

U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management

Environmental Assessment
DOI-BLM-NV-S010-2014-0005-EA
March 2014

Right-of-Way Grant Amendment for Bath Reservoir
N-61413/A

APPLICANT

Las Vegas Valley Water District

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ACRONYMS AND ABBREVIATIONS

ACEC	Area of Critical Environmental Concern
BLM	Bureau of Land Management
BMP	best management practice(s)
CC 215	Clark County Route 215
CFR	Code of Federal Regulations
CLV	City of Las Vegas
EA	Environmental Assessment
FLPMA	Federal Land Policy and Management Act
LVFO	Las Vegas Field Office
LVVWD	Las Vegas Valley Water District
NaOCl	sodium hypochlorite
NEPA	National Environmental Policy Act
NNHP	Nevada Natural Heritage Program
NRCS	Natural Resource Conservation Service
RMP	Las Vegas Field Office Resource Management Plan
RRCNCA	Red Rock Canyon National Conservation Area
ROW	right-of-way
SHPO	State Historic Preservation Office
SMP	Sheep Mountain Parkway
SNPLMA	Southern Nevada Public Land Management Act
U.S.	United States
U.S.C.	United States Code
US 95	U.S. Highway 95
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

TABLE OF CONTENTS

	Page No.
1.0 Introduction	1
1.1 Identifying Information	1
1.1.1 Title, EA Number, and Type of Project	1
1.1.2 Location of Proposed Project	1
1.1.3 Preparing Field Office	1
1.1.4 Subject Function Code and Serial Number	1
1.1.5 Applicant	1
1.2 Purpose and Need for Action	4
1.3 Relationship to Statutes, Regulations, Policies, and Plans	4
1.4 Scoping, Public Involvement, and Issues	5
1.5 Scope of Analysis and Decision	5
2.0 Proposed Action and Alternatives	6
2.1 Proposed Action	6
2.2 Description of Proposed Project	6
2.3 No Action Alternative	8
2.4 Alternatives Considered but not Analyzed	8
3.0 Affected Environment	9
3.1 General Setting of Project Area	9
3.2 Supplemental Authorities and Resources not Analyzed	9
3.3 Wildlife	11
3.3.1 Common Species	11
3.3.2 Sensitive Species	12
3.3.3 Threatened or Endangered Species	12
3.3.4 Migratory Birds	12
3.4 Vegetation	12
3.4.1 Common Species	12
3.4.2 Sensitive Species	13
3.4.3 Cactus and Yucca Species	13
3.4.4 Invasive Species and Noxious Weeds	13
3.5 Soils and Mineral Resources	13
3.5.1 Soils	13

3.5.2 Mineral Resources..... 14

4.0 Environmental Impacts 15

4.1 Wildlife..... 15

4.1.1 Proposed Action Impacts 15

4.1.2 No Action Impacts 16

4.1.3 Avoidance and Mitigation Measures..... 16

4.2 Vegetation..... 17

4.2.1 Proposed Action Impacts 17

4.2.2 No Action Impacts 18

4.2.3 Avoidance and Mitigation Measures..... 18

4.3 Soils and Mineral Resources 18

4.3.1 Proposed Action Impacts 18

4.3.2 No Action Impacts 19

4.3.3 Avoidance and Mitigation Measures..... 19

5.0 Cumulative Impacts 20

5.1 Past and Present Actions..... 20

5.2 Reasonably Foreseeable Actions 20

5.3 Summary of Cumulative Impacts 20

5.3.1 Wildlife..... 21

5.3.2 Vegetation 21

5.3.3 Geological Resources..... 21

6.0 Coordination and Consultation 22

6.1 Federal Agencies 22

6.2 State Agencies 22

6.3 Local Agencies 22

7.0 References 23

8.0 List of Preparers 24

APPENDICES

Appendix A: Legal Description – Aliquot Parts and Metes and Bounds Survey of Relocated Water Reservoir Site

Appendix B: Programmatic Biological Opinion – Terms and Conditions

Appendix C: Plant Species

Appendix D: Avoidance and Mitigation Measures and Stipulations

LIST OF FIGURES

	Page No.
Figure 1-1. Project Location	2
Figure 1-2. Location of Existing and Proposed Water Reservoir Sites	3
Figure 2-1. Proposed Water Reservoir Site.....	7

LIST OF TABLES

	Page No.
Table 3-1. Resources Not Present or Not Impacted by Proposed Action	9

1.0 INTRODUCTION

The Las Vegas Valley Water District (LVVWD) submitted an application to the United States (U.S.) Bureau of Land Management (BLM) to amend right-of-way (ROW) grant N-61413 to relocate the site for the planned Bath Water Reservoir to accommodate the location for proposed ROW grant N-77772/A for the Sheep Mountain Parkway–West Leg transportation corridor.

1.1 Identifying Information

1.1.1 Title, EA Number, and Type of Project

LVVWD Bath Water Reservoir
DOI-BLM-NV-S010-2014-0005-EA
Right-of-Way Amendment for Water Facility

1.1.2 Location of Proposed Project

The water reservoir site is in the northwest part of the Las Vegas Valley (Figure 1-1). The relocated site would be along the north side of Centennial Parkway approximately 1,800 feet west of Puli Road (Figure 1-2). The site would be adjacent to the western boundary of the proposed ROW for the west leg of the Sheep Mountain Parkway (SMP).

The water reservoir would be relocated to the southwest quarter of the southeast quarter of Section 23, Township 19 South, Range 59 East, Mount Diablo Meridian of Clark County, Nevada. Appendix A includes the metes and bounds description of the site.

1.1.3 Preparing Field Office

U.S. Department of the Interior
Bureau of Land Management
Southern Nevada District – Las Vegas Field Office
4701 North Torrey Pines Drive
Las Vegas, NV 89130

1.1.4 Subject Function Code and Serial Number

Case Code: 287001 – Right-of-Way, Water Facility
Serial Number: N-61413/A

1.1.5 Applicant

Las Vegas Valley Water District
1001 South Valley View Boulevard
Las Vegas, NV 89153

Figure 1-1. Project Location

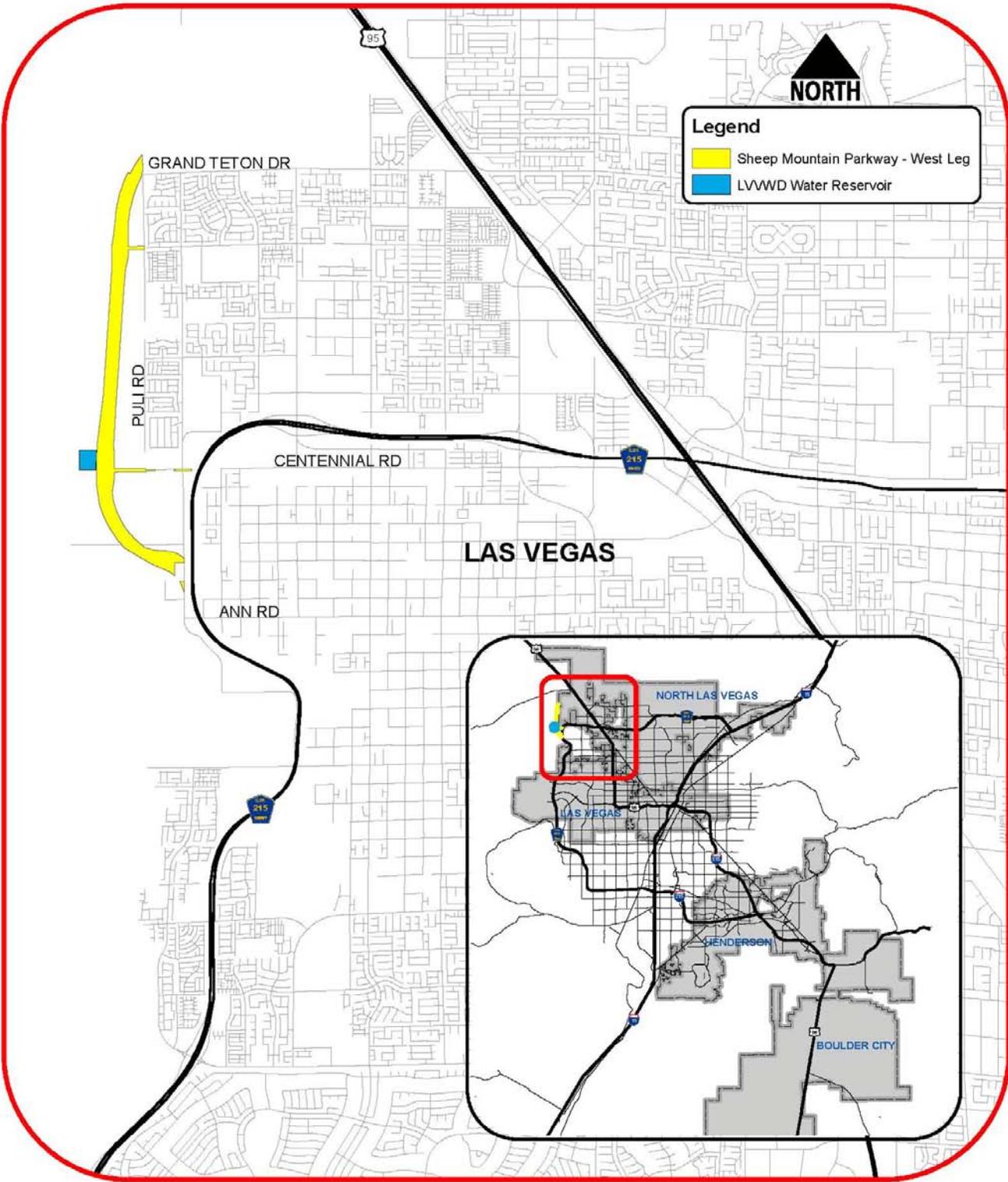
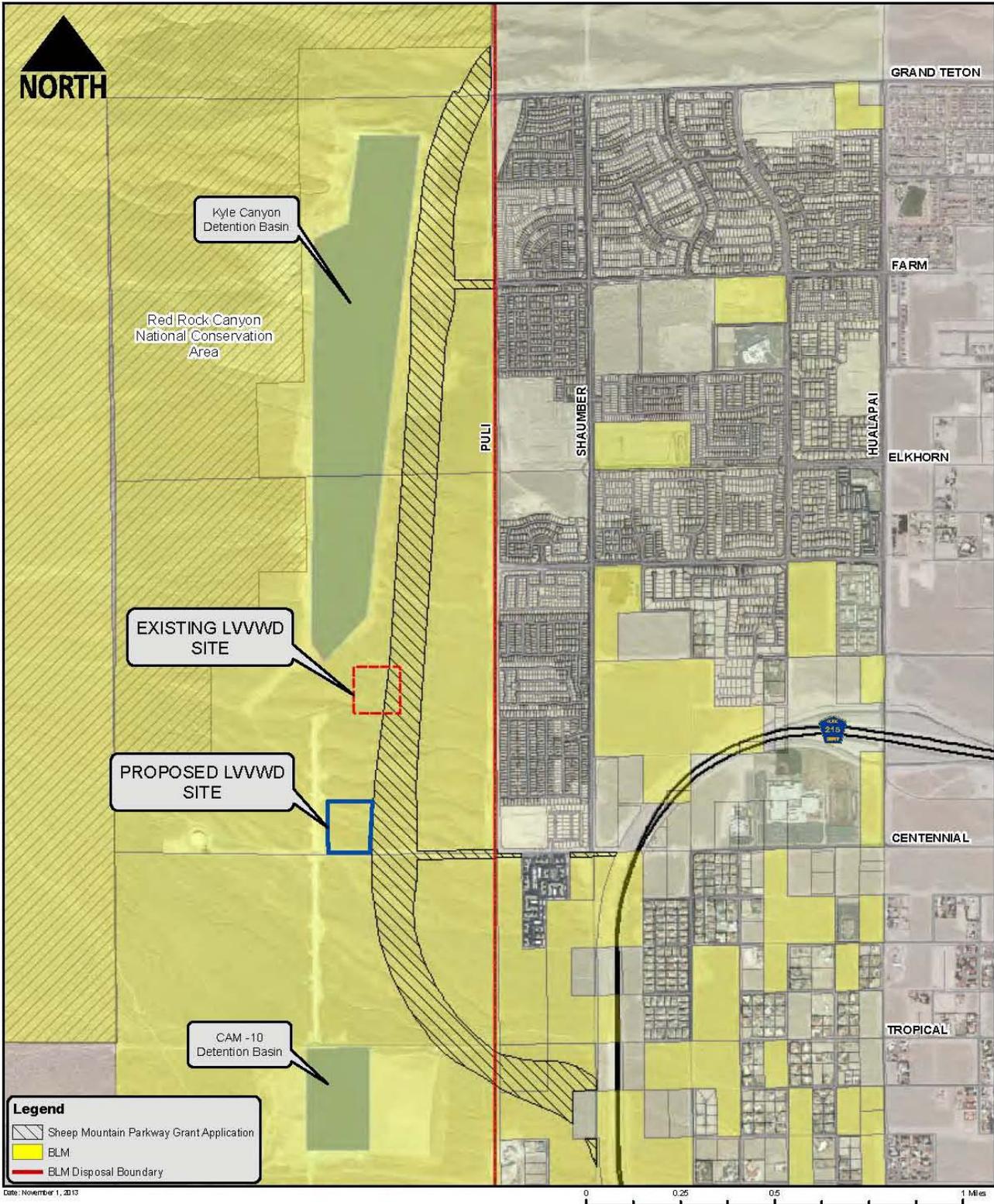


Figure 1-2. Location of Existing and Proposed Water Reservoir Sites



1.2 Purpose and Need for Action

As authorized by the Federal Land Policy and Management Act (FLPMA), the BLM issues ROW grants for reservoirs, pipelines, and other facilities for the impoundment, storage, or distribution of water. The purpose of the action is to determine if certain public lands should be devoted to such uses and to provide the LVVWD with legal access to such lands to construct and operate the Bath Water Reservoir. The need for the action is established by FLPMA and BLM's responsibility to respond to the LVVWD's request to amend a ROW grant to relocate the water reservoir site.

The purpose for the water reservoir was established through the issuance of grant N-61413 in 2005. The LVVWD is responsible for providing potable water and fire protection for the public in the northwest valley, and based on growth estimates a 10-million gallon water reservoir is required to meet the anticipated demands. Water reservoirs are sited based on gravity flow (elevation) and pressure zones. The search conducted to locate a site at the critical elevation that could also physically contain a facility of this size resulted in the 10-acre site granted under N-61413 located at the south end of the Kyle Canyon Detention Basin (Figure 1-2). The purpose for relocating the water reservoir is to accommodate the location proposed by the City of Las Vegas (CLV) for the west leg of the SMP. The SMP-West Leg is to provide a continuous roadway connection between U.S. Highway 95 (US 95) and Clark County Route 215 (CC 215) to accommodate projected traffic increases and improve traffic circulation in the northwest valley.

1.3 Relationship to Statutes, Regulations, Policies, and Plans

This Environmental Assessment (EA) was prepared in accordance with specific statutory, regulatory, and agency requirements. Local plans were also considered in the analyses and are included in the following list:

- National Environmental Policy Act (NEPA) (42 U.S. Code [U.S.C.] 4321 *et seq.*)
- Council on Environmental Quality, Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] 1500-1508)
- Department of the Interior, Implementation of NEPA (43 CFR 46)
- BLM NEPA Handbook (H-1790-1)
- FLPMA Section 501 (43 U.S.C. 1761)
- BLM Las Vegas Field Office Resource Management Plan (RMP) (1998), Rights-of-Way Management
 - Meet public demand by providing for transportation and other related facilities (Objective RW-1).
 - Public land is available for ROW at the discretion of the BLM under the authority of FLPMA (Management Direction RW-1-h).
- LVVWD Major Construction Program
- Regional Transportation Commission of Southern Nevada, 2013-2035 Regional Transportation Plan
- CLV 2020 Master Plan, Streets and Highways

1.4 Scoping, Public Involvement, and Issues

The BLM resource specialists and the CLV participated in an internal scoping meeting to exchange information about the SMP-West Leg project and the resources within the project area, which includes the existing and proposed sites for the LVVWD water reservoir. Comments and input provided by the BLM resource specialists are summarized and analyzed in Chapter 3.

Grant holders adjacent to the proposed relocation site for the water reservoir are the CLV and LVVWD; therefore, no additional notification to others of the proposed ROW relocation was necessary.

1.5 Scope of Analysis and Decision

The decision to be made is limited to granting or denying the amended ROW request made by the LVVWD to relocate the water reservoir site. The existing and proposed ROWs are located entirely on BLM-managed land.

2.0 PROPOSED ACTION AND ALTERNATIVES

This chapter describes the BLM's proposed action and a description of the LVVWD's Bath Water Reservoir project. Other alternatives that were considered and reasons they were not analyzed are discussed.

2.1 Proposed Action

The proposed action by the BLM is to evaluate the amended ROW application submitted by the LVVWD for the Bath Water Reservoir project, and to decide if granting an amended ROW on public land for water storage purposes in accordance with FLMPA is in the public interest.

2.2 Description of Proposed Project

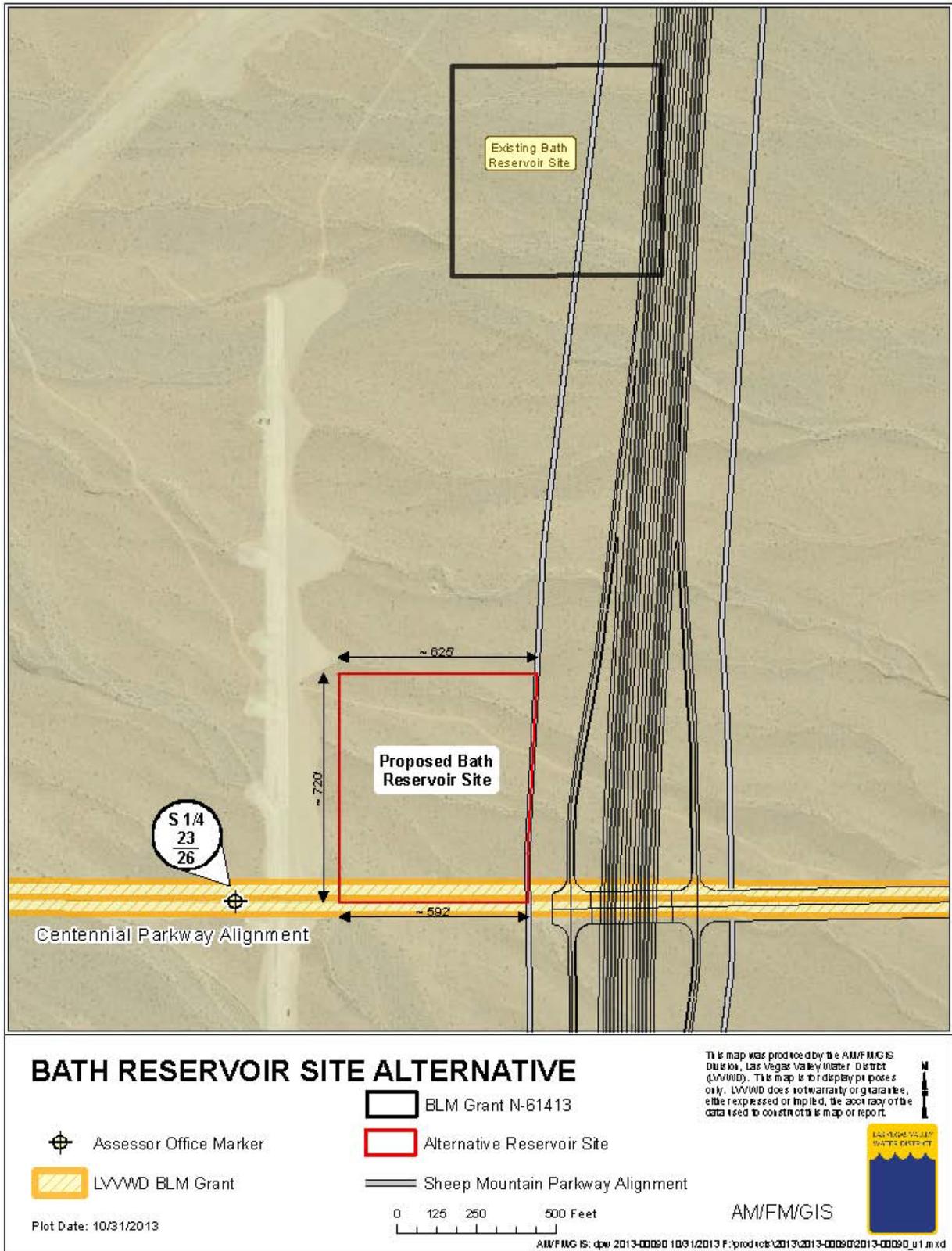
The proposed site is an irregular rectangle. The lengths of the north and south boundaries are 625 feet and 592 feet, respectively, and the east and west boundaries are 720 feet long for a total of approximately 10 surface acres (Figure 2-1). A concrete block wall 6 to 8 feet tall would be constructed around the site perimeter. Inside the perimeter wall would be the in-ground reservoir basin, 10-million gallon concrete storage tank, inlet/outlet pipes, surge tanks, utilities (electrical, communications), access road, drainage system, and a control building for the pump system and disinfection room. From the top of the storage tank roof to the bottom of the reservoir basin would be approximately 25 feet, of which half would be above finished grade.

The construction sequence involves flagging and staking the ROW, salvaging cacti and yucca plants, clearing the surface, and excavating earthen materials. Excavated materials would be screened and stockpiled on-site. All structures and equipment would be constructed and installed, the storage tank would be filled with water, and a 14-day testing period would begin to detect possible leaks, bacterial content, pumping operations, and disinfection requirements.

After testing is completed the material excavated for the basin would be used to backfill around and cover the tank. Borrow material would not be needed and unsuitable or extra excavated materials not used on the site would be removed in accordance with the BLM's mineral materials disposition procedures (43 CFR 3610 and 3620). The access road and interior driving surfaces would be paved, a dust palliative and rock mulch applied on disturbed surfaces, and perimeter walls erected. There would be no interior landscaping; desert landscaping outside the perimeter wall would only be installed as required.

Sodium hypochlorite (NaOCl), a bleach solution, would be stored on-site for water quality control and disinfection. A tanker truck would deliver a 12 percent solution of NaOCl to the site on a biweekly basis. The solution would be stored in two, 160-gallon polyethylene storage tanks on concrete bases within a concrete containment pit in the disinfection room inside the control building. The tanks would be filled via pipe from a coupling system (with an associated containment pit) located on the exterior of the building. The LVVWD prepares and maintains a Spill Prevention and Contingency Plan for each reservoir site in compliance with federal and state regulations. In the unlikely event of a spill, the NaOCl solution would be fully contained within the containment pit, which has a capacity of 110 percent of the volume of the storage tanks. The containment pit has a sump connected to a sump on the outside of the

Figure 2-1. Proposed Water Reservoir Site



building. A manually-operated valve in the pipeline connecting the inside and outside sumps can be opened, and the contents of the containment pit pumped into a truck for recycling.

The reservoir would be in continual operation. The capacity use and water quality levels would be monitored at various scheduled times and physical inspections of the reservoir and associated equipment would occur on a monthly basis. Every five years the storage tank would be drained, cleaned, and disinfected.

Preliminary construction activities such as boundary surveying and staking, soil sampling, and geotechnical studies are anticipated to commence on or around July 2018, based on population growth and demand in the northwest valley. Construction of the reservoir would take approximately two years to complete. The workforce could be 50-80 people, including surveyors, construction workers, equipment operators, engineers, and inspectors, but not all workers would be on-site at the same time. The type of construction equipment that could be used includes a grader, scraper, excavator, backhoe, trencher, crane, hauler, front-end loader, cement truck, water truck, paver, and utility truck.

2.3 No Action Alternative

The No Action Alternative represents the continuation of current management of the public land without BLM granting the requested amendment to N-to relocate the existing ROW grant held by the LVVWD. The LVVWD would construct the Bath Water Reservoir at some future time at the existing granted site. However, a transportation corridor that directly connects US 95 and CC 215 would not be possible without the pending ROW (N-77772/A) from BLM. A revised ROW alignment for the SMP-West Leg that avoids the existing reservoir site would greatly complicate the engineering and design for safe interchanges and for the planned type of transportation facility. A revised roadway alignment would increase costs and require additional public and private land to safely design the interchange with CC 215.

The No Action Alternative would not meet the LVVWD's purpose for relocating the reservoir site in cooperation with the CLV's purpose and need for accommodating projected traffic increases, improving traffic circulation and level of service, and increasing transit options in the northwest valley. Taking no action on the LVVWD's request for an amended ROW grant would not meet BLM's purpose and need under FLPMA to review and authorize ROW grants for water storage, and ultimately for transportation purposes, that are in the public interest.

2.4 Alternatives Considered but not Analyzed

The LVVWD and CLV staffs reviewed alternate 10-acre sites within the project area to relocate the water reservoir and collaboratively agreed on the proposed (preferred) site. One site reviewed was east of the proposed SMP-West Leg alignment and north of Centennial Parkway; however, that site was rejected because access would be more difficult than at the preferred site. Another site reviewed was between the preferred and existing sites; however, that alternate site was also rejected to avoid a known location of two gravesites of unknown age and origin.

3.0 AFFECTED ENVIRONMENT

3.1 General Setting of Project Area

The project area is along the northwestern edge of the suburban expansion of the Las Vegas Valley, set on the valley floor off the east-facing alluvial slope of the La Madre Mountains. For purposes of defining the affected environment, the project area includes the proposed amended ROW location and the surrounding land that could be directly, indirectly, or cumulatively affected by the proposed water reservoir relocation and the SMP-West Leg. The project area covers about 600 acres generally located between the Kyle Canyon Detention Basin on the west, Puli Road on the east, Tropical Parkway on the south, and the Red Rock Canyon National Conservation Area (RRCNCA) boundary to the north.

3.2 Supplemental Authorities and Resources not Analyzed

The BLM NEPA Handbook lists supplemental statutory and executive authorities to be considered during the NEPA process. During internal scoping the BLM resource specialists identified environmental resources that are either present in or otherwise considered important to the project area. Scoping discussions and a review of the supplemental authorities facilitate an efficient environmental analysis process by identifying resources for full consideration and analysis in the EA, while devoting less attention to resources that are not present in the project area or are present but not affected by the proposed action. Table 3-1 lists the resources not analyzed and the reasoning for excluding them from detailed analysis in this EA.

Table 3-1. Resources Not Present or Not Impacted by Proposed Action

Resources Not Present or Not Impacted	Reasoning
Air Quality	The LVVWD will comply with federal, state, and local air quality regulations for the duration of the project, obtain necessary dust or any air quality permits for soil disturbing activities of 0.25 acre or more, and adhere to stipulations prior to and during soil disturbing activities for the duration of the project.
Area of Critical Environmental Concern (ACEC)	The project area is not within an ACEC or critical desert tortoise habitat.
BLM Natural Areas	No such designations are within the project area or field office area.
Cultural Resources	A review of existing data for historic properties in the project area was completed according to 36 CFR 800.4. The area has been previously evaluated for other ROW authorizations and in support of the Valley Disposal Boundary project. There are no known historic properties within the area that would be impacted by the project and the two graves (unlikely human) near the proposed relocated ROW would be avoided. No further Section 106 review is required.
Greenhouse Gas Emissions	There are currently no emission limits for suspected greenhouse gases and no technically defensible methodology for predicting potential climate changes from such emissions.
Environmental Justice	No minority or low-income communities are within or adjacent to the project area.

Resources Not Present or Not Impacted	Reasoning
Farmlands (Prime or Unique)	No such designations are within the project area or field office area.
Floodplains	The proposed relocated ROW site is not within any Federal Emergency Management Agency designated floodplain.
Fuels/Fire Management	Compliance with fire restrictions current at time of construction would mitigate any risks posed by the project.
Hydrological Conditions	With the proposed reservoir site adjacent to Centennial Parkway and future SMP-West Leg, there would be no new changes to hydrological conditions in the project area that would not already have been impacted by these roadways and existing flood control structures. The existing flood control channel up-gradient of the proposed reservoir site already contains and controls the runoff across the site. This channel and other structures intercept flood flows from the project area so the drainage structures associated with the proposed reservoir site and SMP-West Leg would not adversely alter the overall hydrologic conditions through the project area.
Lands/Access	Access to the relocated reservoir site would be from Centennial Parkway, which is an existing public ROW authorization to the CLV that would be used by the LVVWD.
Livestock Grazing	The project area is not within any authorized grazing allotment.
Native American Religious Concerns	An ethnographic assessment completed for the Valley Disposal Boundary project concluded there are no Native American concerns in the part of the valley covering this project. The State Historic Preservation Officer concurred with those consultation efforts; no further analysis is required.
Paleontology	Fossil-bearing geological strata or paleontological resources are not known to occur in the area; however, work would stop and the BLM Archaeologist would be contacted should any be discovered during construction.
Rangeland Health Standards	The project area is not within any authorized grazing allotment.
Recreation	There are no recreation resources or uses on the proposed relocated site.
Socioeconomics	The project would not disproportionately impact social or economic values.
Threatened, Endangered, or Candidate Plant Species	There are no threatened, endangered, or candidate plant species known to occur in the project area.
Wastes (Hazardous or Solid)	There are no hazardous materials or waste issues known in the project area. Standard stipulations addressing hazardous materials will apply to the grant.

Resources Not Present or Not Impacted	Reasoning
Water Resources/Quality (drinking/surface/ground)	With the proposed relocated site adjacent to Centennial Parkway and the future SMP-West Leg, there would be no new changes to surface water runoff patterns in the project area that would not already have been impacted by these roadways and existing flood control structures. Construction excavation would not intercept groundwater. Construction activity would comply with Section 402 of the Clean Water Act, as well as other state and local permit program requirements. A construction stormwater discharge permit would be obtained and a Stormwater Pollution Prevention Plan would be prepared prior to construction. The Plan would specify best management practices to control erosion and runoff from the construction areas to protect water quality.
Wetlands, Riparian Zones	There are no permanent surface waters, wetlands, or riparian zones in the project area.
Wild and Scenic Rivers	There are no wild or scenic rivers in the project area.
Wilderness/Wilderness Study Area	There are no wilderness study areas or designated wilderness areas in the project area.
Visual Resources	The project area is within Visual Resource Management Class III which aims to partially retain the existing character of the landscape. Levels of change to the landscape can be moderate but should not dominate the view of the casual observer. With most of the reservoir below grade and the site adjacent to existing developments in the project area, the project is not expected to dominate the view of the casual observer.
Wild Horses and Burros	The project area is not located within an active herd management area. There would be no impacts to wild horses or burros.
Lands with Wilderness Characteristics	There are no lands with wilderness characteristics in the project area

3.3 Wildlife

3.3.1 Common Species

The wildlife that can be assumed to occur in the project area is noted from literature reviews and previous surveys of similar habitat, and includes small mammals, rodents, birds, and reptiles. The project area provides marginal habitat for most common wildlife species. Species-specific surveys were not conducted for common wildlife within the project area; however, casual observations included white-tailed antelope squirrel (*Amмосpermophilus leucurus*), black-tailed jackrabbit (*Lepus californicus*), zebra-tailed lizard (*Callisaurus draconoides*), desert horned lizard (*Phrynosoma platyrhinos*), mourning dove (*Zenaida macroura*), northern mockingbird (*Mimus polyglottos*), and common raven (*Corvus corax*). Different bat species occur throughout the general area, with the more common ones likely being the long-eared bat (*Myotis evotis*), pallid bat (*Antrozous pallidus*), and Mexican free-tailed bat (*Tadarida brasiliensis*).

3.3.2 Sensitive Species

A sensitive species is a native species with its viability at risk because of a downward trend in a distinct population or because unique habitat is threatened. The sensitive species that may occur in the general area include western burrowing owl (*Athene cunicularia*), chuckwalla (*Sauromalus ater*), banded Gila monster (*Heloderma suspectum cinctum*), Mojave shovel-nosed snake (*Chionactis occipitalis occipitalis*), desert glossy snake (*Arizona elegans*), and Mojave Desert sidewinder (*Crotalus cerastes*). Bats species that occur throughout the general area could include some that are designated as sensitive, such as California leaf-nosed bat (*Macrotus californicus*). Species-specific surveys were not conducted for sensitive species and none were observed during field visits of the project area.

3.3.3 Threatened or Endangered Species

The Mojave population of the desert tortoise (*Gopherus agassizii*) was listed as threatened under the Endangered Species Act in 1990. Throughout most of the Mojave Desert, tortoises occur most commonly on gently sloping terrain with sandy-gravel soils and where there is sparse cover of low-growing shrubs, which allows establishment of herbaceous plants. Soils must be friable enough for digging of burrows, but firm enough so that burrows do not collapse. Typical habitat for the desert tortoise in the Mojave Desert has been characterized as creosote bush scrub below 5,500 feet, where precipitation ranges from 2 to 8 inches, the diversity of perennial plants is relatively high, and production of ephemeral plant species is high. (USFWS, 2011)

A field survey for the desert tortoise was completed in support of the SMP project (CLV, 2013). The survey area covered approximately 630 acres which included the proposed reservoir relocation site adjacent to Centennial Parkway. There were 178 tortoise burrows and 21 live tortoises recorded. Based on the results of that survey, the estimated abundance of tortoises in the survey area would range from 7 to 30 tortoises per square kilometer (250 acres) at the 95 percent confidence interval.

3.3.4 Migratory Birds

Most all birds receive some level of protection from harm by the Migratory Bird Treaty Act (16 U.S.C. 703-711) (see list at 50 CFR 10.13). The creosote-white bursage vegetation and mammal and tortoise burrows in the project area can provide foraging and nesting habitat for a number of different bird species, including the western burrowing owl, a BLM sensitive species. Typically, the breeding season (generally mid-February through the end of August) is when these species are most sensitive to disturbance. Migratory birds casually observed during field visits to the project area are listed in 3.3.1 Common Wildlife.

3.4 Vegetation

3.4.1 Common Species

The vegetation classification of the project area is the *Larrea tridentata-Ambrosia dumosa* Shrubland Alliance (Peterson, 2008), which is dominated by creosote bush and white bursage. Other desert shrubs common to this alliance include four-wing saltbush (*Atriplex canescens*), Mormon tea (*Ephedra*

torreyana), ratany, (*Krameria erecta*), and bladder sage (*Salazaria mexicana*). The various plant species observed in the project area during field surveys conducted for the SMP project are listed in Appendix C.

3.4.2 Sensitive Species

The yellow two-toned beardtongue (*Penstemon bicolor* ssp. *bicolor*) is the BLM sensitive species known to occur in the vicinity. The plant is commonly found at elevations between 2,500 to 5,480 feet, and in calcareous or carbonate soils in washes, along roadsides, rock crevices, outcrops, or places that receive a significant amount of runoff (NNHP, 2013). The plant occurs in creosote-bursage, blackbrush, mixed-shrub, and the lower juniper zones (NNHP, 2013).

The project area was surveyed for sensitive plant species for the SMP project. There was no *Penstemon* plant species observed within or near the proposed water reservoir relocation site.

3.4.3 Cactus and Yucca Species

Cactus and yucca plants are considered government property and are regulated under the Nevada BLM forestry program. The various species observed in the project area during field surveys conducted for the SMP project are listed in Appendix C. The density of cactus and yucca plants averaged across the project area is approximately 10 plants per acre, with higher numbers of individual plants in the southern part of the project area closer to Centennial Parkway. The BLM considers this area as high density for cactus and yucca plants.

3.4.4 Invasive Species and Noxious Weeds

Southern Nevada lands are impacted by the presence of noxious and invasive, non-native vegetation. Noxious and invasive species are characterized as hazardous fuels and need to be managed accordingly to reduce fire risk. The Las Vegas Field Office (LVFO) has prepared the LVFO Weed Plan that provides guidance for an active integrated weed management program using Best Management Practices (BMPs).

The non-native plant species that are considered invasive or noxious that were observed in the project area during field surveys included Russian thistle (*Salsola tragus*), red brome (*Bromus madritensis ssp rubens*), redstem filaree (*Erodium cicutarium*), and Mediterranean grass (*Schisumus* sp.).

3.5 Soils and Mineral Resources

3.5.1 Soils

Soils within the project area are classified as Tencee and Dalian, very fine sandy gravelly loam. These are well-drained soils found on 2 to 8 percent slopes on alluvial fan remnants and skirts. Parent soil material is alluvium derived from limestone, dolomite, and dolostone. Tencee soils are classified as hydrologic soil group D (low rate of water transmission) and Dalian soils are group A soils (high infiltration rate) (NRCS, 2013).

Microbiotic crusts or biological soil crusts are a community of organisms that live at the surface of desert soils. These crusts are more generally associated with soils formed from gypsiferous sedimentary rocks

and in vegetative zones of saltbush and blackbrush (NRCS, 2013). These soil and vegetation conditions are not present in the project area.

3.5.2 Mineral Resources

A geology and minerals assessment in the La Madre Mountain Wilderness Study area to the west of the project area reported no mineral or energy resources were located in the area (USGS, 2013). Potential for silver, lead, and zinc mineral resources as well as petroleum resources are rated as low. In contrast, sand, gravel, and limestone are listed as abundant in the nearby La Madre Mountain area.

Information from the RMP shows the project area having high potential for mineral material sales, low potential for locatable minerals, and moderate potential for prospectively valuable oil and gas (BLM, 1998). There are no active mining claims in the project area (BLM, 2013).

4.0 ENVIRONMENTAL IMPACTS

Impacts are defined in general terms and are qualified as direct or indirect, adverse or beneficial, and as short-term or long-term. Construction-related impacts are generally addressed by BMPs or permits required by federal, state, or local regulations to minimize or control the adverse effects of construction. Construction-related impacts are generally temporary, short-term, and cease after construction is complete, whereas operational impacts are generally permanent, long-term, and begin or continue after construction is complete.

The special and general stipulations to authorizing a ROW grant serve to avoid or minimize adverse environmental impacts of the proposed project. The list of special stipulations is in Appendix D and would also be attached to the grant. Some stipulations are discussed in this chapter as avoidance and mitigation measures.

4.1 Wildlife

4.1.1 Proposed Action Impacts

Common Wildlife, Sensitive Species, and Migratory Birds

Ground-disturbing activities associated with construction could directly result in mortality to wildlife inhabiting the project area. Mobile species might be able to avoid injury or mortality by leaving the area; however, less mobile species, nocturnal species, or species that use burrows might be more susceptible to injury or mortality from construction activities. After project completion, injury or mortality of wildlife could continue from additional vehicular traffic from subsequent use of the area.

Removing 10 acres of creosote-white bursage desert scrub habitat would displace wildlife using the project area; however, this type of habitat is the most common type of habitat throughout the surrounding area. The typical common wildlife species that could be displaced or impacted are widely distributed; thus, loss of habitat and some individuals would not measurably impact the populations throughout their range. Any impacts to BLM sensitive species would not likely lead to further decline of the species range wide.

The project area provides suitable habitat for burrowing owls and other migratory birds, such as wrens and thrashers, which build their nests in shrubs and cactus and yucca plants. Construction activities that occur from mid-February through the end of August could displace these birds and disrupt their breeding and nesting season by destroying habitat and altering behavior because of construction noise. Impacts would be minimized by ensuring the construction area is cleared of nests or breeding activity and active nests are avoided.

Security lighting for the water reservoir facilities could indirectly affect behavior of nocturnal bats and use of the project area for foraging or migrating.

Desert Tortoise

Permanent removal of approximately 10 acres of desert tortoise habitat would be necessary to construct the water storage reservoir and appurtenant facilities. All construction would occur within the bounds of the relocated ROW, so there would be no additional impact to habitat outside the ROW for temporary purposes. Based on survey data (CLV, 2013) and USFWS calculations to determine abundance and probability of tortoises, there could be one tortoise on the 10-acre site that could be adversely affected.

Similar to the effects on other wildlife, tortoises might be killed or injured during construction activities. Tortoises or tortoise eggs could be crushed, killed, or trapped in burrows by construction grading and excavation activities. Construction traffic entering/exiting the project area could increase the potential for tortoise/vehicle collisions. Construction noise and vibration could affect tortoises and their normal activity patterns. Tortoises might be attracted to the water used for dust control on the site or seek shade under construction equipment and thus be at risk of injury or death. Construction site litter and new perching opportunities might attract ravens and other raptors that prey on juvenile tortoises, thus potentially causing an increase in juvenile tortoise mortality. Due to increased human presence in the area, tortoises may be killed or injured due to collection or vandalism associated with increased encounters with workers, visitors, and pets.

Construction of the water storage reservoir and appurtenant facilities on the 10-acre relocated site may affect and is likely to adversely affect the desert tortoise. Remuneration fees for mitigation to disturb 10 acres of tortoise habitat were paid with the N-61413 grant for the existing authorized reservoir location, and for 0.75 acre for existing disturbance under N-78008 and N-78008-01 on the southern edge of the proposed relocated site. Since issuance of those grants, consultation under Section 7 of the Endangered Species Act is covered under the Programmatic Biological Opinion for BLM activities, File No. 84320-2010-F-0365.R001. Impacts to and take of desert tortoise and habitat would be minimized through compliance with the terms and conditions of the Programmatic Biological Opinion (discussed in Section 4.1.3).

4.1.2 No Action Impacts

Under the No Action Alternative the amended ROW application would be denied and the water reservoir site would not be relocated; however, similar project-related effects on wildlife would still occur at the currently authorized location.

4.1.3 Avoidance and Mitigation Measures

If ground clearing and other construction activities cannot be scheduled to avoid bird breeding and nesting season (generally February 15 through August 31), the project area would be surveyed by a qualified biologist to confirm the absence of nests (on the ground, in burrows, and in vegetation) and nesting activity to avoid impacting migratory birds. Active nests (containing eggs or young) would be avoided until they are no longer active or the young birds have fledged. The area to be avoided around the nest would be appropriate to the species, which could be at least 250 feet distance from an active nest, but will be confirmed by either a BLM or Nevada Department of Wildlife biologist. Any nesting activity that is observed outside this general seasonal timeframe should be similarly avoided.

To reduce potential impacts to bats that may be in the project area, as well as nocturnal migratory birds, facility and security lights should be kept to the minimum number necessary and be of minimum intensity and down-shielded to keep the illumination within the boundaries of the site.

Conservation measures for desert tortoise are those listed terms and conditions (included in Appendix B) of the Programmatic Biological Opinion for BLM activities, File No. 84320-2010-F-0365.R001. An authorized desert tortoise biologist will conduct a clearance survey of the site for any overland travel for surveys and geotechnical testing and before construction. For overland travel, the authorized biologist will walk in front of vehicles while traveling over undisturbed habitat and ensure the same route is used for ingress and egress to the site. An authorized biologist will present an education program to construction workers and site personnel, and be on-site during construction during the tortoise active season (March 1 to October 31) and on call during the inactive season. The concrete block wall will serve as tortoise-proof fencing; however, access gates will have minimal ground clearance to deter ingress by tortoises and will be inspected and reported per the terms and conditions.

4.2 Vegetation

4.2.1 Proposed Action Impacts

Approximately 10 acres of creosote-white bursage vegetation community would be cleared to construct the water storage reservoir and appurtenant facilities. The design of the reservoir would limit the amount of surface area not used for operations and maintenance requirements; therefore, on-site restoration of vegetation would not occur and impacts to vegetation within the ROW would be permanent.

Sensitive Species

The field surveys did not find any occurrences of the *Penstemon* species within the proposed relocated site and therefore no impacts to the species are anticipated. No additional surveys for sensitive species are required.

Cactus and Yucca Species

A number of cactus and yucca plants would be impacted to construct the water storage reservoir and appurtenant facilities. The entire 10-acre site would be cleared of all vegetation. Because of the operations and maintenance requirements of the water reservoir, the ground surface not covered by facilities would be covered by rock mulch. Approximately 100 plants could be impacted based on the average density of 10 plants per acre.

Invasive Species and Noxious Weeds

Removing 10 acres of native plant cover and disturbing surface soils provides opportunity for non-native invasive weed species to colonize bare disturbed ground. Weeds can establish on stockpiled soils and disturbed ground where construction is not actively occurring, or spread to adjacent undisturbed ground where they can out-compete native plants for resources, such as sunlight, soil, water, nutrients, and space. Soil disturbance can also reduce the native seed bank associated with the site.

Increased vehicle traffic during construction can also increase the spread of weeds and invasive annual grasses by inadvertently disbursing seeds off-site that are lodged in tire treads. These grasses serve as fine fuels that increase fire risk and loss of natural resources.

4.2.2 No Action Impacts

Under the No Action Alternative, the amended ROW would not be granted and the water reservoir site would not be relocated. However, similar project-related effects on vegetation and from potential increases in invasive and noxious species would still occur at the currently authorized location.

4.2.3 Avoidance and Mitigation Measures

The cactus and yucca plants on the ROW will be salvaged, transplanted, and maintained according to BLM guidance. Salvage will be conducted by an approved contractor with a minimum of three years experience with Mojave or Sonoran desert salvage and transplant. Because any open disturbed ground surface on the ROW would be covered by rock, the salvaged plants would be taken to the Ann Road stockpile. The LVVWD may coordinate a salvage sale with the BLM Botanist prior to construction.

The LVVWD will prepare a Noxious Weed Management Plan in coordination with the BLM Weeds Coordinator before the start of construction. Invasive or noxious species will be aggressively managed by implementing BMPs and monitoring procedures detailed in the Plan to eradicate and control the spread of these species.

4.3 Soils and Mineral Resources

4.3.1 Proposed Action Impacts

The below-grade reservoir construction would involve earthwork and subsurface excavation, impacting soils within the proposed relocated ROW. All construction would occur on the 10-acre site and no temporary use areas for construction staging would be needed. Disturbing the surface soils for construction would result in a temporary increase in windblown dust, but impacts would be controlled through BMPs and compliance with dust control permit conditions imposed by the Clark County Department of Air Quality.

There are no known geologic hazards or soil conditions that cannot be addressed by engineering design standards.

There are no active mining claims in the project area that would be affected by the project.

Excavated materials would be incorporated into the design and construction of the water reservoir and appurtenant facilities, including drainage. The design would attempt to balance the cut and fill calculations. Any excess mineral materials would be stockpiled for disposal by BLM in accordance with 43 CFR 3600 Mineral Materials Disposal regulations. Depending on the amount of excess materials, previously disturbed portions of the Lone Mountain Community Pit could be considered for long-term storage/stockpile. The BLM must authorize the use of any excess materials before their removal or disposal from the proposed ROW.

4.3.2 No Action Impacts

Under the No Action Alternative, the amended ROW would not be granted and the water reservoir site would not be relocated. However, similar project-related effects on soils and changes to mineral materials would still occur at the currently authorized location.

4.3.3 Avoidance and Mitigation Measures

The LVVWD and its construction contractor will comply with any city and county dust control ordinance or permits in place at the time of construction, including obtaining a dust control permit from Clark County and/or the CLV as required.

Removal of any excess mineral materials from the ROW would be in accordance with BLM regulations and approvals. If mineral materials are stockpiled on-site for future disposal by the BLM, a mineral material contract, free use permit or material site right-of-way must be issued by the BLM. The LVVWD will provide the BLM with the location and volume of stockpiled mineral materials. If excess mineral materials are to be stockpiled at the Lone Mountain Community Pit, the LVVWD will contact the BLM at least 30 days in advance of moving the materials. The LVVWD will not stockpile excess mineral materials outside the ROW without prior written acknowledgement from the BLM.

5.0 CUMULATIVE IMPACTS

Cumulative impacts are the incremental impacts of an action added to other past, present, and reasonably foreseeable future actions. Cumulative impacts can result from individually minor, but collectively significant actions taking place over a period of time (40 CFR 1508.7). These actions include projects identified within the spatial (geographic) and temporal (timeframe) boundaries of the action considered in this EA. For this project, the spatial limits are bound by the RRCNCA to the west, Kyle Canyon Detention Basin to the north, CAM-10 Detention Basin to the south, and Puli Road with existing and proposed developments to the east. The temporal limits are bound by the anticipated construction timeframe of the water reservoir.

5.1 Past and Present Actions

Existing land ownership in the project area is BLM land with grant holders for existing flood control structures and roadways. There are master planned communities, mixed-use developments, and employment centers that have been developed or are under construction east of Puli Road. As such, the impacts of past and present actions combine to form existing conditions. Existing conditions were considered in the affected environment section of this EA.

5.2 Reasonably Foreseeable Actions

Reasonably foreseeable actions include the disposal of BLM lands and subsequent residential and commercial development in the area. The existing Providence and future Kyle Canyon master-planned communities (residential and commercial developments) in the area cover 2,900 acres and up to 20,000 residences, and would continue to advance growth, resulting in traffic impacts and further loss of natural habitat. The CLV will construct a segment of SMP on the ROW it holds from Fort Apache Road to Grand Teton Drive through the Kyle Canyon development, and plans future construction of the SMP-West Leg from Grand Teton Drive to CC 215 near Ann Road.

5.3 Summary of Cumulative Impacts

The environmental impacts of future developments within the disposal boundary were analyzed in the Las Vegas Valley Disposal Boundary EIS (BLM, 2004). This development is expected to continue regardless of the proposed SMP-West Leg ROW request by the CLV and the amended ROW to relocate the Bath Water Reservoir. Relative to the existing development and planned growth for the northern Las Vegas Valley, the incremental cumulative impact of the relocated reservoir site on natural and social resources would be negligible.

Mitigation of potential environmental impacts resulting from planned development projects would remain with each project proponent in accordance with applicable federal, state, and local laws, regulations, and ordinances. Mitigation of related impacts of the proposed relocated site for the water reservoir is considered in the impacts and mitigation sections of this EA.

5.3.1 Wildlife

Future development with increases in population and human activities in the valley would continue to displace wildlife, including migratory birds, cause mortality of species, and reduce the amount of wildlife habitat. The Las Vegas Valley does not contain the majority of any common wildlife species' population, and therefore, the cumulative loss of 10 acres of habitat for the relocated reservoir site would be unmeasurable in comparison to similar habitat occurring elsewhere.

The cumulative impacts of development within the disposal boundary and adjacent areas on desert tortoise were addressed in the biological opinion (File No. 1-5-96-F-023R.3) for the expansion of the disposal boundary by SNPLMA, for actions proposed by the BLM (File No. 94320-2010-F-0365), and for the incidental take permit issued to Clark County (File No. 1-5-00-FW-575). The cumulative impacts of the SMP-West Leg on desert tortoise could directly affect 200 acres needed for ROW and indirectly affect another 287 acres (more or less) of fragmented habitat. These effects are also addressed by the terms and conditions for the Programmatic Biological Opinion for BLM activities (File No. 94320-2010-F-0365).

5.3.2 Vegetation

The proposed relocation for the water reservoir with other projects would result in the incremental loss of native vegetation communities (including cacti and yucca species), the potential spread of invasive and noxious species, and the potential to alter fine fuels that affect fire risk. However, the extent of similar creosote-white bursage vegetation surrounding the Las Vegas Valley would make the incremental loss of 10 acres unmeasurable. Because the habitat is marginal for sensitive plant species and none were located through plant surveys, cumulative impacts are not anticipated. The hard landscape design (rock mulch) installed upon construction completion would eliminate the spread of invasive or noxious species.

5.3.3 Geological Resources

Mitigation of potential impacts to soils and mineral materials resulting from planned development projects in the area would remain with each project proponent in accordance with applicable federal, state, and local laws, regulations, and ordinances.

Any excess mineral materials from constructing the water reservoir would be managed the same as excess materials on BLM land and private land for constructing the SMP. There would not likely be temporal overlap between the construction of the two segments of SMP on private land and BLM land, which would minimize the cumulative disposal needs of any excess materials.

Relative to the existing development and planned growth for the northern Las Vegas Valley, the incremental cumulative impact of the proposed project on soils and mineral materials would be negligible.

6.0 COORDINATION AND CONSULTATION

The BLM, CLV, and LVVWD, as the project proponent, coordinated together in identifying resource issues and concerns to address in this EA, and to assist with consultation requirements with other agencies.

6.1 Federal Agencies

The BLM consulted with the USFWS, Nevada Fish and Wildlife Office in accordance with Section 7 of the Endangered Species Act. The results of that consultation (an action appended to the Programmatic Biological Opinion) will be incorporated into the amended ROW grant stipulations.

6.2 State Agencies

The BLM consulted with the State Historic Preservation Office (SHPO) in accordance with Section 106 of the National Historic Preservation Act for the SMP-West Leg Project, which included the proposed relocated water reservoir site. The SHPO concurred with the Cultural Resource Inventory Needs Assessment submitted by BLM.

6.3 Local Agencies

The LVVWD, as the project proponent, with the assistance of the CLV provided information on the purpose and need for relocating the water reservoir site and the anticipated design of the reservoir facility to assist BLM in their review of the proposed amended ROW.

To assist BLM, the LVVWD and the CLV worked collaboratively to resolve potential conflicts with the proposed SMP-West Leg ROW to relocate the existing grant for the water reservoir.

7.0 REFERENCES

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8.0 LIST OF PREPARERS

The following individuals contributed to scoping the issues and the preparation of this EA:

Name	Title	EA Contribution
BLM – Las Vegas Field Office and Red Rock/Sloan Field Office		
Mark Boatwright	Archaeologist	Cultural Resources; Native American Religious Concerns, Paleontology
Lisa Christianson	Air Resources and Hazardous Materials Specialist	Air Quality; Greenhouse Gas Emissions; Wastes (hazardous or solid)
Lorri Dee Dukes	Geologist	Geology/Mineral Resources/Energy Production
John Evans	Planning and Environmental Coordinator	Environmental Justice; Socioeconomics
Mathew Hamilton	Wildlife Biologist	Visual Resources
Krystal Johnson	Wild Horse and Burro Specialist	Farmlands; Wild Horses and Burros
Sendi Kalcic	Wilderness Specialist	BLM Natural Areas; Wilderness/Wilderness Study Areas; Lands with Wilderness Characteristics
Katie Kleinick	Natural Resource Specialist	Livestock Grazing; Rangeland Health Standards; Threatened or Endangered Plants; Woodland/Forestry; Vegetation
Ben Klink	Fire Management Specialist	Fuels/Fire Management; Invasive Species/Noxious Weeds
Marilyn Peterson	Outdoor Recreation Specialist	Recreation; Wild and Scenic Rivers
Boris Poff	Hydrologist	Floodplains; Hydrological Conditions; Soils; Water Resources/Water Quality; Wetlands/Riparian Zones
Mark Slaughter	Wildlife Biologist	Areas of Critical Environmental Concern; Fish and Wildlife; Migratory Birds; Threatened or Endangered Wildlife
Kerrie-Anne Thorpe	Realty Specialist	Lands/Access
City of Las Vegas and Las Vegas Valley Water District		
Randy Fultz	Assistant City Engineer (CLV)	Purpose and Need; Proposed Action and Alternatives; Coordination and Consultation
Greg McDermott	Engineer, Public Works (CLV)	Purpose and Need; Proposed Action and Alternatives; Coordination and Consultation
Rebecca Rury	Realty Specialist (CLV)	NEPA Review and Processing
Sharon Kennemer	Senior Right-of-Way Agent (LVVWD)	Project Description
Jeff Fredine	Environmental Planner (Parsons Brinckerhoff)	Affected Environment and Impacts; Geological Resources
Mary Peters	Environmental Consultant (MBP Consulting)	Affected Environment and Impacts; Wildlife; Vegetation; Coordination and Consultation
Scott Rickert	Engineer (Parsons Brinckerhoff)	Proposed Action and Alternatives
Sam Tso	Engineering Manager (Parsons Brinckerhoff)	Proposed Action and Alternatives; Coordination and Consultation

**Appendix A:
Legal Description – Aliquot Parts and Metes and Bounds Survey of
Relocated Water Reservoir Site**

FUTURE RESERVOIR SITE

Parcel 1 - ALIQUOT PART DESCRIPTION

Being a Portion of the SW1/4 of the SE1/4 of Section 23, Township 19 South, Range 59 East, M.D.M.

METES AND BOUNDS DESCRIPTION

Being that portion of the southwest quarter (SW ¼) of the southeast quarter (SE ¼) of Section 23, Township 19 South, Range 59 East, M.D.M., in Clark County, State of Nevada, described as follows:

Beginning at a point on the south line of the southeast quarter (SE ¼) of said Section 23, being the southwest corner of the parcel herein described, whence the south quarter corner of said Section 23 bears N89°51'33"W a distance of 323.25 feet;

thence N00°00'00"E along the westerly boundary line of the parcel herein described a distance of 723.10 feet to a point being the northwest corner of the parcel herein described;

thence S89°51'33"E along the northerly boundary line of the parcel herein described a distance of 620.85 feet to a point on the westerly proposed right-of-way line of Sheep Mountain Parkway being the northeast corner of the parcel herein described;

thence S03°04'24"W along said westerly proposed right-of-way line of Sheep Mountain Parkway a distance of 582.70 feet to a point;

thence S00°58'15"E a distance of 141.18 feet to a point on said south line of the southeast quarter (SE ¼) of Section 23, being the southeast corner of the parcel herein described;

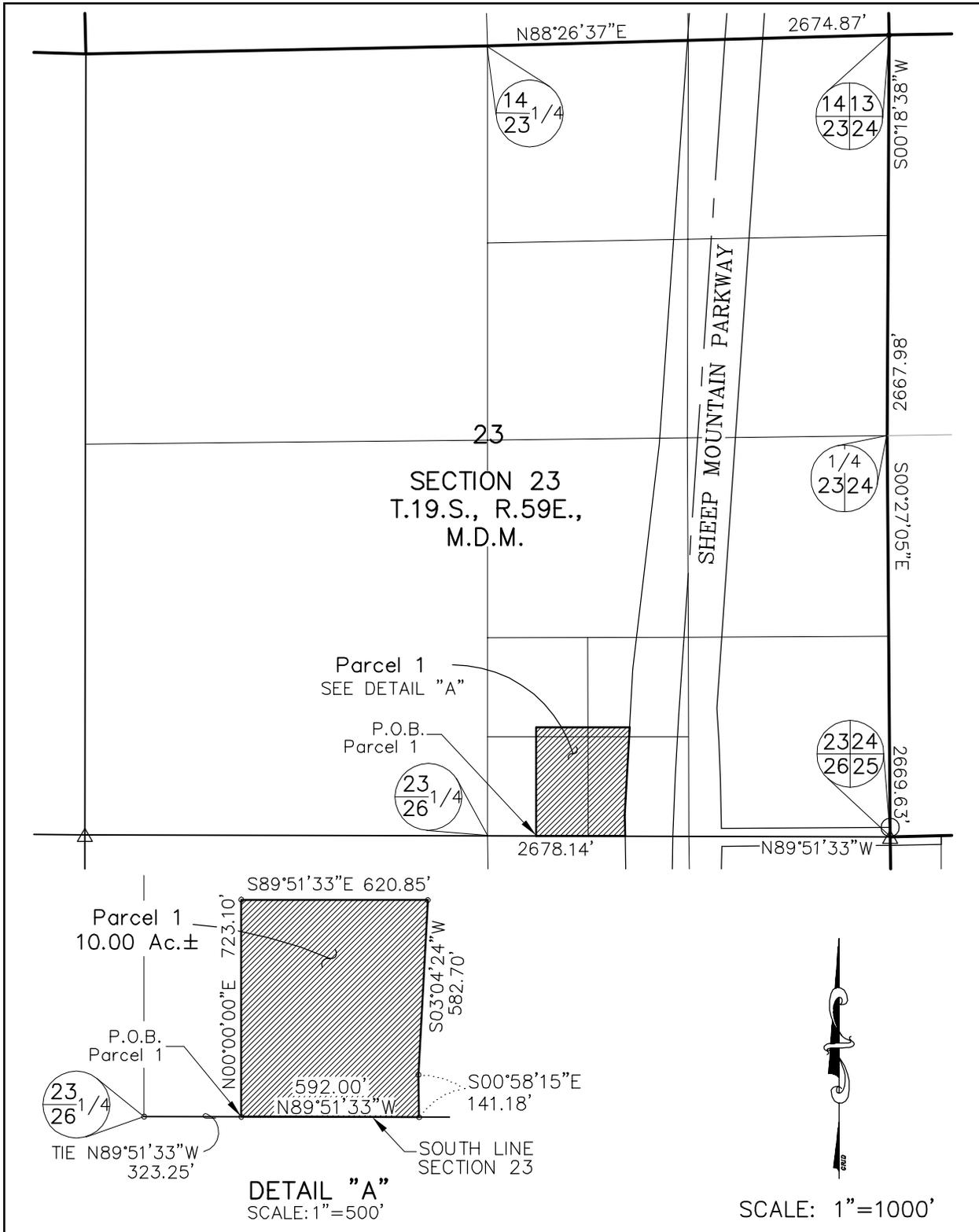
thence N89°51'33"W along said south line of the southeast quarter (SE ¼) of Section 23 a distance of 592.00 feet to the point and place of beginning.

Containing 10.00 acres, more or less.

See Sheet 1 of 1, Map to Accompany Description, for a plat depicting the above described land.

BASIS OF BEARINGS:

South 88°26'37" West, being the bearing of the north line of the northeast quarter (NE 1/4) of Section 23, Township 19 South, Range 59 East, M.D.M., Clark County Nevada, as established in the Bureau of Land Management Nevada Geographic Coordinate Database (GCDB) downloaded from the Nevada Land Records Web Site, (<http://www.nv.blm.gov/landrecords>), June 2012.



**PARSONS
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MAP TO ACCOMPANY DESCRIPTION
FUTURE RESERVOIR SITE
POR. SECTION 23, T.19S., R.59E. M.D.M.

DRAWN BY RSB
CHECKED BY JLE
SHEET 1 OF 1
DATE: JUNE 2013

**Appendix B:
Programmatic Biological Opinion – Terms and Conditions**

Case Number: N-61413A
NEPA Project #: DOI-BLM-NV-S010-2014-0005-EA
Sec. 7 Log #: NV-052-14-040

TERMS AND CONDITIONS for ROWs: BO File No. 84320-2010-F-0365.R001

In order to be exempt from the prohibitions of section 9 of the Act, the Bureau must comply with the following terms and conditions and minimization measures, which implement the reasonable and prudent measures described above. These terms and conditions are non-discretionary.

RPM 1: **Applies towards lands and realty, ROWs, and mining actions and other activities that involve vehicle and equipment use, excavations, or blasting.** *BLM, and other jurisdictional Federal agencies as appropriate, shall implement or ensure implementation of measures to minimize injury or mortality of desert tortoises due to project construction, operation and maintenance; and most actions involving habitat disturbance.*

Terms and Conditions:

- 1.a. *Field Contact Representative*—BLM shall ensure a Field Contact Representative (FCR) (also called a Compliance Inspection Contractor) is generally designated for each contiguous stretch of construction activity for linear projects or isolated work areas for non-linear projects. The FCR will serve as an agent of BLM and the Service to ensure that all instances of non-compliance or incidental take are reported. BLM has discretion over approval of potential FCRs; however, those who also may be acting as authorized desert tortoise biologists, and must also be approved by the Service (see Term and Condition 1.c). All FCRs will report **directly** to BLM and the Service.

The FCR, authorized desert tortoise biologist, and monitors (see Term and Condition 1.c.) shall have a copy of all stipulations when work is being conducted on the site and will be responsible for overseeing compliance with terms and conditions of the ROW grant, including those for listed species. BLM shall ensure the FCR and authorized desert tortoise biologists have authority to halt any activity that is in violation of the stipulations. The FCR shall be on site year-round during all project activities.

Within 3 days of employment or assignment, the project proponent and BLM shall provide the Service with the names of the FCR.

- 1.b. *Authorized desert tortoise biologist*— **This project will require an authorized desert tortoise biologist to present a tortoise education program to workers, conduct desert tortoise clearance surveys for all areas of new disturbance including access that requires overland travel (land surveys and soil boring), is required to be on site during the desert tortoise active season (March 1 to October 31) and on call during the inactive season (November 1 to February 28/29) for construction activities associated with this project. For overland travel, the authorized biologist will walk in front of vehicles while travelling over undisturbed habitat and ensure the same route is to be used for ingress and egress to the site.**

All authorized desert tortoise biologists (and monitors) are agents of BLM and the Service and shall report directed to BLM and the proponent concurrently regarding all compliance issues and take of desert tortoises; this includes all draft and final reports of non-compliance or take. The initial draft report shall be provided to BLM and Service within 24 hours of the observation of take or non-compliance.

An authorized desert tortoise biologist will be assigned to each piece/group of large equipment engaged in activities that may result in take of desert tortoise (*e.g.*, clearing, blasting, grading, lowering in pipe, hydrostatic testing, backfilling, recontouring, and reclamation activities) and other work areas that pose a risk to tortoises. BLM may use their discretion to require a monitor instead of an authorized desert tortoise biologist to monitor equipment that is low risk to tortoises.

1. c. Authorized desert tortoise biologists, monitors, and the FCR (see Term and Condition 1.a.) shall be responsible for ensuring compliance with all conservation measures for the project. This responsibility includes: (1) enforcing the litter-control program; (2) ensuring that desert tortoise habitat disturbance is restricted to authorized areas; (3) ensuring that all equipment and materials are stored within the boundaries of the construction zone or within the boundaries of previously-disturbed areas or designated areas; (4) ensuring that all vehicles associated with construction activities remain within the proposed construction zones; (5) ensuring that no tortoises are underneath project vehicles and equipment prior to use or movement; (6) ensuring that all monitors (including the authorized desert tortoise biologist) have a copy of the required measures in their possession, have read them, and they are readily available to the monitor when on the project site.

An authorized desert tortoise biologist will serve as a mentor to train desert tortoise monitors and will approve monitors if required. An authorized desert tortoise biologist is responsible for errors committed by desert tortoise monitors.

An authorized desert tortoise biologist shall record each observation of desert tortoise handled in the tortoise monitoring reports. Information will include the following: location (GPS), date and time of observation, whether the desert tortoise was handled, general health and whether it voided its bladder, location desert tortoise was moved from and location moved to, unique physical characteristics of each tortoise, and effectiveness and compliance with the desert tortoise protection measures. This information will be provided **directly** to BLM and the Service.

An authorized desert tortoise biologist should possess a bachelor's degree in biology, ecology, wildlife biology, herpetology, or closely related field. The biologist must have demonstrated prior field experience using accepted resource agency techniques. As a guideline, Service approval of an authorized biologist requires that the applicant have at least 60 days project experience as a desert tortoise monitor. In addition, the biologist shall have the ability to recognize and accurately record survey results and must be familiar with the terms and conditions of the biological opinion that resulted from project-level consultation between BLM and the Service. All tortoise biologists shall be familiar with the field manual (Service 2009).

Potential authorized desert tortoise biologists must submit their statement of qualifications to the

Service's Nevada Fish and Wildlife Office in Las Vegas for approval, allowing a minimum of 30 days for Service response. The statement form is available on the internet at:

http://www.fws.gov/nevada/desert_tortoise/auth_dt_form.htm.

Prior to final approval to begin work on the project, the authorized desert tortoise biologists will have read the required measures (terms and conditions and other stipulations) and have a copy of the measures available at all times while on the project site. BLM shall provide the appropriate agency contact for the project to the Service and the Service will include the forms with approval letters. Biologists and monitors should be visibly identifiable on the project site, which may include use of a uniquely designated hardhat or safety vest color.

1. d. Desert tortoise monitor—Desert tortoise monitors assist an authorized desert tortoise biologist during surveys and serve as apprentices to acquire experience. Desert tortoise monitors ensure proper implementation of protective measures, and record and report desert tortoises and sign observations in accordance with Term and Condition 1.c. They will report incidents of noncompliance to the authorized desert tortoise biologist or FCR. No monitors shall be on the project site unless supervised by an authorized desert tortoise biologist or approved by the BLM.

If a desert tortoise is immediately in harm's way (*e.g.*, certain to immediately be crushed by equipment), desert tortoise monitors may move the desert tortoise then place it in a designated safe area until an authorized desert tortoise biologist assumes care of the animal.

Desert tortoise monitors may not conduct field or clearance surveys or other specialized duties of an authorized desert tortoise biologist unless directly supervised by an authorized desert tortoise biologist or approved to do so by the Service; "directly supervised" means an authorized desert tortoise biologist has direct sight and voice contact with the desert tortoise monitor (*i.e.*, within approximately 200 ft of each other).

Within 3 days of employment or assignment, the project proponent and BLM shall provide the Service with the names of desert tortoise monitors who would assist an authorized desert tortoise biologist.

1. e. *Desert tortoise education program*—A desert tortoise education program shall be presented to all personnel on site during construction activities by an agency or authorized desert tortoise biologist. The Service, BLM, and appropriate state agencies shall approve the program. At a minimum, the program shall cover desert-specific Leave-No-Trace guidelines, the distribution of desert tortoises, general behavior and ecology of this species, sensitivity to human activities, threats including introduction of exotic plants and animals, legal protection (the definition of "take" will also be explained), penalties for violation of State and Federal laws, reporting requirements, and project measures in this biological opinion. All field workers shall be instructed that activities must be confined to locations within the approved areas and their obligation to walk around and check underneath and vehicles and equipment before moving them (or be cleared by an authorized desert tortoise biologist). Workers and project associates will be encouraged to carpool to and from the project sites. In addition, the program shall include fire prevention measures to be implemented by employees during project activities. The program shall instruct participants to report all observations of desert tortoise and their sign during construction activities to the FCR and authorized desert tortoise biologist.

- 1.f. *Vehicle travel*— Project personnel shall exercise vigilance when commuting to the project area to minimize risk for inadvertent injury or mortality of all wildlife species encountered on paved and unpaved roads leading to and from the project site. Speed limits will be clearly marked, and all workers will be made aware of these limits. On-site, personnel shall carpool to the greatest extent possible.

During the desert tortoise less-active season (generally November through February), vehicle speed on project-related access roads and in the work area will not exceed 25 mph. All vehicles and construction equipment will be tightly grouped.

During the more-active season (generally March through October), and if temperatures are above 60 but below 95 °F for more than 7 consecutive days, vehicle speed on project-related access roads and in the work area will not exceed 15 mph. All vehicles and construction equipment will operate in groups of no more than three vehicles.

New access and spur road locations will be sited to avoid potentially active tortoise burrows to the maximum extent practicable.

- 1.g. *Unauthorized access*—BLM shall ensure that unauthorized personnel, including the public and off-duty project personnel, do not travel on project-related temporary access roads, to the greatest extent practicable.

During the more-active season (generally March through October), and if temperatures are above 60 but below 95 °F for more than 7 consecutive days, project- and non-project-related activities on all access roads that intersect the ROW will be monitored and logged. During construction, the ROW will be fenced at public roads that intersect the ROW. Signs will say that access on the ROW is strictly prohibited except by authorized personnel and that violators will be prosecuted.

- 1.h. *Desert tortoise clearance—required for this project.*

Prior to surface-disturbing activities, authorized desert tortoise biologists potentially assisted by desert tortoise monitors, shall conduct a clearance survey to locate and remove all desert tortoises from harm's way including areas to be disturbed using techniques that provide full coverage of all areas (Service 2009). During the more-active season, clearance surveys will be conducted either the day prior to, or the day of, any surface-disturbing activity. During the less-active season, clearance surveys will be conducted within 7 days prior to any surface-disturbing activity. No surface-disturbing activities shall begin until two consecutive surveys yield no individuals.

An authorized biologist shall excavate all burrows that have characteristics of potentially containing desert tortoises in the area to be disturbed with the goal of locating and removing all desert tortoises and desert tortoise eggs. During clearance surveys, all handling of desert tortoises and their eggs and excavation of burrows shall be conducted solely by an authorized desert tortoise biologist in accordance with the most current Service-approved guidance (currently Service 2009). If any tortoise active nests are encountered, the Service must be contacted immediately, prior to removal of any tortoises or eggs from those burrows, to determine the most appropriate course of action. Unoccupied burrows shall be collapsed or blocked to prevent desert tortoise entry. Outside construction work areas, all potential desert

tortoise burrows and pallets within 50 ft of the edge of the construction work area shall be flagged. If the burrow is occupied by a desert tortoise during the less-active season, the tortoise shall be temporarily penned (see Term and Condition 1.k.). No stakes or flagging shall be placed on the berm or in the opening of a desert tortoise burrow. Desert tortoise burrows shall not be marked in a manner that facilitates poaching. Avoidance flagging shall be designed to be easily distinguished from access route or other flagging, and shall be designed in consultation with experienced construction personnel and authorized biologists. All flagging shall be removed following construction activities.

An authorized desert tortoise biologist will inspect areas to be backfilled immediately prior to backfilling.

- 1.i. *Desert tortoise in harm's way*—Any project-related activity that may endanger a desert tortoise shall cease if a desert tortoise is found on the project site. Project activities may resume after an authorized desert tortoise biologist or desert tortoise monitor (see restrictions in Term and Condition 1.d.) removes the desert tortoise from danger or after the desert tortoise has moved to a safe area on its own.

During the more-active season and if temperatures are above 60 but below 95 °F for more than 7 consecutive days, at least 1 monitor shall be assigned to observe spoil piles prior to excavation and covering.

- 1.j. *Handling of desert tortoises*—Desert tortoises shall only be moved by an authorized desert tortoise biologist or desert tortoise monitor (see restrictions in Term and Condition 1.d.) solely for the purpose of moving the tortoises out of harm's way. During construction, operation, and maintenance, an authorized desert tortoise biologist shall pen, capture, handle, and relocate desert tortoises from harm's way as appropriate and in accordance with the most current Service-approved guidance. No tortoise shall be handled by more than one person. Each tortoise handled will be given a unique number, photographed, and the biologist will record all relevant data on the Desert Tortoise Handling and Take Report (Appendix E) to be provided to BLM in accordance with the project reporting requirements.

Desert tortoises that occur aboveground and need to be moved from harm's way shall be placed in the shade of a shrub, 150 to 1,640 ft from the point of encounter. In situations where desert tortoises must be moved more than 1,640 ft (500 m), translocation procedures may be required. Translocation would likely result in a level of effect to the desert tortoise that would require the appended procedures.

If desert tortoises need to be moved at a time of day when ambient temperatures could harm them (less than 40 ° F or greater than 95° F), they shall be held overnight in a clean cardboard box. These desert tortoises shall be kept in the care of an authorized biologist under appropriate controlled temperatures and released the following day when temperatures are favorable. All cardboard boxes shall be discarded after one use and never hold more than one tortoise. If any tortoise active nests are encountered, the Service must be contacted immediately, prior to removal of any tortoises or eggs from those burrows, to determine the most appropriate course of action.

Desert tortoises located in the project area sheltering in a burrow during the less-active season

may be temporarily penned in accordance with Term and Condition 1.k. at the discretion of an authorized desert tortoise biologist. Desert tortoises should not be penned in areas of moderate to heavy public use, rather they should be moved from harm's way in accordance with the most current Service-approved guidance (currently Service 2009).

Desert tortoises shall be handled in accordance with the Desert Tortoise Field Manual (Service 2009). Equipment or materials that contact desert tortoises (including shirts and pants) shall be sterilized, disposed of, or changed before contacting another tortoise to prevent the spread of disease. All tortoises shall be handled using disposable surgical gloves and the gloves shall be disposed of after handling each tortoise. An authorized desert tortoise biologist shall document each tortoise handling by completing the Desert Tortoise Handling and Take Report (Appendix E).

1.k. *Penning*—Not required for this project.

1.l. *Temporary tortoise-proof fencing*— All construction areas, including open pipeline trenches, hydrostatic testing locations, and tie-in work shall be fenced with temporary tortoise-proof fencing (e.g., silt fencing) or inspected by an authorized desert tortoise biologist periodically throughout and at the end of the day and immediately the next morning. BLM and the Service will determine the appropriate length of open trench that will be allowed on the project.

Fencing will be designed in a manner that reduces the potential for desert tortoises and hatchlings to access the construction areas. Thus, the lower 6 to 12 in of fencing will be folded outward (i.e., away from the construction area and towards the direction a tortoise would approach the work area), and covered with sufficient amount of soil, rocks, and staking to maintain zero ground clearance and secure the bottom section of material. An authorized desert tortoise biologist will check the integrity of the fencing every 2 hours and ensure that there are no breaches in the fencing and no desert tortoises pacing the fence. After the fencing is erected and secure, the inside will be cleared by an authorized desert tortoise biologist. The fencing must remain closed during any construction activities.

1.m. ***Permanent tortoise-proof fencing***—As proposed the ROW will be surrounded by a 6' block wall permanent tortoise-proof fencing is not required around the perimeter of the ROW. Gates are required to be maintained to have minimal ground clearance and shall be inspected per Table 15 below.

Tortoise-proof fencing shall be installed around the boundary of permanent aboveground facilities that require regular monitoring and maintenance and other areas as directed by the BLM or Service. Fence specifications will be consistent with those approved by the Service (Service 2009). Tortoise guards shall be placed at all road access points where desert tortoise-proof fencing is interrupted, to exclude desert tortoises from the facility. **Gates shall provide minimal ground clearance and deter ingress by desert tortoises.** Permanent tortoise-proof fencing along the project area shall be appropriately constructed, monitored, and maintained. Fencing shall be inspected in accordance with Table 15 and reports prepared in accordance with Term and Condition 7.c. unless modified by the Service. Monitoring and maintenance shall include regular removal of trash and sediment accumulation and restoration of zero ground

clearance between the ground and the bottom of the fence, including re-covering the bent portion of the fence if not buried.

Table 15. Desert tortoise fence inspection requirements

Condition	Minimum Requirements
First week following fence installation; tortoises active	Inspect fence perimeter, tortoise guards, and gates twice per day, timed to occur when tortoises may be pacing the fenceline.
First week following fence installation; tortoises inactive	Inspect fence perimeter, tortoise guards, and gates once per day.
Beginning the second week following fence construction, tortoises active	Inspect fence perimeter, tortoise guards, and gates once per day.
Beginning the second week following fence construction, tortoises inactive	Inspect fence perimeter, tortoise guards, and gates once per month.
Following major storm event, tortoises active	Inspect fence perimeter, tortoise guards, and gates within 48 hours.
Following major storm event, tortoises inactive	Inspect fence perimeter, tortoise guards, and gates within 72 hours.
Breach in fence observed, tortoise guard or gate requires maintenance, tortoises active	Repair within 48 hours of breach occurrence.
Breach in fence observed, tortoise guard or gate requires maintenance, tortoises inactive	Repair within 1 week of breach occurrence.

- 1.n. *Wildlife escape ramps*—Not required for this project.
- 1.o. *Dust control*—Water applied to for dust control shall not be allowed to pool outside desert-tortoise fenced areas, as this can attract desert tortoises. Similarly, leaks on water trucks and water tanks will be repaired to prevent pooling water. An authorized desert tortoise biologist will be assigned to patrol each area being watered immediately after the water is applied and at approximate 60-minute intervals until the ground is no longer wet enough to attract tortoises if conditions favor tortoise activity.
- 1.p. *Blasting*—Not applicable for the proposed action.
- 1.q. *Power transmission projects*—Not applicable for the proposed action.
- 1.r. *Timing of construction*—The BLM shall ensure that when possible, the project proponent schedules and conducts construction, operation, and maintenance activities within desert tortoise habitat during the less-active season (generally October 31 to March 1) and during periods of reduced desert tortoise activity (typically when ambient temperatures are less than 60 or greater than 95 °F).

All vehicles and equipment that are not in areas enclosed by desert tortoise exclusion fencing will stop activities in desert tortoise habitat during rainfall events in the more-active season (generally March 1 to October 31), and if temperatures are above 60 but below 95 °F for more than 7 consecutive days. The Field Contact Representative (FCR) or designee will determine, in coordination with the BLM and Service, when it is appropriate for project activities to continue.

RPM 2: Predator Control— Applies to all actions. *BLM, and other jurisdictional Federal agencies as appropriate, shall ensure their agency personnel, the project proponent, and their contractors implement the following measures to minimize injury to desert tortoises as a result of predators drawn to the project area from construction, operation, and minor maintenance activities:*

Terms and Conditions:

- 2.a. *Litter control, applies to all projects*—A litter control program shall be implemented to reduce the attractiveness of the area to opportunistic predators such as desert kit foxes, coyotes, and common ravens. Trash and food items will be disposed of properly in predator-proof containers with predator-proof lids. Trash containers will be emptied and construction waste will be removed daily from the project area and disposed of in an approved landfill. Vehicles hauling trash to the landfill or transfer facility must be secured to prevent litter from blowing out along the road.
- 2.b. *Deterrence*—The project proponent will implement measures to discourage the presence of predators on site (coyotes, ravens, etc.), including elimination of available water sources, designing structures to discourage potential nest sites, and use of hazing to discourage raven presence.
- 2.c. *Monitoring and predator control*—Not applicable for the proposed action.
- 2.d. *Evaporation ponds and open water sources*— BLM will ensure that the ponds are not available to ravens and other predators. Tortoise-proof fencing should be installed to prevent tortoises from entering the ponds.

RPM 3: Impacts to Desert Tortoise Habitat—Applies towards all actions that involve habitat impacts. *BLM, and other jurisdictional Federal agencies as appropriate, shall ensure their agency personnel, the project proponent, and their contractors implement the following measures to minimize loss and long-term degradation and fragmentation of desert tortoise habitat, such as soil compaction, erosion, crushed vegetation, and introduction of weeds or contaminants from construction, operation, and minor maintenance activities:*

Terms and Conditions:

- 3.a. *Habitat protection plans*—BLM shall ensure that the applicants develop and implement an approved fire prevention and response plan, erosion control plan, and a weed management plan approved by BLM prior to surface disturbance.
- 3.b. *Restoration plan*—BLM shall ensure that the applicant develop and implement a restoration/reclamation plan. The plan will describe objectives and methods to be used, species of native plants and/or seed mixture to be used, time of planting, success standards, actions to take if restoration efforts fail to achieve the success standards, and follow-up monitoring. The plan will be prepared and approved prior to the surface disturbance phase of the project. Reclamation will be addressed on a case-by-case basis.
- 3.c. *Minimizing new disturbance*—Cross-country travel outside designated areas shall be prohibited. All equipment, vehicles, and construction materials shall be restricted to the designated areas and

new disturbance will be restricted to the minimum necessary to complete the task (e.g., such as construction of one-lane access roads with passing turnouts every mile rather than a wider two-lane road).

All work area boundaries shall be conspicuously staked, flagged, or otherwise marked to minimize surface disturbance activities.

- 3.d. *Weed prevention*—Vehicles and equipment shall be cleaned with a high pressure washer prior to arrival in desert tortoise habitat and prior to departure from areas of known invasive weed and nonnative grass infestations to prevent or at least minimize the introduction or spread these species.
- 3.e. *Chemical spills*—Hazardous and toxic materials such as fuels, solvents, lubricants, and acids used during construction will be controlled to prevent accidental spills. Any leak or accidental release of hazardous and toxic materials will be stopped immediately and cleaned up at the time of occurrence. Contaminated soils will be removed and disposed at an approved landfill site.
- 3.f. *Residual impacts from disturbance*—**As proposed, this project will disturb 9.25 acres of desert tortoise habitat; however, remuneration fees are not required as they were previously paid in full in 2005 for the original ROW site (N-61413) which has not been disturbed.**

RMP 7: Compliance and Reporting—Applies towards all actions. *BLM, and other jurisdictional Federal agencies as appropriate, shall ensure their agency personnel, the project proponent, and their contractors implement the following measures to comply with the reasonable and prudent measures, terms and conditions, reporting requirements, and reinitiation requirements contained in this biological opinion:*

Terms and Conditions:

- 7.a. *Desert tortoise deaths*—The deaths and injuries of desert tortoises shall be investigated as thoroughly as possible to determine the cause. The Service (702/515-5230), BLM wildlife staff (702/515-5000) and appropriate state wildlife agency must be verbally informed immediately and within 5 business days in writing (electronic mail is sufficient). The Authorized Desert Tortoise Biologist shall complete the Desert Tortoise Handling and Take Report (Appendix E).
- 7.b. *Non-compliance*—Any incident occurring during project activities that was considered by the FCR, authorized desert tortoise biologist, or biological monitor to be in non-compliance with this biological opinion shall be immediately documented by an authorized desert tortoise biologist. Documentation shall include photos, GPS coordinates, and details on the circumstances of the event. The incident will be included in the annual report and post-project report.
- 7.c. *Fence inspection*— **As proposed the ROW will be surrounded by a 6' block wall; therefore, permanent tortoise-proof fencing is not required around the perimeter of the ROW. Gates are required to be maintained to have minimal ground clearance and shall be inspected per term and condition l.m. and reported as described below.**

Quarterly reports (January-March, April-June, July-September, and October –December) for monitoring and repair of tortoise-proof fencing as specified in Table 15, shall be submitted to the

Service's Nevada Fish and Wildlife Office in Las Vegas. Reports are due within the first 30 days following each quarter (e.g., the report for quarter January-March is due April 30).

- 7.d. *Project reporting requirements***— Project proponents will provide BLM with compliance reports. Quarter (non-appended actions), annual, and comprehensive final project reports will be submitted to BLM and the Service's Nevada Fish and Wildlife Office in Las Vegas. Annual reports are required for all appended actions (except those completed and provided in a prior annual report). Annual reports will cover the calendar year and are due April 1st of the following year (e.g., the annual report for calendar year 2013 is due April 1, 2014). Quarterly reports for non-appended actions are due 15 calendar days following the quarter. Final project reports are due within 60 days following completion of the project or each phase of the project.

The Programmatic Biological Opinion Report to the Fish and Wildlife Service (Appendix G) will be used for quarterly, annual, and final project reports, and shall include all Desert Tortoise Handling and Take Reports (Appendix E). If available, GIS shape files will be included.

- 7.e. *Operation and maintenance***—A written assessment report shall be submitted annually to the Service outlining the operation and maintenance activities that occurred over the past year.

Report to include: It will include frequency of implementation of minimization measures, biological observations, general success of each of the minimization measures. All deaths, injuries, and illnesses of endangered or threatened species within the project area, whether associated with project activities or not, will be summarized in the annual report. The report is due April 1 of each year.

- 7.f. *Restoration monitoring***—Vegetation restoration success shall be monitored by project proponent and reported to BLM and the Service. Monitoring will include both qualitative and quantitative data collection and analysis. Monitoring frequency and parameters for restoration success will be described in the required restoration/reclamation plan.

8: Minimization Measures

- 8.a. *The project applicant shall notify BLM wildlife staff at 702-515-5000 at least 10 days before initiation of the project.*** Notification shall occur before any activities begin that will damage or remove vegetation, such as off-road vehicle travel for surveys, soil testing, and clearing vegetation off the project site. The purpose of the notification is to ensure that the proper education program is given and to review expectations for compliance with the terms and conditions of the biological opinion.
- 8.b.** Overnight parking and storage of equipment and materials, including stockpiling, shall be in previously disturbed areas or areas cleared by a tortoise biologist. If not possible, areas for overnight parking and storage of equipment shall be designated by the tortoise biologist in coordination with BLM and project proponent, which will minimize habitat disturbance.
- 8.c.** Within desert tortoise habitat, any construction pipe, culvert, or similar structure with a diameter greater than 3 inches stored less than 8 inches above the ground will be inspected for tortoises before the material is moved, buried, or capped.
- 8.d.** Trenches: Not applicable to the proposed action.

- 8.e. Ravens and other avian tortoise predators: All towers and poles will be fitted with “bird-be-gone” or other perch deterrent devices to minimize the potential for increased predation from aerial predators following construction.
- 8.f. Vehicles: All project/event-related individuals shall check underneath stationary vehicles before moving them. Tortoises often take cover under vehicles. All vehicle use will be restricted to existing roads. New access roads will be created only when absolutely necessary and only when approved by BLM. Workers shall not drive or park vehicles where catalytic converters can ignite dry vegetation and to exhibit care when smoking in natural areas. Fire protective mats or shields shall be used during grinding or welding.

Minimization Measures to Minimize Threat of Nonnative Plants

- 8.g. Rehabilitate, reclaim, or revegetate areas subjected to surface-disturbing activities where feasible. Habitat will be reclaimed so that pre-disturbance conditions can be reached within a reasonable time frame. Reclamation may include salvage and transplant of cacti and yucca, recontouring the area, scarification of compacted soil, soil amendments, seeding, vertical mulch, and transplant of seedling shrubs. If necessary subsequent seeding or transplanting efforts may be required, should monitoring indicate that the original effort was not successful.
- 8.h. Complete a Weed Risk Assessment for the proposed project prior to construction activities. This document will address the presence of any weeds; the potential for weeds within the project area to be spread to non-infested areas within the project area; the potential for introducing weeds into the project area via vehicles, equipment, fill material, and water brought in from an outside source; and minimization to reduce the potential for spreading weeds.
- 8.i. If off-site fill material is used, survey the site where the fill source comes from for noxious plants. Only fill from non-contaminated sites shall be used.
- 8.j. Certify that all plant material including animal feed and material used for erosion control (straw, etc.) is weed-free.
- 8.k. Clean all equipment of weed and grass seeds, stems, stalks, etc., prior to arrival and release from the project site. The washdown will concentrate on the undercarriage, with special emphasis on axles, crossmembers, motor mounts, and on and underneath steps, running boards and front bumper/bushguard assemblies.
- 8.l. Should there be concentrated areas of noxious weeds within the project area, additional spraying of equipment may be required to prevent the contamination of uninfested areas.
- 8.m. Wash sites will be mapped for future monitoring of weed infestations.
- 8.n. Mechanized treatments will not be conducted on slopes greater than 30 percent to minimize erosion.
- 8.o. Treatments that compact and disturb the soil to the degree that runoff and erosion would be increased should be ripped and properly drained.
- 8.p. Untreated islands of natural vegetation would be left to minimize negative impacts of the natural community.
- 8.q. When herbicide use is approved by BLM and the Service, applicant will follow information and guidelines provided on label and pesticide use permit.

APPENDIX E. DESERT TORTOISE HANDLING AND TAKE REPORT

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

Completed forms should be submitted to the BLM and Fish and Wildlife Service:

Bureau of Land Management
4701 North Torrey Pines Drive
Las Vegas, Nevada 89130
702-515-5000

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

Project Name: LVVWD Bath Reservoir NEPA No.: DOI-BLM-NV-S010-2014-0005-EA Case File No./SRP No.: N-61413A BLM Section 7 log no.: NV-052-14-040	Report Date:
Fish and Wildlife Service Append File No.- n/a	
Authorized Desert Tortoise Biologist: _____ Employed by: _____	
Section 1: Complete all information below if a desert tortoise is injured or killed in addition to initial contact described above.	
If tortoise was injured <input type="checkbox"/> or killed <input type="checkbox"/> (check appropriate box):	
Date and time found: _____ Found by: _____ GPS location (NAD 83): easting: _____ northing: _____ No. of photos taken: _____ Disposition: _____ _____ _____	
Attach report with photos that describe in detail, the circumstances and potential cause of injury or mortality. For injuries include name of veterinarian and detailed assessment of injuries.	

Section 2: Complete all information below for each desert tortoise handled.

All instances of desert tortoise handling must be reported in this section and be included in the quarterly, annual, and final project reports.

Desert tortoise number: _____

Date and time found: _____ Sex of tortoise: _____

Air temperature when found: _____ Air temperature when released: _____

Tortoise activity when found: _____

Handled by: _____ Approx. carapace length _____

GPS location (NAD 83) found: easting: _____ northing: _____

GPS location released: easting: _____ northing: _____

Approximate distance moved: _____

Did tortoise void bladder; if so state approximate volume and actions taken:

Post handling or movement monitoring and observations:

Section 3: Complete for each tortoise burrow penned.

All instances of desert tortoise penning must be reported in this section and be included in the quarterly, annual, and final project reports.

Date and time of pen construction:

Began: _____ Completed: _____

Date and time pen removed: _____

Pen constructed by: _____

Why was tortoise penned? _____

How frequently was pen monitored? _____

Observations of desert tortoise behavior including time and date of observation:

Include photos of pen and burrow with report.

APPENDIX G. PROGRAMMATIC BIOLOGICAL OPINION (FILE NO. 84320-2010-F-0365) REPORT TO THE FISH AND WILDLIFE SERVICE

The information below should be completed by BLM or the Authorized Desert Tortoise Biologist for the project/action. Reports for all appended actions are required annually (due March 1 of each year for prior calendar year activities) and upon completion of the project/action.

Project Name: LVVWD Bath Reservoir
 NEPA no.: DOI-BLM-NV-S010-2014-0005-EA
 Case File no./SRP no.: N-61413A
 BLM Section 7 log no.: NV-052-14-040

Annual Report Project Completion Report

1. Date: _____

2. Fish and Wildlife Service File No (for appended actions): n/a

3. Species and critical habitat affected:

Desert tortoise Desert tortoise critical habitat

Other (identify): _____

4. Project/action status:

Not begun In progress* Completed date _____

If in progress, state approximate percent complete: _____

5. Desert tortoise habitat disturbed:

Non-critical habitat		Critical habitat	
Proposed disturbance (ac)	Actual disturbance (ac)	Proposed disturbance (ac)	Actual disturbance (ac)
9.25 (fees previously paid)		0	

6. Habitat of other species disturbed (identify species, non-critical, and critical habitat affected below):

7. Summary of individual desert tortoises taken (appended action):

	Desert Tortoise:		
	Adults	Juveniles	Eggs
Exempted			
Actual			

Describe other individuals taken:

8. Name of authorized desert tortoise biologists and monitors on the project and the dates they were on the project.

9. Describe all non-compliance issues and events.

10. Desert tortoise burrow observed during activity/event:

Total number desert tortoises observed: _____

Total number desert tortoise burrows observed: _____

Attach a summary report detailing each desert tortoise and/or desert tortoise burrows observed during activity/event including tortoise activity when found, how the animal was avoided, what happened to the tortoise, the date and time encountered and GPS location (NAD 83 easting: _____ northing: _____)

11. Contact Information

Name _____ Company _____

Address _____

Phone _____

Signature _____ Date _____

Send completed form to:

Bureau of Land Management
Attn: Wildlife Staff
4701 North Torrey Pines Drive
Las Vegas, Nevada 89130
702-515-5000
U.S. Fish and Wildlife Service
4701 North Torrey Pines Drive

Appendix C: Plant Species

Common Plant Species Observed in the Project Area

Scientific Name	Common Name
<i>Acamptopappus sphaerocephalus</i>	desert goldenhead
<i>Adenophyllum cooperi</i>	Cooper's dogweed
<i>Ambrosia dumosa</i>	white bursage
<i>Amsinckia tessellata</i>	yellow fiddleneck
<i>Aristida sp.</i>	needlegrass
<i>Astragalus sp.</i>	milkvetch
<i>Atriplex canescens</i>	four-wing saltbush
<i>Baileya multiradiata</i>	desert marigold
<i>Bebbia juncea</i>	sweetbush
<i>Bromus madritensis ssp rubens*</i>	red brome*
<i>Camissonia brevipes</i>	golden suncup
<i>Cheanactis fremontia</i>	Fremont's pincushion
<i>Chorizanthe brevicornu</i>	brittle spineflower
<i>Chorizanthe rigida</i>	rigid spineflower
<i>Chrysothamnus sp</i>	rabbitbrush
<i>Cryptantha nevadensis</i>	Nevada cryptantha
<i>Encelia virginensis</i>	brittlebush
<i>Ephedra sp.</i>	Ephedra
<i>Ephedra torreyana</i>	Mormon tea
<i>Eriogonum deflexum</i>	skeleton weed
<i>Eriogonum fasciculatum</i>	California buckwheat
<i>Eriogonum inflatum</i>	desert trumpet
<i>Eriogonum trichopes</i>	little trumpet
<i>Erioneuron pulchellum</i>	fluffgrass
<i>Erodium cicutarium*</i>	redstem filaree*
<i>Gaura sp.</i>	scarlet gaura
<i>Gilia sp.</i>	gilia
<i>Gutierrezia sarothrae</i>	broom snakeweed
<i>Hymenoclea salsola</i>	burrobush
<i>Krameria erecta</i>	ratany
<i>Krascheninnikovia lanata</i>	winter fat
<i>Langloisia setosissima</i>	Great Basin sunbonnet
<i>Larrea tridentata</i>	creosote bush
<i>Lycium andersoni</i>	Anderson's wolfberry
<i>Menodora spinescens</i>	spiny menodora
<i>Mentzelia albicaulis</i>	whitestem blazingstar

Scientific Name	Common Name
<i>Mirabilis</i>	four-o'clock
<i>Nicotiana obtusifolia</i>	coyote tobacco
<i>Oxytheca perfoliata</i>	roundleaf oxytheca
<i>Pectocarya setosa</i>	moth combseed
<i>Penstemon sp.</i>	penstemon
<i>Petalonyx</i>	sandpaper plant
<i>Physalis crassifolia</i>	thick-leaved ground cherry
<i>Plantago ovata</i>	psyllium
<i>Pleuraphis rigida</i>	galleta grass
<i>Prunis fasciculata</i>	desert almond
<i>Psathyrotes ramosissima</i>	velvet turtleback
<i>Psilotrophe cooperi</i>	Cooper's paper daisy
<i>Psorothamnus sp. (fremontii)</i>	indigo bush
<i>Salazaria mexicana</i>	bladder sage
<i>Salsola tragus*</i>	Russian thistle*
<i>Salvia dorrii</i>	desert sage
<i>Schismus sp.*</i>	Mediterranean grass*
<i>Senecio flaccidus</i>	California butterweed
<i>Sphaeralcea ambigua</i>	desert globemallow
<i>Sphaeralcea angustifolia</i>	copper globemallow
<i>Stephanomeria pauciflora</i>	brownplume wirelettuce
<i>Tamarix ramosissima*</i>	saltcedar*
<i>Thamnosma montana</i>	turpentine broom
<i>Thymophylla pentachaeta</i>	dogweed
<i>Xylorhiza tortifolia</i>	Mojave aster
* Invasive or noxious species	

Cacti and Yucca Species Observed in the Project Area

Scientific Name	Common Name	Number Observed ¹
<i>Echinocactus polycephalus</i>	cottontop cactus	1,520
<i>Echinocereus engelmannii</i>	hedgehog cactus	1,280
<i>Escobaria vivipara</i>	beehive cactus	60
<i>Opuntia basilaris</i>	beavertail cactus	670
<i>Opuntia echinocarpa</i>	silver cholla	340
<i>Opuntia ramosissima</i>	pencil cholla	30
<i>Yucca brevifolia</i>	Joshua tree	80
<i>Yucca schidigera</i>	Mojave yucca	1,000 ²
Total		4,890
Acres in Project Area		580
Average Density per Acre ¹		10 ¹
¹ Rounded to the nearest 10 ² Visual estimate		

**Appendix D:
Avoidance and Mitigation Measures and Stipulations**

Avoidance and Mitigation Measures

The following table summarizes the avoidance and mitigation measures presented in Section 4.0 of the EA and compliance requirements listed in the supplemental authorities Table 3-1.

Resource	EA Section 4.0 – Avoidance or Mitigation Measure
Migratory Birds	A qualified biologist will survey the ROW for nests (on the ground, in burrows, and in vegetation) and nesting activity if construction begins during bird breeding and nesting season (generally February 15 through August 31). Active nests (containing eggs or young) will be avoided until they are no longer active or the young birds have fledged. The area to be avoided around the nest will be confirmed by either a BLM or Nevada Department of Wildlife biologist. Any nesting activity that is observed outside this general seasonal timeframe should be similarly avoided.
Bats and Nocturnal Migratory Birds	Facility and security lights will be the minimum number and intensity necessary and down-shielded to keep the illumination within the boundaries of the site.
Desert Tortoise	Per the terms and conditions of Programmatic Biological Opinion, File No. 84320-2010-F-0365.R001
Vegetation – Cactus and Yucca Plants	Salvage, transplant, and maintain cactus and yucca plants on the ROW according to BLM guidance. Salvage will be conducted by an approved contractor with a minimum of three years experience with Mojave or Sonoran desert salvage and transplant. Coordinate a salvage sale with the BLM Botanist prior to construction.
Invasive Species and Noxious Weeds	Prepare and implement a Noxious Weed Management Plan in coordination with the BLM Weeds Coordinator before the start of construction.
Soils (same as Air Quality)	Obtain and comply with any city and county dust control ordinance or permits in place as the time of construction.
Mineral Materials	Provide BLM with location and volume of any excess stockpiled mineral materials to be removed from the ROW in accordance with BLM regulations through contract, free use permit, or material site right-of-way. Notify the BLM 30 days in advance if excess mineral materials are to be stockpiled at the Lone Mountain Community Pit.
Resource	Table 3-1 – Supplemental Authorities Compliance
Air Quality (same as Soils)	Obtain and comply with any city and county dust control ordinance or permits in place as the time of construction.
Fuels/Fire Management	Comply with fire restrictions current at time of construction.
Paleontology	Cease work and contact BLM Archaeologist in the event of a discovery of a paleontological or fossil resource.
Wastes (hazardous or solid)	Comply with standard stipulations addressing hazardous/solid wastes.
Water Resources	Obtain a construction stormwater discharge permit, prepare a Stormwater Pollution Prevention Plan, and implement best management practices to control erosion and runoff from the construction areas to protect water quality.