

Final Environmental Assessment

Northwest Reno Fuels Reduction Project

City of Reno
LPDM-PJ-09-NV-2010-001

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FEMA

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Acronyms

APE	Area of Potential Effect
BMP	Best Management Practice
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
City	City of Reno
CO	carbon monoxide
CO ₂ e	carbon dioxide equivalent
EA	Environmental Assessment
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act of 1973
FEMA	Federal Emergency Management Agency
GBBO	Great Basin Bird Observatory
GCR	General Conformity Rule
GHG	greenhouse gas
I-80	Interstate 80
LPDM	Legislative Pre-Disaster Mitigation
MBTA	Migratory Bird Treaty Act of 1918
NAAQS	National Ambient Air Quality Standards
NDEM	Nevada Division of Emergency Management
NDOT	Nevada Department of Transportation
NDOW	Nevada Department of Wildlife
NEPA	National Environmental Policy Act of 1969
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act of 1966
NNHP	Nevada Natural Heritage Program
NO _x	nitrogen oxides
PA	Programmatic Agreement
PM _{2.5}	particulate matter with particles of 2.5 micrometers in diameter or smaller
PM ₁₀	particulate matter with particles of 10 micrometers in diameter or smaller
SHPO	Nevada State Historic Preservation Officer

SO ₂	sulfur dioxide
U.S.C.	U.S. Code
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
VOC	volatile organic compound

1. INTRODUCTION

The Department of Homeland Security's Federal Emergency Management Agency (FEMA) proposes to provide Federal financial assistance (Federal action) to the City of Reno (Subapplicant), through the Nevada Division of Emergency Management (NDEM), for the Northwest Reno Fuels Reduction Project (proposed project). The proposed project would be implemented in the City of Reno (City), Washoe County, Nevada (Figure 1).

The proposed project consists of reducing the risk of damage and loss associated with wildfire events through implementation of a fuel reduction program in undeveloped City-owned areas in northwest Reno. Vegetation would be treated on approximately 374 acres in small and large canyons and on hillsides adjacent to developed areas. Vegetation treatment would include cutting, chipping, or masticating vegetation and either hauling it offsite or scattering it to the treatment areas to prevent erosion and inhibit growth of weeds. The proposed project includes creating defensible space near existing structures.

The assistance would be provided through the Legislative Pre-Disaster Mitigation (LPDM) Program. The LPDM Program is authorized by Section 203 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988, as amended (42 U.S.C. §§ 5170c), to assist States and communities implement sustained, pre-disaster, natural-hazard mitigation programs to reduce risk to the population and structures, while also reducing reliance on financial assistance from disaster declarations.

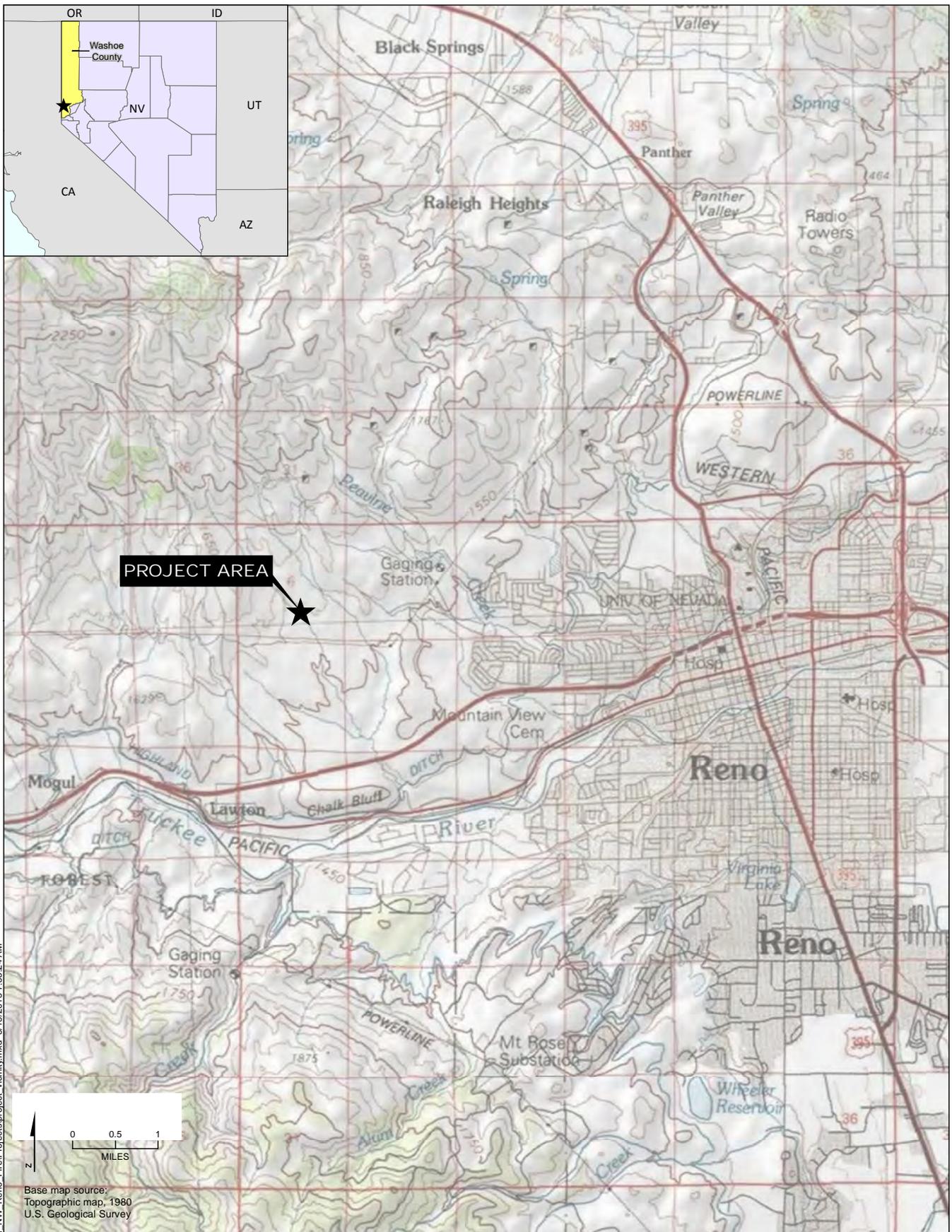
FEMA has prepared this Environmental Assessment (EA) to evaluate the impacts of the City's proposal. The EA has been prepared according to the requirements of the National Environmental Policy Act of 1969 (NEPA), as amended (42 U.S.C. §§ 4321–5327), the Council on Environmental Quality's (CEQ's) regulations implementing NEPA (40 CFR Parts 1500–1508), and FEMA's implementing regulations (44 CFR Part 10).

The EA process provides steps and necessary procedures for evaluating the potential environmental, social, and economic impacts of the proposed project and alternatives. Potential impacts are measured by context and intensity, as defined in CEQ regulations. The EA process also includes procedures for giving the public and local, State, and Federal agencies opportunities to provide input on the proposed project and identified alternative.

1.1 PURPOSE AND NEED FOR ACTION

The urban/wildland interface in the City, including the proposed project area, is susceptible to the effects of catastrophic wildfire. The purpose of the Federal action is to provide PDM Program Federal financial assistance to the City, through NDEM, to reduce the risk of death and injury to people and damage to property from wildfire events.

The wildfire hazard in the proposed project area poses a risk to the adjacent residential neighborhoods. Most of northwest Reno is rated moderate on the wildfire hazard assessment scale, but the hazard is more severe in the proposed project area, which consists of the areas that



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Base map source:
Topographic map, 1980
U.S. Geological Survey

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City of Reno
Northwest Reno Fuels Reduction Project

Figure 1
Project vicinity

have been selected for treatment in the proposed project. The proposed project area is characterized by subdivision development built around densely packed open-space shrub-covered hillsides and canyons. Walking paths were built throughout the open space. The soil was disturbed when the paths were built, allowing cheat grass, an easily ignitable fuel, to establish along the paths—the most likely place for a fire to start.

The City has concluded that there is a need to reduce the risk of loss or damage from wildfire events in the project area by thinning vegetation and removing brush and other ladder fuels. Therefore, the purpose of the proposed Federal action is to reduce the risk of wildfire in the project area and help protect the health and safety of the public and property within the City.

2. DESCRIPTION OF THE PROPOSED PROJECT AND ALTERNATIVES

This section contains a description of the No Action Alternative, the proposed project, and the three alternatives that were considered but eliminated.

2.1 NO ACTION ALTERNATIVE

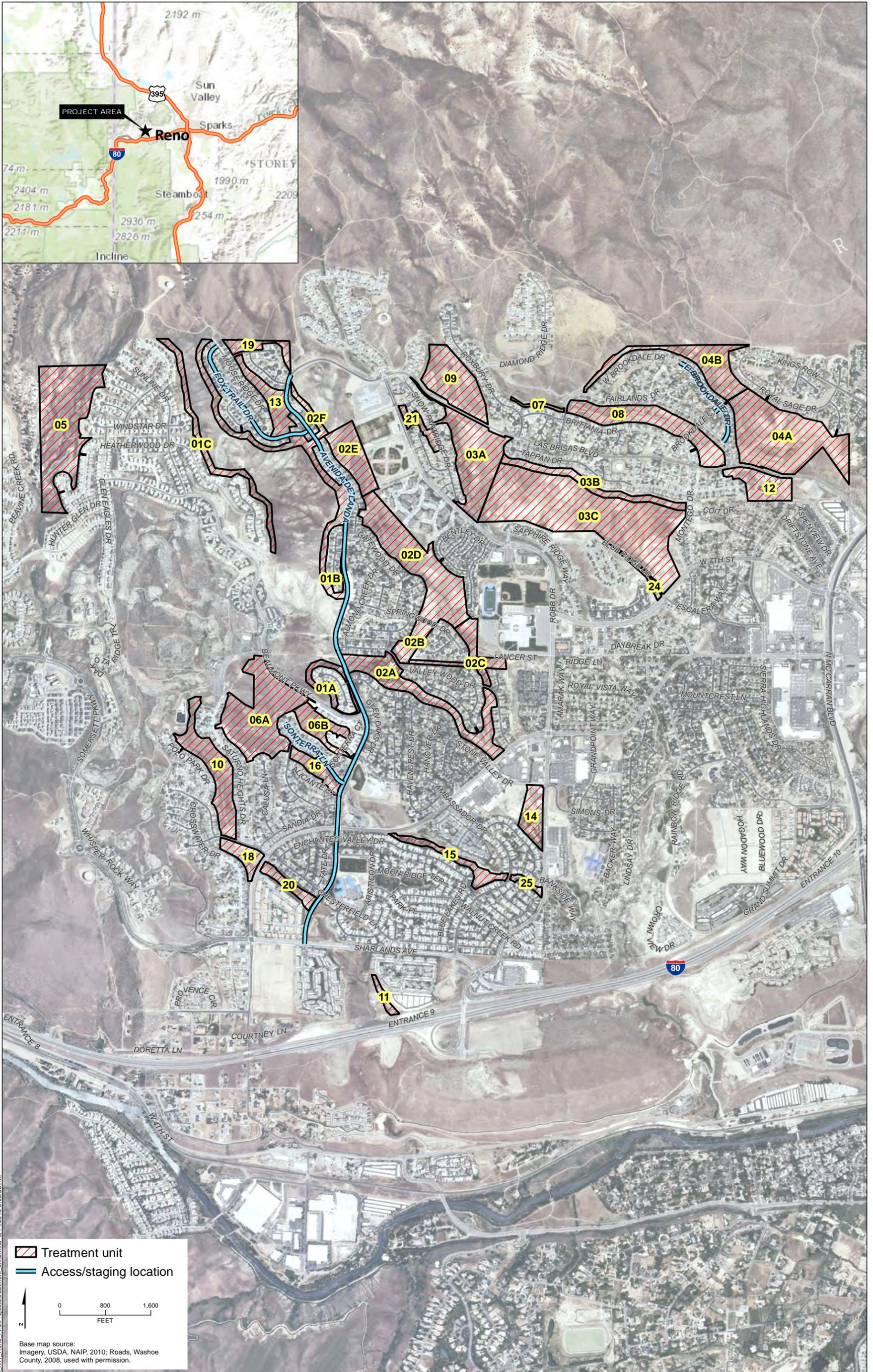
A No Action Alternative is required to be included in the environmental analysis and documentation pursuant to the CEQ's regulations implementing NEPA (40 CFR Parts 1500–1508). The No Action Alternative is defined as maintaining the status quo, with no Federal financial assistance, and is used to evaluate the effects of not providing eligible assistance for the proposed project, thus providing a benchmark against which action alternatives can be evaluated.

Under the No Action Alternative, no Federal financial assistance would be provided to the City. This would not meet the mission of the LPDM program in providing Federal financial assistance to assist communities in implementing sustained, pre-disaster, natural-hazard mitigation programs to reduce risk to the population and structures, while also reducing reliance on financial assistance from disaster declarations. The subapplicant would be unable to mitigate potential wildfires in the project area because of the lack of Federal financial assistance. The existing wildfire hazard would therefore continue, and the health and safety risks to people and damage to property from wildfires in the open space area would not be reduced. Therefore, the No Action Alternative would not meet the purpose and need of the project.

2.2 PROPOSED PROJECT

The City proposes to reduce the biomass in the project area by thinning trees and removing brush and other ladder fuels such as big sagebrush (*Artemisia tridentate*), rubber rabbitbrush (*Chrysothamnus nauseosus*), mormon tea (*Ephedra spp.*), and bitterbrush (*Purshia tridentate*) to reduce the potential for wildfires. Ground cover would be retained and identified sensitive plant species, such as live hardwood trees, would be protected.

The City has identified 33 sites (treatment units) in the wildland-urban interface in northwest Reno that require treatment. The 33 units encompass approximately 500 acres, of which 374 acres would be treated. The locations of the units are shown on Figure 2, and acreages and proposed vegetation treatments are listed in Table 1.



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Table 1: Treatment Units and Vegetation Treatments

Treatment Unit		Proposed Vegetation Treatment	Acreage to Be Treated
Number	Acreage		
01A	4.7	Hand-cut and scattered	4.7
01B	19.1	<ul style="list-style-type: none"> • Hand-cut and scattered • Mulching by a mechanical masticator 	9.1 10.0
01C	10.6	Hand-cut and scattered	10.6
02A	21.7	Hand-cut and mulched in a wood chipper	15.0
02B	5.5	<ul style="list-style-type: none"> • Hand-cut and scattered • Mulching by a mechanical masticator 	1.0 4.5
02C	9.2	Hand-cut and mulched in a wood chipper	9.2
02D	34.8	<ul style="list-style-type: none"> • Hand-cut and mulched in a wood chipper • Mulching by a mechanical masticator 	18.0 6.0
02E	12.6	Mulching by a mechanical masticator	6.0
02F	2.6	Hand-cut and scattered	2.6
03A	27.1	<ul style="list-style-type: none"> • Hand-cut and scattered • Hand-cut and mulched in a wood chipper • Mulching by a mechanical masticator 	3.1 8.0 16.0
03B	9.4	<ul style="list-style-type: none"> • Hand-cut and scattered • Mulching by a mechanical masticator 	1.4 8.0
03C	75.4	Mulching by a mechanical masticator	23.0
04A	43.3	<ul style="list-style-type: none"> • Hand-cut and scattered • Mulching by a mechanical masticator 	6.3 27.0
04B	17.7	Hand-cut and mulched in a wood chipper	17.7
05	42.0	Hand-cut and scattered	30.0
06A	33.0	<ul style="list-style-type: none"> • Hand-cut and mulched in a wood chipper • Mulching by a mechanical masticator 	15.0 18.0
06B	8.1	Hand-cut and scattered; possible hauling of cut vegetation to Unit 06A for mastication	8.1
07	1.1	Hand-cut and scattered	1.1
08	21.7	Hand-cut and mulched in a wood chipper	21.7
09	19.2	<ul style="list-style-type: none"> • Hand-cut and scattered • Mulching by a mechanical masticator 	2.2 12.0
10	18.2	Hand-cut and mulched in a wood chipper	18.2
11	1.8	Hand-cut and scattered; possible mulching of hand-cut vegetation in a wood chipper if access to an adjacent private storage facility is obtained	1.8

Treatment Unit		Proposed Vegetation Treatment	Acreage to Be Treated
Number	Acreage		
12	10.3	Hand-cut and mulched in a wood chipper	1.5
13	9.4	<ul style="list-style-type: none"> • Hand-cut and mulched in a wood chipper • Mulching by a mechanical masticator 	4.0 5.4
14	7.9	Hand-cut; hauling of cut material offsite	2.5
15	6.8	Hand-cut and mulched in a wood chipper	4.0
16	5.7	Hand-cut and mulched in a wood chipper	5.7
18	5.4	Hand-cut and mulched in a wood chipper	5.4
19	4.7	Hand-cut and scattered	3.0
20	4.4	Hand-cut and scattered	0.5
21	3.6	Hand-cut; mulching of the cut vegetation in a wood chipper or hauling offsite	3.6
24	1.7	Hand-cut; mulching of the cut vegetation in a wood chipper or hauling offsite	1.7
25	1.4	Hand-cut and mulched in a wood chipper	1.4

Hand removal would involve the use of chainsaws, and the vegetation would be scattered onsite, hauled offsite to an approved disposal location, or transported to a towed wood chipper. Chipped mulch would be scattered onsite to a maximum depth of 4 inches. The towed chipper would stay on established roads and trails except when it is necessary for the chipper to leave the road or trail to avoid an obstacle. In areas with poor vehicular access, cut vegetation would be scattered by hand, away from private property lines. Mechanical mastication would involve driving a compact excavator with a mulching attachment over vegetated areas.

Plants from 2 to 6 inches in height would generally not be removed. The proposed project would focus primarily on removing plants that are taller than 2 feet. Approximately 10 percent of the shrubs shorter than 2 feet would be removed. The target for a post-treatment aerial shrub cover is 25 to 50 percent. Shrubs within 100 feet of homes would be thinned to create an average separation between shrub branches of twice the average shrub height. Shrubs within 5 feet of wooden fences or other flammable improvements would be removed.

Access and staging would occur on local roads near each treatment unit, including East Brookdale Drive, Brookdale Court, Fox Trail Drive, Sonterra Lane, and Avenida de Landa. Other local paved road adjacent to the treatment units may also be used for staging and/or access.

Crews would vary in size; 4 to 20 individuals would work in the project area at any one time. Crews would commute to the site for each 8-hour work day. Treatment in the units would take place over approximately 2.5 years. Treatment could occur on any days except when the fire danger is high, when soils are saturated and susceptible to rutting, and during the migratory or winter seasons (approximately November 15th through April 15th).

Equipment would be returned to the Reno Fire Department Shop each night and would be thoroughly cleaned before being transported to the site the next day to reduce the potential for spreading invasive weeds. Equipment would be fueled only on nonpervious surfaces.

Long-term maintenance would involve occasional re-entry to the treatment units to cut vegetation that has regrown or increased in size. Treatment areas typically require maintenance every 5 to 8 years. To prolong the effective life of the project and discourage the establishment and spread of invasive annual grasses, pre-emergent herbicide would be applied according to the manufacturer's instructions, and units would be revegetated with less flammable forbs and perennial grasses.

2.3 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM FURTHER REVIEW

Three project alternatives other than the No Action Alternative and proposed project were considered and eliminated: controlled burning, grazing, and using pre-emergent chemicals.

The first alternative consisted of a controlled burn in the project area. The project area is close to thousands of residential and commercial buildings, and the wind patterns in the project area are unpredictable. Therefore, this alternative was eliminated because the risk of damage would be greater than the potential benefit.

The second alternative consisted of using grazing animals to reduce the vegetation. This alternative was eliminated because the reduction of fire fuels would be insufficient and because the project could not be implemented in a consistent manner.

The third alternative consisted of using pre-emergent chemicals to manage the vegetation. This alternative was eliminated because the reduction of fire fuels would be insufficient. Application of pre-emergent chemicals would discourage new vegetation growth; however, the chemicals would not be able to effectively reduce the existing biomass in the proposed project area that is subject to fires. Mechanical treatment, such as that listed in the proposed project, would still be required to sufficiently reduce the risk of wildfire in the proposed project area. The chemicals would reduce non-native plant species, but native plant species would also need to be treated.

3. AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This section focuses on the resources that the No Action Alternatives and the proposed project have the potential to affect: geology and soils, air quality, climate change and greenhouse gas emissions, water resources, biological resources, historic properties, public services and recreation, noise, transportation, visual resources, socioeconomics and environmental justice, and cumulative impacts.

Based on the geographic location and setting of the project area, the following resources have been identified as not having the potential to be affected by either the No Action Alternative or the proposed project and therefore do not require further evaluation pursuant to CEQ regulations:

- Agriculture: There is no agricultural land in the project area.
- Coastal zone: The project area is outside the coastal zone.
- Hazardous materials: The use of herbicides in accordance with the manufacturer's specifications and applicable laws would minimize the potential for accidental release. Implementation of Best Management Practices (BMPs) would make hazardous material releases or accidents unlikely and would ensure that any accidental release would be finite and localized.
- Land use: Vegetation removal would not change land use patterns.
- Seismicity: The proposed project would not expose structures to additional risks associated with known earthquake faults, strong seismic ground shaking, or seismic-related ground failure (including liquefaction). There would be no construction of new structures or modification of existing structures.

3.1 GEOLOGY AND SOILS

The project area is on the eastern slope of the Sierra Nevada range. The primary soil type in the project area is the Chalco series, which is a gravelly loam derived from volcanic rocks. This soil type is found on rock pediments, plateaus, and hills and is characterized by shallow, well drained soils that formed in pedisegment or colluvium over residuum on slopes ranging from 0 to 50 percent. The soil is well drained and has high surface runoff and low saturated hydraulic conductivity (USDA, 2012).

3.1.1 No Action Alternative

Under the No Action Alternative, there would be no fuel reduction activities and therefore no effects to geology or soils.

3.1.2 Proposed Project

The proposed project would result in minimal ground disturbance caused by the foot traffic from the work crews and the use of equipment. This minor disturbance could increase erosion in the project area. The potential for loss of topsoil and hazards associated with unstable soils would be minimized by use of low-impact equipment, chipping materials on paved surfaces where feasible, confining mechanical thinning to areas with shallow slopes and areas with low erosion potential, and avoiding work on days when soils are saturated and susceptible to rutting. The City would revegetate treated areas with less flammable forbs and perennial grasses, which would minimize long-term soil erosion.

Therefore, the proposed project would result in minor short-term direct effects to soils and no long-term direct or indirect effects to geology or soils.

3.2 AIR QUALITY

The Clean Air Act of 1970, as amended (42 U.S.C. §§ 7401–7661), was enacted to regulate 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 six criteria pollutants regulated by the act are carbon monoxide (CO), lead, nitrogen dioxide (NO₂), ozone (O₃), particulate matter (less than 10 micrometers [PM₁₀] and less than 2.5 micrometers [PM_{2.5}] in diameter), and sulfur dioxide (SO₂). Ozone is not directly emitted from emission sources, but volatile organic compounds (VOCs) and nitrogen oxides (NO_x) are ozone precursors that react in the atmosphere to produce ozone.

Under the 1977 amendments to the Clean Air Act, States with air quality that does not achieve the NAAQSs are required to develop and maintain State Implementation Plans. These plans constitute a federally enforceable definition of the State's approach (or plan) and schedule for the attainment of the NAAQSs. Air quality management areas are designated as "attainment," "nonattainment," or "unclassified" for each criteria pollutant depending on whether the concentration of the pollutant exceeds the applicable NAAQS. Areas that have been redesignated from nonattainment to attainment are called maintenance areas.

The project area is in Washoe County, which is regulated by the Washoe County Air Quality Management Division. The EPA currently designates the project area as being in serious nonattainment for PM₁₀ 24-hour NAAQS. The project area is under maintenance for CO and is in attainment or undesignated for all other NAAQS.

The General Conformity Rule (GCR) (40 CFR § 51.853) states that "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 nonattainment or maintenance area caused by a Federal action would equal or exceed any of the rates" specified in the GCR (40 CFR 51.853b). Therefore, a comparison must be made to demonstrate that a proposed action's emissions would be below the applicable emission threshold rates listed in the GCR. The applicable GCR emission threshold rates are listed in Table 2.

3.2.1 No Action Alternative

Under the No Action Alternative, no mechanical equipment would be used, and no direct effects to air quality would therefore occur.

The wildfire risk would remain unmitigated in the project area and the adjacent residential properties. There is potential for indirect impacts to air quality in the event of a wildfire in the project area. A wildfire would temporarily increase levels of most criteria pollutants and many hazardous air pollutants. In the long term, particulate matter emissions could increase as a result of the soils exposed in the project area after a wildfire event. Therefore, the No Action Alternative could result in indirect, short- and long-term adverse effects to air quality if a wildfire occurred in the project area.

3.2.2 Proposed Project

Implementation of the proposed project would result in a temporary deterioration of air quality as a result of exhaust from construction crew vehicle trips to and from the project area and from exhaust from the use of mechanical equipment including chain saws and from the transport of green waste. Impacts to air quality would occur only during treatment.

The predicted emissions of the proposed project were calculated to determine whether a conformity determination would be required under the GCR. The calculations include a consideration of the direct and indirect emission rates of PM₁₀ and CO to determine whether the emission rates would equal or exceed the *de minimis* threshold emissions rates specified in the GCR.

Table 2 shows the calculated total estimated emission of PM₁₀ and CO as well as the other criteria pollutants from the implementation of the proposed project. The calculations conservatively assume that vegetation clearing would be performed by a team of 20 people working 8-hour days for 250 days per year for 2.5 years.

Table 2: Projected Total Emissions from the Proposed Project

Pollutant	Total (tons/year)⁽¹⁾	General Conformity Threshold (tons/year)	Exceeds Threshold
VOC	22.7	N/A	N/A
PM ₁₀	3.1	70	No
PM _{2.5}	2.9	N/A	N/A
CO	94.5	100	No
NO _x	2.6	N/A	N/A
SO ₂	0.1	N/A	N/A

(1) Includes emissions from mechanical equipment, employee vehicles, and transportation of green waste

As shown in Table 2, implementation of the proposed project would result in substantially less than 70 tons per year of PM₁₀ and less than 100 tons per year of CO. Therefore, the proposed project qualifies as a GCR exemption, and no further analysis is required to establish conformity with the State Implementation Plan.

The proposed project would therefore have negligible short-term and no long-term impacts on air quality.

3.3 CLIMATE CHANGE AND GREENHOUSE GAS EMISSIONS

On February 18, 2010, the CEQ released a memorandum, *Draft NEPA Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emissions*, which provides guidance on how Federal agencies should consider climate change in their NEPA decision-

making documents (CEQ, 2010). The guidance advises that the consideration of climate change address the greenhouse gas (GHG) emission effects of a proposed project. The CEQ guidance states that “if a proposed project would be reasonably anticipated to cause direct emissions of 25,000 metric tons or more of carbon dioxide equivalent (CO₂e)GHG emissions on an annual basis, agencies should consider this an indicator that a quantitative and qualitative assessment may be meaningful to decision makers and the public” (CEQ, 2010). The project area as a whole is calculated to have the ability to sequester 5,348 metric tons of CO₂e GHG emissions per year.

The guidance also advises that the Federal agency’s consideration of climate change address the effects of climate change on a proposed project. The CEQ advises the “analysis to be focused on the aspects of the environment that are affected by the proposed project and the significance of climate change for those aspects of the affected environment” (CEQ, 2010).

3.3.1 No Action Alternative

The No Action Alternative would have no impacts on climate change or GHG emissions because no construction or other activities resulting in air emissions would occur. However, under this alternative, no fuel reduction would occur, and the risk of wildfire would remain high.

A wildfire would result in the release of CO₂e into the atmosphere from burning vegetative fuels. An intense wildfire in the project area would result in CO₂e emissions below the CEQ annual threshold of 25,000 metric tons. Therefore, the No Action Alternative would result in minor, short- and long-term indirect effects on climate change and GHG emissions.

3.3.2 Proposed Project

The proposed project would result in minimal direct and indirect GHG emissions. Direct GHG emissions would result from the short-term use of vehicles and mechanical equipment during implementation of the proposed project and follow-up maintenance. Direct emissions during project implementation would be approximately 664 metric tons of CO₂e per year, and direct emissions during maintenance would be considerably smaller. Therefore, GHG emissions as a result of the proposed project would be well below the CEQ threshold for CO₂e of 25,000 metric tons.

Indirect emissions from the loss of carbon sinks resulting from the removal of vegetation from the project area would also be considerably less than the CEQ threshold. Accounting for the regrowth and vegetation removal during maintenance in the project area, indirect GHG emissions would be negligible because young vegetation stands (i.e., regrowth) tend to sequester carbon at a faster rate than older vegetation stands. As treatment areas cycle through regrowth and maintenance, future carbon sequestration rates in the project area may meet or exceed the current sequestration rate.

The effects of global climate change on the proposed project would be negligible. The proposed project would be implemented over a relatively short period, and global climate change would not have a dramatic effect on fuel loads in the project area during this period. Maintenance

would sustain the level of fuel loads resulting from the proposed project. Treatment would be adaptive to address the fuel loads in the area undergoing maintenance and would therefore be adaptive to how fuel loads may change as a result of global climate change.

The proposed project would be implemented in a manner that would have minimal effects on the environment. Mitigation measures would continue to be implemented during maintenance and would therefore also have minimal effects on the environment. Because of the adaptive nature of the proposed project and maintenance, global climate change is not expected to have a substantial effect on the resources affected by the proposed project.

Therefore, the proposed project would have negligible, direct and indirect, short-term impacts on GHG emissions. The proposed project would make a negligible contribution to long-term global climate change.

3.4 WATER RESOURCES

The project area is located in the Truckee River watershed, which eventually drains to Pyramid Lake more than 40 miles northeast of the City. None of the streams that originate in the region have outlets to the ocean. Chalk Creek flows in two major tributaries from the south face of Peavine Mountain in the northwest Reno area. The flow has become year-around due to urban irrigation. The flow in the lower reach is approximately 0.5 cubic feet per second. There are no wetlands or water bodies in the project area (City of Reno, 2012).

Executive Order (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 11988 are codified in 44 CFR Part 9. Because the City participates in FEMA's National Flood Insurance Program (NFIP), the City must adopt and enforce floodplain management ordinances, particularly with respect to new construction. NFIP is an important element in making flood insurance available to home and business owners. The City has promulgated and enforces a floodplain ordinance at least as stringent as the NFIP and its implementing regulations (44 CFR Parts 59–77).

According to FEMA's Flood Insurance Rate Map for Washoe County, Nevada, effective date March 16, 2009, the project area is in a low- to moderate-risk flood area. Most of the project area is within unshaded Zone X. Unshaded Zone X is defined as an area of minimal flood hazard (outside the 0.2 percent-annual-chance floodplain). The portion of the project area that contains the Upper Peavine Creek Reservoir is located within Zone A, which is defined as a special flood hazard area subject to inundation by the 1 percent-annual-chance flood with no base flood elevations determined.

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 CFR Part 9. The National Wetlands Inventory maps (USFWS, 2013) and a field reconnaissance in August 2012 indicated no evidence of wetlands in the project area.

3.4.1 No Action Alternative

Under the No Action Alternative, there would be no direct effects to water resources. Soil erosion and sedimentation could occur as a result of the loss of existing vegetation if a wildfire occurred in the project area, which would negatively affect water quality. The indirect effect on water quality would continue until the soil in the burned area has stabilized. Therefore, adverse short- and long-term indirect effects could occur to water resources if a wildfire occurred in the project area.

3.4.2 Proposed Project

The increased number of vehicles that would use the project area during project implementation may result in increased amounts of fluids that could run off, either on- or offsite, into waterways. As discussed in Section 3.1.2, temporary surface disturbance of soils from the foot traffic of work crews, the use of equipment, and the loss of top soils in the project area could cause erosion. The eroded soil could be transported downslope during and immediately after rain events, negatively affecting water quality. The Subapplicant will implement mitigation measures to reduce impacts to water quality including using silt fences, covering spoil piles, watering areas of disturbed soil, staging equipment along existing roads, and keeping equipment properly maintained. With implementation of these mitigation measures, temporary impacts are expected to be minor. The proposed project does not include any activities that would alter drainage patterns.

In compliance with EO 11988, FEMA considered the proposed project's impacts on the floodplain using the Eight-Step Decision-Making Process. FEMA published an Initial Public Notice on December 14, 2012, which included information about FEMA's intention to carry out actions within or affecting the floodplain. To FEMA's knowledge, no comments were received on the Initial Public Notice. The proposed project is limited to vegetation removal and does not involve construction of new features or impermeable surfaces within the floodplain. The proposed project would not modify the extent of the floodplain. FEMA will require that the Subapplicant publish a Final Public Notice in compliance with EO 11988 before implementation of the proposed project.

Therefore, the proposed project is anticipated to have no direct effects and minor, short-term indirect effects to water quality. The proposed project would have no long-term effects to water resources.

3.5 BIOLOGICAL RESOURCES

The project area is composed of big sagebrush shrubland, montane sagebrush steppe, xeric mixed sagebrush shrubland, cliff and canyon, and invasive annual and biennial grassland/forbland communities interspersed with ephemeral or seasonal drainages sometimes connecting with permanent ponds or stream corridors. Notable prevalent species include big sagebrush (*Artemisia tridentata*), bitterbrush (*Purshia* sp.), rubber rabbitbrush (*Ericameria nauseosa*), mormon tea (*Ephedra nevadensis*), and blackbrush (*Coleogyne ramosissima*). In August 2012, FEMA's consultant, URS Group, Inc., conducted a reconnaissance survey of the project area to identify sensitive biological resources.

The following subsections contain a description of the affected environment, including special-status species, and an evaluation of the potential direct and indirect effects to the special-status species. Special-status species are defined in this document as federally listed species and species protected at the State and local levels and under the Migratory Bird Treaty Act of 1918, as amended (MBTA) (16 U.S.C. §§ 703–711).

3.5.1 Endangered Species Act

Section 7 of the Endangered Species Act of 1973, as amended (ESA) (16 U.S.C. § 1536(a)(2)), requires Federal agencies to consult on actions they propose to authorize, fund, or carry out if those actions have the potential to affect species that are listed or proposed for listing as threatened or endangered or their habitat is designated as critical habitat.

A U.S. Fish and Wildlife Service (USFWS) species list for Washoe County was obtained, and the project area was evaluated for its potential to support federally listed species. Because of the absence of suitable habitat in the project area for federally listed species, the federally listed species identified by the USFWS for Washoe County do not have the potential to occur in the project area.

3.5.2 Rare and Endemic Plants, State Species of Concern, and the Migratory Bird Treaty Act

Three rare and endemic plant species tracked by the Nevada Natural Heritage Program (NNHP) have been identified as occurring within 2 miles of the project area (NNHP, 2012). Two species, altered andesite buckwheat (*Eriogonum robustum*) and altered andesite popcornflower (*Plagiobothrys glomeratus*), are reliant on the presence of hydrothermally altered andesite rock (Mozingo, 1987). Based on the lack of suitable habitat, neither species has the potential to occur in the project area. The third species, steamboat monkeyflower (*Mimulus ovatus*), is also reliant on the presence of similarly altered deposits of andesite or rhyolite (NNHP, 2001) and has no potential to occur in the project area.

In January 2013, the Nevada Department of Wildlife (NDOW) submitted a letter to FEMA regarding the proposed project and the wildlife protected by NDOW's *Wildlife Action Plan* (NDOW, 2012) and the MBTA¹ (see Appendix A). In the *Wildlife Action Plan*, mule deer (*Odocoileus hemionus*) is designated as a species of conservation priority that is highly associated with montane and sagebrush shrubland and successional vegetation. These characteristics make the species of particular concern in the project area given that large portions of the existing vegetation may be classified as shrubland and/or areas recovering or exhibiting recent disturbance (natural or manmade). Additionally, the known mule deer herds near the project area have experienced severe and steady population decline since 1990, resulting largely from human and wildfire encroachment into crucial winter forage range for mule deer.²

Numerous bird species recently observed within 2 miles of the project area (eBird, n.d.) are identified in the *Nevada Comprehensive Bird Conservation Plan* as priority species for montane shrubland and sagebrush habitats (GBBO, 2010). The following recently observed priority species also are known historically to occur in the project area (Sauer et al., 2011): bald eagle (*Haliaeetus leucocephalus*), golden eagle (*Aquila chrysaetos*), prairie falcon (*Falco mexicanus*), mountain quail (*Oreortyx pictus*), pinyon jay (*Gymnorhinus cyanocephalus*), Brewer's sparrow (*Spizella breweri*), Calliope hummingbird (*Selasphorus calliope*), and green-tailed towhee (*Pipilo chlorurus*). These species are likely to occur in the project area although many more avian species have potential to occur. With exception of mountain quail and California quail, these species are also protected under the MBTA.

3.5.3 No Action Alternative

Under the No Action Alternative, there would be no fuel reduction, and no direct effects to biological resources would occur. Given that the project area does not provide habitat to support federally listed species or rare or endemic plant species, the No Action Alternative would not affect any of these species. However, potential indirect effects could occur to birds protected under the MBTA or to common wildlife and vegetation. If a wildfire occurs in the project area, indirect reduction in terrestrial wildlife habitat and forage as well as mortality to individual species could occur. Additional indirect effects would occur to aquatic habitat and resources because fire residue and eroded soils could be washed into local streams and bodies of water. The indirect effects associated with the loss of existing vegetation would continue until adequate vegetation in the burned area has been re-established. Therefore, adverse short- and long-term indirect effects could occur to biological resources if a wildfire occurred in the project area.

¹ Mark Freese, Supervisory Habitat Biologist, NDOW, written communication, January 23, 2013.

² Ibid.

3.5.4 Proposed Project

This section contains a discussion of the effects to wildlife and vegetation from the proposed project (Section 3.5.4.1) and compliance of the proposed project with EO 13112, Invasive Species (Section 3.5.4.2).

3.5.4.1 *Effects to Wildlife and Vegetation*

Given that the project area does not provide habitat to support federally listed species or rare or endemic plant species, the proposed project would not affect any of these species. However, effects could occur to birds protected under the MBTA and to common wildlife and vegetation. Potential effects to common wildlife would be limited to when vegetation clearing is taking place.

The presence of work crews has the potential to directly affect wildlife species through interruptions in typical behavior, which could result in indirect the effects of vulnerability and stress. The effects of human presence and disturbance during work activities would be reduced by preferential use of hand tools over motorized equipment whenever possible and by minimizing the size of work crews. Forced dispersal of wildlife due to noise, dust, vibration, or visual disturbance from human presence could result in short-term, minor direct effects from stress caused by relocation to other suitable habitat. However, species living near the project area may be accustomed to human presence and low-level disturbance since most of the project area is in a developed, residential area.

Indirect long-term effects resulting from reductions in forage, protection from predation, thermal cover, and nesting structure could result in decreased survivability and fecundity (i.e., population fitness) of wildlife species. Mule deer are especially susceptible to energetic and nutritional stressors during winter when the species relies on shrub and brush communities for browsing and cover in times of deep snowfall (Stubbendieck et al., 1992). Per NDOW's recommendations, vegetation removal should not occur during the migratory or winter seasons (approximately November 15th through April 15th) to avoid potential direct and indirect effects to mule deer populations that would decrease mule deer vitality in the project area.

The reduction of mature shrubs (to no greater than 2 feet in height) would have temporary indirect effects to mule deer forage and nesting bird habitat availability until vegetation regrowth occurred. A reduction in suitable habitat acreage, a permanent indirect effect, would occur initially based on the removal of some shrubs close to buildings and fences. However, the amount of affected acreage would not increase over time because future activities would involve only the periodic thinning and pruning of remaining shrubland necessary to maintain reduced fuel loads in the project area.

The City has prepared a draft revegetation plan for the proposed project (Reno Fire Department, 2012) that includes weed control practices and the use of pre-emergent herbicide post-clearing of invasive annual grasses, followed by the revegetation of treatment units with less flammable forbs and perennial grasses. The treatments would help protect native shrubland by slowing the

spread and reducing the temperature of potential wildfires, allowing for more effective fire control to prevent further destruction of suitable habitat. Long-term effects to soils and subsequently vegetation and habitat quality would also be avoided by the preferential use of hand tools over heavy mechanized equipment and by not conducting work when soils are highly saturated, such as post-precipitation, and the ground is susceptible to erosion and rutting.

Since vegetation-clearing may occur during the avian breeding season (i.e., March through August), pretreatment surveys for the presence of birds, including their nests and eggs, would be conducted by a qualified biologist to ensure compliance with the MBTA. To avoid directly or indirectly affecting nesting birds, treatment would not occur in the parts of the project area where sensitive resources have not yet been surveyed by a qualified biologist. Potential effects (such as nest desertion) would be a greater risk for ground- and shrub-nesting species, though human presence and disturbance could affect behavior of other nesting species if activities occurred within a certain distance of an active nest. If nests or signs of nesting activity are observed by the project biologist, a protective buffer (the size of which would depend on species-specific requirements) would be implemented and monitored by the project biologist during project implementation. The protective buffer would be maintained until chicks were fledged and the nest was no longer active. These measures would avoid and minimize potential direct and indirect effects to nesting birds in the project area.

Therefore, minor long-term, indirect effects and minor short-term, direct effects to wildlife of local conservation concern (i.e., mule deer) and nesting birds protected under MBTA would occur as a result of the proposed project, but the effects would be reduced by implementation of the measures listed above. No direct or indirect effects to federally listed species or rare and endemic plant species would occur as a result of the proposed project because of the lack of suitable habitat for these species.

3.5.4.2 Executive Order 13112: Invasive Species

The proposed project would not result in any adverse impacts to or from the introduction of invasive species. The proposed project involves long-term maintenance, and treatment areas may require revisiting every 5 to 8 years. To prolong the effective life of the project and discourage the establishment and spread of invasive annual grasses, pre-emergent herbicide would be applied according to manufacturer's instructions, and units would be revegetated with less flammable forbs and perennial grasses. Therefore, FEMA would be in compliance with EO 13112.

3.6 HISTORIC PROPERTIES

Investigations were undertaken to identify historic properties in the Area of Potential Effect (APE) in compliance with Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended (16 U.S.C. § 470f), and the 2005 Programmatic Agreement (PA) between FEMA, the Nevada State Historic Preservation Office (SHPO), and the Nevada Department of Emergency Management (NDEM).

In accordance with 36 CFR § 800.4(a)(4), FEMA sent an informational letter to the Reno Sparks Indian Colony and Washoe Tribe on September 20, 2012, requesting information or concerns related to the project area (see Appendix B). To date, no responses have been received.

FEMA-contracted archaeologists conducted a records search of the Nevada Cultural Resource Information System. The records search was conducted for the APE and a 0.25-mile radius surrounding the APE to provide contextual information. In addition, the Nevada State Museum conducted a record search for the APE. The records search resulted in the identification of seven recorded historic properties within the APE. Of the seven properties, five were reported as prehistoric properties, one was reported as multi-component (i.e., including both prehistoric and historic-era artifact scatters), and one had no information about the site composition (i.e., the site records were missing).

An intensive pedestrian survey of the entire APE was performed on August 15 through August 18, 2012, to relocate and identify historic properties that may exist in the APE. Two of the previously reported properties were re-identified during the pedestrian survey; the remaining five properties were not re-identified. The survey also resulted in the identification of three additional isolated features and one isolated artifact.

3.6.1 No Action Alternative

Under the No Action Alternative, no treatment would occur, and there would therefore be no impacts to historic properties. The No Action Alternative could result in indirect effects to historic properties if a wildfire occurred that damaged such properties.

3.6.2 Proposed Project

The location, design, materials, and workmanship of historic properties within the APE could be affected if activities (e.g., vegetation removal, staging) occurred within their recorded boundaries. To avoid potential adverse effects to historic properties, FEMA will require that the Subapplicant refrain from conducting any work or staging any equipment within the boundaries of the identified historic properties. Prior to the commencement of project activities, a Secretary of the Interior Professional Qualified archaeologist will identify the historic properties and physically delineate their boundaries. Once delineated, the sites will be avoided by all project activities for the duration of the work.

Therefore, FEMA determined that, with the above-stated avoidance measures, the proposed project would result in “no adverse effect to historic properties.” In accordance with the PA, FEMA informed the SHPO of its determination that the proposed project would not adversely affect historic properties in a letter dated January 23, 2013 (see Appendix C). In a letter dated May 9, 2013, the SHPO concurred with FEMA’s determination (see Appendix C). If any buried and previously unidentified resources are located during project construction, construction would be halted and the SHPO would be notified. With SHPO’s concurrence of its determination, FEMA has complied with Section 106 of the NHPA.

3.7 PUBLIC SERVICES AND RECREATION

The project area receives law enforcement and fire protection services from the Reno Police Department and Reno Fire Department. Other public services and service providers in the project area include:

- Electricity and gas: NV Energy
- Local telephone: AT&T
- Water: Truckee Meadows Water Authority
- Garbage and recycling: Waste Management

The project area is characterized by open space subdivision development built around densely packed shrub-covered hillsides and canyons. Walking paths and trails exist throughout the open space in these developments. There is a golf course and multiple parks near the project area providing recreational opportunities, as shown in Figure 3. Multiple treatment areas contain parks, including the following (City of Reno, n.d.):

- Valley Wood Park in Unit 02A – Picnic areas, playground equipment, basketball courts, walking trails, and grass areas
- Las Brisas Park in Unit 12 – Rentable shelters, picnic areas, playgrounds, basketball courts, and a water play area
- Canyon Creek Park in Unit 14 – Volleyball, basketball, horseshoes, playgrounds, picnic areas, and rentable shelters

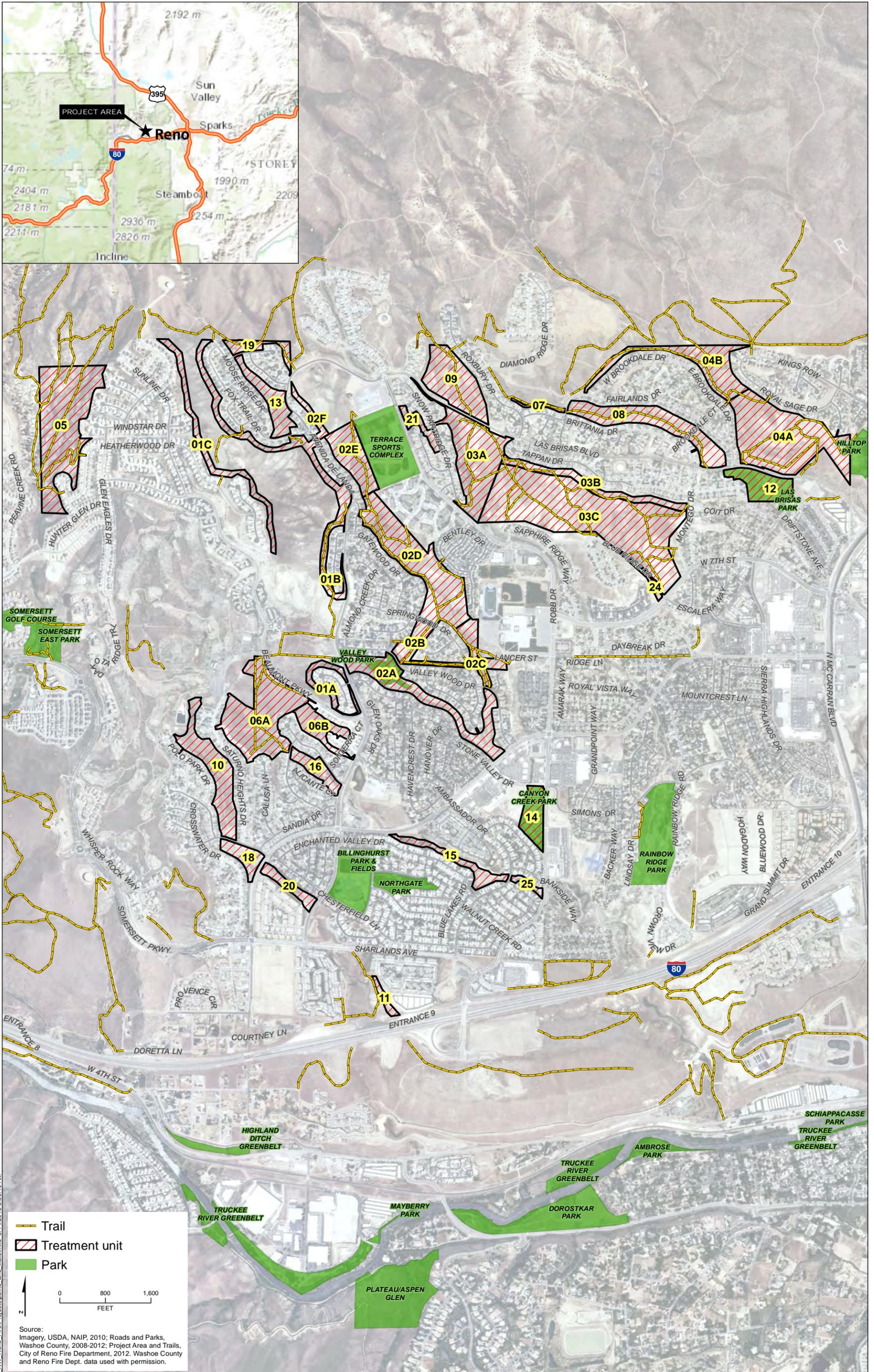
3.7.1 No Action Alternative

Under the No Action Alternative, vegetative fuels in the project area would not be reduced, and public services and recreational opportunities would therefore not be directly affected.

However, public services and recreational opportunities would not be protected from damage caused by future wildfires. Adverse impacts to recreational opportunities include preventing access to playing fields, picnic areas, playgrounds, and other forms of recreation in the project area. Public service impacts would include disruption of services to water, electricity, gas, and telephone services. Without fuel reduction, the No Action Alternative could indirectly result in disruptions to public services and adverse impacts to recreational opportunities. Therefore, the No Action Alternative could result in adverse, indirect impacts to public services and recreation.

3.7.2 Proposed Project

The proposed project would not result in any direct or indirect impacts to utilities and would not result in any direct changes that would adversely affect public service providers, including emergency services.



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Figure 3
 Parks and trails

Furthermore, this alternative could result in a beneficial impact to emergency service providers and other public service providers by reducing the risk of loss or damage as a result of fires in the area. Therefore, the proposed project would result in no direct impacts and substantial indirect beneficial impacts to public services.

During the implementation of the proposed project, some segments of the trails in the treatment units could be temporarily closed for worker and equipment access and to promote public safety during implementation. However, the duration of the closures would be short (no more than two consecutive days), a limited number of areas would be closed to public access at any one time, and other nearby parks, trails, and public paths would be available for use by the public. To minimize the inconvenience of the temporary segment closures, the City will notify the public before implementation of the proposed project by posting signs at trailheads informing recreational users of work duration and safety measures. All recreational areas would be available for public use following treatment. Therefore, the proposed project would result in minor, short-term direct impacts and no indirect or long-term impacts to recreation.

3.8 NOISE

Noise-sensitive land uses, primarily residential homes, are adjacent to the project area, as shown in Figure 2. Other noise-sensitive land uses within and adjacent to the project area include churches, schools, libraries, and parks. Current noise sources in the project area are limited to the traffic on the roads in the project area.

The City of Reno Municipal Code states that “it is unlawful for any person to make, continue, or cause to be made or continued any loud, unnecessary or unusual noise or any noise which either annoys, disturbs, injures or endangers the comfort, repose, health, peace or safety of others within the limits of the city” (Ordinance No. 6274 § Sec. 8.04.010).

3.8.1 No Action Alternative

The No Action Alternative would not result in new noise sources, and noise would remain at current levels. Therefore, there would be no impacts to noise sensitive land uses.

3.8.2 Proposed Project

Implementation of the proposed project would include use of equipment such as chainsaws, mechanical masticators, wood chippers, and trucks to haul or transport debris and the wood chipper. Noise generated from this equipment could potentially cause temporary annoyance and disturbance to surrounding sensitive land uses. Of the anticipated equipment to be used, the wood chippers are anticipated to generate the most noise. Depending on the type of wood chipper and the debris being mulched, noise levels could reach between 95 to 100 A-weighted decibels at the source (Brueck, 2008). Nearby sensitive receptors would experience noise levels at varying degrees depending on the distance from the wood chipper. These impacts would be temporary and localized and would discontinue upon project completion.

To reduce temporary impacts from construction-related noise, the City will be responsible for implementing the following measures to the extent practicable:

- The City will post public notices on its website and in the treatment units to provide advance notification of the project activities.
- All mobile or fixed noise-producing equipment that is regulated for noise output by a Federal, State, or local agency will comply with such regulation.
- Noise-producing signals including horns, whistles, alarms, and bells will be used for safety purposes only.
- In compliance with the local noise ordinance (Ordinance No. 6274 § Section 8.04.010), project activities will not occur without permission from the City. Project activities will be limited to daytime hours such as weekdays between 7 a.m. and 7 p.m. and weekends between 10 a.m. and 5 p.m. or as otherwise indicated by the City.

No long-term impacts to the ambient noise environment would occur as a result of the proposed project, and noise levels would return to pretreatment levels upon project completion. Therefore, the proposed project would result in moderate short-term adverse direct impacts to noise levels.

3.9 TRANSPORTATION

The project area is close to many local roads. Most of the treatment units are along two- or four-lane roads within residential or commercial land uses. The nearest freeway is Interstate 80 (I-80). The project area can be accessed from I-80 by exiting at Robb Drive and McCarran Boulevard and going north. Although the trails within the project area (Figure 3) serve primarily a recreational function, some pedestrians and bicyclists may use them for transportation. Bicycle lanes are provided on several streets surrounding the project area.

3.9.1 No Action Alternative

The No Action Alternative would result in no changes to transportation features. However, if a wildfire occurred within the project area, road and trail closures could occur, leading to traffic congestion on surrounding roads. Therefore, this alternative could result in a short-term indirect impact on transportation.

3.9.2 Proposed Project

Treatment would take place over approximately 2.5 years. Long-term maintenance would involve occasional re-entries into the project area. Access and staging would occur off local roads near each treatment unit, including East Brookdale Drive, Brookdale Court, Fox Trail Drive, Sonterra Lane, and Avenida de Landa. Crews would vary in size, with 4 to 20 individuals working in the project area at any one time. The crews would commute to the site each workday on local roadways, but the commute trips would be minor, would be accommodated easily by the existing transportation infrastructure, and would therefore negligibly affect traffic. No road

closures are anticipated as a result of the proposed project. The proposed project would have negligible short-term direct and indirect impacts on traffic.

Bicycle lanes and trails that may be used for transportation may be temporarily and intermittently closed during implementation of the proposed project. However, as noted in Section 3.7, the duration of the closures would be short (no more than two consecutive days), only a limited number of areas would be closed to public access at any one time, and other nearby trails and public paths would be available for use by the public. Following project implementation, access to and available use of transportation facilities in the project area would not change.

Therefore, the proposed project would result in minor, short-term direct impacts and no long-term or indirect impacts to transportation.

3.10 VISUAL RESOURCES

The project area is characterized by modern residential and commercial development built around shrub-covered hillsides and canyons. The project area has three primary viewsheds: a vista-based viewshed where the treatment units are viewed from afar, such as from the streets in the City and along I-80; a foreground-based viewshed from the backyards of residences whose properties are adjacent to the project area; and the viewshed experienced from within the project area along existing trails. All three viewsheds may vary depending on the viewer and location of the treatment units.

The vista-based viewshed from I-80 and surrounding streets varies greatly depending on the roadway elevation. Most of the treatment units are concealed by intervening structures such as homes. Where treatment units are visible from roadways, views consist of rolling hills with low-lying brush or ornamental trees and grass. In these areas, the pattern of textures is heavily dominated by vegetation with tones of green and brown.

Most of the foreground-based viewshed provides views of the vegetated slopes of the project area. The foreground-based viewshed provides closer views of treatment units where individual, low-lying plants and shrubs are noticeable. The foreground views are very similar to the views from existing trails, which may vary from areas characterized by the built environment to views of the hills and low-lying vegetation. There are no scenic byways designated by the Nevada Department of Transportation (NDOT) within the project area (NDOT, 2013a).

3.10.1 No Action Alternative

Under the No Action Alternative, fuel reduction would not occur, and the visual character of the project area would not change. Therefore, no direct impacts to visual resources would occur. The No Action Alternative would not reduce fuel loads in the project area, and if a wildfire occurred, smoke could cause adverse, short-term, indirect impacts to visual resources. Views of severely burned vegetation and bare ground from a wildfire could cause long-term, indirect impacts to visual resources in the project area.

3.10.2 Proposed Project

Short-term impacts to views of the project area would occur during treatment when crews are working. Work crews and equipment are not typical components of the viewshed and would be moderately noticeable to viewers, especially viewers from adjacent residences who are most familiar with the visual character of the project area. Fugitive dust from work in the project area could temporarily affect vistas during project work hours.

The proposed project would result in a minor change in the visual character of the vista-based viewshed because the color, scale, and patterns of trees and low-lying shrubs in the project area would be altered but not substantially. The primary component of the visual character of the project area (i.e., varying slopes covered with low-lying shrubs and a few trees) would not be affected by the proposed project.

Similarly, the reduction in vegetation density would not substantially alter the vistas from the foreground-based viewshed and along existing trails in the project area because most of the vegetation is relatively low to the ground.

For viewsheds along the trail in the project area, the change in the vegetation density would be moderately noticeable. The homogenous vegetation pattern would change to a mosaic pattern due to the removal of low-lying vegetation. The texture and dominant tones would not change and would continue to contain low lying shrubs in earth tones, though some additional soil and mulched material may be visible due to the lower density of vegetation.

The proposed project would result in minor, short-term, direct and indirect impacts to visual resources.

3.11 SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE

Consistent with EO 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, this analysis identifies and addresses any disproportionately high and adverse human health or environmental effects of the proposed project on minority and low-income populations.

Table 3 is a summary of the 2010 population and demographics in Nevada, Washoe County, and the City of Reno, and the seven census tracts in the project area.

3.11.1 No Action Alternative

Under the No Action Alternative, no changes to the existing conditions would occur, and there would therefore be no change to the socioeconomic environment in the project area, including impacts to minority or low-income populations. Therefore, the No Action Alternative would not have any environmental justice or socioeconomic impacts.

Table 3: Population and Demographics

Area	Population (2010)	Minority (Percent)	Median Household Income, 2007–2011	Persons Below Poverty Level, 2007–2011 (Percent)
Nevada	2,700,551	22.3%	\$55,553	12.9%
Washoe County	421,407	13.9%	\$55,813	12.9%
Reno	225,221	25.8%	\$49,700	16.1%
CT 23.01	4,665	10.0%	\$107,989	2.0%
CT 24.01	3,445	19.0%	\$70,656	9.0%
CT 24.07	3,938	24.0%	\$63,924	7.0%
CT 24.08	3,027	18.0%	\$86,575	1.0%
CT 24.09	4,382	18.0%	\$98,242	8.0%
CT 24.10	3,960	21.0%	\$51,523	9.0%
CT 24.12	2,597	23.0%	\$89,938	1.0%

Source: U.S. Census Bureau (2010)

CT = census tract

3.11.2 Proposed Project

The proposed project would result in a negligible increase in employment during implementation. Crews would vary in size; 4 to 20 individuals would work in the project area at any one time. It is assumed that most of the crew would be existing City or fire department personnel. Crews may make ancillary purchases near the project area (e.g., lunch). Based on the small number of staff anticipated to influx into the project area, the indirect economic impact would be negligible.

Although the percentage of population that self-reports as minority is higher in all but one of the census tracts in the project area than in Washoe County and higher in two of the census tracts in the project area than in the State of Nevada, all of the census tracts in the project area have a lower minority percentage than the City. Median household income in the project area is higher than in the City, and one census tract (CT 24.10) has a lower median household income than Washoe County and the State of Nevada.

The fuels reduction project would substantially reduce the potential for loss and damage due to wildfire in the surrounding community. The proposed project would protect assets and new development from wildfires. This would result in beneficial impacts to the local population. There are no substantial adverse impacts related to noise, air quality, visual resources, or hazardous materials for any population in the project vicinity. Therefore, the proposed project would not create direct or indirect adverse human health, economic, or social effects that would disproportionately affect minority or low-income populations.

3.12 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 CFR § 1508.7). Present and reasonably foreseeable actions were identified based on information obtained from the City, NDEM, U.S. Forest Service (USFS), NDOT, and FEMA.

Because the direct and indirect impacts associated with the No Action Alternative and the proposed project would be primarily short-term and localized, the analysis of cumulative impacts is focused on activities in the vicinity of the project area. Past actions in the vicinity include construction, maintenance, activities associated with the use of nearby residential and commercial properties and transportation features, and recreational activities. The City has implemented the Peavine Wildland Fire Ecosystem Restoration Project, which is adjacent to the proposed project treatment unit 19. The project area for the restoration project has been excluded from the proposed project because of its lack of fuel and the poor access to the area. The past actions are assumed to have created the existing affected environment.

Ongoing and current projects in the project vicinity include the use and maintenance of developed facilities, including ongoing efforts to create defensible space around private properties adjacent to the project area. According to the USFS Schedule of Proposed Actions, no USFS projects are listed in the immediate area (USFS, 2013).

According to NDOT’s Northwestern Nevada Construction Report (NDOT, 2013b), roadway improvements near the project area are planned for U.S. Highway 50 (widening of a 6-mile section from two to four lanes) and along Interstate 580 and U.S. Highway 395 (grading and drainage improvements) . The NDEM and FEMA have not identified other reasonably foreseeable future projects in the area associated with their agencies or Applicants.

The potential cumulative impacts of the two alternatives (No Action Alternative and the proposed project) to resource areas are discussed below. If an alternative would have no or negligible direct or indirect impacts to a resource, the alternative is assumed to not contribute to any cumulative impact on that resource and is not discussed further in this section.

3.12.1 No Action Alternative

Under the No Action Alternative, no activities would occur, and there would be no reduction in the risk of loss or damage as a result of wildfire. The implementation of this alternative would not result in direct or indirect effects to noise, socioeconomics, or environmental justice (refer to Sections 3.1 to 3.11), and the No Action Alternative would therefore not contribute to cumulative impacts on these resources.

In the event of a wildfire, the ongoing and reasonably foreseeable actions could result in indirect short- or long-term impacts to air quality, water quality, biological resources, recreation, transportation, historic properties, greenhouse gases and climate change, and visual resources.

However, these impacts would vary greatly depending on the location and extent of such an event. Further, the timing of such an event is unknown. Therefore, the No Action Alternative, when considered along with other past, present, and reasonably foreseeable future projects, could result in minor cumulative impacts to each of these resource areas.

3.12.2 Proposed Project

With the proposed project, depending on the timing of the other reasonably foreseeable future actions, the public could experience cumulative impacts because of overlapping or consecutive implementation periods. When considered with past, present, and reasonably foreseeable future actions, short-term impacts on soils, water resources, biological resources, recreation, and visual resources would occur and may be exacerbated. For example, if NDOT's planned transportation improvements were concurrent with the proposed project, impacts to traffic may be exacerbated. Future work would be consistent with Federal policies and procedures and would also be in compliance with local and State environmental regulations and policies.

Therefore, the proposed project, when considered with other past, ongoing, or reasonably foreseeable future projects, would not result in a cumulatively substantial adverse effect to the environment.

4. MITIGATION, MINIMIZATION, AND AVOIDANCE 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 this EA, are projected with the assumption that any identified, applicable mitigation measures will be implemented. The City may also be required to implement additional mitigation measures based on compliance with local, State, or other general laws or regulations, as applicable.

4.1 NO ACTION ALTERNATIVE

No mitigation measures will be required for the implementation of the No Action Alternative.

4.2 PROPOSED PROJECT

The following measures will be required as a stipulation for receipt of Federal financial assistance from FEMA. If the proposed project is implemented, the mitigation measures described below will be required:

1. The City will implement mitigation measures to reduce impacts to water quality including using silt fences, covering spoil piles, watering areas of disturbed soil, staging equipment along existing roads, and keeping equipment properly maintained.
2. Because vegetation-clearing activities may occur during the avian breeding season (March through August), pretreatment surveys for the presence of nesting birds, including their nests and eggs, will be conducted by a qualified biologist to ensure

compliance with the MBTA. If nests or signs of nesting activity are observed, a protective buffer will be used (the size would depend on species-specific habitat requirements), and the buffer will remain intact until chicks are fledged and the nest is no longer active.

3. The City will implement the revegetation plan it has prepared for the proposed project (Reno Fire Department, 2012), which includes weed control practices and the use of pre-emergent herbicide post-clearing of invasive annual grasses, followed by revegetation of units with less flammable forbs and perennial grasses.
4. Prior to the commencement of project activities, a Secretary of the Interior Professional Qualified archaeologist will identify the historic properties in the project area and physically delineate their boundaries. Once delineated, the sites will be avoided by all project activities for the duration of the proposed work in order to ensure their protection.
5. If any buried and previously unidentified resources are located during project construction, construction will be halted and the SHPO will be notified.
6. The City will post public notices on its website and in the treatment units to provide advance notification of the project activities.
7. All mobile or fixed noise-producing equipment that is regulated for noise output by a Federal, State, or local agency will comply with such regulation.
8. Noise-producing signals including horns, whistles, alarms, and bells will be used for safety purposes only.
9. In compliance with the local noise ordinance (Ordinance No. 6274 § Section 8.04.010), project activities will not occur without permission from the City. Project activities will be limited to daytime hours such as weekdays between 7 a.m. and 7 p.m. and weekends between 10 a.m. and 5 p.m. or as otherwise indicated by the City.

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

5.1 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 the 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 Action Alternative would not directly require the use of resources. However, ongoing wildfire risk and the potential of a wildfire to damage facilities and result in loss of social, natural, historic property, and cultural resources within the City would continue.

The proposed project would require the commitment of human and fiscal resources. The additional expenditure of labor required for this alternative would occur predominately during implementation. However, maintenance would continue throughout the life of the alternative. Funding for the proposed project would not be available for other uses and would therefore be irretrievable.

Nonrenewable and irretrievable fossil fuels and construction equipment (e.g., hand tools) would be required. Labor and materials would also be irretrievably committed during the preparation and distribution of materials and equipment. However, the proposed 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.

Although the proposed project would result in the commitment of resources as described above, the commitment would not be irreversible or irretrievable. This alternative would decrease the risk of loss to critical facilities and residential properties in Washoe County.

5.2 SHORT-TERM USES OF THE ENVIRONMENT AND MAINTENANCE OF LONG-TERM PRODUCTIVITY

Implementation of the proposed project would result in short-term uses of and short- and long-term impacts on the environment, as documented in Sections 3.1 through 3.12. However, the uses of the environment would be balanced by the long-term reduction in the risk of damage to critical facilities and residential properties as a result of wildfire. The proposed project would enhance the long-term productivity of resources by appropriately addressing wildfire risks. Furthermore, implementation of either alternative would not preclude or alter the range of potential uses of the resources in the area.

6. PUBLIC PARTICIPATION AND AGENCY COORDINATION

FEMA is the lead Federal agency for conducting the NEPA compliance process for the proposed project. 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 Washoe County residents while meeting the spirit and intent of NEPA and complying with all NEPA provisions. Copies of FEMA coordination with applicable agencies are presented in Appendix A.

The City has produced informational packets for property owners surrounding the project area describing the work to take place and providing them with additional information on defensible space and preparing for wildfires. The City also produced press releases and provided responses to any inquiries from the press on this project. Additionally, the City will provide information to other communities looking for examples of mitigation projects. Throughout the public

involvement and FEMA's coordination and consultation with applicable agencies, no concerns regarding this project have been expressed.

FEMA published a notice in *Reno Gazette-Journal* that the Draft EA was available for review by the public. The notice stated that written comments on the Draft EA would be accepted during a 15-day public comment period and should be mailed to the FEMA Region IX Environmental and Historical Preservation Office, 1111 Broadway, Suite 1200, Oakland, California 94607, or to fema-rix-ehp-documents@dhs.gov. No comments were received.

FEMA will consider the results of the Final EA, which are contained in this document, and publish its decision in a Finding of No Significant Impact or Notice of Intent to prepare an Environmental Impact Statement. Interested parties will be provided a copy of the documentation.

7. REFERENCES

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8. LIST OF PREPARERS

Federal Emergency Agency, Region IX

Donna M. Meyer, Deputy Regional Environmental Officer

URS Group, Inc.

Linda Peters, Senior Environmental Planner

Graham Craig, Senior Environmental Planner

Alissa Stillman, Environmental Planner

Lorena Solorzano-Vincent, Project Biologist
Maureen Kick, Senior Archaeologist
Kirsten Lawrence, GIS Specialist
Diana Burke, Technical Editor

Appendix A: Agency Coordination



FEMA

January 7, 2013

**Re: Northwest Reno Fuels Reduction Project
LPDM-PJ-09-NV-2010-001
Subapplicant: City of Reno**

Dear Interested Party,

The City of Reno has applied, through the Nevada Division of Emergency Management, to the Department of Homeland Security's Federal Emergency Management Agency (FEMA) for Federal financial assistance to implement a fuels reduction project (Proposed Project) in Washoe County, Nevada. The Proposed Project would reduce the risk of loss of life and property from wildfires in northwest Reno. The Proposed Project would consist of thinning vegetation on up to 374 acres in the wildland-urban interface in northwest Reno. The locations of the units are shown on Figure 1. Vegetation would be thinned by hand and machine (e.g. wood chipper or mechanical masticator). Treatment would include cutting, chipping, or masticating vegetation and either hauling it offsite or scattering it in the treatment areas to prevent erosion and inhibit growth of weeds.

The assistance would be provided through the Legislative Pre-Disaster Mitigation (LPDM) Program. The LPDM Program is authorized by Section 203 (42 U.S.C. § 5133) of the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988, as amended, and provides funds to States and communities to implement sustained, pre-disaster, natural-hazard mitigation programs.

FEMA will be preparing environmental studies on the Proposed Project in compliance with the National Environmental Policy Act (NEPA). Your input is a critical component of the NEPA compliance process. Please forward any comments on the Proposed Project in writing to Ms. Donna M. Meyer, Deputy Regional Environmental Officer, CEM/HPS, FEMA, 1111 Broadway, Suite 1200, Oakland, California 94607. To ensure that your comments are considered, please respond by February 7, 2013.

Sincerely,

A handwritten signature in blue ink, appearing to read "Donna M. Meyer".

Donna M. Meyer, CEM/HPS
Deputy Regional Environmental Officer
Non-Disaster Grant Programs



BRIAN SANDOVAL
Governor

STATE OF NEVADA
DEPARTMENT OF WILDLIFE

1100 Valley Road
Reno, Nevada 89512
(775) 688-1500 • Fax (775) 688-1595

KENNETH E. MAYER
Director

RICHARD L. HASKINS, II
Deputy Director

PATRICK O. CATES
Deputy Director

January 17, 2013

Donna M. Meyer
Deputy Regional Environmental Officer
CEM/HPS FEMA
1111 Broadway, Suite 1200
Oakland, CA 94607

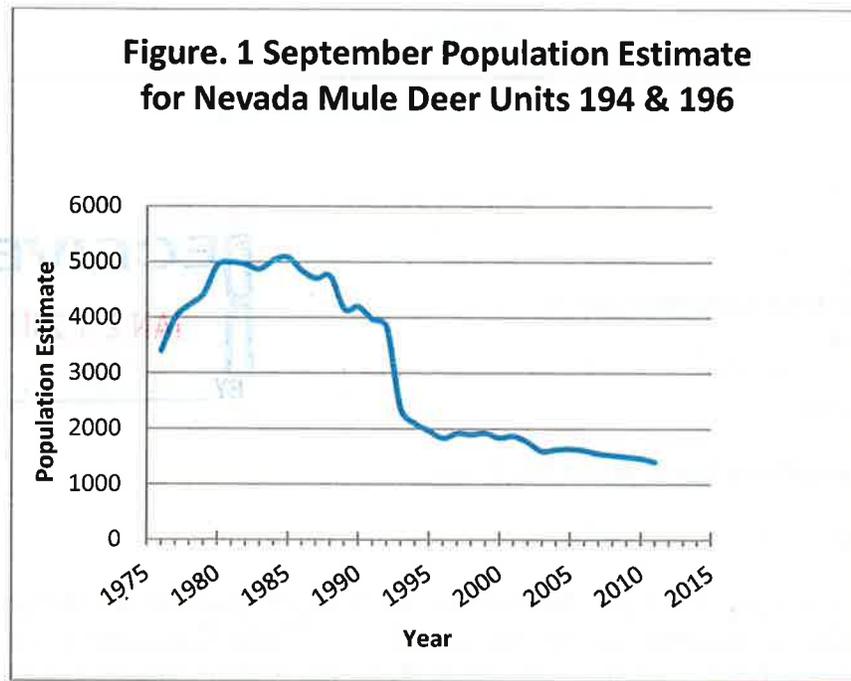


Subject: Northwest Reno Fuels Reduction Project

Donna M. Meyer:

The Nevada Department of Wildlife (NDOW) thanks the U.S. Department of Homeland Security for the opportunity to comment on the Northwest Reno Fuels Reduction Project. The NDOW acknowledges that a hazardous fuel risk exists along the wildland-urban interface in northwest Reno and if a fire ignition occurred, it could be devastating for the Sommersett community. While removing shrubs would be beneficial to the Sommersett community, there will be negative impacts to mule deer, migratory birds and other wildlife that depend upon these shrubs for nesting, forage and cover. As such, we hope that you will consider our comments and proposals so that wildlife impacts associated with this project are minimized and offset.

Mule deer, a species of conservation priority (designated in NDOW's Wildlife Action Plan), have experienced severe population declines within Management Units 194 & 196 (Fig 1) of which the Northwest Reno Fuels Reduction Project is contained within. Much of the decline in deer numbers can be attributed to "a combination of factors including, but not limited to, loss of habitat through human encroachment, significant mortality on highways and railroads, reduced habitat productivity resulting from natural vegetational changes, and harassment caused by greatly increased human recreational use (1982 Loyalton-Truckee Deer herd Plan)". Today, these issues still exist with urban and ex-urban development and associated recreational uses and loss of habitat due to the establishment and expansion of invasive weedy plant populations following wildfires being the greatest threats. Of particular importance is the loss of habitat in crucial winter range. Human development and wildfires (human caused and natural) continue permanently removing winter range; subsequently, reducing the carrying capacity of the Loyalton-Truckee/Verdi Interstate herd. An effort led by Washoe County is looking to replace lost habitat through a series of herbicidal sprayings, seeding and plantings of desirable species. The Northwest Reno Fuels Reduction Project is proposing to remove 374 acres of the little remaining crucial winter range which the Loyalton-Truckee/Verdi Interstate Mule Deer herd is dependent upon.



Removing 374 acres of intact brush habitat is expected to permanently eliminate this crucial habitat thereby displacing migratory bird species and mule deer among other wildlife. Such displacement may have unintentional consequences such as increasing mule deer activities around Sommersett residences; subsequently creating greater human-wildlife conflicts such as landscape destruction and vehicle collisions. Displacement will also result in greater competition for limited resources such as water, forage, and cover (both for refuge and thermal maintenance). Displacement will require deer to move to unfamiliar areas where water, forage, and cover locations may not be known and are limiting, further adding to stress and possible predation. Stress on mule deer will increase as they move from marginal habitat (such as would be the case for this project) to even poorer quality habitat. Higher concentrations of stressed animals lead to increased winter mortality due to greater disease incidence and greater disease transfer. Furthermore, the effectiveness of predation on mule deer will likely increase due to an increase in vulnerability resulting from stress. Therefore stress increases in wildlife may lead to weight loss and reduced health, pregnant wildlife to abort, and mortality among individuals which will result in decreased population fitness (survivability and fecundity); ultimately leading to a further reduction in population. This will be especially pronounced during winters with deep snow as a disproportionately high number of mule deer depend upon these lower brush communities for cover and forage.

To minimize displacement impacts and subsequently reduce physiological stressors, energetic and nutritional expenses, and decreases in vital rates (e.g. reduced pregnancy) we recommend construction activities occur outside migration and winter mule deer seasons (approximately 11/15 – 4/15). Since construction activities will occur during the migratory bird breeding and nesting season, we request that appropriate migratory bird surveys be conducted by a qualified biologist. Such surveys will reduce the potential for taking of a migratory bird species as required by the USFWS under the Migratory Bird Treaty Act of 1918 (MBTA), as amended (16 U.S.C. 703 *et seq.*). If a migratory bird nest or juvenile is discovered or bird breeding/nesting behaviors are observed, a protective buffer (buffer size will depend upon species habitat

requirements) should be created and protected during the breeding/nesting season to avoid destruction and disturbance that would result in a take under the Migratory Bird Treaty Act. For further information, contact the USFWS at (775) 861-6300.

After accounting for measures designed to reduce impacts to wildlife and to mitigate for residual impacts, we recommend balancing the remaining detrimental project impacts with offsets with the goal of achieving a net neutral outcome. As such, we encourage the U.S. Homeland Security Department, City of Reno, and Sommersett community to take-on a mitigation project themselves or establish a mitigation account to offset project impacts. Should the Department of Homeland Security decide to proceed with this project, the NDOW would appreciate participating in the planning to help ensure that impacts to wildlife are minimized and that adequate mitigation is built into the project to provide compensation for loss.

NDOW encourages developing and implementing a noxious and invasive species plan to prevent the introduction and spread of undesirable species into adjacent habitat. Such a plan should include prevention measures, inventory, monitoring, and treatment. Noxious and invasive species plans ensure wildlife compatibility with new development by protecting and conserving adjacent habitat.

Please let us know how NDOW can become involved in the mitigation project planning or if you have any questions or concerns.

Sincerely,



Mark Freese
Supervisory Habitat Biologist
(775 688-1145)
markfreese@ndow.org

Cc: Cheryl Surface, Washoe County Park Planner

BRIAN SANDOVAL
Governor

STATE OF NEVADA

LEO DROZDOFF
Director

JASON KING, P.E.
State Engineer

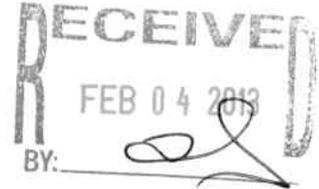


DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF WATER RESOURCES

901 South Stewart Street, Suite 2002
Carson City, Nevada 89701-5250
(775) 684-2800 • Fax (775) 684-2811

<http://water.nv.gov>

January 29, 2013



Donna M. Meyer, Deputy Regional Environmental Officer
FEMA Region IX
1111 Broadway, Suite 1200
Oakland, California 94607-4052

RE: NORTHWEST RENO FUELS REDUCTION PROJECT LPDM-PJ-09-NV-2010-001

Dear Ms. Meyer:

The FEMA Flood Insurance Rate Map (FIRM) panel 32031C3036G for the City of Reno, dated March 16, 2009 (copy enclosed), indicates that a portion of the subject project includes the area of Upper Peavine Creek Reservoir, located in Special Flood Hazard Area Zone A – areas subject to inundation by the 1-percent-annual-chance flood event; base flood elevations or depths undefined. If the project is deemed by FEMA to involve property acquisition, construction or improvement within a 100-year floodplain identified by FEMA maps, then the project is subject to Executive Order 1198, Floodplain Management, May 24, 1977.

Since the project is partly located within Special Flood Hazard Area, you are advised to consult with the local Floodplain Administrator for the City of Reno, Kerri Williams-Lanza, Community Development Department, P.O. Box 1900, Reno, Nevada 89505, (775) 334-2683, williams-anza@ci.reno.nv.us, for any local floodplain management ordinance requirements which may apply to the project.

Please contact me at kadavis@water.nv.gov or (775) 684-2884 if you have any questions.

Yours truly,

A handwritten signature in black ink, appearing to read "KADAVIS".

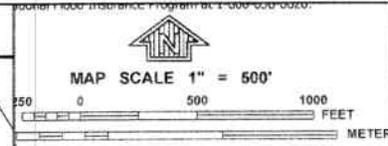
Kim Davis
Floodplain Management Program

cc: Elizabeth Ashby, Nevada Division of Emergency Management
Kerri Williams-Lanza, Reno Community Development Department

Enclosures

Washoe County
Unincorporated Areas
320019

WASHOE COUNTY
CITY OF RENO



ZONE X

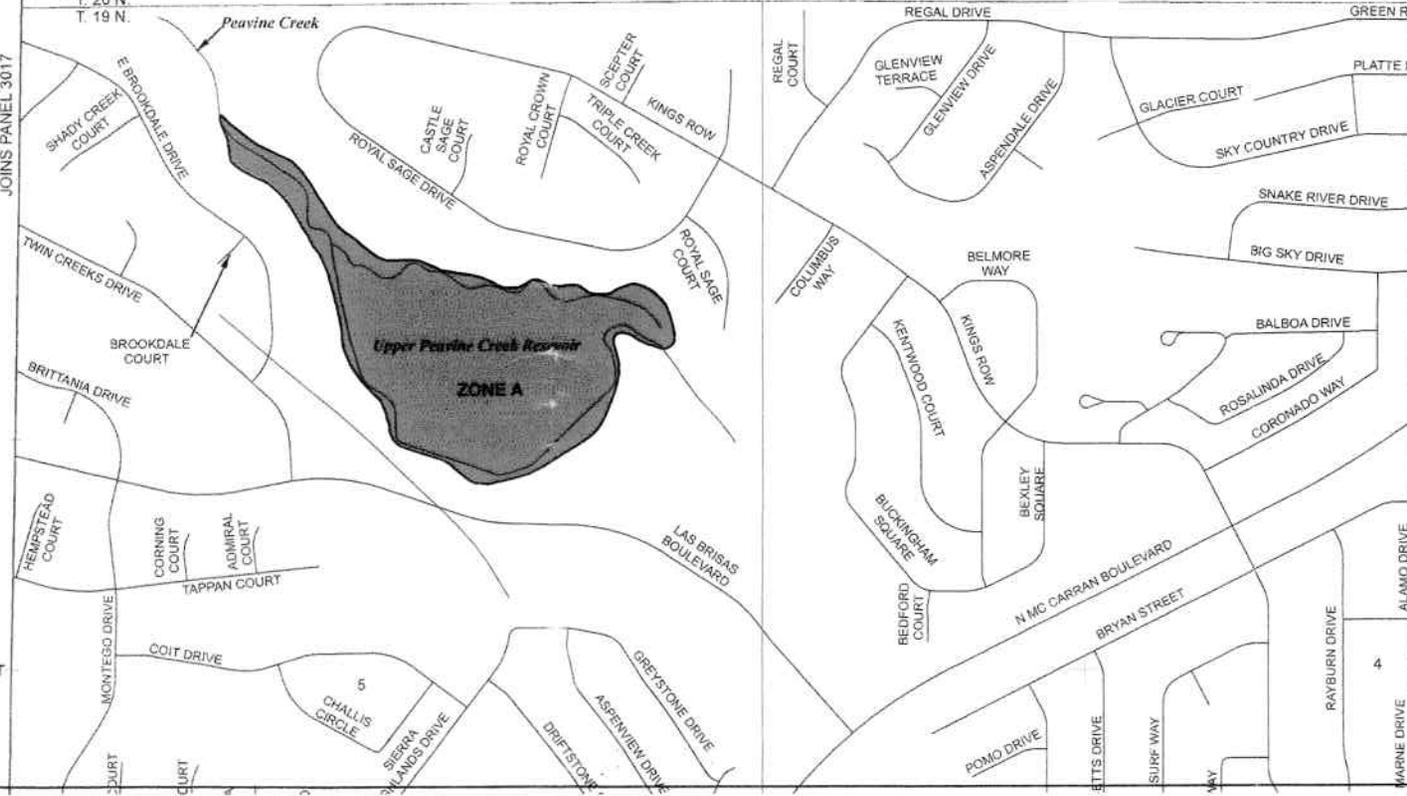
T. 20 N.
T. 19 N.

Peavine Creek

Upper Peavine Creek Reservoir

ZONE A

JOINS PANEL 3017



NIP PANEL 3036G

FIRM
FLOOD INSURANCE RATE MAP

WASHOE COUNTY,
NEVADA
AND INCORPORATED AREAS

PANEL 3036 OF 3475
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS

COMMUNITY	NUMBER	PANEL	SUFFIX
RENO, CITY OF	320030	3036	0
WASHOE COUNTY	320019	3036	0

Notice to User: The Map Number shown below should be used when placing map orders. The Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
32031C3036G

MAP REVISED
MARCH 16, 2009

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov





FEMA

January 7, 2013

Re: Northwest Reno Fuels Reduction Project
LPDM-PJ-09-NV-2010-001
Subapplicant: City of Reno

Dear Interested Party,

The City of Reno has applied, through the Nevada Division of Emergency Management, to the Department of Homeland Security's Federal Emergency Management Agency (FEMA) for Federal financial assistance to implement a fuels reduction project (Proposed Project) in Washoe County, Nevada. The Proposed Project would reduce the risk of loss of life and property from wildfires in northwest Reno. The Proposed Project would consist of thinning vegetation on up to 374 acres in the wildland-urban interface in northwest Reno. The locations of the units are shown on Figure 1. Vegetation would be thinned by hand and machine (e.g. wood chipper or mechanical masticator). Treatment would include cutting, chipping, or masticating vegetation and either hauling it offsite or scattering it in the treatment areas to prevent erosion and inhibit growth of weeds.

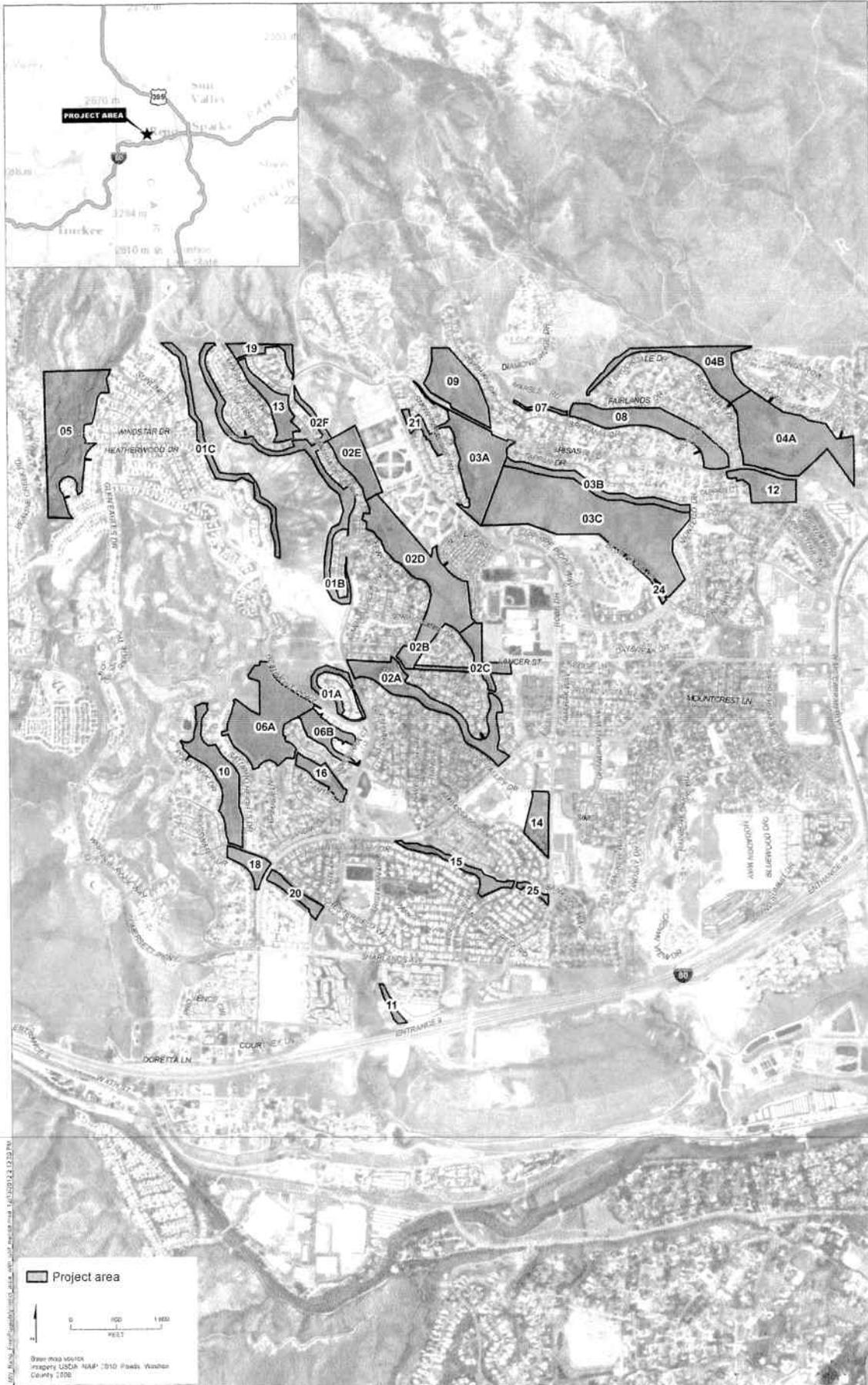
The assistance would be provided through the Legislative Pre-Disaster Mitigation (LPDM) Program. The LPDM Program is authorized by Section 203 (42 U.S.C. § 5133) of the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988, as amended, and provides funds to States and communities to implement sustained, pre-disaster, natural-hazard mitigation programs.

FEMA will be preparing environmental studies on the Proposed Project in compliance with the National Environmental Policy Act (NEPA). Your input is a critical component of the NEPA compliance process. Please forward any comments on the Proposed Project in writing to Ms. Donna M. Meyer, Deputy Regional Environmental Officer, CEM/HPS, FEMA, 1111 Broadway, Suite 1200, Oakland, California 94607. To ensure that your comments are considered, please respond by February 7, 2013.

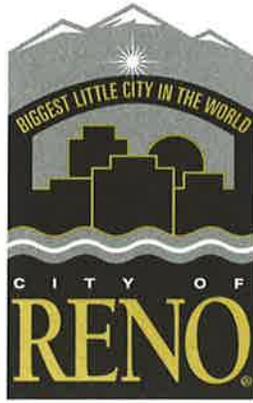
Sincerely,

Donna M. Meyer, CEM/HPS
Deputy Regional Environmental Officer
Non-Disaster Grant Programs

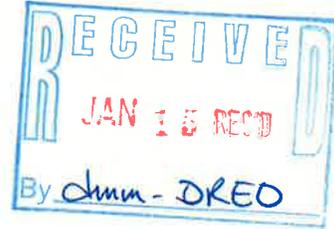
RECEIVED
2013 JAN 10 AM 11:38
ENGINEERS OFFICE



Michael Hernandez
Fire Chief



David Cochran
Interim Fire Marshal



January 10, 2013

Donna M. Meyer, CEM/HPS, FEMA
Deputy Regional Environmental Officer
1111 Broadway Suite 1200
Oakland, California 94607

RE: Northwest Reno Fuels Reduction Project
LPDM-PJ-09-NV-2010-001
Sub-applicant: City of Reno

Dear Ms. Meyer,

I am writing this letter in response to your letter dated January 7, 2013, regarding the application the City of Reno applied for to FEMA for federal financial assistance to implement a fuels reduction project as referenced above.

The Reno Fire Department supports this effort and feels the project would definitely help reduce the risk of loss of life and property from wildfires in northwest Reno.

If you have any questions or concerns regarding this project, please feel free to contact me at 775-657-4626 or e-mail me at Cochrand@reno.gov.

Thank you.

Sincerely,

A handwritten signature in blue ink, appearing to read "David Cochran".

David Cochran, Interim Fire Marshal
City of Reno, Fire Department

Appendix B: Native American Consultation



FEMA

September 20, 2012

Ms. Marie Barry
Washoe Tribe, Environmental Department
919 U.S. Highway 395 South
Gardnerville, Nevada 89410

**Re: Northwest Reno Fuels Reduction Project
FEMA LPDM-PJ-09-NV-2010-001
Subapplicant: City of Reno**

Dear Ms. Barry:

The City of Reno (subapplicant) has applied for Federal financial assistance from the Department of Homeland Security's Federal Emergency Management Agency (FEMA), through the California Emergency Management Agency, to address wildfire hazards in the northwest portion of the City of Reno (City), Washoe County, Nevada (Figure 1). The assistance would be provided under the Legislative Pre-Disaster Mitigation Program.

The proposed project consists of vegetation management on approximately 374 acres of City-owned land and includes clearing brush and vegetation that constitute wildfire fuels. Brush removal would occur in three phases: near East Brookdale Drive and Brookdale Court (Phase I), near Fox Tail Drive (Phase II), and near Sonterra Lane and Avenida de Landa (Phase III).

Providing Federal financial assistance in support of the subapplicant's proposal is a Federal Undertaking, pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended.

FEMA contractors conducted a cultural resources investigation, including a records search and intensive pedestrian survey. The results are summarized in the table below and shown on Figure 2.

Resource Name	Description	Date Recorded	Current Site Condition
26WA1052	Prehistoric lithic scatter, possible shelter remnants and hearth feature, two possible burials	1958	A single tertiary, red, CCS flake and a possible hearth feature—a rock ring with no associated charcoal
26WA1084	Site records are missing (location only)	Unknown	This site is recorded directly adjacent to the APE on U.S. Forest Service property. No cultural resources were identified. A deeply incised channel runs through the center of the recorded site boundary. The channel has a high gravel and cobble content, indicative of high-energy stream deposits. It is probable that 26WA1084 was washed downstream.
26WA1110	Prehistoric lithic scatter	1957-recorded and artifacts collected	No cultural resources were identified. The area has been heavily modified, likely causing the destruction of 26WA1110. An engineered slope is present in the northern portion of the recorded site, a riprap-lined ravine runs through the center, and a large cement culvert empties into the ravine from the west.
26WA1122	Prehistoric lithic scatter	1957-recorded and artifacts collected	FEMA contractors identified an isolated obsidian cache within the plotted site boundaries. Few, if any, of the flakes appear to be cultural. Obsidian cobbles and large (fist-sized) cores are present and exhibit recent (unweathered) breaks.
26WA3252	Prehistoric chert biface and reduction flake and a mano fragment along an ephemeral stream	1984	The recorded site location was surveyed by FEMA contractors on August 18, 2012, and no cultural resources were identified. The area has been heavily modified, likely causing the destruction of 26WA3252. The recorded site boundary is in a newer housing development. Disturbances within the site boundary include a paved bike path and steep engineered ravine lined with riprap. The ephemeral stream referenced in the site record has been channelized and replaced by a cement culvert.
26WA7042	Prehistoric lithic scatter with some ground stone materials and small historic-era trash scatter	2002	The recorded site location was surveyed by FEMA contractors on August 16, 2012, and no cultural resources were identified. Based on the recorded site description, the site appears to be outside the APE. Furthermore, the site appears to have been destroyed by the construction of a paved

Resource Name	Description	Date Recorded	Current Site Condition
			road.
26WA7210	Prehistoric lithic scatter with some ground stone material	2003	The recorded site location was surveyed by FEMA contractors on August 18, 2012, and no cultural resources were identified. The area has been heavily modified, likely causing the destruction of 26WA7210. A paved bike path with a curb runs through the center of the recorded location. The northern portion of the recorded site location is sloped and lined with riprap, and the southern portion is landscaped. An engineered drainage channel runs into the recorded site boundaries from the north.

APE = Area of Potential Effect

CCS = cryptocrystalline silicate

FEMA = Federal Emergency Management Agency

The pedestrian survey also resulted in the identification of three small (2-meter-diameter maximum) isolated rock rings, NW Reno ISO-1 through -3, and a single basalt biface fragment, NW Reno ISO-4 (Figure 2).

If you have any knowledge of historic or cultural properties in the project vicinity, or if you have other concerns about the proposed project, please contact me at (510) 627-7728, donna.meyer@fema.dhs.gov, or the letterhead address within 30 days of receipt of this letter. If you need additional time, please contact me; otherwise, if I do not hear from you within 30 days, I will assume that you have no comment regarding the proposed project.

Sincerely,



Donna M. Meyer, CEM/HPS
Deputy Regional Environmental Officer
Non-Disaster Grant Programs

Enclosures



FEMA

September 20, 2012

Mr. Waldo Walker, Chairman
Washoe Tribe
919 U.S. Highway 395 South
Gardnerville, Nevada 89410

**Re: Northwest Reno Fuels Reduction Project
FEMA LPDM-PJ-09-NV-2010-001
Subapplicant: City of Reno**

Dear Mr. Walker:

The City of Reno (subapplicant) has applied for Federal financial assistance from the Department of Homeland Security's Federal Emergency Management Agency (FEMA), through the California Emergency Management Agency, to address wildfire hazards in the northwest portion of the City of Reno (City), Washoe County, Nevada (Figure 1). The assistance would be provided under the Legislative Pre-Disaster Mitigation Program.

The proposed project consists of vegetation management on approximately 374 acres of City-owned land and includes clearing brush and vegetation that constitute wildfire fuels. Brush removal would occur in three phases: near East Brookdale Drive and Brookdale Court (Phase I), near Fox Tail Drive (Phase II), and near Sonterra Lane and Avenida de Landa (Phase III).

Providing Federal financial assistance in support of the subapplicant's proposal is a Federal Undertaking, pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended.

FEMA contractors conducted a cultural resources investigation, including a records search and intensive pedestrian survey. The results are summarized in the table below and shown on Figure 2.

Resource Name	Description	Date Recorded	Current Site Condition
26WA1052	Prehistoric lithic scatter, possible shelter remnants and hearth feature, two possible burials	1958	A single tertiary, red, CCS flake and a possible hearth feature—a rock ring with no associated charcoal
26WA1084	Site records are missing (location only)	Unknown	This site is recorded directly adjacent to the APE on U.S. Forest Service property. No cultural resources were identified. A deeply incised channel runs through the center of the recorded site boundary. The channel has a high gravel and cobble content, indicative of high-energy stream deposits. It is probable that 26WA1084 was washed downstream.
26WA1110	Prehistoric lithic scatter	1957-recorded and artifacts collected	No cultural resources were identified. The area has been heavily modified, likely causing the destruction of 26WA1110. An engineered slope is present in the northern portion of the recorded site, a riprap-lined ravine runs through the center, and a large cement culvert empties into the ravine from the west.
26WA1122	Prehistoric lithic scatter	1957-recorded and artifacts collected	FEMA contractors identified an isolated obsidian cache within the plotted site boundaries. Few, if any, of the flakes appear to be cultural. Obsidian cobbles and large (fist-sized) cores are present and exhibit recent (unweathered) breaks.
26WA3252	Prehistoric chert biface and reduction flake and a mano fragment along an ephemeral stream	1984	The recorded site location was surveyed by FEMA contractors on August 18, 2012, and no cultural resources were identified. The area has been heavily modified, likely causing the destruction of 26WA3252. The recorded site boundary is in a newer housing development. Disturbances within the site boundary include a paved bike path and steep engineered ravine lined with riprap. The ephemeral stream referenced in the site record has been channelized and replaced by a cement culvert.
26WA7042	Prehistoric lithic scatter with some ground stone materials and small historic-era trash scatter	2002	The recorded site location was surveyed by FEMA contractors on August 16, 2012, and no cultural resources were identified. Based on the recorded site description, the site appears to be outside the APE. Furthermore, the site appears to have been destroyed by the construction of a paved

Resource Name	Description	Date Recorded	Current Site Condition
			road.
26WA7210	Prehistoric lithic scatter with some ground stone material	2003	The recorded site location was surveyed by FEMA contractors on August 18, 2012, and no cultural resources were identified. The area has been heavily modified, likely causing the destruction of 26WA7210. A paved bike path with a curb runs through the center of the recorded location. The northern portion of the recorded site location is sloped and lined with riprap, and the southern portion is landscaped. An engineered drainage channel runs into the recorded site boundaries from the north.

APE = Area of Potential Effect

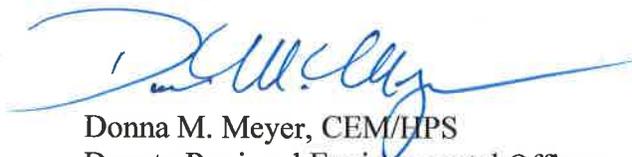
CCS = cryptocrystalline silicate

FEMA = Federal Emergency Management Agency

The pedestrian survey also resulted in the identification of three small (2-meter-diameter maximum) isolated rock rings, NW Reno ISO-1 through -3, and a single basalt biface fragment, NW Reno ISO-4 (Figure 2).

If you have any knowledge of historic or cultural properties in the project vicinity, or if you have other concerns about the proposed project, please contact me at (510) 627-7728, donna.meyer@fema.dhs.gov, or the letterhead address within 30 days of receipt of this letter. If you need additional time, please contact me; otherwise, if I do not hear from you within 30 days, I will assume that you have no comment regarding the proposed project.

Sincerely,



Donna M. Meyer, CEM/HPS
Deputy Regional Environmental Officer
Non-Disaster Grant Programs

Enclosures



FEMA

September 20, 2012

Mr. Arlan Melendez, Chairman
Reno Sparks Indian Colony
98 Colony Road
Reno, Nevada 89502

**Re: Northwest Reno Fuels Reduction Project
FEMA LPDM-PJ-09-NV-2010-001
Subapplicant: City of Reno**

Dear Mr. Melendez:

The City of Reno (subapplicant) has applied for Federal financial assistance from the Department of Homeland Security's Federal Emergency Management Agency (FEMA), through the California Emergency Management Agency, to address wildfire hazards in the northwest portion of the City of Reno (City), Washoe County, Nevada (Figure 1). The assistance would be provided under the Legislative Pre-Disaster Mitigation Program.

The proposed project consists of vegetation management on approximately 374 acres of City-owned land and includes clearing brush and vegetation that constitute wildfire fuels. Brush removal would occur in three phases: near East Brookdale Drive and Brookdale Court (Phase I), near Fox Tail Drive (Phase II), and near Sonterra Lane and Avenida de Landa (Phase III).

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26WA1110	Prehistoric lithic scatter	1957-recorded and artifacts collected	No cultural resources were identified. The area has been heavily modified, likely causing the destruction of 26WA1110. An engineered slope is present in the northern portion of the recorded site, a riprap-lined ravine runs through the center, and a large cement culvert empties into the ravine from the west.
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If you have any knowledge of historic or cultural properties in the project vicinity, or if you have other concerns about the proposed project, please contact me at (510) 627-7728, donna.meyer@fema.dhs.gov, or the letterhead address within 30 days of receipt of this letter. If you need additional time, please contact me; otherwise, if I do not hear from you within 30 days, I will assume that you have no comment regarding the proposed project.

Sincerely,



Donna M. Meyer, CEM/HPS
Deputy Regional Environmental Officer
Non-Disaster Grant Programs

Enclosures

Appendix C: SHPO Correspondence

LEO M. DROZDOFF, P.E.
Director
Department of Conservation and
Natural Resources

RONALD M. JAMES
State Historic Preservation Officer

BRIAN SANDOVAL
Governor

STATE OF NEVADA



Address Reply to:
901 S. Stewart Street, Suite 5004
Carson City, NV 89701-5248
Phone: (775) 684-3448
Fax: (775) 684-3442



DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION OFFICE

January 17, 2013

Donna M. Meyer, DEM/HPS
Deputy Regional Environmental Officer
Non-Disaster Grant Programs
US Department of Homeland Security
Federal Emergency Management Agency
1111 Broadway, Suite 1200
Oakland, CA 94607-4052

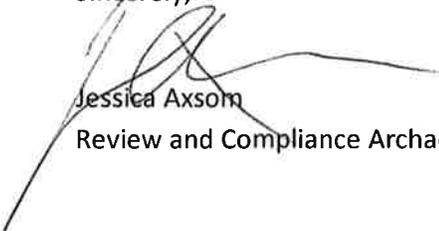
RE: *Northwest Reno Fuels Reduction Project*. Subapplicant City of Reno
LPDM-PJ-09-NV-2010-001/ Undertaking #2013-2515.

Dear Ms. Meyer:

The Nevada State Historic Preservation Office (SHPO) reviewed the subject documents submitted January 7, 2013; received January 10, 2013. As this undertaking has the potential to affect historic properties the SHPO looks forward to continued consultation with Federal Emergency Management Agency (FEMA) in meeting their responsibilities under National Environmental Policy Act (NEPA) and Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended.

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

Sincerely,



Jessica Axsom

Review and Compliance Archaeologist



FEMA

January 23, 2013

Ms. Rebecca L. Palmer
Acting State Historic Preservation Officer
901 South Stewart Street, Suite 5004
Carson City, NV 89701-4285

**Re: Northwest Reno Fuels Reduction Project
LPDM-PJ-09-NV-2010-001
Subapplicant: City of Reno**

Dear Ms. Palmer:

The City of Reno (subapplicant) has applied for Federal financial assistance from the U.S. Department of Homeland Security's Federal Emergency Management Agency (FEMA), through the Nevada Division of Emergency Management (NDEM), to implement a fuel reduction program in undeveloped City-owned areas in northwest Reno. Vegetation would be treated on approximately 374 acres in small and large canyons and on hillsides adjacent to developed areas. The assistance would be provided through the Pre-Disaster Mitigation (PDM) Program.

FEMA's action of providing Federal financial assistance meets the definition of a Federal Undertaking in accordance with 36 CFR § 800.16(y), and therefore requires compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. § 470f).

FEMA has identified an Area of Potential Effect (APE) for the proposed project and has reviewed the proposal in compliance with Section 106 of the National Historic Preservation Act and the 2005 Programmatic Agreement (PA) among FEMA, your office, and NDEM. FEMA has determined that the subapplicant's proposal and FEMA's subsequent Undertaking would result in no adverse effects to historic properties, pursuant to 36 CFR § 800.5(b).

FEMA requests your concurrence on our finding in compliance with Stipulation VII.D of the PA and has enclosed documentation in accordance with 36 CFR § 800.11(e) for your review. We will authorize funding for the subapplicant's proposal unless you notify FEMA of your nonconcurrence within 21 days of your receipt of this documentation.

Ms. Rebecca Palmer
January 23, 2013
Page 2

If you require any additional information about FEMA's request, please do not hesitate to contact me at (510) 627-7728 or donna.meyer@fema.dhs.gov.

Sincerely,

A handwritten signature in blue ink that reads "Donna M. Meyer". The signature is fluid and cursive, with the first name "Donna" being the most prominent.

Donna M. Meyer, CEM/HPS
Deputy Regional Environmental Officer
Non-Disaster Grant Programs

Enclosures

cc: Glen B. Daily, P.E., City of Reno
Elizabeth Ashby, NDEM

LEO M. DROZDOFF, P.E.
Director
Department of Conservation and
Natural Resources

RONALD M. JAMES
State Historic Preservation Officer

BRIAN SANDOVAL
Governor

STATE OF NEVADA



Address Reply to:
901 S. Stewart Street, Suite 5004
Carson City, NV 89701-5248
Phone: (775) 684-3448
Fax: (775) 684-3442

www.nvshpo.org

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
STATE HISTORIC PRESERVATION OFFICE

February 8, 2013

Donna M. Meyer, DEM/HPS
Deputy Regional Environmental Officer
Non-Disaster Grant Programs
US Department of Homeland Security
Federal Emergency Management Agency
1111 Broadway, Suite 1200
Oakland, CA 94607-4052



RE: *Northwest Reno Fuels Reduction Project- Subapplicant: City of Reno.*
LPDM-PJ-09-NV-2010-001/Undertaking #2013-2549.

Dear Ms. Meyer:

The Nevada State Historic Preservation Office (SHPO) has reviewed the subject undertaking in compliance with Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended. Based on the submitted report, the SHPO offers the following comments:

The subject documents do not contain the required unaltered copy of the 7.5' USGS map showing the location of the project area.

The SHPO notes that the following statement within the above-mentioned subject documents is not consistent with Section 3.A.1 within the Programmatic Agreement between the Federal Emergency Management Agency (FEMA), the SHPO, and the Nevada Division of Emergency Management (DEM), signed 2005:

"To protect these properties, prior to the commencement of project activities, and archaeologist or a Registered Professional Forester certified in archaeology will identify the historic properties and physically delineate their boundaries."

The SHPO notes that consultation with the affected Native American representatives has been initiated. If this consultation results in the identification of properties of religious or cultural significance that could be affected by the undertaking, FEMA must consult with this office concerning the National

Donna M. Meyer, DEM/HPS

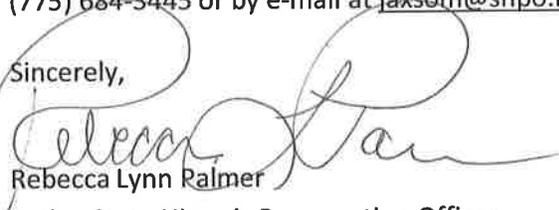
Page 2 of 2

February 8, 2013

Register eligibility and possible effects of the undertaking. Regardless of the results of this consultation, the SHPO requests that FEMA submit a summary statement after its completion.

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

Sincerely,

A handwritten signature in cursive script, appearing to read "Rebecca Lynn Palmer". The signature is written in black ink and is positioned above the printed name.

Rebecca Lynn Palmer

Acting State Historic Preservation Officer

From: Kick, Maureen
Sent: Thursday, April 18, 2013 12:35 PM
To: jaxsom@shpo.nv.gov
Cc: Peters, Linda; donna.meyer@fema.dhs.gov
Subject: FEMA LPDM-PJ-09-NV-2010-001, Northwest Reno Fuels Reduction Project, City of Reno

Hi Jessica,

This email is in response to your February 8, 2013 letter regarding the above-referenced project (attached). The letter requested a revised map showing the project area on an unaltered 7.5' USGS map. The letter also stated that the City of Reno's intent to use Registered Professional Forester's certified in archaeology to delineate the boundaries of archaeological sites located within and/or adjacent to the proposed project area was not consistent with Section 3.A.1 of the 2005 Programmatic Agreement between FEMA, NV SHPO and NDEM.

A revised map showing the project area on an unaltered 7.5' USGS map is attached to this email. Additionally, as discussed in our phone conversation yesterday, the City of Reno has agreed to retain archaeologists who meet the Secretary of the Interior's Standards for Archaeology to delineate and cordon off the sites prior to project initiation. FEMA will include this requirement as a condition of their grant.

Hopefully this additional information will allow you to complete your review of this project. FEMA requests your concurrence with their determination of No Adverse Effects to Historic Properties. Please notify Donna Meyer at FEMA at donna.meyer@fema.dhs.gov and copy me if you need any further information and when you have completed your review.

Thank you for your attention to this matter,

Maureen Kick

Senior Archaeologist, URS Corporation
maureen.kick@urs.com
cell: 917.400.7137

LEO M. DROZDOFF, P.E.
Director
Department of Conservation and
Natural Resources

RONALD M. JAMES
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DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
STATE HISTORIC PRESERVATION OFFICE

May 9, 2013



Donna M. Meyer, DEM/HPS
Deputy Regional Environmental Officer
Non-Disaster Grant Programs
US Department of Homeland Security
Federal Emergency Management Agency
1111 Broadway, Suite 1200
Oakland, CA 94607-4052

RE: **Northwest Reno Fuels Reduction Project- Subapplicant: City of Reno.**
LPDM-PJ-09-NV-2010-001/Undertaking #2013-2549.

Dear Ms. Meyer:

The Nevada State Historic Preservation Office (SHPO) has reviewed the subject undertaking in compliance with Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended. The Federal Emergency Management Agency's (FEMA) is deferring a determination of National Register eligibility for the following resources pending additional research:

26WA1052

26WA1122.

The SHPO concurs with the FEMA's determination that the proposed undertaking will not have an adverse effect to the above-mentioned unevaluated cultural resources with the proposed avoidance measures noted in the email correspondence, received by the SHPO April 18, 2013.

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

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

Sincerely,

Handwritten signature of Rebecca Lynn Palmer.
Rebecca Lynn Palmer

Acting State Historic Preservation Officer

cc. Maureen Kick, URS