

Final Environmental Assessment

# Water Supply Well #3

City of Caliente

FEMA-1583-DR-NV, PW #81

*October 2008*



**FEMA**

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The City of Caliente (Figure 1) has applied through the Nevada Division of Emergency Management to the Federal Emergency Management Agency (FEMA) Region IX Public Assistance (PA) Program for funding to replace a culinary water well damaged during the flood events of January 2005, which were declared a major disaster (FEMA-1583-DR-NV). FEMA proposes to provide PA Program funds pursuant to Section 406 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, Public Law 93-288, as amended, and its implementing regulations codified at Title 44 of the Code of Federal Regulations (44 CFR) Part 206.

FEMA has prepared this Environmental Assessment (EA) to evaluate the impacts of the proposed PA Program project. The EA has been prepared according to the requirements of the National Environmental Policy Act of 1969 (NEPA), the Council on Environmental Quality (CEQ) regulations implementing NEPA (40 CFR Parts 1500–1508), and FEMA’s implementing regulations (44 CFR Part 10).

The EA process provides steps and procedures to evaluate the potential environmental, social, and economic impacts of a Proposed Action and its alternatives, as well as an opportunity for the public and local, state, and other Federal agencies to provide input through a public comment period. These potential impacts are measured by their context and intensity, as defined in the CEQ regulations.

FEMA's PA Program provides supplemental Federal assistance for the repair, replacement, or restoration of disaster-damaged, publicly owned facilities. From January 10, 2005, to January 17, 2005, portions of the City of Caliente were flooded by high water in Clover Creek. During this flood event, the City of Caliente's Municipal Well #3 was damaged. The purpose of the project is to provide PA Program funding to the City of Caliente to restore the function served by Municipal Well #3.

Municipal Well #3, located at the corner of Dixon Street and McKinley Street in Caliente, Nevada, was drilled in 1966. Municipal Well #3 was one of three wells (one of which was an unacceptably high arsenic producer) that provided water to the residents of Caliente. However, Municipal Well #3 was the City of Caliente's primary culinary well. Prior to the January 2005 flood event, the City of Caliente's municipal water supply was able to meet the demand for water, even in the peak summer months. Before this flood, Municipal Well #3 pumped approximately 600 gallons per minute (gpm) of water containing a small, but acceptable, amount of sand. Water quality tests revealed that the water pumped from this well contained 6 parts per billion (ppb) of arsenic, below the State of Nevada water quality standard of 10 ppb. Two weeks after the January flood event, Municipal Well #3 began to pump unacceptable amounts of sand and was taken off line. It was suspected, and an engineering report later confirmed, that the damage was caused by the January 2005 flood event. Since Municipal Well #3 was taken off line, the remaining two wells do not have capacity to meet the demand of residents for water in the peak summer months. The City is forced to acquire water from the State of Nevada's youth center to meet demands for water during peak periods. Further, Caliente residents have been asked to ration water use during the summer. Last summer the City of Caliente was unable to water three public parks. Therefore, action is needed to restore the potable water capacity provided by Municipal Well #3 so that the City of Caliente can meet the water consumption requirements of its residents.

### **3.1 ALTERNATIVES CONSIDERED AND DISMISSED**

CEQ's NEPA regulations require an investigation and evaluation of reasonable alternatives as part of the NEPA process. The City of Caliente considered repairing Municipal Well #3. According to the engineering report, the shallow aquifer that Municipal Well #3 pumps from is susceptible to surface water influence and the casing of the well is damaged. Due to engineering concerns, repair of Municipal Well #3 was deemed infeasible and eliminated from further consideration.

The City of Caliente considered several criteria for a replacement well location. The site of the replacement well should be on city-owned property, the groundwater at the site should have levels of arsenic below drinking water standards, the site should not be located in the 100-year floodplain, and the site should be close to power and water transmission systems. The City of Caliente contracted a hydrogeologic assessment of potential well sites in April 2007. The study (City of Caliente 2007) examined five potential well sites. Site #1 and Site #3 were dismissed because the likelihood of developing groundwater with an arsenic concentration lower than 10 ppb is low. Site #2 and Site #4 were dismissed because these locations are down-gradient of potential contamination sources and are in the 100-year floodplain. Executive Order 11988 (Floodplain Management) and FEMA's implementing regulations (44 CFR Part 9) prohibits occupancy or modification of floodplains if a practicable alternative exists. For these reasons, these alternatives were eliminated from further consideration. The City of Caliente chose Site #5 as the Preferred Alternative or Proposed Action.

### **3.2 ALTERNATIVE 1 - NO ACTION**

Inclusion of a No Action Alternative in the environmental analysis and documentation is required under NEPA. The No Action Alternative is defined as maintaining the status quo with no FEMA funding for any alternative action. The No Action Alternative is used to evaluate the effects of not providing eligible assistance for the project, thus providing a benchmark against which "action alternatives" may be evaluated. For the purpose of this alternative, it is assumed that the City of Caliente would be unable to restore the service previously provided by Municipal Well #3 for lack of Federal assistance. The City of Caliente would continue to acquire water from the State of Nevada during peak periods, city residents would need to ration their use of water during the summer, and the City of Caliente would be unable to water its public parks during the summer.

### **3.3 ALTERNATIVE 2 - PROPOSED ACTION**

The City of Caliente selected Site #5 (Figure 2) as the preferred location for the replacement well because the site has the potential for low levels of arsenic in the groundwater, the site is located on city-owned property, the site is outside of the 100-year floodplain, and power and water transmission lines are close to the site. Site #5 is a vacant, dirt parcel consisting of 8.45 acres on the Clover Street Extension, northeast of Denton Avenue and southeast of the Union Pacific Railroad track. More specifically, Site #5 is in the Southwest Quarter of the Northeast Quarter of Section 8, Township 4 South, Range 67 East, Mount Diablo Meridian, in the City of Caliente, Lincoln County, Nevada. The site has recently been assigned Lincoln County Assessor's Tax

Parcel Number 03-201-08. Site #5 has recently been used as a temporary debris staging area, primarily for Christmas trees, downed limbs, and other vegetation.

Under the Proposed Action, Municipal Well #3 would be capped and abandoned in place. A test well would be drilled at Site #5 to ensure safe levels of arsenic in the groundwater. Assuming acceptable results, a new well would be drilled as the primary source of culinary water for the City of Caliente. The new well would be drilled to a depth of 300 feet and have a 12-inch-diameter well casing. The new well would be designed to pump 600 gpm. The finished well site would consist of a well house with a floorplan of approximately 22 feet by 16 feet and an approximate height of 9 feet. The well house would be constructed of concrete blocks with a metal roof. The pump would be installed below grade, and the well house would be insulated. No back-up generator would be installed. A gated, perimeter fence would be installed over an area of approximately 100 feet by 75 feet. The area between the fence and the well house would be lined with crushed gravel. An 8-inch-diameter water line would be installed via trenching to connect the new well to the existing water system. The route of the proposed water line from the well house would be northwest for approximately 100 feet, then southwest under the northwest side of Clover Street for approximately 600 feet, to the existing 10-inch-diameter water main. Equipment and materials staging would be on the 8.45-acre parcel. The City of Caliente would not need to acquire property or amend existing utility easements.

The analysis in this chapter focuses on those resource areas where some level of impact may result, including geology and soils, seismicity, water resources, biological resources, cultural resources, air quality, noise, traffic, and environmental justice. No other resource areas have been identified that would require further evaluation pursuant to NEPA for the Proposed Action.

## **4.1 GEOLOGY AND SOILS**

The project area occurs within the Central Nevada Basin and Range physiographic province. The Central Great Basin Mountains section is located in central Nevada and a small area of western Utah. The dominant landforms are north-south trending mountains separated by broad, sediment-filled valleys, many of which have internal drainages. Mountains were formed by faulting and were subsequently modified by erosion. Large alluvial fans have developed at the mouths of most canyons. Undifferentiated volcanic rocks from the Miocene and Oligocene epochs occur in this section. Rhyolites and andesites also occur. Sedimentary rocks from the Miocene-Pliocene epoch, along with rocks from the Pennsylvanian period, are found, and limestone and dolomite from the Cambrian period occur. Intrusive igneous rocks form many of the mountain ranges. Playas are also evident in the internally drained valleys of this section. Alluvial deposits occur in most of the valleys, and these include sand dunes.

The City of Caliente is located in the area of the Meadow Valley Wash and Clover Creek. Bedrock in the Rainbow Canyon and Clover Canyon has been eroded by their streams. The Caliente area is underlain by approximately 200 feet thick of alluvial deposits (Tschanz and Pampeyan 1970, Phoenix 1948). These deposits consist of clay, silt, sand, and gravel and have the potential to yield moderate to large supplies of water while the surrounding consolidated rocks, mainly volcanics with some sandstone and shale, yield small supplies of water. Two main soil types are found in the project area. Site #5 is characterized by Stewval-Gabbvally association soils, which includes those formed from colluvium derived from volcanic rock, over residuum weathered from volcanic rock. These soils are found along mountains and are characterized by a thin layer of very gravelly fine sandy loam over very gravelly loam. Unweathered bedrock is found at an average depth of 10 to 14 inches.

### **4.1.1 Alternative 1 – No Action**

The No Action Alternative would have no potential effects on geology and soils because no new well would be constructed and no ground disturbance would occur.

### **4.1.2 Alternative 2 – Proposed Action**

Under the Proposed Action, a new well would be drilled, a new well house would be constructed, and a waterline would be constructed. All project components would be constructed on flat terrain with little grading or excavation of soils needed. Excavated soil from trenching of the waterline would be backfilled into the trench. It is not anticipated that the proposed drilling, grading, or trenching would have an adverse effect on the geologic resources in the project area. Because of the level topography of the area, erosion from surface runoff is expected to be negligible. Wind erosion would be more likely to occur; however, the City of Caliente would be responsible for covering spoil piles and watering areas of exposed soil as necessary to minimize soil loss from wind erosion.

## 4.2 SEISMICITY

The City of Caliente is located in a seismically quiet region; with noticeable earthquakes felt less than once per few decades. However, slight readjustments to changing conditions do occur.

Executive Order (EO) 12699, Seismic Safety of Federal and Federally Assisted or Regulated New Building Construction, requires newly constructed buildings to meet standards for seismic safety set by the National Earthquake Hazard Reduction Program. However, EO 12699 applies only to construction of new buildings that are to be used or intended for sheltering persons or property and thus is not application for this project.

### 4.2.1 Alternative 1: No Action

Under the No Action Alternative, no impacts would occur to the existing seismicity.

### 4.2.2 Alternative 2: Proposed Action

Under the Proposed Action, the potential for earthquakes remains unchanged. The most likely failure mechanism for the well and water line would be deformation during a seismic event. If the water line or well were to fail during an earthquake, water delivery would be interrupted to residences and businesses. Both the well and the water line would be metered to allow the City of Caliente to quickly discover any leaks caused by a seismic event and would be able to temporarily suspend service until the failure could be resolved. Because the water line is underground and the well isolated from buildings or gathering places, structural damage would pose no major risk to people and facilities located in the vicinity.

## 4.3 WATER RESOURCES

### 4.3.1 Water Quality and Hydrology

Meadow Valley Wash and Clover Creek are important sources of recharge to the local groundwater system. Clover Creek and Meadow Valley Wash run west and south, respectively, before they join together and then flow through the City of Caliente in the southwestern direction. Groundwater flows in a similar pattern following the wash and creek (CES 1995).

Numerous wells have been drilled and documented in the area. All of the wells are shallower than 220 feet deep and the static water levels in the wells are generally shallow. Most of the wells withdraw groundwater from the alluvial aquifer that is capable of transmitting a significant quantity of groundwater. Yields of more than 1,000 gpm are reported for wells in Clover and Rainbow Canyons. Groundwater quality is generally good and meet the drinking water standards for those constituents analyzed (CES 1995).

Drinking water for the City of Caliente meets or exceeds federal and state water quality standards. However, elevated arsenic concentrations have been reported in some wells in the City of Caliente and its vicinity. Meadow Valley Wash from the north contributes to elevated arsenic concentrations in the City of Caliente while Clover Creek from the east and Newman Canyon from the northwest have little to no impact on elevated arsenic levels (City of Caliente 2007). Groundwater in the eastern and southeastern area of the City of Caliente appears to be

more influenced by the Clover Creek drainage than by the Meadow Valley Wash drainage (City of Caliente 2007).

#### *4.3.1.1 Alternative 1 - No Action*

The No Action Alternative would have no potential effects on water quality because no new well would be constructed. There would be no surface disturbance from construction and no potential erosional impacts to surface water. There would also be no potential effects to drainage patterns in the area.

#### *4.3.1.2 Alternative 2 - Proposed Action*

Under the Proposed Action, a new water well would be drilled to a depth of 300 feet and, when completed, pump approximately 600 gpm from the groundwater aquifer. Groundwater wells in Clover and Rainbow Canyons yield more than 1,000 gpm. Production rates of the City of Caliente's wells range between 400 gpm and 600 gpm; and, before being damaged by the 2005 storms, Municipal Well #3 yielded approximately 600 gpm. Yields of 600 gpm proposed for Site #5 would match the of the output of Municipal Well #3, which would be abandoned under the Proposed Action, and thus are not anticipated to adversely affect groundwater quality, quantity, or flow rates.

Test results indicate that arsenic concentration at Site #5 is 1 ppb (City of Caliente 2007). U.S. Environmental Protection Agency (USEPA) standards for arsenic in drinking water are 10 ppb. Groundwater in the project area is influenced by Clover Creek which does not contribute to elevated arsenic levels in the area. Conversely, Meadow Valley Wash, located west of the project area, is believed to contribute to elevated arsenic levels. Furthermore, Site #5 is located upgradient of potential contamination sources in the City of Caliente. As a result, the likelihood is high for a developing groundwater well with arsenic concentrations within safe drinking water standards of 10 ppb.

The proposed well site consists of a 100-foot-by-75-foot portion of an 8.5-acre vacant dirt parcel on flat terrain. Creating such a small area of impervious surface would thus have minimal potential to increase the long-term rate of surface runoff or to affect patterns of hydrology. Including excavation associated with the extension of the water line along Clover Street and equipment and supply staging, more than 1 acre of land would likely be disturbed. Therefore, the City of Caliente would likely need to obtain a National Pollutant Discharge Elimination System (NPDES) permit. The City of Caliente would prepare a Storm Water Pollution Prevention Plan (SWPPP) prior to construction and would submit the Notice of Intent (NOI) and the Notice of Termination (NOT) to the USEPA. The NOI would be submitted to the USEPA at least 48 hours prior to the start of construction.

In order to minimize any potential impacts to water quality as a result of soil erosion associated with construction, the City of Caliente would employ Best Management Practices (BMPs) such as covering spoil piles, watering areas of disturbed soil, and staging equipment along existing roads. The City of Caliente would dispose of extraneous spoils resulting from drilling, grading, or trenching in compliance with all applicable federal, state, and local regulations.

### 4.3.2 EO 11998 - Floodplain Management

EO 11988 requires federal agencies to take action to minimize occupancy and modification of floodplains. Furthermore, EO 11988 requires that federal agencies proposing to fund a project sited in the 100-year floodplain must consider alternatives to avoid adverse effects and incompatible development in the floodplain. FEMA's regulations implementing EO 11988 are codified at 44 CFR Part 9.

The City of Caliente participates in FEMA's National Flood Insurance Program (NFIP). Thus the City of Caliente has promulgated and enforces a floodplain ordinance at least as stringent as the NFIP and its implementing regulations (44 CFR Parts 59 through 77). Furthermore, FEMA has published a Flood Insurance Rate Map (FIRM) for the City of Caliente. Site #5 and the proposed water line route are shown on FIRM number 3200150001C, dated October 15, 1985, as being in Special Flood Hazard Area Zone B, which represents an area outside the 100-year floodplain but between the 100-year floodplain and the 500-year floodplain.

#### *4.3.2.1 Alternative 1 – No Action*

The No Action Alternative would not impact the floodplain in the project vicinity. Flooding is expected to occur as it has historically.

#### *4.3.2.2 Alternative 2 – Proposed Action*

Under the Proposed Action, a well house measuring approximately 16 feet by 32 feet and approximately 600 feet of water line would be constructed in Special Flood Hazard Area Zone B. The proposed improvements are located outside of the 100-year floodplain and would not result in modifications or occupation of the floodplain. Thus the Proposed Action complies with EO 11988 and 44 CFR Part 9. The City of Caliente would ensure that the Proposed Action complies with the local floodplain ordinance.

### 4.3.3 EO 11990 - Protection of Wetlands

EO 11990 requires federal agencies to take action to minimize the destruction or modification of wetlands by considering both direct and indirect impacts to wetlands. Furthermore, EO 11990 requires that federal agencies proposing to fund a project that could adversely affect wetlands must consider alternatives to avoid such effects. FEMA's regulations implementing EO 11990 are codified at 44 CFR Part 9. A biologist from FEMA's consultant, Nationwide Infrastructure Support Technical Assistance Consultants (NISTAC) (a joint venture of URS Group, Inc. and Dewberry and Davis LLC), conducted a reconnaissance field survey on February 20, 2008. Based on this site reconnaissance and a review of the National Wetland Inventory maps, no evidence of wetlands were found in the project area.

#### *4.3.3.1 Alternative 1 - No Action*

Because there are no wetlands in the project area, the No Action Alternative would not affect wetlands.

#### *4.3.3.2 Alternative 2 - Proposed Action*

Because there are no wetlands in the project area, the Proposed Action would not affect wetlands. Thus, the Proposed Action complies with EO 11990 and 44 CFR Part 9.

### **4.4 BIOLOGICAL RESOURCES**

Vegetation in the project area is classified as Big Sagebrush Shrubland (SWReGAP 2008). This ecological system occurs throughout much of the western U.S., typically in broad basins between mountain ranges, plains, and foothills. These shrublands are dominated by big sagebrush (*Artemisia tridentata*) with scattered juniper (*Juniperus* spp.), greasewood (*Sarcobatus vermiculatus*), and saltbush (*Atriplex* spp.) present in some stands. Site #5 had been used by the City of Caliente as a temporary debris staging before being chosen for the new well site. As a result, the area has been graded, natural vegetation is no longer present, and the vegetation that exists consists of non-native grasses. The proposed site of the water line connecting the well house to the water main would be placed under Clover Street, a graded and maintained dirt road with no vegetation present.

#### **4.4.1 Endangered Species Act**

Section 7 of the Endangered Species Act requires federal agencies to determine if projects that they undertake or fund have the potential to affect species listed or proposed for listing as threatened or endangered or designated critical habitat. To determine the potential for federally listed endangered, threatened, or proposed species or designated critical habitat to occur in the project area, FEMA reviewed the U.S. Fish and Wildlife Service (USFWS) list of federally listed species for Lincoln County, Nevada (USFWS 2008). The species list for Lincoln County maintained by the USFWS contains seven endangered and threatened candidate species. To evaluate the potential for the project site to provide suitable habitat for federally listed and USFS sensitive species, a NISTAC biologist conducted a reconnaissance field survey on February 20, 2008. During the site visit, no federally listed species, species proposed for federal listing, or areas of suitable habitat for these species were observed. For all the of seven federally listed or candidate species, the project area is either (1) clearly outside of the known geographic or elevational range of the species or (2) does not contain habitat characteristics known to support the species.

##### *4.4.1.1 Alternative 1 - No Action*

Under the No Action Alternative there would be no adverse or beneficial effects to listed, proposed or candidate species.

##### *4.4.1.2 Alternative 2 - Proposed Action*

Because the project area lacks suitable habitat for any federally protected species, FEMA determined that the Proposed Action would not affect any threatened or endangered species, species proposed for listing as threatened or endangered, or designated critical habitat. Therefore, the Proposed Action complies with Section 7 of the Endangered Species Act.

#### 4.4.2 EO 13112 - Invasive Species

EO 13112 requires federal agencies to prevent the introduction of invasive species and to provide for their control and minimize the economic, ecological, and human health impacts that invasive species cause.

##### *4.4.2.1 Alternative 1 - No Action*

The No Action Alternative would not result in the introduction or control of invasive species.

##### *4.4.2.2 Alternative 2 - Proposed Action*

The Proposed Alternative would not contribute to the spread of invasive species in the project area. Site #5 has been used by the City of Caliente as a temporary debris storage area and much of the vegetation in the area has been cleared; vegetation that remains consists of non-native grasses. The proposed pipeline would be placed under Clover Street, a graded and maintained dirt road with no vegetation present. The City of Caliente would ensure that any imported fill or other construction materials would be certified as being free from containing invasive species. Therefore, the Proposed Action would comply with EO 13112.

### 4.5 CULTURAL RESOURCES

Section 106 of the National Historic Preservation Act (NHPA) requires federal agencies to identify significant cultural resources that may be affected by their actions (including funding) and mitigating adverse effects to those resources.

A NISTAC archaeologist conducted a record search and identified three previously recorded cultural resource sites within a 1-mile-radius of the project area. No previously-recorded cultural resource sites were found within 1000 feet of Site #5 or the proposed water line route. NISTAC archaeologist Michael S. Kelly, a Registered Professional Archaeologist, conducted a pedestrian archaeological survey of the area of potential effects on February 20, 2008. No cultural resources potentially eligible to the National Register of Historic Places (NRHP) were located during this survey. Both Site #5 and the proposed water line route exhibit considerable surface disturbance associated with modern and historic development. FEMA documented the results of the record search and pedestrian survey in a Cultural Resources Technical Report (FEMA 2008).

#### 4.5.1 Alternative 1 - No Action

Under the No Action Alternative, no impacts would occur to cultural resources because no construction or other activities would occur that could potentially disturb cultural resources.

#### 4.5.2 Alternative 2 - Proposed Action

Based on the results of the record search and the pedestrian survey, FEMA determined that the Proposed Action would not affect cultural resources. In accordance with Section 106 of the NHPA, FEMA transmitted copies of the Cultural Resources Technical Report and requested comments from the Moapa Band of Paiutes, Yerington Paiute Tribe, and Yomba Shoshone Tribe on June 3, 2008. The only response FEMA received was from the Chairman of the Cultural Committee for the Moapa Band of Paiutes, Ms. Anna Domingo, who contacted FEMA by

telephone on June 20, 2008. FEMA attempted to contact Ms. Domingo by telephone at her office and home multiple times throughout July 2008; however, Ms. Domingo has not responded to date. FEMA considers the consultation with the Moapa Band of Paiutes concluded. On August 12, 2008, FEMA transmitted a copy of the Cultural Resources Technical Report to the Nevada State Historic Preservation Officer (SHPO) and requested that the SHPO concur with FEMA's determination of "no historic properties affected." The SHPO concurred with FEMA's determination by letter of September 10, 2008 (Appendix A).

Should any previously unidentified prehistoric or historic cultural resources be encountered during the construction process, the City of Caliente must stop all construction activities in the vicinity of the discovery and take all reasonable measures to avoid or minimize harm to the property. The City of Caliente must notify NDEM, and NDEM must notify FEMA as soon as practicable. FEMA would then consult with the SHPO. In the case of the discovery of human remains, the City of Caliente must immediately notify the local law enforcement office and the county coroner/medical examiner. If the coroner/examiner determines that human remains are or may be of Native American origin, the discovery would be treated in accordance with Nevada Revised Statute 383.

#### **4.6 AIR QUALITY**

The Clean Air Act is a comprehensive federal law that regulates air emissions from area, stationary, and mobile sources. It authorized the USEPA to establish National Ambient Air Quality Standards (NAAQSs) to protect public health and the environment. The NAAQSs include standards for the following five criteria pollutants: nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>), carbon monoxide (CO), sulfur dioxide (SO<sub>2</sub>), and particulate matter less than 10 micrometers in diameter (PM<sub>10</sub>). In addition, new NAAQSs for ozone and particulate matter less than 2.5 micrometers in diameter (PM<sub>2.5</sub>) have been implemented. Areas where the monitored concentration of a pollutant exceeds the NAAQS are classified as being in nonattainment for that pollutant. If the monitored concentration is below the standard, the area is classified as in attainment. The project area is within an attainment area for all criteria pollutants.

##### **4.6.1 Alternative 1 - No Action**

Under the No Action Alternative, there would be no effects to air quality, as no construction or other activities resulting in air emissions would occur.

##### **4.6.2 Alternative 2 - Proposed Action**

The Proposed Action would result in negligible, temporary impacts to air quality. These impacts would only occur during construction. Combustion engines associated with construction equipment and vehicles would emit CO, NO<sub>2</sub>, SO<sub>2</sub>, and O<sub>3</sub> precursors. Ground disturbance would result in emissions of PM<sub>10</sub> and PM<sub>2.5</sub>. To minimize the effects to air quality, the City of Caliente would ensure use of well-maintained and properly tuned construction equipment and vehicles, minimize idling time of construction vehicles, and employ dust control measures, such as watering disturbed areas and covering spoil piles, as necessary.

## 4.7 NOISE

Noise is federally regulated by the Noise Control Act of 1972. Although the Noise Control Act tasks the USEPA to prepare guidelines for acceptable ambient noise levels, it only charges those federal agencies that operate noise-producing facilities or equipment with implementing noise standards. By nature of its mission, FEMA does not have statutes defining noise.

Certain land uses are sensitive to noise. Noise-sensitive receptors are located at land uses associated with indoor and/or outdoor activities that may be subject to stress or significant interference from noise. They often include residential dwellings, hotels, hospitals, nursing homes, educational facilities, libraries, and offices. There are no noise-sensitive land uses in or near the project area. Noise sources in the project area include the Union Pacific Railroad, highway traffic along U.S. Route 93, and vehicle traffic along Clover Street and Denton Street.

### 4.7.1 Alternative 1 – No Action

Under the No Action Alternative, noise would remain at current levels.

### 4.7.2 Alternative 2 – Proposed Action

The Proposed Action would result in temporary increases in noise levels, which would be limited to the duration of construction activities. There are no sensitive noise receptors that would be affected by construction activities. Because the proposed well house would be insulated, no long-term noise impacts are expected.

The City of Caliente would be responsible for implementing the following measures to reduce noise levels and their effects to the extent practicable:

- All mobile or fixed noise-producing construction equipment that is regulated for noise output by a local, state, or federal agency would comply with such regulation.
- The use of noise-producing signals, including horns, whistles, alarms, and bells, would be for safety warning purposes only.
- Construction would be limited to weekdays between 7 a.m. and 7 p.m. and between 10 a.m. and 5 p.m. on weekends.
- Noise levels resulting from construction would comply with local noise ordinances.

## 4.8 TRAFFIC

U.S. Route 93 is an arterial road through the City of Caliente and the primary access to Las Vegas to the south and Ely to the north. Clover Street is connected to U.S. Route 93 by Spring Street, which is one of two Union Pacific Railroad crossings in the City of Caliente. Clover Street in the project area hosts one of the City of Caliente's commercial districts. Denton Street provides ingress/egress to residences south of the project area.

### 4.8.1 Alternative 1 – No Action

The No Action Alternative would result in no activities which would affect traffic.

#### 4.8.2 Alternative 2 – Proposed Action

The Proposed Action would only impact traffic during construction. As U.S. 93 is a major highway that becomes an arterial route through the City of Caliente, the small addition of any construction vehicle traffic associated with the Proposed Action would be negligible. A short-term increase in traffic on Spring Street and Clover Street would result from construction vehicles accessing Site #5. The City of Caliente may need to detour traffic along Clover Street during the installation of the proposed water line. The City of Caliente would provide notification, signage, flagpersons, and other measures to minimize disruption to residents south of the project area along Denton Street and to business owners and customers along Clover Street. The Proposed Action would not inhibit access to the railroad crossing at Spring Street. No long-term impacts to traffic would occur.

### 4.9 EO 12898 - ENVIRONMENTAL JUSTICE

EO 12898 requires federal agencies to make achieving environmental justice part of their missions by identifying and addressing disproportionately high and adverse human health or environmental effects by its programs, policies, and activities on minority and low-income populations. EO 12898 also tasks federal agencies with ensuring that public notifications regarding environmental issues are concise, understandable, and readily accessible.

#### 4.9.1 Alternative 1 - No Action

Under the No Action Alternative, there would be no impacts to minority or low-income populations in the City of Caliente.

#### 4.9.2 Alternative 2 - Proposed Action

Under the Proposed Action, the socioeconomic impacts are beneficial to all City of Caliente residents. The primary benefit would be returning the supply of potable water to pre-disaster levels. Construction of the new well would allow the City of Caliente to supply water to all residents without reliance on external sources. As described in preceding sections, no substantial adverse impacts are expected to occur as a result of implementing the Proposed Action. Thus, the Proposed Action would not result in disproportionately high and adverse effects on minority or low-income populations. As a result, the Proposed Action would comply with EO 12898.

### 4.10 CUMULATIVE IMPACTS

CEQ defines a cumulative impact as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions...” (40 CFR Part 1508.7). The Proposed Action would return potable water production to pre-disaster levels and would not increase the water supply systems capacity or create new distribution networks. Because the capacity and distribution systems would be unchanged, the Proposed Action would not provide additional water resources for development, agriculture, or minimal resource exploration. Further, the City of Caliente is unaware of any plans for additional construction in the project area during the construction period for the

Proposed Action. Therefore, no cumulative impacts are expected to occur from the Proposed Action in combination with actions occurring in the vicinity of the project area.

FEMA is the lead federal agency for conducting the NEPA compliance process for this project. It is the lead federal agency's responsibility to expedite the preparation and review of NEPA documents in a way that is responsive to the needs of City of Caliente residents while meeting the spirit and intent of NEPA and complying with all NEPA provisions.

FEMA and the City of Caliente circulated the Draft EA for a 1-week public comment period. The public was notified of the Draft EA availability via the FEMA website and publication of a public notice in the *Lincoln County Record*. During the public comment period, FEMA accepted written comments on the Draft EA addressed to FEMA Region IX Environmental Officer, 1111 Broadway, Suite 1200, Oakland, California 94607 or [fema-rix-ehp-documents@dhs.gov](mailto:fema-rix-ehp-documents@dhs.gov). FEMA received no comments on the Draft EA.

- Consulting Engineering Services, Inc. 1995. Hydrogeologic Investigation to Delineate Capture Zones for the City of Caliente Wellhead Protection Program.
- Federal Emergency Management Agency (FEMA). 2008. Cultural Resources Inventory Report for the City of Caliente Water Supply Well #3 Restoration Project, City of Caliente, Lincoln County, Nevada. Prepared under contract by Nationwide Infrastructure Support Technical Assistance Consultants (NISTAC). May.
- Phoenix, D.A. 1948. Geology and Ground Water in the Meadow Valley Drainage Area, Nevada, Above the Vicinity of Caliente. State of Nevada Water Resources Bulletin No. 7.
- Southwest Regional Gap Analysis Project. 2008. SWReGAP Landcover Database. Assessed August 13, 2008. <http://earth.gis.usu.edu/swgap/index.html>
- City of Caliente. 2007. Hydrogeologic Assessment, A Well Siting Study. Prepared under contract by Sunrise Engineering. April 16.
- Tschanz, C.M. and E.H. Papeyan 1970. Geology and Mineral Deposits of Lincoln County, Nevada. Nevada Bureau of Mines and Geology Bulletin 73.
- U.S. Fish and Wildlife Service (USFWS). 2008. Nevada Ecological Services Database. <http://www.fws.gov>. Accessed August 14.

Federal Emergency Management Agency, Region IX

Alessandro Amaglio, Environmental Officer

Nationwide Infrastructure Support Technical Assistance Consultants

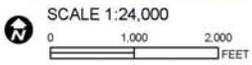
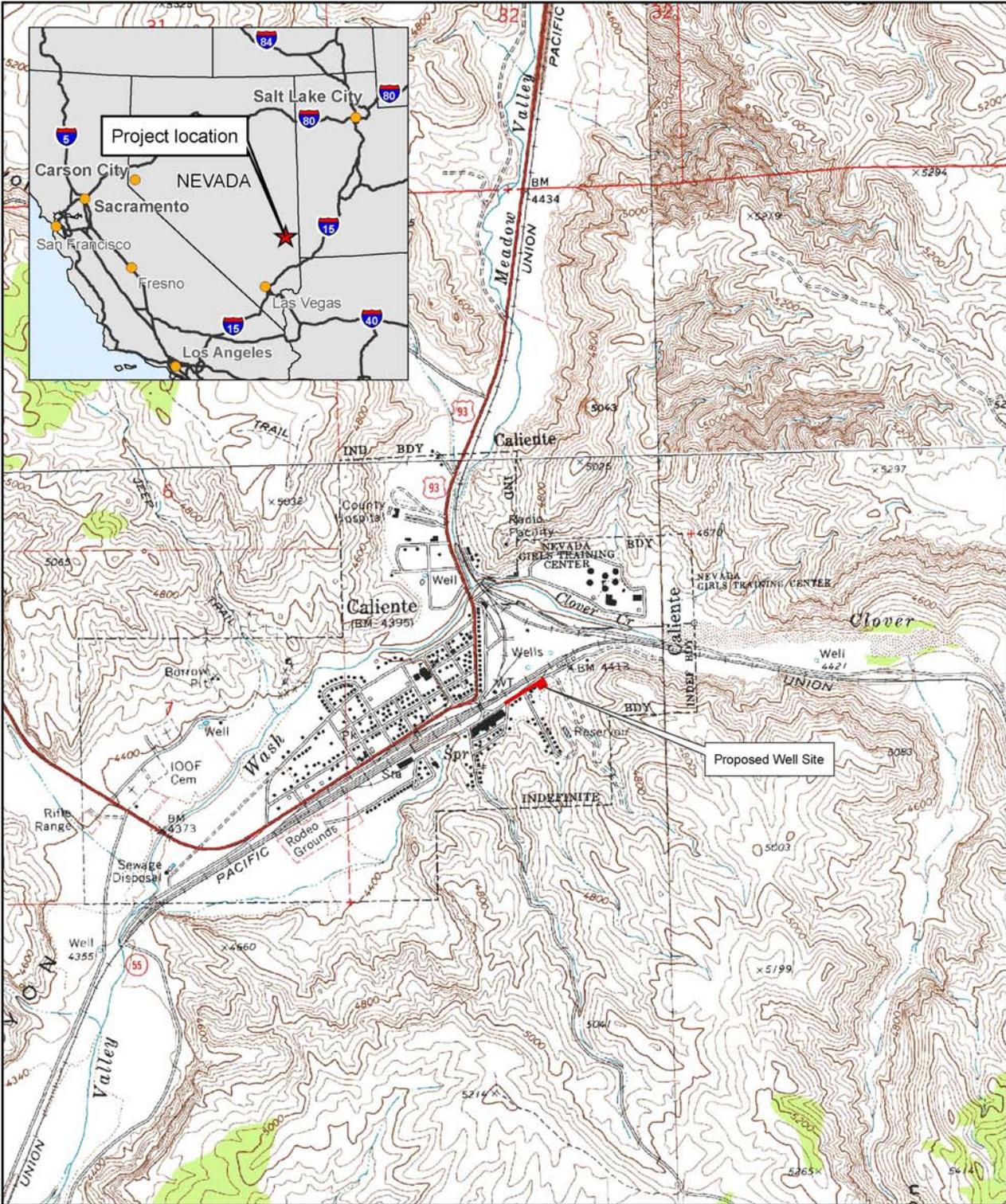
G. Morgan Griffin, Senior Project Manager

J.P. Charpentier, Environmental Planner

Michael S. Kelly, Senior Archaeologist

Sarah McDaniel, Archaeologist

## Figures



1:24,000 USGS Topographic Quad: Caliente  
 Township and Range: SW 1/4, Sec. 8, T4S, R67E, M.D. B&M.

Figure 1  
**Vicinity Map**  
 Caliente Well Replacement Project



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**Appendix A**  
**Concurrence from the State Historic Preservation Officer**



JIM GIBBONS  
Governor

MICHAEL E. FISCHER  
Department Director

STATE OF NEVADA  
DEPARTMENT OF CULTURAL AFFAIRS

State Historic Preservation Office  
100 N. Stewart Street  
Carson City, Nevada 89701  
(775) 684-3448 • Fax (775) 684-3442  
www.nvshpo.org

RONALD M. JAMES  
State Historic Preservation Officer

September 10, 2008

Alessandro Amaglio  
Environmental Officer  
Federal Emergency Management Agency  
U.S. Department of Homeland Security  
1111 Broadway Suite 1200  
Oakland CA 94607-4052

RE: Water Supply Well #3 Replacement Project, City of Caliente, Lincoln County  
(FEMA-1583-DR-NV, PW #81).

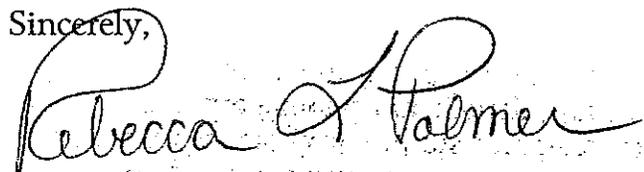
Dear Mr. Amaglio:

The Nevada State Historic Preservation Office (SHPO) reviewed the subject undertaking. This cultural resource inventory report was completed following an intensive archaeological and historic inventory of the project area. The SHPO concurs with the Federal Emergency Management Agency's determination that no historic properties were found within the area of potential effects (APE) for the subject undertaking.

If buried and previously unidentified resources are located during project activities, the SHPO recommends that all work in the vicinity cease and this office be contacted for additional consultation per 36 CFR 800.13.b.3. and NRS 383.150-383.190.

If you have any questions concerning this correspondence, please contact me by phone at (775) 684-3443 or by e-mail at [Rebecca.Palmer@nevadaculture.org](mailto:Rebecca.Palmer@nevadaculture.org).

Sincerely,

  
Rebecca Lynn Palmer  
Review and Compliance Officer, Archaeologist

SEP 15 PM 1:36

RECEIVED