State Historic Preservation Officer

APPENDIX C

Map of the Area of Potential Effect (APE) for Archaeological Resources


PAIUTE WAY
NV
Project Location
Las Vegas
LEGEND
Project Area 1-Mile Study Area Radius
Source: USGS Topo Quadrangles (Corn Creek Springs NW, Corn Creek Springs, Grapevine Spring, Tule Springs Park).
PLSS: Township 18 S Range 59 E; Township 19 S Range 59 E
N
0
0.25
0.5
Miles
APE Map
Snow Mountain Reservation,
Paiute Tribe, Nevada

APPENDIX D

Air Quality Emissions Calculations

Appendix B.
Air Quality Emissions Calculations

Table B-1 Equipment Use

Equipment Type	Number of Units	Days on Site	Hours Per Day	Operating Hours
Drill Rig	1	10	6	60
Cement Mixer	1	4	4	16
Grader/Loader/Backhoe	1	4	5	20

Table B-2 Equipment Emission Factors (lbs/hour)

Equipment	CO	NO_x	VOC	SO_x	PM_{10}	$PM_{2.5}$	CO_2
Drill Rig	0.0057	0.0152	0.0220	0.0001	0.0004	0.0004	1.16
Cement Mixer	0.0447	0.0658	0.0113	0.0001	0.0044	0.0044	7.2
Grader/Loader/Backhoe	0.4063	0.7746	0.1204	0.0008	0.0599	0.0599	66.8

Source: CARB 2016, USEPA 1995

Table B-3 Equipment Emissions (tons per year)

Equipment	CO	NO_x	VOC	SO_x	PM_{10}	$PM_{2.5}$	CO_2
Drill Rig	0.342	0.912	1.32	0.006	0.024	0.024	69.6
Cement Mixer	0.7152	1.0528	0.1808	0.0016	0.0704	0.0704	115.2
Grader/Loader/Backhoe	8.126	15.492	2.408	0.016	1.198	1.198	1336
Total (tons)	9.1832	17.4568	3.9088	0.0236	1.2924	1.2924	1520.8

Table B-4. Emissions from Delivery of Construction Materials

Number of Deliveries	4						
Miles Per Trip	100						
Total Miles	400						
Pollutant	CO	NOx	VOC	SOx	PM10	PM2.5	CO2
Emission Factor (lb/mi)	0.0219	0.0237	0.0030	0.0000	0.0009	0.0007	2.7
Total Emissions (lb)	8.76	9.48	1.2	0.0	0.36	0.28	1,080
Total Emissions (tons)	0.0044	0.0047	0.0006	0.0	0.0002	0.0001	0.54

Source: CARB 2016

Table B-5. Particulates from Surface Disturbance

TSP Emissions	80.00	lb/acre				
PM_{10}/TSP	0.45					
$PM_{2.5}/PM_{10}$	0.15					
Period of Disturbance	10	days				
Capture Fraction	0.5					
Building/Facility	Area [acres]	TSP [lb]	PM10 [lb]	PM10 [tons]	PM2.5 [lb]	PM2.5 [tons]
All Facilities	1.0	400	180	0.09	60	0.03
Total	1.0	400	180	0.09	60	0.03

Source: USEPA 1995

Table B-6. Emissions from Worker Commutes

Number of Workers	4						
Number of Trips	2						
Miles Per Trip	50						
Days of Construction	10						
Total Miles	4,000						
Pollutant	CO	NOx	VOC	SOx	PM10	PM2.5	CO2
Emission Factor (lb/mi)	0.0105	0.0011	0.0011	0.0000	0.0001	0.0001	1.1
Total Emissions (lb)	42	4.4	4.4	0.0	0.4	0.4	4,400
Total Emissions (tons)	0.021	0. 0022	0.0022	0.0000	0. 0002	0.0002	2.2

Source: CARB 2016

Table B-7. Total Emissions

	CO	NOx	VOC	SOx	PM10	PM2.5	CO2
Equipment emissions	9.1832	17.4568	3.9088	0.0236	1.2924	1.2924	1520.8
Delivery emissions	0.0044	0.0047	0.0006	0.0	0.0002	0.0001	0.54
Particulates	-	-	-	-	0.09	0.03	-
Commute emissions	0.021	0. 0022	0.0022	0.0000	0. 0002	0.0002	2.2
Total Emissions (tons)	9.2086	17.4615	3.9116	0.0236	1.3826	1.3227	1523.54

APPENDIX E

U.S. Fish and Wildlife Service Biological Opinion

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Southern Nevada Fish and Wildlife Office
4701 North Torrey Pines Drive
Las Vegas, Nevada 89130

IN REPLY REFER TO:
08ENVS00-2017-F-0115

July 17, 2017

Stephanie L. Wilson
U.S Environmental Protection Agency
Region IX
75 Hawthorne Street
San Francisco, California 94105-3901

Dear Ms. Wilson:

Subject: Formal Consultation for Construction of a Water Infrastructure Project on the Snow Mountain Indian Reservation, Clark County, Nevada

The Environmental Protection Agency (EPA) proposes to fund the subject project and determined that the project may adversely affect the federally threatened Mojave desert tortoise (*Gopherus agassizii*). On April 27, 2017, we received your request for formal consultation for the subject project.

This consultation addresses potential effects to the Mojave desert tortoise in accordance with section 7(a)(2) of the Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 *et seq.*) and 50 CFR § 402 of our interagency regulations governing section 7 of the Act. The subject project does not involve or affect any federally listed species other than the Mojave desert tortoise or designated or proposed critical habitat for any listed species.

We have based this biological opinion on information provided by EPA in the April 25, 2017, request; October 17, 2016, desert tortoise survey report; emails between EPA and the Fish and Wildlife Service; and other information in our files.

Consultation History

June 2016: The U.S. Environmental Protection Agency (EPA) contacted the U.S. Fish and Wildlife Service (Service) by phone requesting information on a proposed desert tortoise survey protocol for the Snow Mountain Water Infrastructure Project (Project).

August 12, 2016: EPA provided the proposed survey protocol and resume of proposed surveyor.

August 25, 2016: The Service reviewed the protocol and resume and responded to EPA, concurring with the protocol and selection of surveyor.

October 17, 2016: EPA provided survey results and requested informal consultation for the Project.

November 29, 2016: The Service emailed EPA with questions regarding the Project.

January 3, 2017: EPA responded with answers to questions asked by the Service on November 29, 2016.

April 25, 2017: Following additional discussion with the Service, EPA requested formal consultation for the Project.

April 27, 2017: The Service received EPA's request for formal consultation at which time, formal consultation was initiated.

BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

In 1983, Congress adopted House Resolution 3765 which declared that a 3,800-acre parcel of land located in the Las Vegas Valley approximately 6 miles northwest of greater Las Vegas, be held in trust for economic development on behalf of the Las Vegas Paiute Tribe (Tribe; Figure 1). This land became the Snow Mountain Reservation (Reservation).

As the Federal action for this consultation, EPA proposes to provide funding to develop water infrastructure on the Reservation with a new water tank and a new well. When the first homes were constructed on the Reservation in the 1980s, one potable water well was drilled and a 216,000 gallon tank installed to accommodate the residents. The utility infrastructure is owned and operated by the Tribe and consists of a public water system and sanitary sewer plant. The system is classified as a community public water system and consists of one active well, a storage tank, and a distribution system. The well pumps directly into the distribution system and the storage tank rides on the line. The system, although maintained, has not been appreciably improved since its installation.

The existing well is 950 feet deep and the water tank has a capacity of 216,000 gallons. The new well would be approximately the same depth and the new water storage tank capacity would be approximately 250,000 gallons. Components of the Project would include the well, storage tank, a pump, shut-off valves, connection piping, and other essential system components. The new tank would tie into the existing distribution system. The new well would be installed on the western portion of the reservation near the existing well and the new tank constructed near the existing tank. This would allow installing T-valves to the existing mainline servicing the homes and business to easily switch over between the two systems.

Construction will involve a forklift and cranes to install the storage tank and a drilling rig for the

new well. The well will involve a 3-man crew for up to 30 days. The storage tank will require a 5-6 man crew for up to 4 months. Existing roads will be used to access the site and the new well and tank will be constructed within previously disturbed areas to the extent possible.

Proposed Measures to Minimize the Potential Effects of the Action

The EPA proposes to minimize potential adverse effects to desert tortoise from the proposed action by implementing the following conservation measures.

1. A desert tortoise education program shall be presented to all personnel onsite during construction. This program will contain information concerning the biology and distribution of the desert tortoise, its legal status and potential occurrence near the proposed project area, the definition of "take" and associated penalties, measures designed to minimize the effects of construction activities, the means by which employees can facilitate this process, and reporting requirements to be implemented in the event that desert tortoises are encountered.
2. An authorized desert tortoise biologist or environmental monitor shall be required to be onsite or on-call during project construction unless determined otherwise by the Service. Potential authorized desert tortoise biologists shall be approved by the Service. Workers will be required to be watchful of tortoises when working.
3. All project vehicles will not exceed 15 miles per hour within project boundaries March 15 through November 15 and 25 miles per hour at other times.
4. Project personnel shall halt activities when the continuation of such activities may endanger a desert tortoise or if a tortoise is found on a project site. Project activities may resume after the tortoise moves out of the work area or is relocated by an authorized desert tortoise biologist.
5. Project personnel shall exercise caution when commuting to the project area and obey speed limits to minimize any chance for the inadvertent injury or mortality of species encountered on roads leading to and from the project site. All desert tortoise observations, including mortalities, shall be reported directly to the Service.
6. Any vehicle or equipment within desert tortoise habitat shall be checked underneath before moving, including the morning before any construction activity begins. If a desert tortoise is observed, an authorized desert tortoise biologist will be contacted.
7. A litter-control program shall be implemented that includes the use of covered, raven-proof trash receptacle, and disposal of edible trash in trash receptacles following the end of each work day.
8. All project activity will be confined to designated areas. All work shall be located on previously-disturbed areas.

Figure 1: Project location map.

9. All fuel, transmission or brake fluid leaks, or other hazardous materials shall not be drained onto the ground or into drainage areas. All petroleum products and other potentially hazardous materials shall be removed to a disposal facility authorized to accept such materials. Waste leaks, spills or releases shall be reported immediately to EPA and the Service. Servicing of construction equipment will take place only at a designated area. All fuel or hazardous waste leaks, spills, or releases will be stopped or repaired immediately and cleaned up at the time of occurrence. Service and maintenance vehicles will carry a bucket and pads to absorb leaks or spills.

10. Cross-country travel and travel outside construction zones and fenced areas shall be prohibited.

11. An authorized desert tortoise biologist shall record each observation of handled desert tortoises including those moved from roads. Data will be collected, including: location, date, time of observation, whether the tortoise was handled, the general health of the tortoise, whether it voided its bladder, the location the tortoise moved from and the location it was moved to, and any unique physical characteristics. The authorized desert tortoise biologist shall also include the names of all monitors approved for the Project, and the activities and level of involvement during the Project. The Tribe and EPA are responsible for collecting all tortoise-related information and submitting it to the Service.

ANALYTICAL FRAMEWORK FOR THE JEOPARDY AND ADVERSE MODIFICATION DETERMINATIONS

Section 7(a)(2) of the Endangered Species Act requires that Federal agencies ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of listed species. "Jeopardize the continued existence of" means to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species (50 CFR § 402.02).

The jeopardy analysis in this biological opinion considers the effects of the proposed Federal action, and any cumulative effects, on the rangewide survival and recovery of the listed species. It relies on four components: (1) the Status of the Species, which describes the rangewide condition of the species, the factors responsible for that condition, and its survival and recovery needs; (2) the Environmental Baseline, which analyzes the condition of the species in the action area, the factors responsible for that condition, and the relationship of the action area to the survival and recovery of the species; (3) the Effects of the Action, which determines the direct and indirect impacts of the proposed Federal action and the effects of any interrelated or interdependent activities on the species; and (4) the Cumulative Effects, which evaluates the effects of future, non-Federal activities in the action area on the species.

STATUS OF THE SPECIES AND ITS CRITICAL HABITAT

The range-wide status of the desert tortoise consists of information on its listing history, species account, recovery plan, recovery units, distribution, reproduction, and numbers. Because of the length of the document, the current range-wide status of the species and its critical habitat is provided on the Service's website at:

http://www.fws.gov/nevada/desert_tortoise/documents/misc/status-desert-tortoise.pdf.

If unavailable on this web site, contact the Southern Nevada Fish and Wildlife Office in Las Vegas at (702) 515-5230, and provide File No. 2017-F-0115 along with the date for the status, which is February 10, 2014.

ENVIRONMENTAL BASELINE

Action Area

The action area is defined as all areas to be affected directly or indirectly by the Federal action including interrelated and interdependent actions, and not merely the immediate area involved in the action (50 CFR § 402.02). Subsequent analyses of the environmental baseline, effects of the action, cumulative effects, and levels of incidental take are based upon the action area as determined by the Service.

The action area occurs within the Northeastern Mojave Recovery Unit, outside critical habitat. The action area for this consultation includes project work areas and access roads. The area is within a habitat linkage along U.S. Highway 95 (US 95) identified by the Service (2012) and because development on both sides of US 95 have undergone section 7 consultation as described below, impacts to the desert tortoise as a result of the developments are considered baseline conditions for the action area of this consultation.

The purpose and intent of the proposed action is to provide a backup water supply for the Tribe and not to provide a new water source to expand development. Because the water provided by the proposed action may be used to supply all development on the Reservation, all existing developments within the Reservation are part of the action area, including the golf course, clubhouse, and retail store east of US 95.

Status of the Species in the Action Area

On April 9 through 13, 1993, biologists conducted surveys of the 3,800-acre parcel of Tribal lands in addition to adjacent BLM lands (Dames and Moore 1993). Dominant plant species present include creosote bush (*Larrea tridentata*), white bursage (*Ambrosia dumosa*), and Mojave yucca (*Yucca schidigera*). The substrate is predominantly rocky desert pavement and

washes. Surveys included a combination of 10 triangular strip transects and 10 40-acre plots which were surveyed at 100-percent coverage and located within the triangular transects. The results of the three transects and associated plots located within the proposed project site include 7 tortoises, 16 scat, 97 burrows, and 3 carcasses. Results of the seven surveys on adjacent lands include 18 tortoises, 13 scat, 146 burrows, 7 carcasses, and 1 tortoise nest. A total of 136 desert tortoises were captured and relocated from the 1,500-acre golf course development east of US 95 (B. Tuttle, Senior Biologist, URS Corporation pers. comm to M. Burroughs, Service on May 3, 2001).

Biologists performed desert tortoise surveys of the action area the week of September 26, 2016, in accordance with Service (2010) protocol. No desert tortoises or their sign were observed within the proposed work areas. Additional transects were performed 200, 400, and 600 meters around proposed work areas. Six burrows, three scats, and five tortoise carcasses were found on the 400-meter and 600- meter buffer transect for the water well site and 10 tortoise burrows were found on the 200-meter, 400-meter, and 600- meter buffer transects for the water tank site.

Factors Affecting the Species in the Action Area

On September 16, 1993, the Service issued a non-jeopardy biological opinion (Service File No. 1-5-93-F-260) to the Bureau of Indian Affairs (BIA) for development of golf courses and associated facilities on the Reservation. The proposed project impacted 1,500 acres of tortoise habitat. Full build-out of the project includes four golf courses, a clubhouse, and two hotels. The development involves most tribal lands north and east of US 95. The Service concluded that four desert tortoises may be killed or injured as a result of the project and 140 tortoises may be harassed by capture and removal from the project area. The biological opinion was amended on February 25, 1994, to clarify proposed measures, and terms and conditions of the incidental take statement. Water for the developments is provided by the existing well and storage tank, and the Project will provide a backup water supply.

On May 25, 2001, the Service issued a biological opinion (Service File No. 1-5-01-F-427R) to BIA for residential and commercial development on 2,200 acres of the Reservation south and west of US 95. As a minimization measure in the biological opinion, the Tribe would construct a permanent tortoise-proof fence along the project boundary before surface disturbance associated with the development. No development has occurred under the biological opinion. Development under the 2001 biological opinion would use water from the existing water system and the proposed backup.

Areas surrounding the existing well and storage tank are highly disturbed and devoid of vegetation. In addition to developments east of US 95 covered under the 1993 biological opinion described above, unpaved, graded roads provide access to the well and storage tank sites and existing developments. A powerline and associated access road parallels US 95, approximately 0.3 mile west of the highway.

EFFECTS OF THE ACTION

The greatest potential threats to desert tortoises resulting from the proposed action are associated with vehicle travel on access roads and in work areas. Tortoises could be killed or injured if not located before activities commence, or not avoided by vehicles and equipment. Project vehicles or equipment that stray from designated areas may crush desert tortoises aboveground or in their burrows or damage habitat outside the project area. Tortoises could wander into work areas or take refuge underneath project vehicles and equipment, and be killed or injured when the vehicle/equipment is moved. Project vehicles may strike and kill or injure desert tortoises on access roads. Measures proposed by the EPA to limit vehicle speed, cease activities if a tortoise appears in harm's way, restrict vehicles and equipment to designated areas, and implement worker awareness training as part of the proposed action should minimize these potential effects.

Desert tortoises that are physically moved out of project areas to prevent mortality or injury could be inadvertently harmed if not handled properly. Urine and large amounts of urates may be voided during handling and may represent a severe water loss, particularly to juveniles (Luckenbach 1982). Overheating can occur if tortoises are not placed in the shade when ambient temperatures equal or exceed temperature maximums for the species (Service 2009). Desert tortoises that are not found may be killed or injured by vehicles or equipment during project activities. Measures proposed by EPA to provide authorized desert tortoise biologists to handle tortoises and conduct clearance surveys should minimize these potential effects.

Project activities may result in trash and litter accumulating on the site, which attracts predators such as the common raven, kit fox, and coyote (BLM 1990, Boarman and Berry 1995). Some forms of trash may be ingested by tortoises or they may become entangled resulting in their injury or death. Hazardous material spills, leaks , and releases could affect tortoises if exposed. Measures proposed by EPA to provide desert tortoise awareness training, control litter, and prevent tortoise exposure to hazardous materials, should minimize these potential effects.

Project vehicles that may stray from designated areas may damage habitat outside the project area and may result in soil compaction, erosion, or crushed vegetation. No substantial new habitat disturbance is anticipated as a result of the Project. Measures proposed by EPA to restrict construction equipment, vehicles, and materials within designated areas and locate staging areas in previously disturbed areas whenever possible, should minimize these potential effects.

CUMULATIVE EFFECTS

Cumulative effects are those effects of future non-Federal (State, tribal, local government, or private) activities that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they would likely require separate consultation pursuant to

section 7 of the Act.

We anticipate that most activities on the Reservation will fall under existing or future biological opinions with the Bureau of Indian Affairs or other Federal agency. Therefore, we do not expect future, non-Federal activities are reasonably certain to occur in the action area.

CONCLUSION

After reviewing the current status of the desert tortoise and its critical habitat, the environmental baseline for the action area, the effects of the Project, and the cumulative effects, it is the Service's biological opinion that the Project, as proposed and analyzed, is not likely to jeopardize the continued existence of the threatened Mojave desert tortoise.

The Service's conclusion of no jeopardy is based on the following:

1. The habitat in the project area has been previously disturbed and is of low quality, and no desert tortoises or tortoise sign were observed in the project area.

2. Measures have been proposed by EPA to further minimize any effects of the proposed action to the desert tortoise.

3. The Project would not result in tortoise mortality, or other take of desert tortoise that would significantly affect the range-wide number, distribution, or reproduction of the species; desert tortoises that are taken by non-lethal means as a result of the Project are anticipated to remain in the wild with no long-term effects. Because the Project involves fence construction around an existing airport, we determined that desert tortoise recovery will not be substantially affected.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened wildlife species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Harass is defined by the Service as an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to

and not the purpose of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this incidental take statement.

In June 2015, the Service finalized new regulations implementing the incidental take provisions of section 7(a)(2) of the Act. The new regulations also clarify the standard regarding when the Service formulates an Incidental Take Statement [50 CFR 402.14(g)(7)], from "…if such take may occur" to "…if such take is reasonably certain to occur." This is not a new standard, but merely a clarification and codification of the applicable standard that the Service has been using and is consistent with case law. The standard does not require a guarantee that take will result; only that the Service establishes a rational basis for a finding of take. The Service continues to rely on the best available scientific and commercial data, as well as professional judgment, in reaching these determinations and resolving uncertainties or information gaps.

The Tribe and EPA have a continuing duty to regulate the activity that is covered by this Incidental Take Statement. If the Tribe or EPA fail to adhere to the Terms and Conditions of the Incidental Take Statement through enforceable terms that are added to permits or grant documents, and/or fails to retain oversight to ensure compliance with these Terms and Conditions, the protective coverage of section 7(o)(2) may lapse.

Based on the scope of the proposed action, the desert tortoise survey data, analysis of impacts provided above, measures proposed by the EPA, and the anticipated project timing and duration, the Service anticipates that the following take could occur as a result of the proposed action:.

1. Up to 2 desert tortoises may be captured and relocated. We anticipate desert tortoises moved from harm's way will remain in their home range with no long-term effects.

2. No desert tortoises are anticipated to be killed or injured as a direct or indirect result of project activities.

3. No desert tortoises will be taken in the form of indirect mortality through predation by ravens or other subsidized predators drawn to the project area. This determination is based on no net increase in potential resources for ravens above baseline levels.

4. No desert tortoise nests are anticipated to be disturbed as a result of project activities.

REASONABLE AND PRUDENT MEASURES

The Service believes that the proposed measures in the *Description of the Proposed Action* section of this Biological Opinion are adequate and necessary to minimize take of desert tortoise and we do not include any additional measures as terms and conditions of this incidental take statement. The Tribe and EPA shall ensure that the measures provided in the *Description of the*

Proposed Action are implemented. In order to be exempt from the prohibitions of section 9 of the Act, the Tribe and EPA must ensure full compliance with proposed measures for the Project, which are incorporated into this incidental take statement by reference.

REPORTING REQUIREMENTS

Pursuant to 50 CFR 402.14(i)(3), the EPA must report the progress of the action and its impact on the species to the Service as specified in this incidental take statement. The EPA shall ensure that a report documenting desert tortoise encounters, incidental take (including capture and relocation), and effectiveness and compliance with the desert tortoise protection measures is prepared and submitted to the Service's Southern Nevada Fish and Wildlife Office in Las Vegas within 60 days of completion of construction of the Project.

DISPOSITION OF DEAD OR INJURED TORTOISES

As part of this incidental take statement and pursuant to 50 CFR 402.14(i)(1)(v), upon locating a dead or injured desert tortoise, the Tribe or EPA shall notify the Service and submit the form in Appendix A below.

If a desert tortoise is injured or killed, it shall be delivered to a qualified veterinarian for appropriate treatment or disposal. The applicant shall bear the cost of any required treatment of desert tortoises injured from the Project, euthanasia of sick desert tortoises, and cremation of desert tortoises that die during treatment. Should sick or injured desert tortoises be treated by a veterinarian and survive, they may be transferred as directed by the Service.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to use their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

We offer no conservation measures at this time.

REINITIATION NOTICE

This concludes formal consultation on the actions outlined in your request received April 27, 2017. As required by 50 CFR § 402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over an action has been retained (or is authorized by law) and if: (1) The amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in

a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

If we can be of further assistance, please contact Michael Burroughs in Las Vegas at (702) 515-5242 or via email at Michael_Burroughs@fws.gov.

Sincerely,

Glen W. Knowles
Field Supervisor

cc:
Supervisory Biologist - Habitat, Nevada Department of Wildlife, Las Vegas, Nevada
Enclosure

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Service (Fish and Wildlife Service). 2010. Preparing for any action that may occur within the range of the Mojave desert tortoise (*Gopherus agassizii*). 18 pp.

Service (U.S. Fish and Wildlife Service). 2012. Connectivity of Mojave desert tortoise populations. March 2012 white paper. 18 pp.

Appendix A: Desert Tortoise Injury or Mortality Take Report

If a desert tortoise is killed or injured, immediately contact the U.S. Fish and Wildlife Service by phone at the numbers below and complete Section 1 of the form.

Completed forms should be submitted to the U.S. Fish and Wildlife Service:

U.S. Fish and Wildlife Service
4701 North Torrey Pines Drive
Las Vegas, Nevada 89130
702-515-5230

Project Name: Snow Mountain Water Infrastructure Project	Report Date:
Fish and Wildlife Service File No.- 08ENVS00-2017-F-0115	
Authorized Desert Tortoise Biologist: _____ Employed by:	
Complete all information below if a desert tortoise is injured or killed in addition to initial contact described above.	
If tortoise was injured ☐ or killed ☐ (check appropriate box):	
Date and time found: _____ Found by: _____ GPS location (NAD 83): easting: _____ northing: _____ No. of photos taken: _____ Disposition: _____ _____ _____ Attach report with photos that describe in detail, the circumstances and potential cause of injury or mortality. For injuries include name of veterinarian and detailed assessment of injuries.	