

RECLAMATION

Managing Water in the West

City of Henderson R-10/R-10A Water Tank Site

Draft Environmental Assessment
LC-14-21

Lower Colorado Region, Boulder City, Nevada



U.S. Department of the Interior
Bureau of Reclamation
Lower Colorado Region
Boulder City, Nevada

April, 2015

Mission Statements

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitments to island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

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List of Acronyms and Abbreviations

| Acronym or abbreviation | Term |
|-------------------------|---|
| APE | Area of Potential Effect |
| BLM | Bureau of Land Management |
| BO | Biological Opinion |
| CEQ Regulations | Council on Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA |
| City | City of Henderson |
| CO | carbon monoxide |
| Contract | Right of Use Contract Number 04-07-30-L0821 |
| DOI | Department of the Interior |
| Dust Control Permit | Clark County Department of Air Quality Dust Control Permit for Construction Activities |
| EA | Environmental Assessment |
| EIS | Final Environmental Impact Statement |
| EO | Executive Order |
| ESA | Endangered Species Act |
| FCR | Field Contact Representative |
| FHWA | Federal Highway Administration |
| GHG | Greenhouse Gas |
| NAAQS | National Ambient Air Quality Standards |
| NDOT | Nevada Department of Transportation |
| NEPA | National Environmental Policy Act of 1969, as amended |
| NHPA | National Historic Preservation Act |
| NO ₂ | nitrogen dioxide |
| NOA | naturally occurring asbestos |
| NPDES | National Pollutant Discharge Elimination System |
| NRHP | National Register of Historic Places |
| O ₃ | ozone |
| PM _{2.5} | particulates less than 2.5 microns |
| PM ₁₀ | particulates less than 10 microns |
| Project | Access road and Site |
| Re-evaluation | Re-evaluation of the Final EIS and ROD Boulder City/US 93 Corridor Study (1-11 Boulder City Bypass) |
| Reclamation | Bureau of Reclamation |
| ROD | Record of Decision |
| ROU | Right-of-Use |
| ROW | Right-of-Way |
| SNWA | Southern Nevada Water Authority |
| Service | U. S. Fish and Wildlife Service |
| SHPO | State Historic Preservation Office |
| Site | 9.34 acre water tank site |
| SO ₂ | sulfur dioxide |
| TCP | Traditional Cultural Property |
| Trail | River Mountain Loop Trail |

| Acronym or abbreviation | Term |
|--------------------------------|--------------------------------|
| APE | Area of Potential Effect |
| Water Tank | Water Reservoir |
| U.S. | United States of America |
| USACE | U.S. Army Corps of Engineers |
| UNLV | University of Nevada Las Vegas |

City of Henderson R10-10A Water Tank Site

**Draft Environmental Assessment
LC-14-21**

**Prepared by:
United States Department of the Interior
Bureau of Reclamation
Lower Colorado Region
Boulder City, Nevada**

1.0 Introduction and Purpose and Need

This Environmental Assessment (EA) was prepared in compliance with the National Environmental Policy Act (NEPA) and the Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA. The purpose of this EA is to evaluate the potential impacts of the Proposed Action on the physical and human environment and determine if there would be significant impacts requiring the preparation of an Environmental Impact Statement.

1.1 Background for the Purpose and Need

The Bureau of Reclamation (Reclamation) is proposing to issue Right of Use (ROU) contract Number 04-07-30-L0821 (Contract) to the City of Henderson (City) for a water reservoir (tank) site (Site) and access road on Reclamation land located at: SE¼ section 35, Township 22 South, Range 63 East, MDM, Clark County, Nevada and the N½ section 2, Township 23 South, Range 63 East, MDM, Clark County, Nevada, in the River Mountains near Railroad Pass.

Reclamation land in the River Mountains was withdrawn from the public domain for the Robert B. Griffith water project which was constructed to supply water to Las Vegas, North Las Vegas, Henderson, Boulder City, and Nellis Air Force Base. This water project is now part of the Southern Nevada water system. Other water related facilities on Reclamation land in the River Mountains are water distribution lines and the River Mountains Water Treatment Facility, operated by Southern Nevada Water Authority (SNWA).

Reclamation issued the original ROU contract, which has expired, to the City in 1986. The original contract granted the City an easement for the 9.34 acre water tank site and an access road connecting to U.S. Highway 93/95. The City constructed two water tanks at the Site. One of the tanks was removed in 2004 when it was no longer useful because of its size, design, and condition.

The existing water tank, known as the R-10 Reservoir, is an above-ground cylindrical tank which stores 3 million gallons of treated water for delivery to the residents of the southeastern portion of the City via the City's water pipeline system. In a water system of this type, above-ground water tanks are generally located on hills or high ground to provide water pressure. Typically, water is pumped with the use of a pump station to a water tank that is located at a higher elevation above sea level than the area it serves. The water pressure created by the higher elevation forces the water to move downward from the force of gravity from the water tank and through the water delivery system. Within the City, these water service areas of similar elevations are known as "Pressure Zones". Water tanks are strategically located at specific elevations in order to create enough water pressure to supply residences and businesses within the Pressure Zone. The water tank at the Site serves the "2500 Pressure Zone". When full, the elevation of the water in the tank is 2500 feet above sea level. Along with elevation, it is also important to locate the water tank close to the area it serves.

Under the Contract, the City proposes to maintain the existing water tank, construct a second water tank and associated facilities, and construct a pumping station. An access road, a portion

of which would cross Reclamation land, would be constructed from near the Paradise Hills neighborhood. The water tank and access road (red line) are shown on Figure 1.



Figure 1- Water Tank Site and Access Road

1.2 Purpose and Need

The purpose of the Proposed Action is to respond to the City of Henderson’s application for re-issuance of the Contract. It is Reclamation’s responsibility under the Act of Congress of June 17, 1902 (32 Stat. 388), the Act of Congress approved August 4, 1939 (53 Stat. 1187), Section 10, and 43 CFR Part 429 to respond to a request for a right-of-use on Reclamation lands.

Issuance of the Contract is needed because the Site is at an ideal location and elevation above sea level to provide water to the 2500 Pressure Zone. The existing water tank has been located at the Site for approximately 29 years and is integrated into the City’s overall water system. Use of the Site for a water tank is compatible with the purposes of the land Reclamation manages as part of the Robert B. Griffith water project. Issuance of the Contract provides a public benefit by contributing to the efficient storage and delivery of water to residents of the City.

The addition of a second tank increases the reliability of the system. The existing tank is in need of immediate maintenance in order to assure reliable water deliveries in the 2500 Pressure Zone.

The second tank would allow one tank to be drained for maintenance while not interrupting delivery of water and provides for a back-up water tank in the event of an emergency. It also would allow the City to store more water to accommodate expansion of the system. The installation of a pump station at the Site in the future would allow the City to pump water to from the Site to another water tank in another Pressure Zone.

The access road is needed because the current access from U.S. Highway 93/95 will not be possible when the highway is re-aligned as part of the Boulder City Bypass (NDOT, 2015). Section 1.3 contains additional information on the Boulder City Bypass.

1.3 Previous NEPA Documents and Actions

In 2005 the Federal Highway Administration (FHWA) completed the “Final Environmental Impact Statement (EIS) and Record of Decision (ROD) for the Boulder City/U.S. 93 Corridor Study” for improvements to U.S. Highway 93 between the end of Interstate 515 on U.S. Highway 93/95 in Henderson to a point on U.S. Highway 93 approximately 4.7 miles east of downtown Boulder City. These improvements are now known as the Boulder City Bypass. Reclamation was a cooperating agency on this EIS and issued a ROD for the granting of a letter of consent to the FHWA for the appropriation and inclusion of a 200-foot easement on Reclamation managed land adjacent to U.S Highway 93/95 in a Highway Easement Deed to the Nevada Department of Transportation (NDOT). The City has obtained approval from NDOT for placement of the access road within the 200-foot easement. Reclamation, as the underlying landowner within the 200 foot easement, has coordinated with NDOT on the issuance of a ROU to the City for the access road.

In 2014, FHWA and NDOT completed the *Re-evaluation of the Final EIS and ROD Boulder City/US 93 Corridor Study (1-11 Boulder City Bypass)* (Re-evaluation) to determine if the EIS would need to be supplemented because of recent research that identified the potential for naturally occurring asbestos (NOA) in the vicinity of the Boulder City Bypass (See Section 3.2.1.) It was determined that a supplement was not needed because of mitigation measures designed to prevent adverse impacts (FHWA, 2014).

The CEQ regulations for implementation of NEPA encourage both tiering and incorporation by reference. Tiering refers to following up on analysis contained in a broader EIS with an EIS or EA with a narrower scope, incorporating by reference the general discussions and concentrating solely on the issues specific to the narrower scope EIS or EA. An EA tiered to a broad EIS need only analyze the changes to, or details of, the original proposal not previously analyzed to determine if any of the changes or details result in potentially significant impacts (40 CFR 1502.20). Since analysis of the area where the proposed access road is located is included in the EIS, and the access road is needed because of the location of the Boulder City Bypass, this EA is tiered to and incorporates by reference the EIS.

1.4 Related Laws, Policies, and Planning Documents

This EA complies with all applicable environmental, natural resource, and cultural resource statutes, regulations, and guidelines. These additional statutes, regulations, and guidelines may require permits, approvals, consultations with outside agencies, or implementation of mitigation measures.

The following federal, state, and local statutes and regulations are relevant to the proposed project.

- National Environmental Policy Act of 1969
- Department of the Interior Secretarial Order 3226: Evaluating Climate Change Impacts in Management Planning
- Executive Order 11514: Protection and Enhancement of Environmental Quality
- Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations
- Executive Order 13423: Strengthening Federal Environmental, Energy, and Transportation Management
- Executive Order 13287 Preserve America
- Clean Air Act of 1970 and amendments of 1977 and 1990
- Clean Water Act of 1970 and National Pollution Discharge Elimination System, as amended
- Chapter 445B of Nevada Administrative Code- State of Nevada's air pollution regulations
- National Historic Preservation Act of 1966, as amended
- Archaeological Resources Protection Act of 1979
- Native American Graves Protection and Repatriation Act of 1990
- Noise Control Act of 1972
- Comprehensive Environmental Response, Compensation, and Liability Act of 1980
- Resource Conservation Recovery Act of 1976, as amended
- Clark County Air Quality Regulations
- Occupational Health and Safety Act of 1970 as amended

2.0 Description of Alternatives

2.1 No Action Alternative

Under the No Action alternative, the Contract would not be re-issued. The City would need to find another location within the 2500 Pressure Zone to locate the water tank. The existing location has been determined to be the best location for the Site, therefore any other location may not be as efficient. It is likely that any suitable location would be on Reclamation or Bureau of Land Management (BLM) land because of the need to place the water tank at the correct elevation and proximity to the 2500 Pressure Zone. The City would need to apply for a ROU in the proposed new location. The City would need to construct new water tanks and associated infrastructure at the location requiring new disturbance.

2.2 Proposed Action Alternative

Under the Proposed Action Alternative Reclamation would issue a perpetual ROU Contract to the City for the use of 11.5 acres of Reclamation land for the Site and the access road, collectively referred to as the Project. The City would be responsible for all construction, operations, and maintenance of the Project. All activities would follow the Plan of Development submitted to Reclamation by the City. The following is a summary of construction activities.

Access Road to Site

A new 12-foot wide gravel access road would be constructed that will extend about 6,000 linear feet from the intersection of East Paradise Hills Drive and Old Vegas Trail to the Site. The area of this would be approximately 2.16 acres. This access road route was previously disturbed by the installation of a waterline operated by SNWA and an existing primitive road leading to the Site. The portion of the access road parallel to U.S. Highway 93/95 within the Boulder City Bypass right-of-way (ROW) (approximately 5,030 linear feet) would be constructed by NDOT as part of the construction activities associated with the Boulder City Bypass. The portion of the access road that is outside of the Boulder City Bypass ROW (approximately 970 feet) would be constructed by the City along the route of the existing primitive road.

Installation of R-10A Water Tank and other Site improvements

The R-10A tank and other Site improvements would be constructed by the City. The area of the Site is 9.34 acres. A smaller portion of this area is currently fenced with chain-link fencing with a locking gate that limits access to authorized personnel. The boundary of the fence would be expanded to include the new R-10A tank and the future pumping station. A portion of the area where the R-10A tank would be installed is located on fill which is previously disturbed from the water tank that was removed in 2004. The ground would be excavated to depths ranging from 10 to 16 feet below the existing grade surface for a concrete slab/foundation. An underground water line would be installed between the two tanks to allow water to be transferred between the two tanks.

The R-10A tank would be an above ground cylindrical tank with the same dimensions and water storage capacity as the R-10 tank: approximately 132 feet in diameter and approximately 30 feet high with a storage capacity of 3 million gallons. The appurtenances on the R-10 tank are powered by roof-mounted solar panels. Similar roof-mounted solar panels would be installed on

the R-10A tank. Both tanks would be painted with a color that blends with the natural surroundings. The area around the tanks would be paved. A preliminary drawing of the R-10A tank location and other improvements is shown in Figure 2.

After the R-10A tank is constructed the R-10 tank would be rehabilitated by painting, rehabilitation of structural steel components, and minor reconfiguration to existing site piping.

The pump station building would be constructed at a future date which has not yet been determined. Designs for this building have not been developed but it will likely be masonry construction. It would be approximately 65 feet long by 35 feet wide by 15 feet tall and would house pumps along with instrumentation and other equipment associated with the operation of the pump. The actual building size may be smaller than this depending on the size of the pumps housed in the building. Its color would be compatible with the color of the tanks and the surrounding landscape.

General Project Information

The City would be responsible for obtaining all Federal, State, and local required permits prior to the start of the Project. All aspects of the Project would comply with the Municipal Code of the City of Henderson and the Code of Clark County.

All construction, with the exception of the pump station, is planned to occur during a single year between June 2015 and June 2016. The City would perform maintenance at the Site and on all facilities as needed.

The facilities would be designed and constructed in accordance with the *City of Henderson Utility Guidelines*, latest edition, the *Uniform Design and Construction Standards for Potable Water Systems*, and the *Uniform Standard Drawings and Specifications for Public Works Construction, Offsite Improvements, Clark County Area* (Uniform Standards).

Table one shows the types of equipment and anticipated fuel use for the construction of the access road and tank. Equipment that would be used during operation and maintenance includes boom truck, lifts, safety equipment, power washers, utility trucks, and other specialty equipment.

Table 1- Equipment and Fuel Use

| Equipment Type | Hours in Operation | Gallons per Hour | Estimated Fuel Use (Gallons) |
|---------------------------------|---------------------------|-------------------------|-------------------------------------|
| Crane | 480 | 6 | 2880 |
| Backhoe | 480 | 6 | 2880 |
| Paving machine | 80 | 6 | 480 |
| Mechanical compactor | 80 | 6 | 480 |
| Water truck | 240 | 6 | 1440 |
| Material delivery truck | 360 | 6 | 2160 |
| Total estimated fuel use | | | 10,320 |

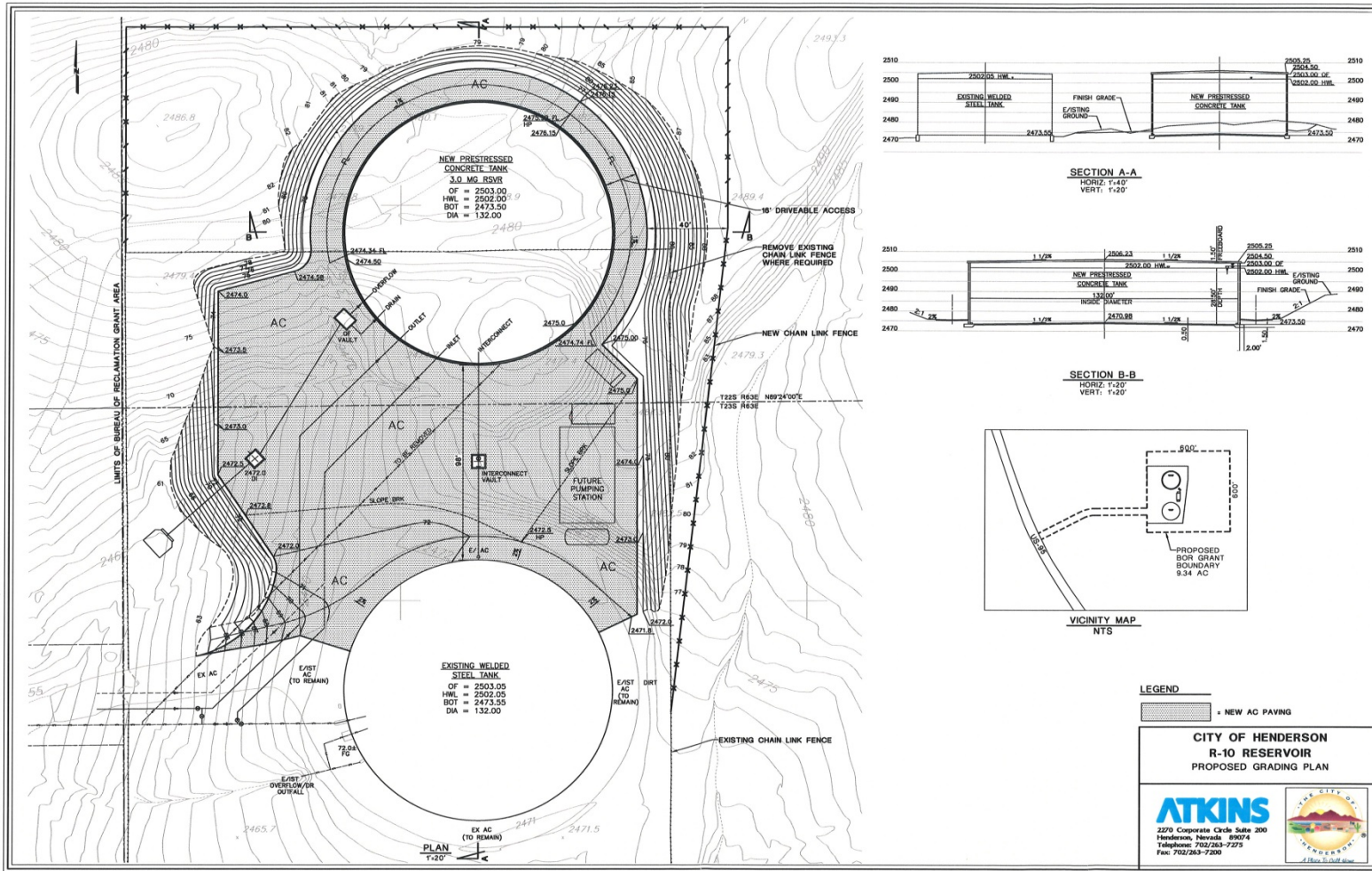


Figure 2- Preliminary layout of R10A tank and other Site improvements

2.2.1 Mitigation Measures

The City has incorporated the following measures into the Proposed Action to reduce or eliminate impacts to resources:

Recreation

- The access road would cross the River Mountain Loop Trail near the Site. The City would use appropriate traffic control during construction to ensure the safety of trail users in that location. Since gravel on trails can create hazards for trail users, the City would take measures to minimize the spillage of gravel from the access road on to the River Mountain Loop Trail during and after construction.

Soils

- Upon completion of construction, appropriate stabilization and rehabilitation measures will be completed in conformance with the requirements of Reclamation, the State of Nevada Division of Environmental Protection and Clark County Department of Air Quality.
- Topsoil removed for construction activities would be replaced in areas not intended for permanent access. All excavated material would remain within the ROU area. It is not anticipated that excess material will remain. If any excess material does remain after construction, it would be stored at the Site

Surface and groundwater quality and quantity

- The City would obtain coverage under and comply with the National Pollutant Discharge Elimination System (NPDES) Stormwater General Permit (NVR100000) in order to discharge stormwater during construction of the R10A tank and other Site improvements. In addition, the City may obtain coverage under NPDES DeMinimus General Permit NVG201000 to allow for discharges to Waters of the U.S. related to construction, maintenance, and testing (quantity, duration and capacity) of a public water system up to 1500 gallons per minute. Both permits are administered by the Nevada Department of Environmental Protection (NDEP).

Air Quality

- The access road construction by NDOT will implement all mitigation measures for NOA identified for the Boulder City Bypass project. This includes a Clark County Department of Air Quality Dust Control Permit for Construction Activities (Dust Control Permit).
- The City would obtain a Dust Control Permit and follow all requirements of the permit.

Biological Resources

- Vegetation removal will occur outside of the migratory bird nesting season, generally occurring from March 1st to August 1st. If vegetation removal cannot occur outside of the nesting season, the area will be surveyed by a qualified (as determined by Reclamation) biologist for migratory birds and nesting activity. If nesting activity is observed, appropriate avoidance buffers will be exercised until the young have fledged.

- The following draft conservation measures are proposed by Reclamation to minimize potential adverse effects to desert tortoise from the Proposed Action. The final measures from the Biological Opinion (BO) will be included in the final EA. (See Section 3.3.2. for more information on these measures).

1. 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 U.S. Fish and Wildlife Service (Service), Reclamation, 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, penalties for violation of State and Federal laws, reporting requirements, and project measures in the BO. Further information on the BO is provided in Section 3.3.2.2. 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 vehicles and equipment before moving them (or be cleared by an authorized desert tortoise biologist). 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 Field Contact Representative (FCR) and authorized desert tortoise biologist.

2. Field Contact Representative – Reclamation shall ensure a 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 Reclamation and the Service to ensure that all instances of non-compliance or incidental take are reported. Reclamation has discretion over approval of potential FCRs; however, those who also may be acting as authorized desert tortoise biologists must also be approved by the Service. All FCRs will report directly to Reclamation and the Service. The FCR, authorized desert tortoise biologist, and monitors 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 ROU grant, including those for listed species. Reclamation 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 Reclamation shall provide the Service with the names of the FCR.

3. Authorized desert tortoise biologist – All authorized desert tortoise biologists (and monitors) are agents of Reclamation and the Service and shall report directly to Reclamation 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 Reclamation and the 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. Reclamation may use their discretion to require a monitor (on-site or on-call) instead of an authorized desert tortoise biologist to monitor equipment that is low risk to tortoises, within tortoise proof fenced areas cleared of tortoise, or during the inactive season.

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 recorded with the use of a global positioning system, 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 Reclamation and the Service.

4. 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 Conservation Measure 1. They will report incidents of non-compliance 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 Reclamation.

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 feet of each other).

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

5. 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. An authorized desert tortoise biologist and desert tortoise monitor will escort or clear ahead of vehicles and equipment for ROU travel. The escort will be on foot and clear the area of tortoises in front of each traveling construction equipment group (see desert tortoise clearance). The escort will use a recreational vehicle with ground visibility such as a Utility Terrain Vehicle; however, at least one authorized desert tortoise biologist and one desert tortoise monitor must ride together and survey both sides of the vehicle. The speed/pace will be determined by an authorized desert tortoise biologist and shall be slow enough to ensure adequate inspection.

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

6. Unauthorized access – Reclamation 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 ROU will be monitored and logged. During construction, the ROU will be fenced at public roads that intersect the ROU. Signs will say that access on the ROU is strictly prohibited except by authorized personnel and that violators will be prosecuted.

7. Desert tortoise clearance – 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 feet 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 Conservation Measure 10). 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.

8. 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 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 one monitor shall be assigned to observe spoil piles prior to excavation and covering.

9. Handling of desert tortoises – Desert tortoises shall only be moved by an authorized desert tortoise biologist or desert tortoise monitor 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 (Attachment A to the BO) to be provided to Reclamation and the Service 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 feet from the point of encounter. In situations where desert tortoises must be moved more than 1,640 feet (500 meters), 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 Conservation Measure 10 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 (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.

10. Penning – Penning shall be accomplished by installing a circular fence, approximately 20 feet in diameter to enclose and surround the tortoise burrow. The pen should be constructed with 1-inch horizontal by 2-inch vertical, galvanized welded wire. Steel T-posts or rebar should be placed every 5 to 6 feet to support the pen material. Pen material will extend 18 to 24 inches aboveground. The bottom of the enclosure will be buried 6 to 12 inches or bent towards the burrow, have soil mounded along the base, and other measures implemented to ensure zero ground clearance. Care shall be taken to minimize visibility of the pen by the public. An authorized desert tortoise biologist or desert tortoise monitor shall check the pen at a frequency to ensure that the desert tortoise is secure and not stressed. No desert tortoise shall be penned for more than 48 hours without written approval by the Service. Because this is a new technique, all instances of penning or issues associated with penning shall be reported to the Service within 3 days.

11. 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. Reclamation 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 inches 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.

12. Permanent tortoise-proof fencing – The limits of construction will be clearly marked or flagged prior to development. All major construction activities and staging areas will be located within exclusion fencing to prevent desert tortoise movement into an active construction zone. 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 Reclamation or Service. Temporary desert tortoise fencing will be installed along the proposed new access road where U.S. Highway 93/95 does not create a barrier to tortoise movement. 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 and a gate is not adequate. 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 2 below and reports prepared in accordance with Term and Conditions in the BO 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 2- Tortoise Fencing Requirements

| Condition | Minimum Requirements |
|---|---|
| First week following 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. |

13. Dust control – Water applied 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.

14. Litter control – 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.

15. 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.

16. To minimize destruction of desert tortoise habitat, such as soil compaction, erosion, or crushed vegetation due to construction and maintenance activities:
All equipment, vehicles, and construction materials will remain within designated areas. Staging areas will be located in previously disturbed areas whenever possible.

Desert soil, rocks, and plants will be salvaged during construction to restore any temporarily disturbed areas. Disturbed sites will be scarified and recontoured; desert soil and large rocks will be replaced. Revegetation of disturbed areas will be initiated immediately following construction activities.

Prior to the onset of construction activities, the City will pay remuneration fees for compensation of 6.0 acres of desert tortoise habitat loss.

- To prevent the spread of noxious and invasive weeds, equipment that would be used for this proposed project would be thoroughly cleaned prior to entering the proposed project site. The cleaning process will ensure that all dirt and debris that may harbor noxious or invasive weeds seeds are removed and disposed of at an appropriate Site. Reclamation’s *Inspection and Cleaning Manual for Equipment and Vehicles to Prevent the Spread of Invasive Species: 2010 Edition* can be found at <http://www.usbr.gov/mussels/> and should be reference for inspection and cleaning activities.
- Any cactus or yucca plants found within areas to be disturbed would be treated in accordance with Nevada Revised Statutes 527.010 and NDOT and/or Reclamation requirements.

Cultural Resources

- In the event of an unanticipated discovery, all operations in the area of the discovery will cease and a Reclamation archaeologist contacted at 702-293-8130. “Discovery” means the encounter of any previously unidentified or incorrectly identified cultural resource including, but not limited to, archaeological deposits, human remains, or places reported to be associated with Native American religious beliefs and practices.

Noise

- The City of Henderson noise ordinance will be observed.

Visual

- The tanks and the pump house would be painted a color that blends with the surrounding landscape.

2.2.2 Alternatives Considered but Not Evaluated in Detail

As discussed in Section 1.1 and 1.2, the Site has been part of the City's water distribution system since 1986. The Site is located in an ideal location and elevation to supply water to the 2500 Pressure Zone. Because of the location and elevation needed, any alternative sites would likely be on Reclamation or BLM land; requiring new authorization and disturbance. Therefore no other alternatives for the location of the Site were considered.

3.0 Affected Environment and Environmental Consequences

This section includes information for each resource potentially affected by the Proposed Action and a discussion of environmental consequences of the Proposed Action and No Action alternatives.

The analysis of the Proposed Action will include direct, indirect, and cumulative effects. The CEQ Regulations define direct effects as those which are caused by the action and occur at the same time and place and indirect effects as those which are caused by the action and occur later in time or farther removed in distance.

Cumulative impacts are defined as impacts to the environment that result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes the action. Cumulative impacts can result from individually minor, but collectively significant, actions taking place over a period of time (40 CFR 1508.7).

The cumulative effects analysis will address the cumulative impacts of the Proposed Action in combination with other projects or management activities. Section 3.1 identifies past, present, and reasonably foreseeable activities that are either located in the vicinity of the Site or have been identified as having the potential for cumulative impacts when considered in addition to the impacts of the Proposed Action. These actions will be addressed as appropriate in Section 3.3. Since the activities would not necessarily impact all resource areas, the cumulative impacts section for each resource will begin with a summary of the activities having potential for cumulative impacts.

The analysis area for all impacts was the access road and the Site and the immediate vicinity.

3.1 Past, Present, and Reasonably Foreseeable Future Projects

- A portion of the River Mountains Loop Trail has been constructed adjacent to the Site. This multi-use trail is managed by the City in the vicinity of the Site.
- A number of relatively smaller-scale projects have been constructed within the vicinity of the Site, including flood control channels and detention basins and underground utilities such as water and telephone lines.
- In March 2014, First Solar Development LLC submitted an application to Reclamation to construct the Magic Solar Facility on approximately 575 acres of Reclamation land in the River Mountains. Although First Solar Development LLC has had initial discussions with the City of Henderson, SNWA, and adjacent landowners on the project, the project is currently on hold and the NEPA process has not been initiated.
- The Site is adjacent to U.S. Highway 93/95, a four lane divided highway with a speed limit of 65 miles per hour. U.S. Highway 93/95 is major corridor which is designated as Interstate 515 through much of Henderson and Las Vegas. The Interstate 515 designation

ends just west of the Site, where U.S. Highway 93/95 continues as the primary route to Boulder City. The Boulder City Bypass Project is anticipated to begin construction in 2015 and is described under Section 1.3.

- The Site is located within a utility corridor with existing transmission lines. Two new transmission lines, Southern Nevada Intertie Transmission Project and Transwest Express Transmission Project, would cross U.S. Highway 93/95 near the Site. A third proposed new transmission line, Eastern Nevada Transmission Project, would end at the River Mountains Water Treatment Plant, located north of the Site.
- River Mountains Solar, LLC has applied for a ROU from Reclamation to install a solar photovoltaic electric generation facility on Reclamation-administered lands in Clark County, Nevada. The solar facility would be contained entirely within SNWA's River Mountain Water Treatment Facility.

3.2 Resources Considered but not Discussed Further

The following resources were considered and are not addressed further in this EA either because there would be minimal or no impacts from the Proposed Action:

- **Recreation-** The Site is located in close proximity to the River Mountain Loop Trail (Trail), a multi-use recreational trail which is managed by the City in that location. The Trail will be considered in the design for the access road to assure there are no adverse impacts. The City does not intend to close this portion of the Trail during construction; they would use appropriate traffic control to ensure the safety of the Trail users. No other impacts to recreation resources are expected.
- **Indian Trust Assets (ITA)** - ITAs are defined as “legal interests in property held in trust by the United States for Indian tribes or individuals” (Reclamation, 1993). ITAs are those properties, interests, or assets of a Federally recognized Indian tribe or individual Indian over which the Federal government also has an interest, either through administration or direct control. Examples of ITAs include lands, minerals, timber, hunting rights, fishing rights, water rights, in-stream flows, and other treaty rights. All Federal bureaus and agencies are responsible for protecting ITAs from adverse impacts resulting from their programs and activities. There would be no impact to ITAs as none are located in the project area.
- **Surface and groundwater quality and quantity-** There are no major watercourses or drainages intersected by the proposed project; however, the general topography of the area would tend to allow sheet flow to cross the action area from the northeast to the highway in the southwest. In addition, there is a stormwater retention channel situated adjacent to the proposed new access road along the residential development on East Paradise Hills Drive. The mitigation measures described in Section 2 for surface and groundwater quality and quantity are expected to prevent adverse impacts from stormwater runoff.

- **Floodplains and Wetlands-** There are no floodplains or wetlands located in the vicinity of the Site, therefore there would be no impact to these resources.

- **Noise and Traffic-** The information on noise tiers to the FWHA EIS, ROD and Re-evaluation. The primary existing noise impact in the immediate project area is U.S. Highway 93/95. In a noise study done for the FWHA EIS, the maximum noise levels measured in the vicinity of the Site were approximately 80 to 83 dBA, which is a measure of sound pressure as compared to a reference sound pressure. This dBAs are typical of urban daytime noise. The FWHA EIS and ROD concluded that the construction of the Boulder City Bypass would add to the existing noise environment in the immediate project area. It was determined that construction activities would generate noise levels ranging from 88 to 92 dBA at a distance of 50 feet. These activities will be temporary and expected to occur within normal daytime working hours. These conclusions would apply to construction of the access road within NDOT's ROW.

Noise would also be generated from the City's construction of the remainder of the access road and at the Site. The western end of the access road would be located on an existing gravel road next to East Paradise Hills Drive, which is adjacent to a residential area. Intermittent increases in noise from construction traffic accessing the Site are expected. This traffic would occur during daytime hours and expected to be of short duration. The majority of construction activities associated with the Site would not be in close proximity to residential areas, so the noise impact is expected to be minimal. Impacts to the existing flow of traffic in this area are also expected to be minimal as the City would use appropriate travel control methods.

- **Human Health-** The Proposed Action would have beneficial human health impacts as it will aid the City in providing a safe source of drinking water to residents. Analysis of NOA included in Section 3.3.1.

- **Environmental Justice-** Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, directs federal agencies to determine whether their programs, policies, and activities have disproportionately high and adverse human health or environmental effects on minority and low-income populations.

In accordance with CEQ guidance, minority populations should be identified if the minority population in the project area "exceeds 50 percent" or if the percentage of minority population in the project area is meaningfully greater than the "minority population percentage in the general population or other appropriate unit of analysis" (CEQ 1997). Communities should be identified as "low income" based on the annual statistical poverty thresholds from the U.S. Census Bureau (CEQ, 1997).

No high and adverse human health or environmental effects were identified from the proposed action, but data on minority populations and poverty in the Project area was reviewed to assure compliance with the Executive Order. U.S. Department of the Census data on minority populations and poverty for the two Census Tracts where the Site and access road would be located was compared to the same data for the state of Nevada and Clark County (U.S. Census, 2015). Minority populations in the two Census

Tracts did not exceed 50 percent, so did not meet the thresholds identified for Environmental Justice analysis. The percent of individuals below poverty levels in the Census Tracts were compared to those for Nevada and Clark County. The poverty levels in the Census Tracts were either below or only slightly higher than those for Nevada and Clark County. This information confirmed that the Proposed Action would not result in disproportionately high and adverse human health or environmental effects on minority and low-income populations.

- **Socio-economic-** The Proposed Action would have a beneficial socio-economic impact to the residents of Henderson. It would allow the City to continue providing a safe, reliable source of water to residents in an efficient manner.

3.3 Resources Discussed Further

The following resources are discussed further in this EA:

- Air Quality/Greenhouse Gases/Climate Change
- Biological Resources
- Cultural Resources/Traditional Cultural Properties/Sacred Sites
- Visual Resources

3.3.1 Air Quality/Greenhouse Gases/Climate Change

3.3.1.1 Affected Environment

National Ambient Air Quality Standards

The Environmental Protection Agency (EPA) establishes National Ambient Air Quality Standards (NAAQS) for the following common air pollutants: ozone (O₃), nitrogen dioxide (NO₂), carbon monoxide (CO), sulfur dioxide (SO₂), particulates less than less than 2.5 microns and less than 10 microns (PM_{2.5}, PM₁₀), and lead (Pb). They have developed primary and secondary NAAQS for these air pollutants to protect human health and prevent environmental and property damage.

Areas of the country that are currently in violation of NAAQS are classified as non-attainment areas; new sources to be located in or near these areas are typically subject to more stringent air permitting requirements than similar sources in attainment areas. The Department of Air Quality implements and enforces the air pollution program in Clark County. Hydrographic areas are used to define air quality regions in Clark County. Air quality is regulated according to compliance in each hydrographic basin.

Clark County is in attainment or unclassifiable for the NAAQS PM_{2.5}, SO₂, NO₂, Pb, and O₃. The Project is located in the Las Vegas hydrographic basin (Basin 212). This basin is one of the hydrographic basins in Clark County that are in O₃ maintenance for the 1997 O₃ NAAQS of 80 ppb. The Las Vegas hydrographic basin is in maintenance for CO and in serious nonattainment for PM₁₀ (Clark County, 2015). Hydrographic basins are referred to as “in maintenance” when they have achieved attainment but are subject to a Redesignation/Maintenance plan to demonstrate that attainment is being maintained.

Naturally Occurring Asbestos

Recent geologic research published by the University of Nevada Las Vegas (UNLV) has identified the potential for NOA minerals in mountain ranges and associated alluvium (sediments which have eroded from the mountains) in the Boulder City, Southeast Henderson, and Colorado River Black Canyon areas (Buck et.al, 2013). These minerals occur in rocks and soils as a result of natural geologic processes and are found in many states west of the Rocky Mountains (Clark County, 2015).

Natural weathering and human activities may disturb NOA-bearing rock or soil and release mineral fibers in the air, which poses a potential risk for exposure by inhalation (NDOT, 2015). The potential health effect of the NOA detected by UNLV is not known and will be the subject of future study (Clark County, 2015).

As part of the FHWA and NDOT re-evaluation of their EIS and ROD; rocks, sediments, and air along the entire Boulder City Bypass Phase I and Phase II corridor were sampled for NOA. This sampling confirmed that NOA is present within the Boulder City Bypass Corridor, but concentrations are generally low (NDOT, 2015). Sixteen surface and subsurface samples were collected and one air monitoring station established between Foothills Drive and the current access to the Site. No NOA was detected in 15 of the surface and subsurface samples. In one of the samples, NOA was detected at a low level; less than 0.25 percent of the total sample. This sample was collected on the opposite side of U.S. Highway 93/95 from the proposed access road.

The reference point of 0.25 percent is used because material that contains 0.25 percent or greater is defined as a “Restricted Material” by the California Air Resources Board, which regulates the NOA mitigation measures in California where NOA is found at many project sites. A Restricted Material may not be used in California for surfacing applications, and there are requirements for covering or wetting surfacing materials if the NOA content is greater than 0.25 percent. The Boulder City Bypass project has adopted this standard for surfacing applications (NDOT, 2015).

Air monitoring is still underway. There are not enough data available at this time to provide reliable risk assessments of potential long-term ambient air concentrations (FHWA, 2014).

Some of the samples analyzed for the re-evaluation contained NOA at levels higher than 0.25 percent of the total sample. These samples were taken east of Railroad Pass outside of the Project area. In order to have consistent measures to ensure worker and public safety during construction activities, FHWA and NDOT have identified mitigation measures for NOA which will apply to the entire Boulder City Bypass project. These mitigation measures were modeled after the Environmental Protection Agencies’ guidance for working with NOA, the Occupational Safety and Health Administration’s asbestos standard for construction, California’s NOA regulations for construction, and best-management practices employed at other asbestos sites across the country (NDOT, 2015).

The City sampled for NOA at the Site and the portion of the access road outside of NDOT’s construction responsibility. No NOA was detected.

Greenhouse Gases/Climate Change

A solid body of scientific evidence supports the theory that rising global Greenhouse Gas (GHG) emissions are significantly affecting the Earth’s climate (IPCC, 2014). The primary GHGs are

carbon dioxide, methane, nitrogen dioxide, and fluorinated gases. Human induced emissions such as the burning of certain types of fuels are one means of release of GHGs in the atmosphere.

3.3.1.2 Environmental Consequences

3.3.1.2.1 No Action Alternative

No impacts to air quality/greenhouse gases/climate change from construction of the access road or construction at the Site would occur under the No Action Alternative.

3.3.1.2.2 Proposed Action Alternative

This analysis tiers to the FWHA EIS, ROD and Re-evaluation. The FWHA EIS and ROD concluded that the construction of the Boulder City Bypass would not create new violations of the NAAQS and would not increase the severity of existing violations due to the mitigation measures in place for construction activities. The Re-evaluation documented that the new information on NOA in the Boulder City Bypass project area did not require a supplement to the EIS because the existing project mitigation measures as well as additional measures put in place for NOA would prevent a significant impact. This determination also applies to construction of the access road, as it will be constructed by NDOT within the ROW for the Boulder City Bypass. Graveling of the access road would minimize future air quality impacts from airborne dust. Also, NOA was not detected in the surface and subsurface samples which were collected from the area where the access road would be constructed.

Construction activities associated with the Site improvements and access road outside of the Boulder City Bypass ROW were not included in the FWHA EIS, ROD or Re-evaluation but the mitigation measures that would be in place for these activities are expected to prevent violations of NAAQS. No NOA was detected in the portion of the access road outside of NDOT's ROW or at the Site. Due to these results and the small size of the project area, the mitigation measures required by the Dust Control Permit were found to be sufficient to prevent air borne dust. Vehicles or other equipment would emit GHGs during the City's construction activities. The City's total estimated fuel use of 10,320 gallons from Table 1 would be the equivalent of 91.7 metric tons of carbon. This is equivalent to the annual GHG emissions from 19.3 passenger cars (EPA, 2015). These emissions would be intermittent and are not expected to have a quantifiable impact on regional greenhouse gas emissions. In accordance with the draft CEQ guidance on Consideration of GHGs and the Effects of Climate Change in NEPA Reviews (CEQ, 2014), no further analysis of GHGs was determined necessary at this time.

3.3.1.2.3 Cumulative Impacts

The projects from Section 3.1 which were considered for cumulative impacts are the construction of the Boulder City Bypass and construction of new transmission lines because of their proximity to the Site. All of these projects would include mitigation measures to minimize impacts to air quality and prevent violations of air quality standards. The Proposed Action is not expected to create cumulative impacts because of the mitigation measures included in the Proposed Action and the other projects.

3.3.2 Biological Resources

3.3.2.1 Affected Environment

Habitat within the project area consists primarily of sparse Mojave desert scrub dominated by creosote bush (*Larrea tridentata*) and white bursage (*Ambrosia dumosa*). The creosote-white bursage desert scrub typically occurs on well-drained sandy flats and bajadas (slopes at the base of the mountains) throughout most of the Mojave Desert from 150 to 1,500 meters elevation in Nevada. Many heat-tolerant reptile species are dependent on this habitat, including the Mohave desert tortoise. About 80% of this type of habitat in Nevada occurs in Clark County and is in relatively good condition. However, increased development, invasive weeds, wildfire, and dispersed recreational activities threaten the quality of the habitat.

The location of the Project and surrounding area have experienced high levels of habitat degradation as a result of U.S. Highway 93/95, housing developments, recreation activities, or other human caused disturbances. The project area also includes areas disturbed by previous construction, including the R-10 water tank, paved access road, the City's waterline to the tank, overhead power transmission facilities, the River Mountains Loop Trail, an existing SNWA waterline, and underground fiber optic facilities. A portion of the area was previously occupied with another water tank that has since been demolished (City, 2014).

Although the project area has experienced high levels of habitat disturbance, it is adjacent to intact habitat in the River Mountains. Nesting opportunities for a number of raptor species, including burrowing owl, and other birds protected under the Migratory Bird Treaty Act may be present in the vicinity of the proposed project area. Migratory birds and other wildlife including desert bighorn sheep use the area for foraging, cover, and occasionally to cross the highway.

The project area occurs within the Eastern Mojave Recovery Unit for desert tortoise as defined in the Revised Recovery Plan for the Mojave Population of the Desert Tortoise (Service, 2011). Habitat occupied by desert tortoises in this recovery unit is typically creosote bush scrub of flats, valley bottoms, alluvial fans, and bajadas. Occasionally, desert tortoises are also found in blackbush scrub or rocky slopes. No designed critical habitat occurs within the Project area or adjacent to the Project area.

On September 10, 2014, Knight and Leavitt Associates' authorized desert tortoise biologists performed a presence/absence survey for tortoise within the action area per Service protocols. No desert tortoises or sign (i.e., burrows, scat, tracks, or carcasses) were observed within the proposed construction area. Following Service protocols, additional surveys were performed at distances of 200, 400, and 600 meters from the proposed project limits. These buffer transects were performed only on the northeast side of the project area, because U.S. Highway 93/95 acts as a barrier to tortoise movement to the southwest. During the additional buffer surveys, two live desert tortoises and two burrow complexes were observed. At the 200 meter range, one juvenile tortoise was observed in the shade of a creosote shrub. The 400 meter survey revealed an adult tortoise inside an earth burrow and a burrow complex with three openings in a caliche (desert sediments naturally cemented with calcium carbonate) deposit. The burrow complex was rated condition class 4, meaning it was in good condition and could possibly support a desert tortoise. The second burrow complex was observed at the 600 meter range. This complex consisted of two caliche burrows that were rated condition class 2, as good condition with definite desert

tortoise presence but no evidence of recent use (Knight and Leavitt Associates, 2014). A full desert tortoise presence/absence report with site photographs and additional figures along with the BO will be included in an appendix to the Final EA.

3.3.2.2 Environmental Consequences

3.3.2.2.1 No Action Alternative

No impacts are anticipated to wildlife or Federally listed species as a result of the No Action alternative. The access road and site expansion would not occur and habitat would not be disturbed.

3.3.2.2.2 Proposed Action Alternative

The area for the Proposed Action includes a total of 11.5 acres of habitat disturbance including 5.5 acres that have been previously disturbed and 6.0 acres of new habitat disturbance. The project will result in loss of 6.0 acres of potential habitat for tortoise and other wildlife species. A chain link fence with tortoise exclusion fencing will surround the location of the tanks and facilities. The fencing will not preclude birds from utilizing the site but no suitable habitat is anticipated to remain within the fenced area. Birds and other common wildlife in the area are considered numerous and any impacts are not anticipated to impact the species as a whole.

In addition to loss of habitat, wildlife can be impacted from construction activities on the project site. Wildlife may be displaced or even killed if not avoided during construction activities. The greatest potential threats to desert tortoises resulting from the Proposed Action are associated with vehicle travel on access roads and in work areas. Tortoises could be killed or injured or their nests with eggs could be destroyed if not located before activities commence, or not avoided by vehicles and equipment. Project vehicles or equipment that travel outside of designated areas may crush desert tortoises aboveground or in their burrows or damage habitat outside the project area. Tortoises could wander into work areas or take refuge underneath project vehicles and equipment, and be killed or injured when the vehicle/equipment is moved. Project vehicles may strike and kill or injure desert tortoises on access roads. Long-term maintenance activities include monthly access to the site for testing of the water level and instrumentation. Wildlife could be temporarily displaced, injured or killed from vehicles traveling to and from the site.

Reclamation initiated formal consultation for a *may affect, likely to adversely affect* determination for the Mojave population of the desert tortoise on December 29th, 2014. The Service will respond to Reclamation's determination with a BO. Impacts to desert tortoise as result of the Proposed Action will be avoided and minimized through measures listed in Section 2.2.1 and outlined in the BO which will be submitted to Reclamation by the Service (File No. 84320-2015-F-0166).

Indirect impacts to wildlife could also occur as a result of lighting, construction noise, and vibration in the immediate vicinity of the proposed project area during construction. These impacts will be short-term in nature and are minimal compared to the historic and ongoing displacement from the highway and nearby housing developments.

3.3.2.2.3 Cumulative Impacts

All of the projects from Section 3.1 were considered for cumulative impacts because of their construction activities or development resulting in increased human activity. Construction results in habitat loss and risk of harm or mortality of individuals, if not avoided, as a result of vehicular travel related to construction, operation, and maintenance. Increased development results in more human activity which can lead to increased predators. All of the projects listed in Section 3.3 include project specific mitigation measures to avoid or minimize impacts to wildlife including sensitive species because they occur on Federal land. Harassment, displacement, and habitat loss from this proposed project when added to the ongoing and future impacts to wildlife species occurring in the area are not significant. These projects are within previously disturbed habitat or adjacent to similar existing structures. Co-locating projects and use of corridors is encouraged in desert tortoise habitat.

3.3.3 Cultural Resources/Traditional Cultural Properties/Sacred Sites

3.2.3.1 Affected Environment

The National Historic Preservation Act (NHPA) Section 106 (36 CFR §800) requires that Federal agencies consider and evaluate the effect that Federal projects may have on historic properties under their jurisdiction. A Traditional Cultural Property (TCP) is a property or place that is eligible for the National Register of Historic Places (NRHP) because of its association with the cultural practices or beliefs of a living community that are: 1) rooted in that community's history and 2) important in maintaining the continuing cultural identity of the community. EO 13007 "Indian Sacred Sites" requires that Federal agencies with legal or administrative responsibility for management of Federal lands, "to the extent practicable permitted by law, and not clearly inconsistent with essential agency functions, to: (1) accommodate access to, and ceremonial use of, Indian sacred sites by Indian religious practitioners; and (2) avoid adversely affecting the physical integrity of such sacred sites".

A cultural resources file and records search (Class I survey) and a field survey (Class III survey) of the Project was conducted in August 2014 by Atkins consulting firm. The Class I survey involved the examination of previously recorded cultural resources sites and surveys that were conducted within one mile sections adjacent to the Project. This involved an examination of the Nevada Cultural Resources Inventory System Database, review of 1:24,000 topographic quadrangle and historic maps, and a review of cultural resources reports archived in Reclamation's Regional Office in Boulder City. The Class III survey, which included the entire area of the Proposed Action (referred to as the APE), was conducted on August 14, 2014. The methodology and results of the survey are described in the report titled: *Final Cultural Resources Assessment R10A Reservoir Project Henderson, NV* (Pentney 2014/Atkins Project No. 100038635).

The field survey did not identify previously unrecorded cultural resources. However, the APE is located within the boundary of a previously recorded historic site named the Squatters Camp (26CK1169). The site is divided into east and west camps. The east camp, where the APE is located has been subject to multiple mitigation efforts for previously constructed utilities such as power transmission lines, water and gas pipelines, and a track extension for the Nevada Southern Railway. The most recent mitigation work for the site was conducted for the Boulder City

Bypass Project in accordance the Section 3.A. of the Boulder City/U.S. 93 Corridor Highway Project Programmatic Agreement (FHWA, 2003).

The access road will cross a portion of a concentration of domestic type artifacts associated with the Squatters Camp, named Locus 14. This portion of Locus 14 has a low artifact density and it has been previously been mitigated. There are no further testing, data recovery, or protection concerns for this locus. A small portion of the R10A water tank is located within the southeastern boundary of the Squatters Camp. There are no artifacts or features associated with the site in this portion of the APE.

On January 23, 2015 Reclamation consulted with the Nevada SHPO under a finding of No Adverse Effect for the direct effect of the undertaking to the Squatters Camp. The SHPO concurred, but requested additional information from Reclamation about indirect effects to several historic engineering resources within the viewshed of the APE. This includes the Hoover Basic Transmission Line (26CK6251/S329), and the Boulder City Branch of the Union Pacific Railroad (26CK5414/S330). On March 13, 2015 Reclamation emailed the requested documentation to the SHPO with a No Adverse Effect finding from the indirect effects. The SHPO has not responded. In accordance with 36 CFR 800.4(i), if the SHPO has entered the NHPA Section 106 process and does not object within 30 days of receipt of an adequately documented finding, the agency official's responsibilities under NHPA Section 106 are fulfilled.

There are no known TCPs or Sacred Sites at the Site or access road location.

3.3.3.2 Environmental Consequences

3.3.3.2.1 No Action Alternative

No impacts to cultural resources/traditional cultural properties/sacred sites from construction of the access road or construction at the Site would occur under the No Action Alternative. Mitigation and data recovery resulting from other projects affecting the Squatters Camp archeological site would continue.

3.3.3.2.2 Proposed Action Alternative

The Proposed Action would not have adverse impacts to cultural resources. Impacts to the Squatters Camp resulting from the access road are subject to the mitigation and data recovery taking place as a result of the Boulder City Bypass. No additional mitigation needs have been identified.

There would be no impacts to cultural resources from construction activities at the Site, as no artifacts or features have been found within the boundaries of the Site.

There would be no impacts to TCPs or Sacred Sites at the Site or access road location as none are known to occur in the area.

3.3.3.2.3 Cumulative Impacts

The Squatters Camp archaeological site has been previously impacted from power transmission lines, water and gas pipelines, and development projects. Impacts will also occur from the Boulder City Bypass. All of these impacts have or will be mitigated in accordance with NHPA Section 106 so adverse cumulative impacts to the Squatters Camp archaeological site are not anticipated.

There would be no cumulative impacts to cultural resources from construction activities at the Site, as no impacts were identified from the proposed action.

3.3.4 Visual Resources

3.3.4.1 Affected Environment

The Site is located in an open desert environment at the foot of the west slope of the River Mountains approximately 4,000 feet north of Railroad Pass and 100 feet east of U.S. Highway 93/95 in Clark County, Nevada. The Site is currently visible from U.S. Highway 93/95 and from portions of southeast Henderson and has been a feature on the landscape since its construction in 1986. The natural terrain and vegetation at the base of the River Mountains dominates the landscape immediately east and north of the Site. This area has a relatively undeveloped appearance compared to the neighborhoods and businesses located to the west, although both roads and transmission lines are visible. The area to the west and south of the Site has been visually influenced by residential developments, transmission lines, U.S. Highway 93/95, a railroad, quarry operation, and other developments.

3.3.4.2 Environmental Consequences

3.3.4.2.1 No Action Alternative

No impacts to visual resources from construction of the access road or construction at the Site would occur under the No Action Alternative.

3.3.4.2.2 Proposed Action Alternative

The Proposed Action alternative would result in the addition of visual elements to the landscape. They would be contained within the existing site and designed to blend in with the existing tank and surrounding landscape. These additional structures are expected to create only a minor change in the existing view of the Site because the tank, and the second tank which was previously located at the Site, has been a feature on the landscape for many years.

3.2.4.2.2 Cumulative Impacts

All of the projects from Section 3.1 were considered for cumulative impacts. The area in which the Site is located is expected to remain relatively undeveloped but will continue to be influenced by existing and future visual impacts. The re-alignment of U.S. Highway 93/95 will change the view in the area slightly. The re-aligned highway will be at a lower grade than it is currently, making the Site less visible from the highway. The addition of two proposed new transmission

lines, Transwest Express Transmission Project and Southern Nevada Intertie Transmission Project, would add additional visual elements. The proposed River Mountains Solar and Magic Way Solar facilities would be located some distance north of the Project and are not expected to add to the visual impact of the area surrounding the Site. Adverse visual cumulative impacts from the Proposed Action are not anticipated because the minor changes to the existing view of the Site will not have a great influence on the overall appearance of the area.

4.0 Coordination and Consultation

4.1 Agencies Consulted

Appropriate staff from NDOT were contacted to discuss access road construction activities within NDOT's ROW.

4.2 Endangered Species Consultation

Reclamation initiated formal Section 7 consultation with the Service on December 29th, 2014 for a *may affect, likely to adversely affect* determination for the Mojave population of the desert tortoise. The Service will respond with a BO on the determination. Reclamation is responsible for ensuring implementation of minimization measures and terms and conditions listed in the BO (File No. 84320-2015-F-0166).

4.3 National Historic Preservation Act Consultation

On January 23, 2015 Reclamation consulted with the Nevada SHPO under a finding of No Adverse Effect for the direct effect of the undertaking to the Squatters Camp. The SHPO concurred, but requested additional information from Reclamation about indirect effects to several historic engineering resources within the viewshed of the APE. This includes the Hoover Basic Transmission Line (26CK6251/S329), and the Boulder City Branch of the Union Pacific Railroad (26CK5414/S330). On March 13, 2015 Reclamation emailed the requested documentation to the SHPO with a No Adverse Effect finding from the indirect effects. The SHPO has not responded. In accordance with 36 CFR 800.4(i), if the SHPO has entered the NHPA Section 106 process, does not object within 30 days of receipt of an adequately documented finding, the agency official's responsibilities under NHPA Section 106 are fulfilled.

4.4 Scoping/Public Involvement

Notification of the initiation of a 30 day public comment period on the Draft EA was sent to a distribution list which includes Federal, State, and County contacts; non-governmental organizations; and other interested parties. The Draft EA was posted on Reclamation's internet site at: <http://www.usbr.gov/lc/region/g2000/envdocs.html>. A news release regarding the availability of Draft EA was sent to newspapers and other media and posted on Reclamation's website at <http://www.usbr.gov/newsroom/newsreleases>.

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