

Final Environmental Assessment

Sky Tavern Water/Fire System

City of Reno

PDMC-PJ-09-NV-2008-001

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FEMA

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Acronyms and Abbreviations

ACM	asbestos-containing materials
APE	area of potential effect
CEQ	Council on Environmental Quality
C.F.R.	Code of Federal Regulations
City	City of Reno
EA	Environmental Assessment
EO	Executive Order
EPA	U.S. Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FONSI	Finding of No Significant Impact
GCR	General Conformity Rule
KEC	Kautz Environmental Consultants, Inc.
lodge	Sky Tavern Lodge
MBTA	Migratory Bird Treaty Act
NAAQS	National Ambient Air Quality Standards
NDEM	Nevada Division of Emergency Management
NDOT	Nevada Department of Transportation
NEPA	National Environmental Policy Act
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NHPA	National Historic Preservation Act
NO _x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NVCRIS	Nevada Cultural Resources Information System
O ₃	ozone
PA	Programmatic Agreement
PM _{2.5}	particulate matter less than 2.5 micrometers in diameter
PM ₁₀	particulate matter less than 10 micrometers in diameter
SHPO	State Historic Preservation Officer
SR 431	State Route 431
TNF	Toiyabe National Forest
tpy	tons per year
URS	URS Group, Inc.
U.S.C.	United States Code
USFWS	U.S. Fish and Wildlife Service

Acronyms and Abbreviations

VOC volatile organic compound

WCAQMD Washoe County Health District Air Quality Management Division

SECTION ONE INTRODUCTION

The City of Reno (City), Nevada, has applied, through the Nevada Division of Emergency Management (NDEM), to the Department of Homeland Security’s Federal Emergency Management Agency (FEMA) for Federal financial assistance (Federal action) to implement the Sky Tavern Water/Fire System Project (proposed project) in Washoe County, Nevada. The assistance would be provided to the City—as the subgrantee—through the Pre-Disaster Mitigation Program (PDMC-PJ-09-NV-2008-001). The subgrantee’s proposal consists of an upgrade of the fire-suppression system at Sky Tavern Lodge (lodge) by installing a new water tank and renovating the associated water pipeline system to feed into three new fire hydrants in the lodge’s parking lots.

The Pre-Disaster Mitigation Program is authorized by Section 203 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988 (42 U.S.C. §§ 5133 [2008]) to assist States and communities to implement sustained, pre-disaster, natural-hazard mitigation programs to reduce overall risk to the population and structures, while also reducing reliance on financial assistance from disaster declarations.

The City owns and manages the lodge and the surrounding 143-acre parcel, which is located approximately 30 miles southwest of Reno, in Washoe County, Nevada (Figure 1 [Appendix A]). The area surrounding the lodge is heavily forested; because drought conditions have prevailed since 1998, vegetation in the area is dry. These dry fuels in the area put the lodge and surrounding residences at high risk for catastrophic wildfires. The area does not have reliable water supply systems for defending against wildfires.

FEMA has prepared an Environmental Assessment (EA) to evaluate the potential impacts of the proposed project and the identified alternatives of the proposed project. FEMA has prepared this EA in accordance with the National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. §§ 4321–4327 [2008]) and the associated Council on Environmental Quality (CEQ) regulations (40 C.F.R. §§ 1500–1508 [2008]) and FEMA implementing regulations (44 C.F.R. § 10 [2008]). The EA process provides steps and procedures to evaluate the potential environmental, social, and economic impacts of a proposed project and alternatives. The potential impacts are evaluated according to their context and intensity, as defined in the CEQ regulations. The EA process also includes procedures for giving Federal, State, and local agencies and the public opportunities to provide input on the proposed project and alternatives.

SECTION TWO PURPOSE OF AND NEED FOR ACTION

The lodge is located immediately west of State Route 431 (SR 431), the Mount Rose Highway; the lodge is surrounded by the Toiyabe National Forest (TNF) Carson Ranger District and several small residential neighborhoods. SR 431 is the only transportation route to this mountainous area. According to the City Fire Department, fires in the area that have had the potential to threaten structures at the lodge have occurred an average of once every 40 years. Recent fires in the vicinity include the 2007 Hawken Fire (5,000 acres), the 2006 Skyline Fire (600 acres), and the 2001 Martis Fire (14,500 acres).

In 2005, the Nevada Fire Safe Council completed *Mt. Rose Corridor Community Wildfire Risk and Hazard Assessment*, which included the lodge area in the assessment (Resource Concepts, Inc. 2005). According to that assessment, the area's mountainous terrain includes topographic features (e.g., narrow canyons) that contribute to "extreme fire behavior," and detritus near the lodge contributes to a high hazard fuel load. Overall, the community was classified as a "high hazard" area. This rating was based on the topographic and vegetative characteristics described above, the limited water sources, and the distance from fire suppression resources.

The existing water tank at the lodge is constructed of redwood, has a storage capacity of 23,000 gallons, and is approximately 1150 feet uphill (southwest) from the lodge. The water tank is fed by a natural spring on the hillside, approximately 160 feet above the tank. The water tank provides drinking water to the lodge facilities year-round, but the primary demand for water occurs during winter weekends when the City's junior ski program is underway (generally November to March). During the rest of the year, the water is held in reserve in case of fire. Most of the time the tank is full, and excess water drains down the mountainside.

The City has determined that the existing water tank is not adequate to protect the lodge if a significant fire occurs in the area. The existing water supply in the area does not provide a sufficient reliable water source for fire suppression. According to the City, the nearest dependable water supplies that meet fire storage/suppression requirements are in southwestern Reno and North Lake Tahoe, approximately 25 and 30 miles away, respectively. Fire responders depend on reliable water sources to fight and suppress fires. Reliable sources enhance the ability of fire responders to suppress fires quickly and minimize the potential for larger catastrophic fires, which can spread and result in the loss of structures and threaten lives.

FEMA has concluded that a need exists for improved firefighting facilities at the lodge to reduce the overall risk to people and structures as a result of fire. The purpose of the proposed Federal action is to address the identified need by providing Federal financial assistance to upgrade the fire-suppression system at the lodge.

SECTION THREE ALTERNATIVE ANALYSIS

The City has proposed reducing the risk of loss at the lodge and neighboring communities from fire by increasing the capacity of the existing water tank and completing associated improvements to the overall water supply system. These improvements would provide additional water for fire suppression and would facilitate the use of the lodge as a staging and re-supply station for firefighting efforts throughout the region. In addition to the No Project Alternative, the City considered four alternatives to improve the water supply system at the lodge.

3.1 ALTERNATIVES CONSIDERED AND DISMISSED

The City considered and dismissed two alternatives prior to the preparation of this document. The City considered renovating only the existing water tank to increase its capacity but determined that enlarging the tank without simultaneously expanding the foundation would result in a structurally unsound facility. Further, the existing 4-inch-diameter pipelines would not be adequate to supply water from a larger tank. Accordingly, this alternative was determined to be infeasible and was eliminated from further consideration.

The City also considered an alternative that would include construction of a new tank (smaller than those identified under Alternative 2 [Proposed Project] and Alternative 3 [Alternative Project]) and pond (larger than that identified under the alternative project). However, this alternative was determined to be infeasible because it would not provide sufficient water volume to protect the full assets at the lodge.

3.2 ALTERNATIVE 1: NO PROJECT

A No Project Alternative is required to be included in the environmental analysis and documentation under NEPA. The No Project Alternative is defined as maintaining the status quo, with no FEMA financial assistance for any alternative. The No Project Alternative is used to evaluate the effects of not providing eligible assistance for the project; thus, this alternative provides a benchmark against which other alternatives may be evaluated. For the purpose of the environmental analysis, under the No Project Alternative, it is assumed that the City would be unable to reduce the risk from fire to people and structures at the lodge and in the neighboring communities because of the lack of Federal financial assistance. Therefore, in the No Project Alternative, no improvements would be made, and the City would continue to operate the lodge with the existing water tank and pipelines.

3.3 ALTERNATIVE 2: SUBGRANTEE'S PROPOSAL (PROPOSED PROJECT)

The subgrantee's proposal (Proposed Project) consists of replacing the water tank with a larger tank, renovating the associated water pipeline system, and installing three fire hydrants in the lodge parking lots. This alternative is referred to as the Proposed Project because it is the

Alternative Analysis

alternative that the City originally proposed to FEMA for financial assistance. Completion of the Proposed Project would be expected to take 60 to 90 days. The City plans to conduct the work between June and September 2010.

The components of the Proposed Project are as follows:

- The existing 23,000-gallon tank, concrete foundation, and adjacent concrete retaining wall would be excavated and removed. A temporary, mobile tank would be sited near the permanent tank location to provide water during construction.
- A new 250,000-gallon steel tank would be installed at the site of the existing tank. At an average rate, once emptied, the spring would fill the proposed tank in approximately 12 days. The tank would be 16 to 20 feet high and 40 to 52 feet in diameter. The exterior of the tank would likely be painted brown to blend with the surroundings.
- A new concrete retaining wall would be constructed on the uphill side of the new tank, if necessary.
- Trees would be planted upslope of the new tank to reduce the risk that skiers or snowboarders might drift to the southern edge of the slope and collide with the tank.
- A water pipeline system would be installed to carry water from the new tank downhill to the lodge and the parking lots. The pipeline would be between 8 and 12 inches in diameter. Installing this system would require the excavation of a trench that is approximately 2 feet wide and 4 to 5 feet deep along the entire length of the new pipeline; the trench would be backfilled after the pipeline is installed. The existing 4-inch-diameter pipeline would be disconnected from the water supply system and left in place underground.
- The water pipeline would continue downhill from the new tank in a straight line, passing diagonally across the open ski run toward the lodge. After approximately 800 feet, a lateral pipeline would divert water 20 feet across the slope to the existing chlorinator station, thereby connecting the new pipeline system to the existing water supply system at the lodge. The existing waterline between the chlorinator and the lodge may be upgraded from 2 to 4 inches in diameter.
- The main pipeline would continue downhill toward the southern side of the parking lots. Depending on the final design, this proposed pipeline route could cross existing drainage channels/culverts at one or more locations. After approximately 500 feet, the pipeline would intersect the west parking lot, and a lateral pipeline would branch north to connect to a proposed fire hydrant adjacent to the west parking lot. The main pipeline would continue east to connect to two proposed fire hydrants adjacent to the east parking lot.
- A circulation mechanism would be installed in the new water pipeline system to maintain water quality and prevent freezing. Proposals for the mechanism include a mixer inside the water tank or a pump at the chlorinator station to recirculate water uphill through the existing pipeline, through the tank, and downhill again through the new pipeline.

- Staging and access for the tank replacement and installation of the upper portion of the new pipeline would occur on the dirt maintenance road on the northern side of the ski run. This road runs east-west perpendicular to the ski run, between the existing water pipeline and the location of the proposed water pipeline. To allow construction equipment and materials to access the tank site, an approximately 20-foot-long section at the western end of the dirt road may need to be graded, or a temporary switchback may need to be constructed. Staging and access for the installation of the lower portion of the new pipeline and hydrants would occur in the east parking lot.
- Maintenance of the new tank and improved supply system would be conducted by the City; the maintenance would be commensurate in scope and effort with current maintenance activities.

The proposed locations of the new tank, pipelines, and fire hydrants for the Proposed Project are shown on Figure 2 (Appendix A). Photographs of the project area, including the ski slope and the existing redwood tank, are included as Photographs 1, 2, and 3 (Appendix A).

3.4 ALTERNATIVE 3: ALTERNATIVE PROJECT

The City is also considering an alternative to the Proposed Project (Alternative Project) that would be similar to the Proposed Project but would also involve constructing a pond and wet well at the edge of the east parking lot to provide a direct source of water to firefighting equipment. The Alternative Project would involve the same components as the Proposed Project; however, in addition, this alternative would include the following components:

- A pond measuring approximately 200 feet long and 100 feet wide would be excavated between the east parking lot and SR 431 in an open, vegetated area. A drainage trench exists in this area, but current water levels are minimal and limited to runoff from the parking lots.
- A drain valve would be installed in the east end of the new pipeline to allow diversion of water to an existing culvert under the east parking lot, which drains into the proposed pond.
- A wet well would be installed adjacent to the pond to enable firefighting equipment to draw water from the pond for resupply during firefighting activities.
- To circulate water through the water pipeline system, maintain water quality, and prevent freezing, the system would be flushed for approximately 1 hour per day. The flushing would prevent pond water from stagnating. Flushed water would be transferred into an existing culvert under SR 431, which drains onto the slope east of the road.
- Staging and access for the construction of the pond and wet well would occur in the east parking lot.

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- Maintenance of the new tank and improved supply system would be conducted by the City; maintenance would include dredging and other maintenance activities for the pond.

The locations of the new tank, pipelines, pond, wet well, and fire hydrants for the Alternative Project are shown on Figure 3 (Appendix A).

SECTION FOUR AFFECTED ENVIRONMENT, IMPACTS, AND MITIGATION

The analysis presented in this chapter focuses on the resource areas where some level of impact may result from the implementation of the alternatives, including geology and soils, seismicity, water resources, biological resources, historic properties, air quality, noise, traffic, visual resources, recreation, and environmental justice. No other resource areas have been identified that would require further evaluation pursuant to NEPA.

4.1 GEOLOGY AND SOILS

The project area is located at the western edge of the Central Nevada Basin and Range physiographic province, adjacent to the Sierra Nevada physiographic province. The Central Nevada Basin and Range physiographic province extends from eastern California to central Utah and from southern Idaho into the state of Sonora in Mexico. The dominant landforms of the Central Nevada Basin and Range province are north-south trending mountain ranges, which are generally 10 miles wide and rarely longer than 80 miles long (Price 2004). The project area is located on the eastern slope of Mount Rose, in the Carson Mountains between the Sierra Nevada mountain range and the Great Basin.

The primary soil type in the project area is the Tallac series, which is a very bouldery, sandy loam weathered from a glaciomarine parent material (NRCS 2008). This soil type is found along mountains and is characterized by bouldery, sandy loam at the surface that becomes progressively stonier and then cobbly with increasing depth, and is cemented at depths of more than 42 inches. The soil is well drained, with approximately 2 inches of available water storage (NRCS 2008).

4.1.1 Alternative 1: No Project

The No Project Alternative would not affect geology or soils.

4.1.2 Alternative 2: Proposed Project

Under the Proposed Project, ground-disturbing activities would consist of demolishing the existing retaining wall at the tank site, excavating the area for the new water tank and for the potential retaining wall uphill of the new tank, planting several trees to screen the tank site, and excavating an approximately 1,400-foot-long trench with a maximum depth of 4 feet below ground surface. Additionally, the Proposed Project would include either grading the upper portion of the dirt road north of the ski run or constructing a switchback along this road to allow construction equipment and materials to access the tank site.

The soil excavated to construct the trench for the new pipeline system would be backfilled and compacted. The City would dispose of all excess soil in compliance with all applicable Federal, State, and local regulations. The two options mentioned above (grading a portion of the dirt road

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and constructing a switchback) are anticipated to result in similar areas of soil disturbance. With either option, the area would be regraded to conform with the topography of the ski run after construction was complete.

Ground-disturbing activities would occur in areas previously disturbed by the annual clearing of the ski runs; the installation of the original water system, including the existing tank, pipeline, and chlorinator station; the removal and installation of a rope tow; construction of the lodge, ski patrol building, and adjacent parking areas; and the recent construction of drainage swales and culverts. Because of the previous ground disturbance in the project area, it is not anticipated that the proposed excavation, grading, or trenching would have an adverse effect on the geologic resources in the project area. Long-term maintenance may require off-road vehicle use. However, this use would be commensurate with the existing maintenance at the site.

The Proposed Project could cause soil erosion in the project area during construction from surface runoff along the disturbed slope. However, because the construction is scheduled for the dry season, potential soil erosion would be limited to periods of thunderstorms. Wind erosion could also potentially occur at the exposed locations along the slope, access road, and parking lots. Therefore, the City would be responsible for using silt fences, covering spoil piles, staging equipment along existing roads, and watering areas of exposed soil as necessary to minimize soil loss from surface runoff and wind erosion. With these mitigation measures, the short-term ground disturbance associated with this alternative would be expected to be minimal and temporary. Currently, water in excess of the tank's capacity overflows and drains down the mountainside. Increases to the capacity of the tank would temporarily reduce this runoff during the refilling of the tank and would therefore reduce the associated soil erosion.

If the Proposed Project were constructed, additional water would be available to suppress future wildfires. The Proposed Project would therefore be expected to minimize the extent and severity of future wildfires. For this reason, the Proposed Project may result in indirect impacts to soils by potentially reducing the total area of soil erosion caused by the vulcanization of soils and vegetation stripping from fire.

Therefore, the Proposed Project would result in minor short-term direct and indirect impacts on soils.

4.1.3 Alternative 3: Alternative Project

Impacts from the Alternative Project would be similar to the impacts from the Proposed Project. However, this alternative would result in a greater area of ground disturbance during construction and may result in increased erosion from surface runoff or wind. However, the area of the proposed pond is generally flat; therefore, the potential for additional surface runoff is minor. If the City pursued this alternative, it would be responsible for the same measures described for the Proposed Project. Therefore, the short-term ground disturbance associated with this alternative would be expected to be minimal and temporary.

As with the Proposed Project, the increases to the capacity of the tank would reduce the current long-term soil erosion at the site. The addition of a pond would allow a greater capacity of runoff to remain onsite and would therefore reduce both onsite and offsite runoff and associated soil erosion.

If the Alternative Project were constructed, additional water sources would be available to suppress future wildfires. When compared to the Proposed Project, the wet well would allow an additional facility for firefighting personnel and would therefore increase the amount of water that could be accessed at a given time. This increased access to water would enhance potential indirect impacts to soils, as described for indirect impacts of the Proposed Project.

Therefore, the Alternative Project would result in minor short-term direct and indirect impacts on soils.

4.2 SEISMICITY

The project area is in a seismically quiet region; noticeable earthquakes occur less than once every few decades. However, the frequency of seismic activity can fluctuate. 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 applicable to any of the alternatives.

4.2.1 Alternative 1: No Project

Under the No Project Alternative, there would be no change to the current risk of seismic events damaging the facilities.

4.2.2 Alternative 2: Proposed Project

Under the Proposed Project, the new water tank and pipeline system would be constructed to a higher, more modern standard than that of the existing facilities; therefore, the potential for damage from earthquakes would be reduced. If the new facilities were damaged as a result of seismic activity, overflow water from the failed water tank could flood the parking lots and SR 431. The new water tank would have a substantially greater capacity than the existing water tank and would result in about 10 times the water overflow. However, given the topography of the site, all structural facilities would be out of the path of any such flooding, and the gentle slope and existing basin located between the east parking lot and SR 431 would contain most of the water onsite. Thus, the impact would be limited to SR 431 and other offsite facilities. The tank and the water lines would be metered to allow the City to quickly discover any leaks caused by a seismic event and to temporarily suspend service until the failure could be resolved.

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Therefore, damage to the tank or pipeline system caused by seismic activity would not pose a major risk to people or structures in the vicinity.

The Proposed Project would therefore have a minor long-term direct impact on the risk of loss or damage from seismicity.

4.2.3 Alternative 3: Alternative Project

The potential for damage from an earthquake under the Alternative Project is the same as the potential under the Proposed Project, with the exception that the presence of the pond would potentially increase the amount of water to be retained onsite in the event of flooding due to seismic failure of the new facilities.

The Alternative Project would therefore have a minor long-term direct impact on the risk of loss or damage from seismicity.

4.3 WATER RESOURCES

Any water that falls as rain or snow into the Basin and Range Province is diverted for use (e.g., agricultural, domestic, industrial) or eventually evaporates; none of the streams that originate within the region have outlets to the ocean. The project area is within the Truckee River watershed, which eventually drains to Pyramid Lake, approximately 40 miles northeast of the City.

4.3.1 Water Quality and Hydrology

The tank at Sky Tavern Lodge draws water from an unnamed natural spring in the hillside approximately 1150 feet west of the lodge—approximately 160 feet upstream from the existing water tank. The spring has a minimum flow of 10 to 12 gallons per minute, and seasonal flows can be as high as 20 gallons per minute. Overflow water from the spring or tank converge and follow a natural drainage downhill, through a stand of aspen trees, and across the base of the hill to the parking lots. An existing system of concrete culverts and wood-covered swales at the base of the slope prevents maintenance vehicles, skiers, and snowboarders from falling into the drainage during the end of the winter season, when the snow cover is thin. Culverts permit drainage under the parking lots to the natural basin west of SR 431 and then downstream under the roadway.

East of SR 431, the water drains down a steep ravine that eventually connects with Galena Creek, which drains into Jones Creek approximately 3.6 miles from the project site. Jones Creek drains into Steamboat Creek, which drains into the Truckee River near the eastern edge of the City.

4.3.1.1 *Alternative 1: No Project*

The No Project Alternative would result in no change to existing water quality or hydrology.

4.3.1.2 *Alternative 2: Proposed Project*

The Proposed Project would not affect the spring collection system at the site. Given the increased capacity of the tank, the spring would fill the new tank in approximately 12 days (10 days longer than it takes to fill the existing tank). The proposed pipeline system would be used only to transfer water from the new tank to the lodge and fire hydrants. Therefore, once the tank was filled, overflow water would continue to drain down the hillside through the existing system of culverts and swales. The overflow water would eventually drain into Galena Creek in the same manner as it currently does. The Proposed Project would modestly and temporarily affect local hydrology by reducing the quantity of overflow water draining into Galena Creek through the increased holding capacity of the tank and the increased use of water in the tank for firefighting activities. This effect would occur during the first filling of the new tank and after subsequent withdrawals for fire events.

To minimize potential impacts to water quality as a result of sedimentation from construction, the City would follow Best Management Practices such as using silt fences, covering spoil piles, watering areas of disturbed soil, staging equipment along existing roads, and keeping equipment properly maintained. The City would dispose of excess spoils resulting from drilling, grading, or trenching in compliance with all applicable Federal, State, and local regulations. The City would be responsible for obtaining the appropriate Section 404/401 Clean Water Act permits and certifications (33 U.S.C. § 1344/1341 [2008]) from the U.S. Army Corps of Engineers and would comply with National Pollutant Discharge Elimination System (NPDES) (Section 402 of the Clean Water Act, 33 U.S.C. § 1342 [2008]) requirements for any pollutants that could be discharged into the water system during construction.

The Proposed Project would provide additional water for future fire-suppression activities and would therefore be expected to minimize the extent and severity of future wildfires. Therefore, the Proposed Action may result in indirect impacts to water quality by potentially reducing the total area of soil erosion caused by fire vulcanization of soils and vegetation stripping, and correspondingly reduce the amount of sediment and debris that would be eroded into waterways. Although the increased number of vehicles that would use the area for firefighting activities may result in increased amounts of fluids (e.g., petroleum) that could run off, either onsite or offsite, this impact is expected to be minor and temporary.

Therefore, the Proposed Project would have minor short-term direct and minor long-term indirect impacts on water quality and hydrology.

4.3.1.3 *Alternative 3: Alternative Project*

Generally, the impacts to water quality and hydrology from the Alternative Project would be the same as those from the Proposed Project, with the following exceptions. The construction of the pond at the edge of the east parking lot would collect additional runoff and act as an informal sediment basin. Because some of the water in the pond would evaporate or drain into the groundwater system, the Alternative Project would reduce runoff into Galena Creek.

If the Alternative Project were constructed, additional water sources would be available for wildfire suppression. When compared to the Proposed Project, the wet well would allow an additional facility for firefighting personnel and would therefore increase the amount of water that could be accessed at any given time. This increased access to water may enhance potential indirect impacts to hydrology and water quality, as described for the Proposed Project.

If the City proceeded with the Alternative Project, it would be responsible for following the same Best Management Practices described for the Proposed Alternative and would also be responsible for obtaining all applicable Clean Water Act permits.

Therefore, the Alternative Project would have minor short-term direct and minor long-term indirect impacts on water quality and hydrology.

4.3.2 **Executive Order 11988: Floodplain Management**

EO 11988, Floodplain Management, requires Federal agencies to take action to minimize occupancy and modification of floodplains. EO 11988 also requires that Federal agencies proposing to fund a project sited in a 100-year floodplain consider alternatives to avoid adverse effects and incompatible development in the floodplain. FEMA's regulations implementing EO 1988 are codified in 44 C.F.R. Part 9 (2008).

According to FEMA's March 16, 2009, Flood Insurance Rate Map for Washoe County, Nevada, the project area is in a moderate- to low-risk flood area because the project area is entirely outside the 100-year floodplain. Specifically, the project area is located in Zone X, designated "Other Areas; Areas determined to be outside the 0.2% annual chance floodplain" (FEMA 2009b).

Because the City participates in FEMA's National Flood Insurance Program, the City has promulgated and enforces a floodplain ordinance at least as stringent as the National Flood Insurance Program and its implementing regulations (44 C.F.R. Parts 59–77 [2008]).

4.3.2.1 *Alternative 1: No Project*

The No Project Alternative would not affect the floodplain in the project vicinity.

4.3.2.2 *Alternative 2: Proposed Project*

The Proposed Project would not result in modifications to, occupation of, or otherwise affect the 100-year floodplain. Therefore, the Proposed Project is in compliance with EO 11988 and 44 C.F.R. Part 9. Therefore, the Proposed Project would have no short- or long-term impact on the 100-year floodplain.

4.3.2.3 *Alternative 3: Alternative Project*

The impacts to the floodplain from the Alternative Project would generally be the same as the impacts from the Proposed Project, as described above; the Alternative Project would have no short- or long-term impacts on the 100-year floodplain.

4.3.3 Executive Order 11990: Protection of Wetlands

EO 11990, Protection of Wetlands, 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 consider alternatives to avoid such effects. FEMA's regulations implementing EO 11990 are codified in 44 C.F.R. Part 9. The National Wetland Inventory maps indicated no evidence of wetlands in the project area. However, during the October 20, 2008, reconnaissance field survey conducted by URS Group, Inc. (URS), a contractor to FEMA, a potential wetland area was identified in a depressed area between the east parking lot and SR 431. Excess runoff water from the existing tank and spring, and water from a drainage south of the parking lots, drain into this depression where water ponds. The depression appears to have characteristics necessary to consider it a wetland under the jurisdiction of the U.S. Army Corps of Engineers.

4.3.3.1 *Alternative 1: No Project*

The No Project Alternative would not require any ground-disturbing activities and would therefore have no effect on wetlands.

4.3.3.2 *Alternative 2: Proposed Project*

The Proposed Project would not require ground disturbance, staging, or other activities in the potential wetland. Short-term impacts would occur when water is filling the new tank (estimated to require approximately 12 days, 10 days longer than the time required to fill the existing tank), which would run off and temporarily reduce the amount of water supplied to the potential wetland. The proposed new water pipeline system would be used only to transfer water from the new tank to the lodge and fire hydrants. Therefore, once the tank was filled, overflow water would continue to drain down the hillside through the existing system of culverts and swales, restoring current drainage into the potential wetland.

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During water draws from the new tank in fire events and refilling of the tank after any withdrawals, water would temporarily be diverted from the potential wetland. This diversion would only occur in and immediately after emergencies, which are expected to be intermittent and infrequent. When water is diverted for other reasons, the depressed area may still receive water from the drainage south of the parking lots; therefore, any impacts on the potential wetland from the Proposed Project would be negligible.

Prior to construction activities, the subgrantee would obtain the appropriate Section 404/401 Clean Water Act permits and certifications (33 U.S.C. § 1344/1341) from the U.S. Army Corps of Engineers.

FEMA applies the Eight-Step Decision-Making Process to ensure that it funds projects that are consistent with EO 11990 and 44 C.F.R. Part 9. The NEPA compliance process involves essentially the same decision-making process to meet its objectives as the Eight-Step Decision-Making Process. As directed by 44 C.F.R. Part 9, FEMA integrates the goals of EO 11990 into its NEPA implementation procedures. Therefore, the Eight-Step Decision-Making Process has been applied through implementation of the NEPA process. In accordance with that process, FEMA published a cumulative Initial Public Notice after the declaration associated with the most recent disaster in the area. FEMA would ensure that the subgrantee publishes a Final Public Notice in compliance with EO 11990 before implementation of the Proposed Project.

Therefore, the Proposed Project would have negligible short-term impacts on wetlands.

4.3.3.3 *Alternative 3: Alternative Project*

The Alternative Project would include construction of a pond between the east parking lot and SR 431, in the area of the potential wetland. Construction of the pond would result in short-term disturbance during excavation and associated construction. After construction, the excavated pond and associated wet well would not be anticipated to adversely affect the functions of the potential wetland. Maintenance activities, including dredging of the pond, would be periodic and would be expected to have minor impacts to vegetation and wetland function, depending on the characteristics of the area during such activities.

As with the Proposed Project, if the Alternative Project were implemented, FEMA would ensure that the Eight-Step Decision-Making Process, as required by EO 11990 and 44 C.F.R. Part 9, would be completed before construction. Also, if the City were to proceed with this alternative, it would be responsible for obtaining the appropriate Clean Water Act permits from the U.S. Army Corps of Engineers for construction activities and any future work that would affect the pond, once constructed.

Therefore, the Proposed Project would have negligible short-term impacts on wetlands.

4.4 BIOLOGICAL RESOURCES

The project area contains three vegetation communities: quaking aspen forest, grassland, and willow riparian drainage. Quaking aspen forest is present in the area surrounding the existing water tank and immediately south of the proposed water pipeline system. This community forms the dominant canopy species. The spring that is the source of the water in the existing tank also supports willows (*Salix* spp.). The slope east-northeast of the existing water tank, which is where the proposed water pipeline system would be installed, can be characterized as grassland. Species observed during URS's October 20, 2008, site visit included Italian rye grass (*Lolium multiflorum*), soft chess (*Bromus hordeaceus*), medusahead (*Taeniatherum caput-medusa*), and foxtail barley (*Hordeum jubatum*). An assemblage of introduced herbs and forbs, including sheep sorrel (*Rumex acetosella*), clover (*Trifolium* spp.), and field mustard (*Brassica rapa*) were intermixed with the grasses.

At the base of the slope, the depressed area between the east parking lot and SR 431 is characterized as willow riparian drainage, which supports riparian species, including dense willow stands. This area was cleared for maintenance purposes within 2 months prior to the site reconnaissance. Willows were cut and the existing 5-foot-wide channel was excavated to clear debris and improve its definition (D. Pack, City of Reno, personal communication, 2008). Photographs 4, 5, and 6 (Appendix A) show the vegetation communities at the project site.

4.4.1 Endangered Species Act

Section 7 of the Endangered Species Act of 1973 (16 U.S.C. § 1536 [2008]) requires Federal agencies to determine whether projects that they propose to undertake or fund have any potential to affect species listed or proposed for listing as threatened or endangered or their 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 Washoe County, Nevada (USFWS 2008). The species list contains eight endangered, threatened, and candidate species. No designated critical habitat exists in the project area. To evaluate the potential for the project site to provide suitable habitat for federally listed and USFWS-sensitive species, a URS biologist conducted a reconnaissance field survey on October 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 eight species, the project area is either clearly outside the known geographic or elevation range of the species or does not contain habitat characteristics known to support the species.

4.4.1.1 *Alternative 1: No Project*

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

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4.4.1.2 *Alternative 2: Proposed Project*

Because the project area lacks suitable habitat for any federally protected species, FEMA determined that the Proposed Project would not affect any threatened or endangered species, species proposed for listing as threatened or endangered, or designated critical habitat. Therefore, the Proposed Project complies with Section 7 of the Endangered Species Act (16 U.S.C. § 1536).

4.4.1.3 *Alternative 3: Alternative Project*

Because the project area lacks suitable habitat for any federally protected species, FEMA determined that the Alternative Project would not affect any threatened or endangered species, species proposed for listing as threatened or endangered, or designated critical habitat. Therefore, the Alternative Project complies with Section 7 of the Endangered Species Act (16 U.S.C. § 1536).

4.4.2 General Wildlife and Vegetation

4.4.2.1 *Alternative 1: No Project*

Under the No Project Alternative, there would be no effects to general wildlife and vegetation in the vicinity of the project area.

4.4.2.2 *Alternative 2: Proposed Project*

The Proposed Project could potentially disturb wildlife in the vicinity of the project. Small mammals, reptiles, amphibians, and insects could suffer injury or mortality from the construction equipment, and all species in the vicinity would experience harassment from noise and dust and short-term habitat loss from construction disturbance around the existing tank, the new tank site, and the proposed pipeline system. Ground disturbance would likely result in associated disturbance to vegetation. However, these impacts would be limited to the construction period, which is expected to be 60 to 90 days, and during routine maintenance activities similar to those that already occur at the site.

If the Proposed Project were implemented, the lodge could be used as a staging area for regional firefighting activities. This use would increase the number of vehicles and persons at the site during non-winter months. Temporary harassment from noise and dust and some injury and mortality from vehicle use may occur to species in the vicinity of the lodge. Also, the Proposed Project would increase fire-suppression ability and therefore may result in wildfires of smaller size or lesser intensity than under existing conditions. This increase in fire-suppression ability may reduce the amount of vegetation that would be burned and the number wildlife species that would be killed, injured, harassed, or displaced. These impacts could be beneficial or adverse, depending on the susceptibility and adaptability of each species to fire and the role of fire as a component in the ecosystem of each vegetative community.

The City would need to comply with the Migratory Bird Treaty Act of 1918 (MBTA) (16 U.S.C. §§ 703–712 [2008]) for all construction-related disturbance and all applicable State or local wildlife and vegetation requirements.

Therefore, the Proposed Project is anticipated to result in minor short-term direct and moderate short-term indirect impacts on general wildfire and vegetation.

4.4.2.3 Alternative 3: Alternative Project

The Alternative Project would cause the same impacts to general vegetation and wildlife as the Proposed Project. However, the pond associated with this alternative would provide additional riparian habitat to various avian, amphibian, and aquatic species as well as to mammals, insects, and other invertebrates. As with the Proposed Project, the City would need to comply with the MBTA for all construction-related disturbance and all applicable State and local wildlife and vegetation requirements.

Therefore, the Alternative Project is anticipated to result in minor short-term direct and moderate short-term indirect impacts on general wildfire and vegetation.

4.4.3 Executive Order 13112: Invasive Species

EO 13112, Invasive Species, requires Federal agencies to prevent the introduction of invasive species; provide for their control; and minimize the economic, ecological, and human health impacts that invasive species cause. Specifically, EO 13112 requires that Federal agencies not authorize, fund, or implement actions that are likely to introduce or spread invasive species unless the agency has determined that the benefits outweigh the potential harm caused by invasive species and that all feasible and prudent measures to minimize harm have been implemented.

4.4.3.1 Alternative 1: No Project

The No Project Alternative would not affect invasive species.

4.4.3.2 Alternative 2: Proposed Project

The Proposed Project has limited potential to contribute to the spread of invasive species in the project area. The proposed water tank would be constructed in the same location as the existing water tank, and the proposed pipeline system would be placed underground. Any disruption of soils and existing vegetation would be reseeded with a native seed mix once construction is complete. The City would take measures to prevent the introduction of invasive weeds at the construction site, including cleaning all equipment before bringing it onsite and using only certified, weed-free erosion control and revegetation materials.

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Routine maintenance activities could result in the spread of invasive species seed from equipment and vehicles traveling around the lodge. However, maintenance activities would be commensurate with those already occurring onsite.

If the area were to be used as a regional staging area for firefighting activities, emergency vehicles and personnel could potentially transport invasive species into the project area or move invasive species seed offsite. However, the seed transport would only occur intermittently and in emergency situations. Therefore, the potential for the Proposed Project to contribute to the spread of invasive species is minimal, and the Proposed Project would comply with EO 13112.

The Proposed Project is therefore anticipated to result in negligible short-term direct and indirect impacts to invasive species.

4.4.3.3 *Alternative 3: Alternative Project*

The Alternative Project has the same limited potential to contribute to the spread of invasive species as the Proposed Project. If the City proceeded with this alternative, it would be required to adhere to the same avoidance measures described for the Proposed Project. Therefore, the Alternative Project would comply with EO 13112.

The Alternative Project is therefore anticipated to result in negligible short-term direct and indirect impacts on invasive species.

4.5 HISTORIC PROPERTIES

Section 106 of the National Historic Preservation Act of 1966 (NHPA) (16 U.S.C. § 470f [2008]) requires Federal agencies to consider the effects of their undertakings on historic properties and to afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on such undertakings prior to the approval of the expenditure of federal funds.

A URS archaeologist, under contract to FEMA, conducted a search of the National Register of Historic Places (NRHP) and the Nevada Cultural Resources Information System (NVCRIS). Twenty-nine previously recorded historic properties were identified within a 1-mile-radius of the project area; no NRHP-listed properties were identified. The majority of the sites are related to the themes of 19th- and 20th-century logging activities and water conveyance systems and to early 20th-century shepherding. Prehistoric sites are less common, although lithic scatters and field camps have been documented. A group of eight tree carvings (arborglyphs) that were identified by archaeologists from Kautz Environmental Consultants, Inc. (KEC) during a 2006 archaeological survey was not listed in the NVCRIS, but because KEC recommended that the resource not be considered significant, FEMA concluded that this site is not eligible to the NRHP (FEMA 2009a).

URS archaeologist Brian Hatoff, who meets the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation, conducted a pedestrian archaeological

survey of the project area on October 28, 2008 (FEMA 2009a). During the survey, the ground was examined for any signs of historic or prehistoric structures, features, or artifacts. The graded area for the existing water storage tank and numerous rodent burrow back-dirt piles allowed intermittent observation of subsurface soils. The existing water tank is a modern facility built as a National Guard training exercise in 1964. No historic properties potentially eligible for listing to the NRHP were located during this survey.

FEMA documented the results of the record search and pedestrian survey in a Cultural Resources Technical Report (FEMA 2009a).

4.5.1 Alternative 1: No Project

Under the No Project Alternative, no impacts would occur on historic properties because no construction or other activities would occur that could potentially disturb historic properties.

4.5.2 Alternative 2: Proposed Project

Based on the results of the record search and the pedestrian survey, FEMA determined that the Proposed Project would not affect historic properties. In accordance with Section 106 of the NHPA, FEMA sent a letter to the Washoe Tribe of Nevada and California to apprise the tribe of the Proposed Project and to request information regarding historic properties or any concerns known to the tribe in the project area. On December 18, 2008, Jennifer Johnson, Environmental Specialist II, Washoe Tribe Environmental Protection Department, responded to the letter, stating that the tribe does not have documented records of any cultural archaeological sites in the project area.

The Proposed Project would increase fire-suppression ability and therefore may result in wildfires of smaller size or lesser intensity. This effect may reduce disturbance to historic properties from wildfire and from wildfire-suppression activities in the region.

In the event a discovery of an artifact is made during project activities, and in compliance with Stipulation X (Unexpected Discoveries) of the Programmatic Agreement (PA) between FEMA, NDEM, and the Nevada State Historic Preservation Officer (SHPO), the City would cease all activity and notify NDEM immediately. NDEM would notify FEMA and ensure that all reasonable measures are taken to avoid or minimize harm to the resource until FEMA completes additional consultation with the SHPO and the tribe. In the event that human remains are found, the City would contact the Washoe County coroner/medical examiner. If the coroner/examiner determines that the human remains are or may be of Native American origin, the discovery would be treated in accordance with Nevada Revised Statute 383.

In compliance with the PA, on April 8, 2009, FEMA informed the SHPO of its determination that the Proposed Project would not affect historic properties and transmitted the Cultural Resources Technical Report (FEMA 2009a). The SHPO did not object to FEMA's determination

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within 14 days of receiving the report. Thus, FEMA has assumed the SHPO's concurrence in accordance with Stipulation VII.C of the PA.

4.5.3 Alternative 3: Alternative Project

The Alternative Project would involve several of the same components as the Proposed Project and result in the same impacts identified in Section 4.5.2. However, the Alternative Project would also involve the installation of a pond at the edge of the east parking lot. Although the area of potential effect (APE) identified by FEMA (2009a) includes only the project footprint associated with the Proposed Project (i.e., excluding the area for pond installation), URS included the area proposed for pond installation in its record search and pedestrian survey. After reviewing the results of the record search and pedestrian survey, FEMA determined that the scope of work and APE associated with the Alternative Project would not affect historic properties.

Therefore, if the City proceeded with the Alternative Project, FEMA would re-open consultation with the Washoe Tribe of Nevada and California and SHPO regarding the scope of work and, in accordance with Stipulation VII of the PA. The results of that consultation would be recorded in subsequent NEPA documentation.

4.6 AIR QUALITY

The Clean Air Act of 1970 (42 U.S.C. §§ 7401–7661 [2008]) is a comprehensive Federal law that regulates air emissions from area, stationary, and mobile sources. The act authorized the U.S. Environmental Protection Agency (EPA) to establish National Ambient Air Quality Standards (NAAQS) to protect public health and the environment. The NAAQS include standards for the following criteria pollutants: nitrogen dioxide (NO₂), ozone (O₃), carbon monoxide (CO), sulfur dioxide (SO₂), particulate matter less than 10 micrometers in diameter (PM₁₀), and particulate matter less than 2.5 micrometers in diameter (PM_{2.5}). 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. After monitoring documents that a nonattainment area meets air quality standards, and if there is a 10-year plan for continuing to meet and maintain such standards, EPA re-designates the area as a maintenance area.

According to Washoe County, the project area is within a maintenance area for the 8-hour O₃ and in an attainment area for all other criteria pollutants (C. Albee, Washoe County Health District Air Quality Management Division, personal communication, June 30, 2009). The subgrantee's proposal is within the jurisdiction of the Washoe County Health District Air Quality Management Division (WCAQMD).

The National Emissions Standards for Hazardous Air Pollutants (NESHAP) are set by the EPA for an air pollutant not covered by NAAQS that may cause adverse impacts on human health,

including asbestos. The existing concrete foundation and retaining wall were constructed in the 1960s and have not been tested for asbestos-containing materials (ACMs).

4.6.1 Alternative 1: No Project

Under the No Project Alternative, no effects to air quality would occur because no construction or other activities resulting in air emissions or affecting attainment status would occur.

4.6.2 Alternative 2: Proposed Project

In compliance with the Clean Air Act, FEMA considered the Proposed Project's impact on air quality. Before approval of any Federal action, the General Conformity Rule (GCR) (40 C.F.R. § 51.853 [2008]) states that a "a conformity determination is required for each criteria pollutant or precursor where the total of direct and indirect emissions of the criteria pollutant or precursor in a non-attainment or maintenance area caused by a Federal action would equal or exceed any of the rates" specified in the GCR. Because Washoe County is a maintenance area for the Federal 8-hour O₃ standard, project emissions must be compared to the GCR de minimis thresholds of 100 tons per year (tpy) of nitrogen oxides (NO_x) and 100 tpy of volatile organic compounds (VOCs). Because there is no direct measurement for O₃, emission rates of NO_x, VOCs (ozone precursors) were analyzed. Using conservative assumptions regarding duration of construction and the number and types of construction vehicles/equipment to be used for the Proposed Project, FEMA conducted an analysis of the expected emissions using the Urban Emission (URBEMIS 2007) (version 9.3) land use emissions model. Emission rates were estimated at 0.38 tpy for VOCs and 3.05 tpy for NO_x. These emission rates are far below the GCR threshold rates for O₃ (100 tpy of VOCs or NO_x). Therefore, the Proposed Project complies with the GCR and this regulation of the Clean Air Act. The City would be responsible for obtaining local air quality permits required by the WCAQMD.

The concrete retaining wall and foundation would be demolished and removed as part of the Proposed Project. The City would complete all required NESHAP notifications and comply with all Federal, State, county, and local regulations regarding the demolition and disposal of materials.

The Proposed Project could lead to secondary impacts to air quality because of increased traffic levels along SR 431 from emergency vehicles using the lodge as a staging area for regional firefighting efforts; however, this increased use would occur only during emergencies. If this alternative were selected, additional firefighting resources (i.e., increased water supply and regional staging area) would be available for wildfire suppression. Therefore, the Proposed Project may indirectly result in wildfires of smaller size or lesser intensity and correspondingly result in a net decrease in emissions of NAAQS criteria pollutants from fires and fire-suppression equipment, particularly for concentrations of PM₁₀ and PM_{2.5}.

To minimize the effects to air quality, the City would ensure the use of well-maintained and properly tuned construction equipment and vehicles, minimize the idling time of construction

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vehicles, and use dust-control measures, such as watering disturbed areas and covering spoil piles, as necessary.

Therefore, the Proposed Project would result in negligible impacts on air quality.

4.6.3 Alternative 3: Alternative Project

Because the Alternative Project would require approximately 1 acre more excavation than the Proposed Project, the Alternative Project would result in a slightly larger amount of construction-related emissions. FEMA conducted an analysis of the expected emissions resulting from the Alternative Project using the same model and methodology used to assess potential impacts from the Proposed Project. The additional acre of work associated with the Alternative Project would not result in a measurable change in the modeled emission rates of VOCs and NO_x from those of the Proposed Project. Therefore, the Alternative Project complies with the GCR and this regulation of the Clean Air Act.

Long-term impacts to air quality would generally be commensurate with those from the Proposed Project; however, construction of the pond and wet well would allow for faster water supply to emergency vehicles and may result in slightly less idling time. This could correspond to fewer vehicular emissions.

The City would be required to obtain the same permits; complete the same required notifications; comply with the same Federal, State, county, and local regulations regarding the demolition and disposal of materials; and implement the same measures to minimize the construction-related effects to air quality as described for the Proposed Project.

Therefore, the Alternative Project would result in negligible impacts on air quality.

4.7 NOISE

Noise-sensitive receptors are located at land uses associated with indoor and outdoor activities that may be subject to substantial interference from noise. These land uses often include residential dwellings, hotels, hospitals, nursing homes, educational facilities, libraries, and offices. The noise-sensitive land uses in or near the project area include various seasonal residential dwellings, the closest of which is approximately 500 feet away. Also, hikers or bikers in the vicinity of the lodge could be sensitive to noise emanating from the project area during construction. Winter noise sources include operations at the lodge (e.g., ski lifts, snowmobiles); during the summer, the only perpetual noise source in the project area is the traffic on SR 431. Routine maintenance would also provide occasional increases in the noise level.

4.7.1 Alternative 1: No Project

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

4.7.2 Alternative 2: Proposed Project

The Proposed Project would result in temporary increases in noise levels, which would be limited to the duration of construction activities. The seasonal residents in the immediate vicinity of the project area and any hikers, bikers, or members of the public pursuing recreational activities in the area could be adversely affected by noise created during construction activities. The City would be responsible for implementing the following measures to reduce impacts from noise levels to the extent practicable:

- The City would post public notices that would provide advanced notification of construction onsite and on its website before construction.
- All mobile or fixed noise-producing construction equipment that is regulated for noise output by a Federal, State, or local agency would comply with such regulation.
- Noise-producing signals, including horns, whistles, alarms, and bells, would be used for safety 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.

In the long term, noise levels could increase because of the operation of emergency vehicles that would use the lodge as a staging area for regional firefighting efforts. Although the risk of catastrophic wildfires would be expected to decrease with the implementation of the Proposed Project, which may decrease the duration of noise emissions from firefighting equipment, the use of the project area as a staging area would concentrate noise from vehicles and personnel at the project site. However, these impacts would occur only during emergencies.

The Proposed Action would therefore result in moderate short-term direct and indirect impacts on noise levels.

4.7.3 Alternative 3: Alternative Project

The Alternative Project would result in the same noise impacts and would require the same implementation measures as the Proposed Project. The Alternative Action would therefore result in moderate short-term direct and indirect impacts on noise levels.

4.8 TRAFFIC

Sky Tavern Lodge is located on SR 431, a 22.2-mile-long highway that begins at the junction of SR 28 in Incline Village, Nevada, near Lake Tahoe and crosses over the Sierra Nevada Mountains to connect with Reno. SR 431 is managed and maintained by the Nevada Department of Transportation (NDOT) and provides access across the Sierra Nevada mountains and to the various residential and recreational facilities along the highway. Where it is adjacent to the

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project area, SR 431 is a two-lane highway; the highway does not have any dedicated or designated turn lanes into the lodge.

4.8.1 Alternative 1: No Project

The No Project Alternative would result in no activities that would affect traffic.

4.8.2 Alternative 2: Proposed Project

The mobilization and demobilization of construction vehicles and equipment to the lodge could slow traffic along SR 431; however, detours are not anticipated to be needed. The impacts to traffic on SR 431 associated with construction would be temporary. The City would provide advanced notification, signs, flagpersons, and other measures to minimize disruption to residents along SR 431 or motorists traversing the area during construction. Traffic levels along SR 431 could increase during emergencies, when personnel would use the lodge as a staging area for regional firefighting efforts. The Proposed Project would involve construction along the dirt access road to the tank site (either grading the road or constructing a temporary switchback), but this component of the Proposed Project would have no impact on traffic because the road is currently a private right-of-way used only for maintenance on the Sky Tavern property.

The Proposed Project would have negligible short-term direct and secondary impacts on traffic.

4.8.3 Alternative 3: Alternative Project

The Alternative Project would have similar traffic impacts as the Proposed Project with the following exception: construction of the pond between the east parking lot and SR 431 would require additional construction vehicles and the work would be conducted closer to SR 431 than under the Proposed Project. The City may need to close one lane along SR 431 during the construction process. The City would be responsible for any permits or coordination with NDOT needed for lane restrictions. The City would provide advanced notification, signs, flagpersons, and other measures to minimize disruption to residents along SR 431 or motorists traversing the area.

The Alternative Project would have minor short-term direct and secondary impacts on traffic.

4.9 VISUAL RESOURCES

Views from the project area include foreground views of SR 431, lodge facilities, and nearby vegetation, and middle-ground views of vegetation and natural topography. In the background, the Carson Mountains are visible to the northeast, and the summit of Slide Mountain punctuates the background to the south. Key observation points are the lodge, the ski runs, and SR 431, which is a designated State scenic byway.¹ Although portions of the site are heavily forested,

¹ On July 1, 1996, NDOT designated the highway as the Mount Rose Scenic Byway.

variable-sized patches of open areas are intermittent at the project site and include ski runs and natural openings in the canopy within and between vegetative communities.

4.9.1 Alternative 1: No Project

The No Project Alternative would not affect visual resources.

4.9.2 Alternative 2: Proposed Project

The demolition of the existing tank and the construction of the new tank and associated pipeline system would result in localized, temporary impacts to visual resources from construction vehicles, excavated material, increased dust, and the storage and use of equipment and materials. The construction operations and area would be visible from the lodge and from SR 431 during the construction period, which is expected to be between 60 and 90 days. Motorists traveling on SR431 would view the project area for only several seconds, and therefore the visual impact of construction to these travelers would be negligible. Depending on weather and observation points, construction may be visible from other trails and viewpoints in the TNF. Dust would be visible for a greater distance. However, dust would be minimized by Best Management Practices, which would include dust suppression activities.

After construction, re-seeding would ensure that any linear scarring or contrast of soil and vegetation color and texture caused by trenching and backfilling would be temporary. The new fire hydrants would be located adjacent to the paved, built forms of the parking lots and would blend with those features. The new water tank would be of a scale (up to 20 feet high and 52 feet in diameter) and material (steel) that is notably different from the existing smaller redwood structure. The new tank would be painted to blend with the adjacent soil and vegetation. The City would screen the new tank with trees. Depending on the size of trees that are planted at the site, the tank may be a notable feature in the foreground. However, this feature would be consistent with the intermittent built features located throughout the ski lodge property. As the trees mature, the tank would become increasingly screened and therefore less visible to casual observers. The tank would not be easily noticeable by motorists on SR 431.

The risk of catastrophic wildfires would be expected to decrease with the implementation of the Proposed Project because the increased water supply and staging facilities may decrease the area and intensity of future wildfires. This decrease could result in a minimization of the area of contrast between burned and unburned vegetation.

The Proposed Project would result in moderate short-term direct and indirect impacts on the visual character of the project area.

4.9.3 Alternative 3: Alternative Project

Impacts to visual resources from the Alternative Project would generally be the same as those described for the Proposed Project. However, the Alternative Project would have a greater

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impact on visual resources than the Proposed Project because of the construction of the pond adjacent to the east parking lot. The construction activities and disturbance for the Alternative Project would be larger than the activities and disturbance of the Proposed Project because of the larger construction area, the potentially longer duration of construction, and the increased proximity of disturbance to motorists on the scenic highway. In the long term, the construction of a pond would be anticipated to introduce a new visual element to the project site; the pond would provide a consistent water feature to observers.

The Alternative Project would result in moderate short-term direct and indirect, and minor long-term direct impacts on the visual character of the project area.

4.10 RECREATION

The lodge is a publicly owned open space set aside for the use and enjoyment of the general public. The City coordinates with the non-profit Sky Tavern Junior Ski Program during the winter season. The ski program provides transportation, lift tickets, and ski and snowboard instruction to the City's children as a means of encouraging skiing and snowboarding among the City's youth. During the rest of the year, the City maintains the lodge as a public resource, and the property provides the residents of neighboring communities with various recreational opportunities, including hiking, bicycling, and picnicking.

4.10.1 Alternative 1: No Project

In the short term, the No Project Alternative would not affect recreational opportunities or experiences at Sky Tavern Lodge.

4.10.2 Alternative 2: Proposed Project

The Proposed Project would be completed during the summer when the recreational use at the lodge is lowest. Although the lodge would remain open during construction, recreational activities on the lodge property would be limited because of the presence of construction equipment and workers. The project area would be safeguarded using appropriate signage, temporary fencing, and/or flagging crews. The City would post notices well in advance of temporary closures so that potential visitors could make alternate plans. The recreating public in the vicinity of the project could be affected by noise and dust, and the public may notice impacts to the visual setting, as previously described.

Because the current water supply system is insufficient for fire suppression at the lodge and for the surrounding community, the fire hazard under this alternative would be reduced. If a fire occurred in the area, property damage and recreational opportunities eliminated or temporarily closed because of fire damage or destruction would be reduced.

The Proposed Project may result in minor short-term direct and indirect impacts on recreation.

4.10.3 Alternative 3: Alternative Project

Under the Alternative Project, impacts to recreation would be similar to those described under the Proposed Project. As with the Proposed Project, the City would post notices well in advance of temporary closures so that potential visitors could make alternate plans. The pond could provide resources for wildlife viewing, which could potentially increase the recreational opportunities at the lodge in the long term.

The Alternative Project may result in minor short-term direct and indirect impacts on recreation.

4.11 EXECUTIVE ORDER 12898: ENVIRONMENTAL JUSTICE

EO 12898, Environmental Justice, 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 on minority and low-income populations that result from their programs, policies, or activities. EO 12898 also tasks Federal agencies with ensuring that public notifications regarding environmental issues are concise, understandable, and readily accessible.

The 2000 U.S. Census does not identify any significant minority or low-income populations living in the area surrounding Sky Tavern Lodge (U.S. Census 2000). The junior ski program is open to all youth in the Reno area, and the recreational facilities at the lodge are open to the general public.

4.11.1 Alternative 1: No Project

Under the No Project Alternative, no impacts would occur to minority or low-income populations.

4.11.2 Alternative 2: Proposed Project

The socioeconomic impacts of the Proposed Project are beneficial to all residents in the project vicinity. The recreational opportunities and youth ski program at the lodge provide a public benefit to local residents, and the new water tank and pipeline system would improve the water supply to the lodge. This alternative would also establish a permanent staging and resupply station for firefighting efforts throughout the region. The impacts of the Proposed Project would affect all residents, visitors, motorists, and lodge visitors equally. Thus, the Proposed Project would not result in disproportionately high and adverse effects on minority or low-income populations. As a result, the Proposed Project would comply with EO 12898.

4.11.3 Alternative 3: Alternative Project

As with the Proposed Project, the Alternative Project would affect all residents, visitors, motorists, and lodge visitors equally. Thus, the Alternative Project would not result in

Affected Environment, Impacts, and Mitigation

disproportionately high and adverse effects on minority or low-income populations. As a result, the Alternative Project would comply with EO 12898.

4.12 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 C.F.R. § 1508.7). Past, present, and reasonably foreseeable actions were identified based on information obtained from the City, Washoe County, NDEM, the NDOT, TNF, and FEMA.

Past actions in the area include the construction, maintenance, and past use of the lodge, SR 431, the adjacent Mount Rose Ski Area (including a 2004 expansion), and the nearby residential and commercial properties; recreational activities (e.g., hiking, biking, skiing, camping); and past fire events. These past actions are assumed to create the existing affected environment. Ongoing and current projects are limited to recreational use and use and maintenance of developed facilities in the project vicinity.

Screening criteria were developed to determine which actions would be considered speculative versus “reasonably foreseeable.” The criteria included specific projects for which NEPA compliance is complete or underway (based on a published notices of intent, other published scoping documents, Findings of No Significant Impact [FONSI]s or decision records, and the TNF’s Schedule of Proposed Action from July 1, 2009, to September 30, 2009), projects listed in short-range adopted land use or managing plans, and those projects specifically identified by each agency to be “reasonably foreseeable.”

The City, Washoe County, NDEM, and FEMA do not document any reasonably foreseeable future projects in the area. The NDOT’s *Annual Work Program* for Washoe County (NDOT 2009) identifies a planned roadway re-surfacing project on SR 431 approximately 0.5 mile southeast of the project area that is scheduled for fiscal year 2009 (July 1, 2009 to June 30, 2010). According to NDOT, this project has not yet been constructed and is currently planned for fall 2009/spring 2010 (P. Booth, Nevada Department of Transportation, personal communication, August 21, 2009). According to *Carson Range Multi-Jurisdictional Fuel Reduction and Wildfire Prevention Strategy With Addendum* (TNF 2008a), TNF plans areas of future fuel reduction treatment approximately 0.25 mile north and 0.5 mile east of the project site; these treatments are planned to occur in the next 0 to 5 and 5 to 10 years, respectively. Improvements to the Mount Rose Ski Area approximately 0.5 mile south of the project area are also planned (improvements to trail conditions and upgrading of chair lifts) (TNF 2008b).

The potential cumulative impacts of each alternative to resource areas are discussed below. If an alternative would have no or negligible direct or indirect impacts to a resource, that alternative is assumed not to contribute to any cumulative impact on that resource and is not discussed further in this section.

Under the No Project Alternative, no activities would occur, and the fire-suppression system at the lodge would remain inadequate to protect the facility. The continued lack of a reliable water source to fight and suppress fires in the immediate vicinity of the lodge could continue to limit the ability of fire responders to suppress fires quickly and therefore continue the current risk of larger, catastrophic wildfires in the area. The implementation of this alternative would not result in direct or indirect effects to social, cultural, or natural resources (refer to Sections 4.1–4.11), and the No Project Alternative would therefore not contribute to cumulative impacts on any resources.

With both the Proposed and Alternative Projects, depending on the timing of the other reasonably foreseeable future actions, the public could experience extended impacts because of overlapping or consecutive construction/implementation periods. Construction and implementation of each of the reasonably foreseeable future projects are likely to occur outside the winter season to avoid seasonal constraints. When considered with past, present, and reasonably foreseeable future actions, short-term soil, water resources, wildlife, vegetation, air quality, invasive species, and aesthetic disturbances and/or losses would occur and may be exacerbated. However, because the project area is surrounded by TNF lands, such impacts would be minimized and all future work would be consistent with Federal policies and procedures. Therefore, these impacts would be temporary and are not considered substantial.

Visitors, motorists, lodge users, and residents could therefore experience increased durations of and slightly more concentrated impacts on vegetation, noise, air quality (including dust), aesthetics, and recreation—as described in the discussion for each resource topic—if projects were implemented concurrently or consecutively. However, when assessed with past, present, and reasonably foreseeable future actions, these impacts would be temporary and are not considered substantial.

Upgrades to facilities in the project area from either of the build alternatives and improvements to SR 431 and the Mt. Rose Ski Area would consist of modern design and materials and would comply with current design requirements. When considered with other past, present, and reasonably foreseeable future projects, both the build alternatives provide an increased emergency water supply for any fires or emergency needs after a seismic event.

Implementation of either the Proposed or Alternative Projects would provide additional water and staging areas for fire-suppression activities; implementation of projects identified in *Carson Range Multi-Jurisdictional Fuel Reduction and Wildfire Prevention Strategy* would reduce fuel loads in the project vicinity (TNF 2008a). The reduced risk of loss from catastrophic wildfire in the area from either project, when considered together with past, present, and reasonably foreseeable future actions, would cumulatively result in increased protection of property, resources, and life from wildfires. Therefore, the cumulative impacts on geology and soil, water resources, wildlife, vegetation, air quality, visual resources, and recreation as a result of either build alternative would be enhanced.

4.13 MITIGATION MEASURES

Mitigation measures are actions that have been identified to minimize the impacts of the alternatives on social, cultural, and natural environmental resources when appropriate. The environmental consequences of the alternatives, as described in the preceding documentation, are projected with the assumption that the applicable mitigation measures are implemented. The subgrantee may also be required to implement additional mitigation measures based on its compliance with local, State, or other general laws or regulations, as applicable. The following measures would be required as a stipulation for receipt of Federal financial assistance from FEMA.

4.13.1 Alternative 1: No Project

No mitigation measures would be required for the implementation of this alternative.

4.13.2 Alternative 2: Proposed Project

If the proposed project is implemented by the City, the following mitigation measures will be required:

- The City would dispose of all excess soil in compliance with all applicable Federal, State, and local regulations.
- The City would use silt fences, covering spoil piles, staging equipment along existing roads, and watering areas of exposed soil as necessary to minimize soil loss from surface runoff and wind erosion.
- The City would keep construction and maintenance equipment properly maintained.
- The City would dispose of excess spoils resulting from drilling, grading, or trenching in compliance with all applicable Federal, State, and local regulations.
- The City would obtain the appropriate Section 404/401 Clean Water Act permits and certifications from the U.S. Army Corps of Engineers prior to construction.
- The City would comply with NPDES (Section 402 of the Clean Water Act) requirements for any pollutants that could be discharged into the water system during construction.
- The City would publish a Final Public Notice in compliance with EO 11990 before implementation of the Proposed Project.
- The City would comply with the MBTA for all construction-related disturbance and all applicable State or local wildlife and vegetation requirements.
- Any disruption of soils and existing vegetation would be reseeded with a native seed mix once construction is complete.

- The City would take measures to prevent the introduction of invasive weeds at the construction site, including cleaning all equipment before bringing it onsite and using only certified, weed-free erosion control and re-vegetation materials.
- In the event a discovery of an artifact is made during project activities, and in compliance with Stipulation X (Unexpected Discoveries) of the PA between FEMA, NDEM, and the SHPO, the City would cease all activity and notify NDEM immediately. NDEM would notify FEMA and ensure that all reasonable measures are taken to avoid or minimize harm to the resource until FEMA completes additional consultation with the SHPO and the tribe.
- In the event that human remains are found, the City would contact the Washoe County coroner/medical examiner. If the coroner/examiner determines that the human remains are or may be of Native American origin, the discovery would be treated in accordance with Nevada Revised Statute 383.
- The City would complete all required NESHAP notifications and comply with all Federal, State, county, and local regulations regarding the demolition and disposal of materials.
- The City would ensure the use of well-maintained and properly tuned construction equipment and vehicles, minimize the idling time of construction vehicles, and use dust-control measures, such as watering disturbed areas and covering spoil piles, as necessary.
- The City would post public notices that provide advanced notification of construction onsite and on its website before construction.
- All mobile or fixed noise-producing construction equipment that is regulated for noise output by a Federal, State, or local agency would comply with such regulation.
- Noise-producing signals, including horns, whistles, alarms, and bells, would be used for safety 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.
- The City would provide advanced notification, signs, flagpersons, and other measures to minimize disruption to residents along SR 431 or motorists traversing the area during construction
- After construction, the City would re-seed to ensure that any linear scarring or contrast of soil and vegetation color and texture caused by trenching and backfilling would be temporary.
- The City would post notices well in advance of temporary closures so that potential visitors could make alternate plans.

4.13.3 Alternative 3: Alternative Project

The City would be required to comply with all mitigation measures listed in Section 4.13.2 (which are not restated below); in addition, the following mitigation measures would *also* be required for the implementation of the Alternative Project:

- The City would obtain the appropriate Clean Water Act permits from the U.S. Army Corps of Engineers for any future work that would affect the pond, once constructed.
- Because additional historic property coordination would be required with this alternative, the City would not proceed with the Alternative Project until FEMA notifies NDEM and the City that FEMA has completed any additional Section 106 consultation and NEPA documentation.
- The City would be responsible for any permits or coordination with NDOT needed for lane restrictions.

4.14 IRREVERSIBLE OR IRRETRIEVABLE COMMITMENT OF RESOURCES AND SHORT-TERM USES OF THE ENVIRONMENT AND MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

4.14.1 Irreversible or Irretrievable Commitment of Resources

For the purposes of this document, irreversible commitment of resources is interpreted to mean that once resources are committed, the production or use of those resources would be lost for other purposes throughout the life of the alternative being implemented. An irretrievable commitment of resources defines those resources that are used, consumed, destroyed, or degraded during the life of the alternative that could not be retrieved or replaced during or after the life of the alternative.

The No Project Alternative would not directly require the use of resources. However, ongoing maintenance of the existing facilities, and the risk of loss of social, natural, and cultural resources as a result of catastrophic fire would continue as it currently exists.

Both the Proposed Project and Alternative Project would require the commitment of human and fiscal resources. The additional expenditure of labor required for the build alternatives would be limited to the efforts during construction because maintenance is expected to be commensurate with current maintenance activities. Funding for the project would not be available for other uses and would therefore be irretrievable.

The build alternatives would also require the commitment of natural resources. Natural resources that would be committed to the project as a result of either of the build alternatives include land, water, and vegetation. Construction of a larger water tank would result in the incorporation of a larger amount of land than what is currently developed. However, the use of the land is consistent with the facilities onsite. If the tank were demolished at a later date, the land could be

reclaimed and converted back to its natural state. Both build alternatives would require committing water resources for construction purposes, diverting water to the larger tank during re-filling, and making water available for future firefighting efforts in the area. If the facility were demolished, water flow patterns and volumes would revert to their natural state. With either build alternative, vegetation committed for project implementation under either alternative would not be restored in the larger footprint of the new tank but would be restored in the areas that would be only temporarily affected by construction or use of the new facilities.

Non-renewable and irretrievable fossil fuels and construction materials (e.g., cement, steel, water, energy) would be required. Labor and materials are also used in the fabrication, preparation, and distribution of construction materials. These materials are generally not retrievable. However, the project would require only a small amount of these materials, the materials are abundant, and use would not result in a measurable impact to the availability of these resources.

The implementation of either of the build alternatives would result in the commitment of resources as described above; however, the alternatives would result in a decreased risk of loss of the lodge facilities, as well as an overall decrease in risk of irreversible and irretrievable resources as a result of catastrophic fire in the region.

4.14.2 Short-term Uses of the Environment and Maintenance and Enhancement of Long-term Productivity

Implementation of either the Proposed Project or the Alternative Project would result in short-term uses of and short- and long-term impacts on the environment, as documented in Sections 4.1 to 4.11. However, these uses of the environment would be balanced by the increased fire-suppression capabilities that either alternative would provide. The new facilities would enhance the long-term productivity of prevention of loss to life and property in the event of a fire at the lodge or in the area. Furthermore, implementation of any of the alternatives would not preclude or alter the range of potential uses of the resources in the area.

SECTION FIVE PUBLIC PARTICIPATION AND AGENCY COORDINATION

FEMA is the lead Federal agency for conducting the NEPA compliance process for this proposal. The lead Federal agency is responsible for expediting the preparation and review of NEPA documents in a way that is responsive to the needs of City residents while meeting the spirit and intent of NEPA and complying with all NEPA provisions. Refer to Appendix B for applicable correspondence from the Reno Fire Department and the TNF.

FEMA and the City circulated the Draft EA for a 15-day public comment period. The public was notified of the availability of the Draft EA through the FEMA website, direct mailings to interested parties (Appendix B), and the publication of a public notice in the *Reno Gazette* on September 9, 2009. During the public comment period, FEMA accepted written comments on the Draft EA addressed to the FEMA Region IX Environmental Office, 1111 Broadway, Suite 1200, Oakland, California 94607 or to fema-rix-ehp-documents@dhs.gov. FEMA received no comments on the Draft EA.

SECTION SIX REFERENCES

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- NDOT (Nevada Department of Transportation). 2009a. *Washoe County, FY2009*. Available at http://www.nevadadot.com/traveler/construction_projects/awp/pdfs/washoe.pdf. Accessed on July 3, 2009.
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SECTION SEVEN LIST OF PREPARERS

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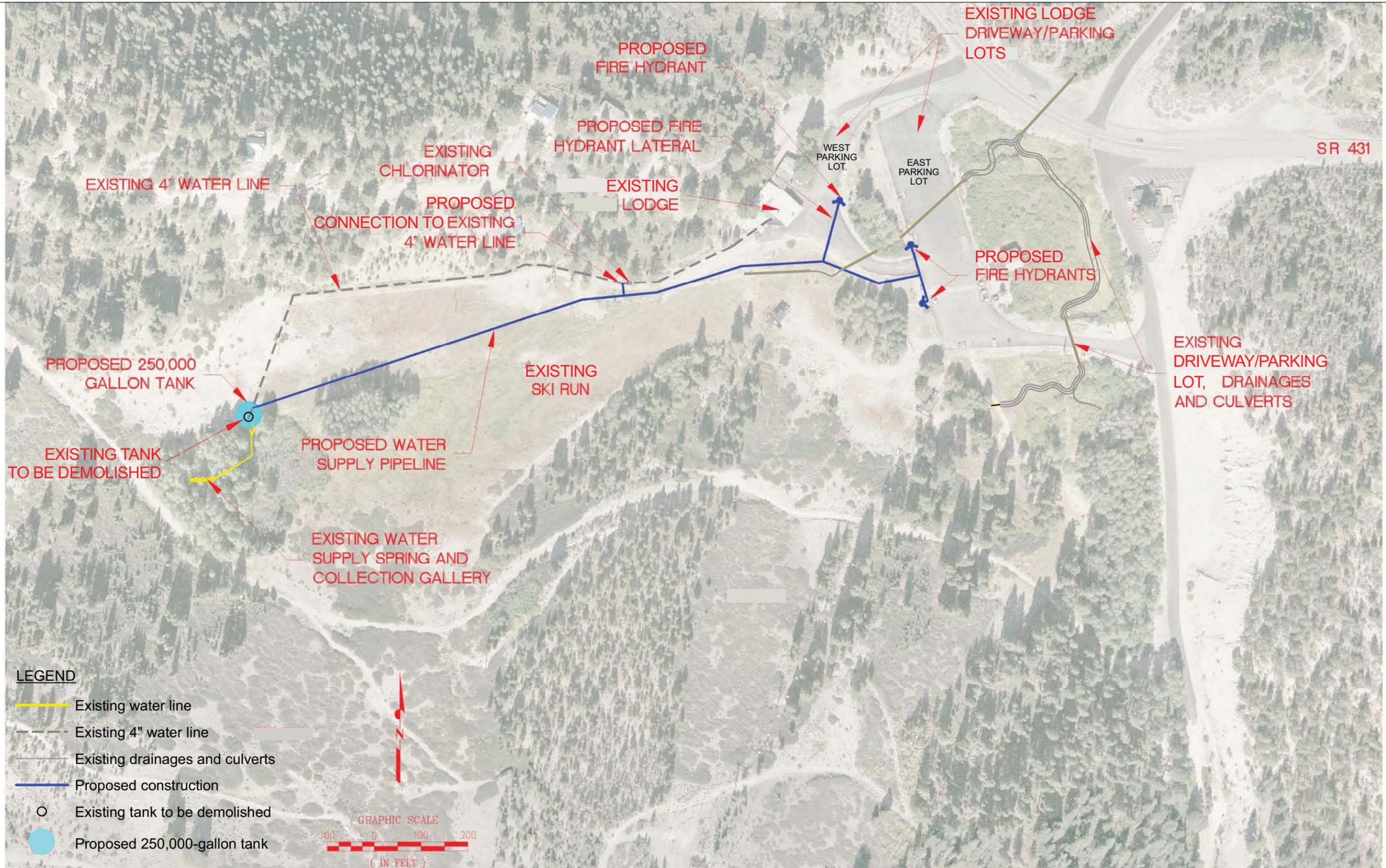
Jessie Golding, Biologist

Christian Raumann, GIS Specialist

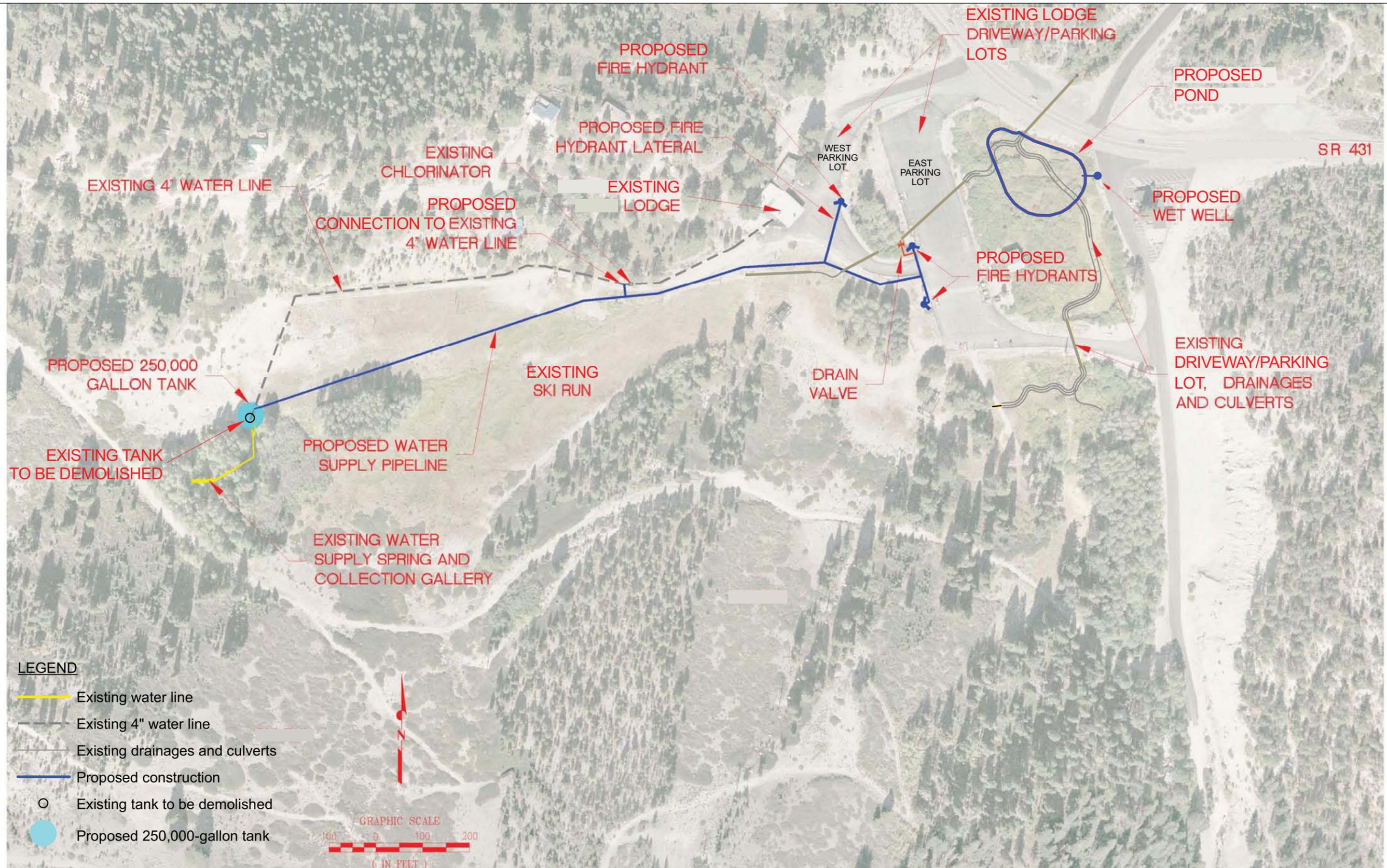
Diana Burke, Technical Editor

APPENDIX A
FIGURES AND PHOTOGRAPHS

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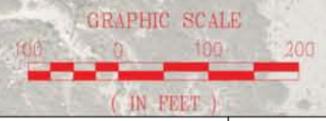


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LEGEND

- Existing water line
- - - Existing 4" water line
- Existing drainages and culverts
- Proposed construction
- Existing tank to be demolished
- Proposed 250,000-gallon tank





Photograph 1: Sky
Tavern ski slope, from
below (view to west)



Photograph 2: Existing
water tank on Sky
Tavern ski slope (view
to west-southwest)



Photograph 3: Sky Tavern ski slope from existing water tank site (view to east-northeast)



Photograph 4: Quaking aspen forest vegetation community on Sky Tavern ski slope near existing water tank site (view to south)



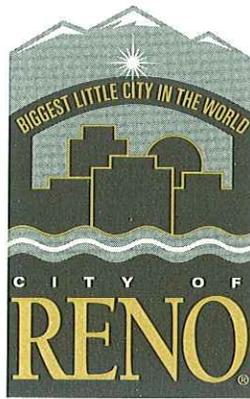
Photograph 5:
Grassland vegetation
community on Sky
Tavern ski slope
(chlorinator building in
mid-ground left) (view
to east)



Photograph 6: Willow riparian drainage vegetation community at base of Sky Tavern ski slope (view to northwest)

APPENDIX B
PUBLIC/AGENCY CORRESPONDENCE

Reno Fire Department
200 Evans Ave.
Reno, NV 89501



Paul Wagner, Fire Chief

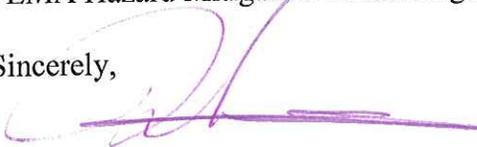
RECEIVED
DEC 31 2007
CITY OF RENO
Public Works Department

Re: Sky Tavern Water System Improvement - FEMA Hazard Mitigation Project
Application

To Whom It May Concern:

The Sky Tavern Ski Lodge and conference facility is located on the east side of the Sierra Nevada range along the Mount Rose Highway (State Route 431) about mid-way between Reno and Lake Tahoe. The facilities are surrounded by steep mountainous forested area under primarily public ownership and some private ownership. Improvements on the property include a lodge, maintenance and equipment storage buildings, ski lifts and snow grooming equipment valued well in excess of \$3 million. The surrounding forested area contains 42 homes and three businesses within less than very close proximity of the lodge. The homes in this area have an average replacement cost of approximately \$520,000 for the structures alone. Existing residential water supply systems in the area do not have a sufficient reliable fire storage provision in the event of a fire throat in the area. Fires in the area which have had the potential of threatening the lodge and adjacent improvements have occurred on average once every 40-years, this is based upon a sample area of similar fire hazard of 300 square miles centered on the Sky Tavern facility. The most recent of these was the Hawken Fire of 2007, burning over 5,000 acres, The Skyline Fire in 2006, burning over 600 acres, as well as, the Martis Fire which occurred in 2001 which burned in excess of 14,500 acres. Total suppression costs for these fire events exceeded \$30 million involving a multitude of local, State and Federal agencies. Direct costs to local fire protection agencies and locally based State agencies alone conservatively exceeded \$2 million for these events. The Reno Fire Department supports implementation of this project and requests your consideration for funding under the FEMA Hazard Mitigation Grant Program.

Sincerely,


Marty Scheuerman
Division Chief, Reno Fire Department
Emergency Manger
(775) 334-2300



United States
Department of
Agriculture

Forest
Service

Humboldt-Toiyabe
National Forest

1200 Franklin Way
Sparks, NV 89431-6432
(775) 331-6444 Fax (775) 355-5399

File Code: 5100

Date: 01/31/2008

Mr. Glen Daily, P.E.
Associate Civil Engineer
City of Reno
Public Works Department
P. O. Box 1900
Reno, NV 89505

Dear Mr. Daily:

We received your letter on December 31, 2007, regarding potential Forest Service support for a FEMA hazard mitigation grant application for improving the Sky Tavern water system. As your letter stated, this particular area, which is located about half-way between Reno and Lake Tahoe along Mount Rose Highway, State Route 431, does not have reliable residential water supply systems required for defending against future wildfires.

Agencies responding to wildfires on the Sierra Front depend upon reliable static water sources to successfully initially attack and suppress such fires. Reliable static water sources greatly enhance the firefighters' ability to put the fires out faster, and avoid larger fires that ultimately impact nearby homeowners and communities.

The USDA Forest Service, on behalf of the Humboldt-Toiyabe National Forest, fully endorses the City of Reno's proposed FEMA hazard mitigation grant application to improve water system and storage capacity for the Ski Tavern Lodge. Please feel free to call Mike Wilde, Deputy Fire Management Officer, if you have any further agency questions for this particular beneficial grant opportunity at 775-352-1222.

Sincerely,

EDWARD C. MONNIG
Forest Supervisor

cc: Greg Vergari, Michael Wilde, Christie Kalkowski



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