

APPENDIX B

RESTORATION PLAN

FOR THE OVERTON POWER 9-YEAR PLAN
CLARK COUNTY, NEVADA

FOR

BUREAU OF LAND MANAGEMENT
BUREAU OF RECLAMATION
OVERTON POWER DISTRICT #5

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- Attachment A. Project Maps
- Attachment B. Legal Descriptions

1.0 INTRODUCTION

This Site Restoration Plan outlines the restoration goals and objectives for the Overton Power 9-Year Upgrades Project and offers guidelines for its implementation during all phases of the construction process.

Overton Power District #5 (Power District) is proposing a 9-year project for constructing power lines and substations within their district boundary. The project proposes to add additional lines and substations and to upgrade or replace existing lines which have been in use for several years. The project is necessitated by the effort to keep pace with current and anticipated demands for power and by the need to bring the power system up to date.

Map 1 in Appendix A provides an overview of the project location and layout while Map Series 2 (Maps 2.0-2.16) provides a detailed overview of the project disturbances. The project area, or project footprint, is located on Bureau of Land Management (BLM), Bureau of Reclamation (Reclamation), and Private Lands in Clark County, Nevada and covers areas in and around Glendale, Logandale, Overton, Bunkerville, and Mesquite. Appendix B lists the Township, Ranges, and Sections the proposed action would affect. The USGS 7.5 minute topographical maps which cover the project area are also listed in Appendix B.

In all, ±103 linear miles of power lines are proposed as upgrades or new lines, totaling ±1,866 acres of proposed ROW. Of this, ±92 miles (±1,670 acres) are proposed on BLM land, ±3.5 miles (±63 acres) are proposed on Reclamation land, and ±7.4 miles (±133 acres) are proposed on private land. In addition 6 substations have been proposed at 5-10 acres each for an additional 45 acres of proposed ROW. Access to the project will be provided using existing Power District maintenance roads and from ±15.5 miles of existing two track roads outside the ROW which are not currently utilized by the Power District. These roads have been proposed for temporary site access until access roads within the ROW are constructed. These roads will not be modified as part of the project.

Knight and Leavitt Associates (K&LA) has been retained by the Power District to complete a site restoration plan for this project. The restoration plan follows guidelines established by the BLM for energy projects completed within the jurisdiction of the BLM Las Vegas Field Office (BLM and Native Resources, 2001) and further incorporates concepts of recently completed and ongoing restoration projects and research in the region.

The goal of restoration is to reduce, to a “not significant” level, the impacts to public lands associated with the construction and maintenance of the proposed project resulting in disturbances to the native environment. Due to the large number of applications for power upgrades in Southern Nevada, the BLM developed a Restoration Plan for Energy Projects in the Las Vegas Field Office, BLM (2001). The impacts of a construction project may affect multiple aspects including soils, visual, vegetation, wildlife, and sensitive species. Restoration of surface disturbances enables natural recovery to occur more quickly and ultimately reduces the cumulative effects of multiple disturbance events. Successful restoration significantly reduces the time required for the disturbed environment to return to its natural state.

The restoration plan outlined for the Overton Power 9-Year Upgrades Project follows guidelines put in place by the BLM Las Vegas Field Office. The plan provides protocols for implementing and monitoring the restoration of lands disturbed during construction. The plan outlines site specific needs for this project while addressing the overall objectives outlined by the BLM. The implementation of this restoration plan, meets the requirements stipulated by the National

Environmental Policy Act (NEPA) as well as multiple federal, state and local conservation plans including the Endangered Species Act, the Las Vegas Resource Management Plan (RMP; BLM, 1998), and the Clark County Multiple Species Habitat Conservation Plan (MSHCP; RECON, 2000).

2.0 PROJECT IMPACTS

2.1 Proposed and Existing Disturbances

For the Overton Power 9-Year Upgrades Project the total amount of overall proposed disturbance is ±575 acres. Table 1 provides an overview of the proposed disturbance for each governing agency.

Table 1. Disturbance in acres for each governing agency on the Overton Power 9-Year Upgrades Project.

Governing Agency	Permanent Disturbance	Temporary Disturbance	Total Disturbance
BLM	321.2	184.2	505.3
Reclamation	23.9	19.8	43.7
Private	18.2	17.8	36.1
Totals	363.3	221.8	585.1

Permanent disturbances for the proposed Overton Power 9-Year Upgrades Project are those areas which will be utilized and maintained by the Power District for the duration of the ROW grant. These long term use areas include land for substations, access roads, spur roads, and power pole sites.

The plan proposes six new substations, two would be built adjacent to existing lines and four would be built in areas with newly proposed lines. Site access will differ in areas with existing lines and areas proposed for new lines. For line upgrades and new lines being constructed parallel to existing lines, the Power District has proposed the use of established maintenance roads which are presently utilized for their existing lines. Spur roads would be required to connect existing maintenance roads to the pole sites along new lines running parallel to existing lines. To limit disturbances outside of the proposed ROW, these spur roads have been designed to utilize existing spur roads or other areas of existing disturbance where feasible. For the new power lines proposed in the project which are not being constructed parallel to existing lines, new access roads will be constructed within the proposed ROW. These access roads are designed to be 12 feet in width and will provide direct access to the power poles located along each of the new lines. These roads will be maintained by the Power District for the duration of the grant.

Power pole sites will likewise be maintained by the Power District for the duration of the ROW grant. These areas must be clear of vegetation to provide an adequate buffer for fire prevention. Areas immediately surrounding the guy wire anchors at each of the turn locations will also be left clear of vegetation to provide access for maintenance.

Temporary disturbances are those areas which are intended for use only during construction and will be restored upon completion of the construction period. Temporary disturbance areas include the pulling and tensioning sites, and temporary access roads. All staging areas, temporary storage areas, and lay down sites will utilize existing facilities or the areas cleared for the proposed substations. Temporary parking, pull out and turn around locations, and similar areas required for vehicular travel will likewise utilize proposed disturbance areas such as spur roads or pole sites. All areas of proposed disturbance are to be clearly marked and easily

recognizable. Travel outside of proposed disturbance areas is prohibited and could result in fines or penalties and will require immediate restoration.

All proposed temporary access roads have been planned to utilize existing roads and trails. These will be used to provide access for passenger vehicles until the new permanent access roads within the ROW have been constructed. The use of these existing roads will not result in any new or additional disturbances in the area.

Much of the proposed ROW has been disturbed from previous events including existing and expired rights-of way, access roads, paved roads, structures, dumping, water impoundment (Bowman Reservoir), erosion, development, agriculture, grazing, materials excavation, light recreation (hiking, camping, fire rings), off road vehicle (ORV) use, and illegal dumping. Of the ±575 acres of proposed disturbance, ±314 acres are in areas of existing disturbance and ±261 acres are projected as new disturbances. Existing disturbances are likewise common in other areas within the ROW not proposed for construction activities. Weeds have become a common problem in disturbance areas. A weed management plan has been submitted the BLM for the project. Aspects of the Weed Management plan relevant to restoration have been implemented into the Restoration Plan.

2.2 Disturbance Levels

Permanent disturbance areas do not require restoration but do require appropriate pre-construction actions such as relocation of cacti and yuccas. Clean up of areas along fence lines and soil stockpiles may need to be addressed following construction. These areas also require post construction monitoring for the presence of noxious weeds.

Disturbances requiring restoration are broken down into three levels. These are D1) overland drive and crush, D2) clear and cut, and D3) clear and cut with soil removal. On the Overton Power 9-Year Upgrades Project, all temporary disturbances are planned as level D1-overland drive and crush at the pulling and tensioning sites. No other levels of temporary disturbances are proposed. Figure 1 depicts the proposed disturbances of angle pull/tension sites and tangent pull/tension sites which are the two types of pulling and tensioning sites to be used during construction.

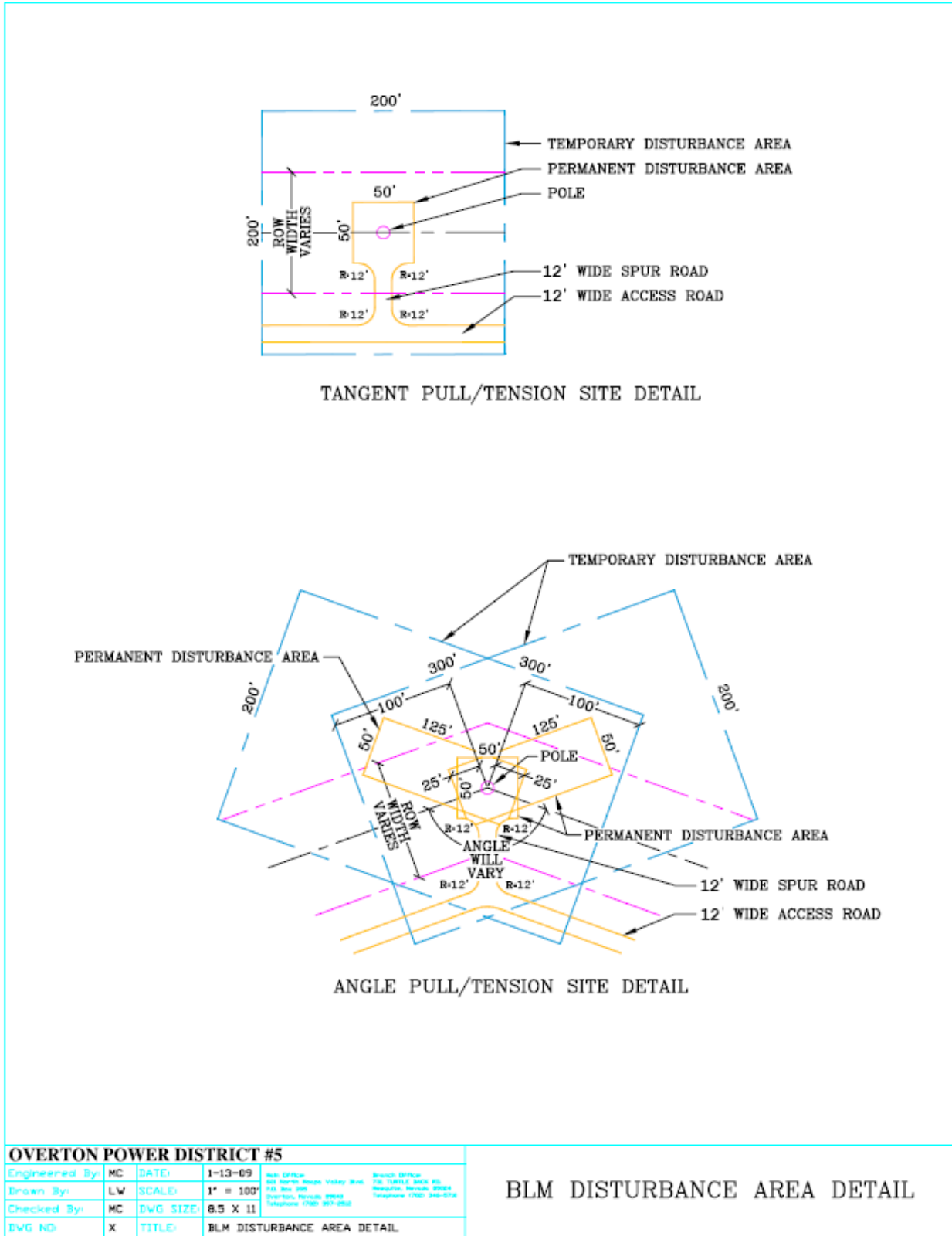


Figure 1. Proposed Disturbances at Pull and Tension Locations.

BLM guidelines for restoration of level D-1 disturbances are as follows.

D-1. Overland Drive and Crush.

Disturbance caused by accessing a site without significantly modifying the landscape. Vegetation is crushed but not cropped. Soil is compacted, but no surface soil is removed. Even though vegetation may be damaged and even destroyed, the surface soil and seed bank remains in place. Some crushed vegetation will likely resprout after disturbance ceases. These activities would result in minimal to moderate disturbance. Pulling and tensions sites are anticipated to generate this type of disturbance. General restoration actions include:

Pre-construction

- Seed collection
- Plant propagation, if required
- Cactus and yucca salvage and relocate outside of disturbance area (within the ROW)

Post Construction

Earthworks: selectively decompact terrain, if required, or erase tracks, pitting or imprinting to enhance water retention

- Shrub outplanting, if required
- Stabilize soil surface
- Reseed
- Install restoration signs
- Monitor

2.3 Restoration Levels

Portions of the proposed project pass through the Mormon Mesa and Virgin River Areas of Critical Environmental Concern (ACECs, see Map 3 in Appendix A). In all cases, the proposed power lines which pass through the ACECs will parallel or replace existing lines. Within the ACECs, where disturbances are planned to complete the project, the proposed plan utilizes existing disturbance areas to the maximum extent possible.

The lands proposed for the Overton Power Systems Upgrade Project primarily fall under restoration levels of R2 and R3 as designated by the BLM (see Map 4 in Appendix A). These lands include multiple use areas in which human activities are not precluded, but where significant areas of undisturbed natural vegetation do occur. Levels designated as R2 are “High Priority Recovery Areas. Management on these lands is oriented toward actions which reduce human impacts to the landscape for the purposes of recovery of federally listed or special status species, preservation of scenic values, or protection of cultural property.” Restoration levels designated as R3 are “Medium Priority Recovery Areas. Management on these lands limits, either spatially or temporally, the range of uses on lands to protect sensitive resources” (BLM and Native Resources, 2001).

All areas within the ACECs and all lands containing BLM special status plant species will be treated at the restoration level of R2. Those lands determined to be heavily impacted by human interaction which do not contain critical habitat for special status species have been designated at restoration level R4 (Multiple Use Areas). The remaining land within the project area has

been designated at restoration level R3. Table 2 shows the acres of proposed temporary disturbance for each restoration level. The required standard for success for restoration level R2 is 70 percent of vegetation cover, density, and species richness compared to native habitat in close proximity to the disturbed sites. For restoration levels R3 and R4 the required standard is 60 percent.

Table 2. Projected disturbance (in acres) on the Overton Power 9-Year Upgrades project for each Restoration Level

Temporary Disturbance (D1)	Restoration Level		
	R2	R3	R4
BLM	142.7	34.6	1.2
Reclamation	4.0	10.3	5.6
TOTAL	146.7	44.9	6.8

3.0 RESTORATION DETAILS

The restoration plan is divided into five sections: 1) Survey and Planning, 2) Pre-construction, 3) Construction, 4) Post-construction, and 5) Monitoring. These activities are sequential in nature.

3.1 Survey and Planning Activities

The following activities are to be completed prior to the start of pre-construction restoration actions. These activities include 1) inventory 2) project area survey 3) identification of disturbance levels 4) determination of restoration levels and 5) vegetation and special status plant inventories. Further, all necessary comments and approvals required by the governing agencies and through the NEPA process are to be addressed and all necessary permits obtained prior to pre-construction activities. A GIS coverage (ArcView shapefile or ArcInfo export file) and map of the project area will be provided to the BLM prior to the start of pre-construction actions showing the special status plant habitat, temporary use areas, permanent use areas, and their corresponding disturbance and restoration levels.

The survey and planning activities have been addressed as follows.

1. *Inventory.* The Overton Power 9-Year Upgrades Project will utilize existing roads for all access to and from the project ROW. All construction materials will be stored at existing Power District facilities or within proposed permanent disturbance areas.
2. *Survey project.* An ArcView shapefile covering the complete project plan has been submitted to the BLM for review.
3. *Identification of Disturbance Levels (D1 - D3).* All temporary disturbances proposed for the Overton Power 9-Year Upgrades Project are planned as level D1-overland drive and crush. Temporary disturbances will be limited to the pulling and tensioning sites.
4. *Determination of Restoration Levels (R1 - R4).* All areas within the ACECs and all areas containing sensitive plant species will be treated as restoration level R2. Developed areas which have been heavily impacted will be treated as restoration level R4. The remaining areas will be treated as restoration level R3 (see Table 2 and Map 4 in Appendix A).

5. *Vegetation and special status plant inventories.* A technical botanical report covering vegetation and special status plant species (K&LA, August 27, 2012) and a Weed Management Plan (K&LA, August 24, 2012) have been submitted to the BLM.

3.2 Pre-construction Actions

The following is a description of restoration actions that are to be performed prior to the beginning of construction on the project. This includes 1) training; 2) survey and mark the ROW and areas of disturbance; 3) noxious weed survey and treatment; 4) cordon off areas requiring avoidance; 5) establish restoration photo points; 6) seed collection and plant propagation, as required; 7) succulent plant salvage.

1. *Training.* All employees entering the job site shall be trained by competent personnel on the following restoration issues: a) completing all activities within the proposed areas of disturbance and minimizing construction impacts, b) identifying sensitive resources including but not limited to flora, fauna, cultural, and paleontological resources, c) understanding the effects of noxious and invasive weeds and basic measures each worker should follow to prevent the spread of invasive plants.
2. *Survey and Mark the ROW and Areas of Disturbance.* The project ROW and all areas of proposed disturbance shall be surveyed and marked so that all contractors, subcontractors, and personnel will be aware of all project boundaries. All work is to be completed within the allotted areas of disturbance as outlined in the approved plans.
3. *Noxious Weed Survey and Treatment.* The project ROW and all areas of proposed disturbance shall be surveyed for noxious weeds and treatments made as per the Weed Management Plan. This includes, but may not be limited to populations of Malta star thistle, Russian knapweed (if observed), and hairy rupturewort. Large populations of Sahara mustard may also require pre-construction treatments to effectively reduce the spread of this noxious weed during and following construction.
4. *Cordon Off Areas of Avoidance.* Prior to beginning work and during all phases of construction, areas regarded as containing sensitive resources or as being high risk for the spread of noxious weeds will be cordoned off or flagged by the Power District to prevent access until management efforts have been implemented as directed by the appropriate governing agency.
5. *Establish Photo Points.* Prior to beginning work, photo points will be selected and photographs taken at locations throughout the project area. These sites will be used to evaluate restoration success upon completion of the project and restoration actions. Photographs of reference locations will also be taken.
6. *Seed Collection and Plant Propagation (as required).* Seed collection will start two years in advance of construction and is to be completed using BLM approved methods or an approved contractor. All seed collection will be performed within 2,000 meters of the ROW. All seed will be cleaned and tested to ensure it meets industry norms for purity and germination. Table 3 provides a representative seed mix for the project although the final seed mix will be determined upon seed availability prior to construction. The final seed mix is to be approved by the BLM. Since all disturbances will be limited to overland drive and crush and no blading or shrub removal will occur, collection of additional perennial plant material will not be required. Maintaining an intact perennial vegetation cover and seed bank during construction will likewise

Table 3. Proposed Seed Mix for Restoration Activities on the Overton Power 9-Year Upgrades Project.

reduce the overall amount of native seed required to adequately reestablish the perennial flora.

7. *Succulent Plant Salvage.* Cactus and yucca salvage is to be conducted according to BLM guidelines (BLM, 2013) by a qualified contractor with a minimum of three years' experience in the Mojave Desert. Cacti that are subject for salvage shall be identified on site with flagging tape. Barrel cacti (*Ferocactus cylindraceus*) and Joshua trees (*Yucca brevifolia*) are to be flagged in such a way as to identify their orientation so they can be moved and replanted with the same orientation. All salvaged cacti and yuccas shall be moved to new locations out of harm's way, within the ROW, and fairly near the salvage location. Where feasible, this may include previous project impact areas. Also, where feasible, all cacti and yuccas are to be replanted in similar conditions to their original location (soil type, exposure, depth, etc.) and preferably in areas known to contain the same species. Care should be taken to maintain the integrity of the root system and remove as much soil around the roots as is feasible. Once transplanted the cacti and yuccas are to be watered according to BLM guidelines or as approved by the BLM. Soil at the base of each plant should be firmly compacted leaving no exposed roots and minimizing air pockets. The location of each transplanted specimen is to be recorded for monitoring and maintenance purposes. The health of all transplanted succulents is to be carefully monitored during restoration activities including the watering schedule and techniques and mortality rates. The minimal anticipated survival rate for salvaged cacti and yucca is 80 percent.

Table 3. Proposed Seed Mix for Restoration Activities on the Overton Power 9-Year Upgrades Project.

Plant taxon*	Target number of live seeds per square meter
Creosote (<i>Larrea tridentata</i>)	40
White bursage (<i>Ambrosia dumosa</i>)	40
Four-wing saltbush (<i>Atriplex canescens</i>)	20
Cheesebush (<i>Ambrosia salsola</i>)	20
Ratany (<i>Krameria erecta</i> , <i>K. grayi</i>)	20
Apricot globemallow (<i>Sphaeralcea ambigua</i>)	20
Indian ricegrass (<i>Achnatherum hymenoides</i>)	20
Big galleta grass (<i>Pleuraphis rigida</i>)	20
TOTAL	200

* Additional favorable taxa could include Nevada Ephedra (*Ephedra nevadensis*), desert marigold (*Baileya multiradiata*, *B. pleniradiata*), pincushions (*Chaenactis carphoclinia*, *C. fremontii*), Virgin River brittlebush (*Encelia virginensis*), dune primrose (*Oenothera deltooides*), paperflower (*Psilostrophe cooperi*), brown plume wirelettuce (*Stephanomeria pauciflora*), and desert indianwheat (*Plantago ovata*).

The overall pounds per acre would be dependent on the final seed mix and viability from seed testing. This is to be determined by the qualified biologist/restoration ecologist prior to application and approved by the BLM.

3.3 Restoration Activities during Construction

As construction proceeds, activities are carried out which facilitate successful restoration. These include 1) noxious and invasive weed surveys and treatments, 2) maintaining proposed disturbance areas, 3) maintenance of succulents, propagated plants, and vertical mulch.

1. *Noxious and Invasive Weed Surveys and Treatments.* During construction and for three years following site restoration, the project footprint shall be inspected for the presence of noxious and invasive weed infestations by a qualified weed specialist approved by the BLM. As per the Weed Management Plan (K&LA August 24, 2012) these inspections are to take place a minimum of three times a year (early spring, mid-spring, and following the monsoon season in late summer or early fall) and a brief summary submitted to the BLM. Of particular concern are those invasive and non-native species not known to be well established in the project area. All treated areas are to be revisited and photo documented during each monitoring period. All observed infestations are to be recorded, photographed, and submitted to the BLM. Infestations are to be promptly treated using the control measures discussed under treatment methods of the Weed Management Plan. Inspections are to be completed at least three times annually in the early spring (prior to April 1), mid-spring (prior to May 15), and following the monsoon season in late summer or early fall (prior to September 30). A brief summary of each survey shall be prepared and submitted to the BLM.
2. *Maintaining Proposed Disturbance Areas.* Periodically during construction the project proponent shall insure that disturbances within the project ROW are limited to proposed areas of disturbance. This shall include a visual inspection of all areas in which activities have been taking place. The person or persons completing each inspection shall insure that the disturbance boundaries are well defined and that all ground disturbances are within these areas as outlined in the construction plan. In the event that construction related disturbances are noted outside of the proposed areas of disturbance, these are to be noted and photographed. To minimize further disturbances in these areas, restoration of disturbed areas outside of the proposed ROW should be completed as soon as they are noted. These areas are to be checked in subsequent surveys as well as during restoration monitoring. Although seeding is included as an integral part of the restoration plan, the restoration plan further relies on minimal disturbance to perennial vegetation. It is anticipated that avoidance of perennial plants will be encouraged and that methods will be selected during pulling and tensioning activities which will reduce the overall ground disturbances and greatly enhance the rates of recovery.
3. *Maintenance of Succulents.* Succulents salvaged prior to construction shall be maintained as per the BLM Guidelines for Cactus and Yucca Salvage in order to achieve an 80 percent or greater survival rate.

3.4 Post-construction Actions

The following is a description of actions that are implemented after the completion of construction activities, and include 1) earthwork and surface stabilization, 2) seeding 3) installation of appropriate barriers and signage, and 4) monitoring.

1. *Earthwork.* It is recommended, due to the small areas affected and to avoid further harm to the soil surface, that all loosening of the terrain from soil compaction and removal of tracks is to be manually accomplished. Where compaction of soils is apparent, the soils can be loosened using hand tools such as a rake or hoe. All tracks are to be removed

and the area generally left in the condition that existed prior to the disturbance. Following this process the soil will be wetted to a depth of 2" to provide stabilization and prevent erosion. The site will be left adequately rough to provide micro sites for seed germination and to reduce soil movement.

2. *Seeding.* Using the seed mix obtained during pre-construction activities, or a similar mix approved by the BLM, each restoration area shall be seeded to promote native plant growth. The methods and rates of application are to be approved by the BLM prior to seeding and will depend on the final composition and viability of the seed mix and required soil preparation. A coverage of 200-400 live seeds per square meter is required. Since the soil seed bank will remain essentially intact during the construction process, a coverage nearer to 200 seeds per square meter should be sufficient. In areas identified from the technical botanical report (K&LA August 27, 2012) as mesquite habitat, planting of mesquite may be required using current BLM protocols and approved methods. It is recommended that cacti and yuccas only be moved one time and not be replanted in their original locations. However, during subsequent phases of the project, newly salvaged cacti and yucca may be placed into restored areas, as appropriate, to replace cacti and yuccas which were previously removed.
3. *Installation of Appropriate Barriers and Signage.* All restoration areas are to have signs installed at regular intervals to deter vehicular damage to the site. Where signage is not adequate it may be necessary, as determined by the BLM, to install additional barriers or deterrents to inhibit or prevent ORV and public use. Fencing may also be required in areas where grazing cattle may trample and destroy restoration efforts. The Power District will work with the BLM to insure that adequate restoration signs and t-posts are installed and that deterrent methods selected are effective. Sign locations and additional deterrent methods will be provided to the BLM following completion of post-construction restoration procedures.
4. *Monitoring.* Following construction, monitoring of all restored areas shall proceed as outlined in the monitoring plan provided below. All restoration monitoring shall be completed by a qualified biologist or restoration ecologist approved by the BLM.

4.0 RESTORATION MONITORING AND REPORTING

4.1 Monitoring

Monitoring standards have been established by the BLM for energy projects in the Southern Nevada District Office (see BLM and Native Resources, 2001 and BLM, January 18, 2013). The long term goal for restoration is to restore the structure and function of the disturbed site. Restoration is considered successful if plant cover, density, and species richness of the dominant native perennial vegetation is equal to, or exceeds, the designated percentage of the values for these parameters in undisturbed reference areas. Plant cover is a measure of the amount of ground covered by vegetation. Density is the number of plants which are rooted and growing and species richness indicates the number of different species growing at the site. For restoration levels designated R2 the success standard is 70 percent for each success parameter. For restoration levels designated R3 and R4 the percentage is set at 60.

The purpose of monitoring is to evaluate the success of the restoration effort by measuring the success parameters (plant cover, density, and species richness) and other key site

characteristics (i.e. erosion, pattern of vegetation, animal use, invasion by exotic species). For relatively small sites, or sites with limited disturbance, qualitative observations are sufficient to determine the success of the restoration process. For larger sites, qualitative and quantitative methods are required to fully analyze the effectiveness of restoration efforts. Monitoring and reporting will further determine necessary adjustments which may be required for successful remediation and will provide the BLM with documentation necessary to approve the restoration efforts and allow the bonds held by the BLM to be released. For the Overton Power 9-Year Upgrades Project the level of disturbance is relatively low (D-1) while the area disturbed is fairly high (approximately 200 acres). While qualitative monitoring will provide sufficient evaluation during most of the monitoring period, quantitative monitoring will also be utilized periodically to provide unbiased and statistically relevant data of the restoration efforts.

Site monitoring will begin with preconstruction activities (seed collection, succulent salvage, weed treatments) and continue until the success standards have been achieved. Monitoring and reporting will be under the supervision of a qualified biologist or restoration ecologist. Shortly following completion of construction on each phase of the project, an as built report will be provided to the BLM as described below. This will initiate the beginning of the six year post-construction monitoring period for that phase. Table 4 outlines the projected monitoring, reporting, and maintenance schedule to be followed during the six year monitoring period. Since the Overton Power 9-Year Upgrades Project is projected to be built in separate phases, multiple preconstruction, construction, and monitoring activities may be carried out simultaneously. The monitoring schedule has been projected for six years. However, since all temporary disturbances projected for the project are overland drive and crush (D-1), it is not expected that extensive damage will be done to the perennial vegetation and recovery will likely be faster than on similar sites which are completely cleared of vegetation. For this reason, if performance standards have been met prior to the six year period, a final report requesting the BLM to approve the project and release the bonds can be made sooner. After six years, if the desired performance standards have not been achieved, further remediation efforts may be required.

4.1.1 Qualitative Monitoring

The goal of qualitative monitoring will be to quickly assess each restoration site and determine if the restoration efforts appear to be on target or whether corrective measures are required. A Qualitative Monitoring Form should be utilized to provide consistent analysis throughout the monitoring period. During the site visit, the restored area is to be photographed at selected photo points and visual observations are made and recorded. Observations during qualitative monitoring will include a visual analysis of the success parameters (cover, density, and species richness) and other key site characteristics such as growth success of the plants included in the seed mix, perennial recovery, pattern of vegetation, weeds, native plant recruitment, erosion issues, animal observations and site use, soil microflora, and public use. Any additional observations which may affect site recovery should be noted during the site visit. Any maintenance issues (erosion, trash, weeds, fencing needs) should be reported by email to the Power District immediately following the site visit. All monitoring efforts will also include an evaluation of the success of the cactus and yucca salvage, including representative photographs.

Table 4: Monitoring, Reporting, and Maintenance Schedule for the Overton Power 9-Year Upgrades Project.

Tasks	Year 1	Year 2	Years 3-5	Year 6
<i>Qualitative Monitoring</i>				
Site inspections/ visual assessments	Quarterly	Semiannually	Annually	Annually
Photo monitoring	Quarterly	Semiannually	Annually	Annually
<i>Quantitative Monitoring</i>				
Transect/plot monitoring	As needed	Yes	Year 4	Yes
<i>Reporting</i>				
Upon completion of construction	As-Built			
Progress Reports via email	Quarterly	Semiannually	Annually	NA
Annual Report	Yes	Yes	Yes	Yes
<i>Maintenance</i>				
Weeding *	As needed	As needed	As needed	As needed
Fencing inspections/repair	As needed	Semiannually	Annually	Annually
Trash removal	As needed	Semiannually	Annually	Annually

* As per the Weed Management Plan (K&LA August 24, 2012) weed inspections are to take place a minimum of three times a year (early spring, mid-spring, and following the monsoon season in late summer or early fall) for three years following restoration and a brief summary submitted to the BLM. Weed inspections are to cover the entire project footprint and not only restoration areas.

4.1.2 Quantitative Monitoring

Quantitative monitoring will be used biennially to objectively evaluate whether the project has met, or is on track to meet the restoration performance standards. Quantitative monitoring is used to measure success parameters of restored sites with nearby undisturbed or natural reference sites. Sample locations within both the reference area and reclaimed area are randomly selected. Sample size adequacy should be calculated to ensure a sufficient number of samples are taken to estimate the means for success parameters with a given level of confidence. If the mean for a given success parameter is less than the standard (i.e., 70% of the reference area mean) a statistical comparison is made with a one sample, one-sided t-test (with $\alpha=0.10$ and $\alpha=0.20$). Failure to reject the null hypothesis that the reclaimed area value is greater than or equal to 70% of the reference area value for each parameter (cover and density) indicates that the site has been successfully reclaimed.

Species richness is evaluated by comparing the total number of native perennial plant species encountered in the measured area of the reclaimed site to that of the reference area. Species richness of the reference area is based on the same amount of area that was sampled within the restored site. Because species richness is based on the entire measured area of a site, there is no measure of variation, and therefore no statistical test can be performed. Therefore, a comparison of the absolute numbers of species to the reference area must be made.

4.2 Performance Standards

Under BLM Southern Nevada District Office restoration guidelines, restoration will be considered successful if plant cover, density, and species richness of the dominant native perennial vegetation is equal to or exceeds 70 percent for R2 designated lands and 60 percent for R3 and R4 designated lands (BLM and Native Resources, September 2001). Regular monitoring provides consistent evaluation of these success standards. To determine if restoration efforts are progressing toward the final goal of achieving the success standards to following targets have been established.

- Year 1: Qualitative evaluation. Growth of plants contained in the seed mix is noted. New growth of perennial species damaged during construction is likewise noted. Weeds are absent or minimal. Growth of native annual species is noted. The site should have no significant concerns with grazing or public use. Damage to the site from public use or grazing may require fencing or other barriers or signage to limit use and promote recovery. No other issues are noted which could significantly reduce restoration success. In areas where mesquite trees have been planted, these should be healthy and showing new growth. If restoration efforts do not appear to be proceeding as anticipated, the process should be reviewed and adjustments made as necessary. Salvaged cacti and yuccas will also be checked and the success of salvage efforts reviewed.
- Year 2: Quantitative evaluation. Success parameters should be approximately 30 percent of the final target. Thus native perennial cover should be ± 25 percent in R2 designated areas and ± 20 percent in R3 and R4 designated areas. Perennial species density should be about 80 percent of the native undisturbed areas assuming that germination and growth of plants from the seed mix has been successful. Likewise species richness should be similar. Weeds should be minimal (less than 2 percent of the species density). In areas where mesquite trees have been planted, these should be healthy and actively growing. No other issues are noted, including public use and grazing, which could significantly reduce restoration success. If restoration efforts are not proceeding as anticipated, the process should be reviewed and adjustments made as necessary. Salvaged cacti and yuccas will also be checked and the success of salvage efforts reviewed.
- Year 3: Qualitative evaluation. Restoration efforts should be showing considerable success with a significant observable amount of ground cover in restored areas (approximately 30 percent) and 60 – 70 percent of the native perennial density. Species richness should be similar to undisturbed area and non-native weedy species should be minimal. In areas where mesquite trees have been planted, these should be healthy and actively growing. No other issues are noted, including public use and grazing, which could significantly reduce restoration success. If restoration efforts do not appear to be proceeding as anticipated, the process should be reviewed and adjustments made as necessary. Salvaged cacti and yuccas will also be checked and the success of salvage efforts reviewed.
- Year 4: Quantitative evaluation. Success parameters should be approximately 60 percent of the final target. Thus native perennial cover should be ± 50 percent in R2 designated areas and ± 40 percent in R3 and R4 designated areas. Perennial species density should be about 60 percent of the native undisturbed areas. Likewise species richness should be similar. Weeds should be minimal (less than 2 percent of the species density). In areas where mesquite trees have been planted, these should be healthy and actively growing. No other issues are noted, including public use and grazing, which could significantly reduce restoration success. If the success standards have been achieved at this point, a final report may be submitted to have the bonds released and further monitoring requirements removed. If restoration efforts are not proceeding as anticipated, the process should be reviewed and adjustments made as

necessary. Salvaged cacti and yuccas will also be checked and the success of salvage efforts reviewed.

Year 5: Qualitative evaluation. Restoration efforts should be nearing completion. Ground cover in restored areas will be at approximately 50 percent. Species density should be near the target parameters and species density and richness should appear similar to native, undisturbed areas. Weeds should be minimal. In areas where mesquite trees have been planted, these should be healthy and actively growing. No other issues are noted, including public use and grazing, which could significantly reduce restoration success. If the success standards appear to have been achieved at this point, a final quantitative analysis and report may be completed and submitted to have the bonds released and further monitoring requirements removed. Salvaged cacti and yuccas will also be checked and the success of salvage efforts reviewed.

Year 6: Quantitative evaluation. All target success parameters should have been met. No other significant areas of concern, including public use and weeds should be noted. A final report is to be submitted for bonds to be released. If the success parameters have not been achieved, further restoration efforts or mitigation may be required.

4.3 Reporting

4.3.1 As-Built Report

Within 30 days of the completion of project construction and site restoration, an As-Built report is to be submitted to BLM for approval. Once approved, the six year monitoring, maintenance and reporting period will begin. The purpose of the As-Built report is to document implementation and success of the restoration activities prior to and during construction and to insure that all measures are in place for monitoring activities.

At a minimum the As-Built report will include:

- Discussion of how the project was implemented, key personnel responsible for the project, any problems encountered and how they were resolved.
- A chronology of the implementation with dates and names of contractors and key personnel responsible for implementing restoration tasks.
- Photo documentation of all milestone restoration tasks (i.e. earthwork, seeding, signage)
- Copies of field notes or log entries from biological monitors present.
- A map of the restoration site indicating treatment locations, the location of photo points, quantitative reference sites and monitoring sites. The locations of salvaged cacti and yuccas will also be provided.
- Scans of the seed tags or any germination viability testing performed on wild collected seed used for seeding.
- Copies of dated invoices from contractors and subcontractors that provided services for the project.
- Written protocols for all qualitative and quantitative monitoring procedures including the data forms which will be used and the methods of analysis.

4.3.2 Progress Reports

Progress reports will be provided to BLM shortly after site visits using the schedule provided in Table 4. The purpose of the progress reports is to document regular site monitoring by an authorized biologist or restoration ecologist. Progress reports are not expected to be extensive and are anticipated to be delivered in an email or similar format.

At a minimum, the progress reports will include:

- The dates and name(s) of the biological monitor(s) completing the site assessments.
- A brief discussion of site conditions.
- A discussion of problems encountered with recommendations for corrective actions, if necessary.
- The dates and a brief description of all maintenance activities completed during the monitoring period.

4.3.3 Annual Reports

Annual reports will provide a more thorough analysis of the restoration efforts than progress reports and are to be submitted to the BLM no later than December 31 of each calendar year. The annual report will provide a summary of each year's monitoring and maintenance efforts; including weed surveys and treatments, and cacti and yucca success rates. Updated maps, field notes, and photo documentation may also be submitted as part of annual reports. Comparisons between the projected success standards and the actual success standards are to be made using the guidelines provided in Section 4.2 (Performance Standards). An annual report may likewise serve as a final report if the success standards have been met (based on a quantitative evaluation) and the Power District is seeking to be released of further monitoring obligations. Additional problems and concerns are likewise to be addressed along with recommendations for corrective measures as needed. If the recommended annual performance goals are not achieved, corrective actions will likely be necessary. Making corrective actions early in the project during the first or second growing season is particularly important to keeping the project on schedule for completion in the 6 year timeframe. Corrective actions could include, but are not limited to, reseeding, weed treatments, installing and maintaining container plantings (including wire cages if necessary), and installing protective fencing or barriers to protect specific sites.

4.4 Project Release

Once the success standards have been achieved, as determined by a quantitative analysis, a final report will be submitted requesting the project to be declared as completed and the bond released. Bonds held by BLM for a given project phase will not be eligible for release until the final performance standards are achieved. If the minimum levels are not achieved, then corrective actions or additional growing seasons will be necessary. If the project has not achieved the performance standards within the 6 year timeline, the proponent remains responsible for continuing project maintenance, monitoring and reporting until the standards are achieved or until BLM determines sufficient progress has been made and releases the project.

The Power District will use all reasonable methods, including remediation, to help ensure that the restoration standards are met on all disturbed sites. However, it is possible that some sites will be incapable of supporting adequate vegetation to meet the standard because of natural or project-caused conditions. Restoration efforts will cease on those sites after all reasonable measures to restore these areas have been taken.

5.0 RESPONSIBILITIES

The Power District is responsible for implementing the Restoration plan and providing all funding and the technical details required to achieve the success standards outlined herein. The Power district is to coordinate all efforts with a qualified biologist/restoration ecologist with a minimum of three years in reclamation activities in the Mojave Desert. The qualified biologist/restoration ecologist must demonstrate the technical skills necessary to complete the entire restoration plan and will provide guidance to assist the Power District in achieving the desired success standards. The qualified biologist/restoration ecologist will provide the training required to educate all personnel as required in the restoration plan. The qualified biologist/restoration ecologist will monitor, analyze, and report all aspects of the restoration plan to the Power District who is responsible for all reporting to the BLM. The Power District is responsible for overseeing all reasonable actions deemed necessary by the BLM to achieve the target success standards.

All subcontractors hired by the Power District for the implementation of the restoration plan are to have a minimum of two years in performing restoration activities in the Mojave Desert. The subcontractors are to perform those portions of the restoration plan as directed by the Power District under the supervision of the qualified biologist/restoration ecologist.

6.0 REFERENCES

- BLM, Las Vegas Field Office and Native Resources. September 2001. *Restoration Plan for Energy Projects in the Las Vegas Field Office Bureau of Land Management*. United States Department of the Interior Bureau of Land Management. Las Vegas Field Office. Las Vegas, Nevada.
- BLM, Las Vegas Field Office. May 1998. *Proposed Las Vegas Resource Management Plan and final Environmental Impact Statement*. United States Department of the Interior Bureau of Land Management. Las Vegas Field Office. Las Vegas, Nevada.
- _____. January 18, 2013. Restoration plan for US Ecology right-of-way for the Administrative Site Relocation Project DOI-BLM-NV-S030-2013-0004-EA. United States Department of the Interior Bureau of Land Management. Las Vegas Field Office. Las Vegas, Nevada.
- _____. 2013. Salvage, stockpiling, and final transplanting of cacti and yucca. United States Department of the Interior Bureau of Land Management. Las Vegas Field Office. Las Vegas, Nevada. Received via e-mail from Fred Edwards on June 5, 2013.
- Knight and Leavitt Associates. August 21, 2012. A biological assessment for the Overton Power 9-year plan, Clark County, Nevada. Knight and Leavitt Associates, Las Vegas Nevada.
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- Regional Environmental Consultants (RECON). 2000. *Clark County Multiple Species Habitat Conservation Plan and Environmental Impact Statement*. Clark County Department of Comprehensive Planning. Las Vegas, Nevada.

ATTACHMENT 1. Maps

ATTACHMENT 2. Legal Descriptions

Legal description of the Overton Power 9-Year Plan Upgrades Project

The legal description of the project area is provided in two formats. Table B-1 presents the data in columns listing each section by township and range and provides the USGS 7.5 minute topographic map on which that section occurs. Sections which occur on multiple USGS maps are repeated for each map on which they occur. The second representation is provided in Table B-2 which presents the data in tabular form and provides a more detailed breakdown to 1/4th of a quarter section. The entire project is within the Mount Diablo Meridian. Maps 2.1 to 2.16 located in Appendix A provide an overview of the project area.

Table B-1. Legal description of the Overton Power 9-Year Plan Upgrades Project (columnar).

Each line lists (in order) Township, Range, Section, and USGS 7.5 minute topographic map. Each value is separated by a semicolon.

- | | |
|---|--|
| <ul style="list-style-type: none"> • 13S; 68E; 34; Moapa Peak NV • 13S; 68E; 34; Moapa Peak SE NV • 13S; 68E; 35; Moapa Peak SE, NV • 13S; 68E; 36; Moapa Peak SE NV | <ul style="list-style-type: none"> • 14S; 67E; 28; Overton NW, NV • 14S; 67E; 29; Moapa East, NV • 14S; 67E; 30; Moapa East, NV • 14S; 67E; 31; Moapa East, NV • 14S; 67E; 32; Moapa East, NV • 14S; 67E; 33; Moapa East, NV • 14S; 67E; 33; Overton NW, NV • 14S; 67E; 34; Overton NW, NV • 14S; 67E; 35; Overton NW, NV |
| <ul style="list-style-type: none"> • 13S; 69E; 31; Moapa Peak SE NV • 13S; 69E; 32; Moapa Peak SE NV • 13S; 69E; 33; Moapa Peak SE NV • 13S; 69E; 34; Moapa Peak SE NV • 13S; 69E; 35; Moapa Peak SE NV • 13S; 69E; 35; Flat Top Mesa, NV • 13S; 69E; 36; Flat Top Mesa, NV | <ul style="list-style-type: none"> • 14S; 68E; 3; Moapa Peak NV • 14S; 68E; 4; Moapa Peak NV • 14S; 68E; 4; Overton NW, NV • 14S; 68E; 5; Overton NW, NV • 14S; 68E; 6; Overton NW, NV • 14S; 68E; 7; Overton NW, NV • 14S; 68E; 8; Overton NW, NV • 14S; 68E; 36; Overton NE, NV • 14S; 69E; 1; Flat Top Mesa, NV • 14S; 69E; 1; Riverside, NV • 14S; 69E; 11; Overton NE, NV • 14S; 69E; 11; Riverside, NV • 14S; 69E; 12; Riverside, NV • 14S; 69E; 13; Riverside, NV • 14S; 69E; 14; Overton NE, NV • 14S; 69E; 14; Riverside, NV • 14S; 69E; 15; Overton NE, NV • 14S; 69E; 16; Overton NE, NV • 14S; 69E; 20; Overton NE, NV • 14S; 69E; 21; Overton NE, NV • 14S; 69E; 22; Overton NE, NV • 14S; 69E; 23; Overton NE, NV • 14S; 69E; 23; Riverside, NV • 14S; 69E; 27; Overton NE, NV • 14S; 69E; 28; Overton NE, NV • 14S; 69E; 29; Overton NE, NV • 14S; 69E; 30; Overton NE, NV • 14S; 69E; 31; Overton NE, NV • 14S; 69E; 32; Overton NE, NV • 14S; 69E; 33; Overton NE, NV |
| <ul style="list-style-type: none"> • 13S; 70E; 8; Flat Top Mesa, NV • 13S; 70E; 9; Flat Top Mesa, NV • 13S; 70E; 10; Flat Top Mesa, NV • 13S; 70E; 11; Flat Top Mesa, NV • 13S; 70E; 12; Flat Top Mesa, NV • 13S; 70E; 12; Mesquite, NV/AZ • 13S; 70E; 17; Flat Top Mesa, NV • 13S; 70E; 19; Flat Top Mesa, NV • 13S; 70E; 20; Flat Top Mesa, NV • 13S; 70E; 30; Flat Top Mesa, NV • 13S; 70E; 31; Flat Top Mesa, NV • 13S; 70E; 34; Flat Top Mesa, NV • 13S; 70E; 35; Flat Top Mesa, NV | |
| <ul style="list-style-type: none"> • 13S; 71E; 5; Mesquite, NV/AZ • 13S; 71E; 7; Mesquite, NV/AZ • 13S; 71E; 8; Mesquite, NV/AZ | |
| <ul style="list-style-type: none"> • 14S; 66E; 26; Moapa East, NV • 14S; 66E; 33; Moapa East, NV • 14S; 66E; 34; Moapa East, NV • 14S; 66E; 35; Moapa East, NV • 14S; 66E; 36; Moapa East, NV | |
| <ul style="list-style-type: none"> • 14S; 67E; 12; Overton NW, NV • 14S; 67E; 13; Overton NW, NV • 14S; 67E; 14; Overton NW, NV • 14S; 67E; 20; Moapa East, NV • 14S; 67E; 21; Moapa East, NV • 14S; 67E; 21; Overton NW, NV • 14S; 67E; 22; Overton NW, NV • 14S; 67E; 23; Overton NW, NV • 14S; 67E; 28; Moapa East, NV | <ul style="list-style-type: none"> • 14S; 70E; 3; Flat Top Mesa, NV • 14S; 70E; 3; Riverside, NV |

- 14S; 70E; 4; Riverside, NV
- 14S; 70E; 5; Riverside, NV
- 14S; 70E; 6; Flat Top Mesa, NV
- 14S; 70E; 6; Riverside, NV
- 14S; 70E; 7; Riverside, NV
- 14S; 70E; 8; Riverside, NV

- 15S; 67E; 2; Overton NW, NV
- 15S; 67E; 3; Overton NW, NV
- 15S; 67E; 5; Moapa East, NV
- 15S; 67E; 6; Moapa East, NV
- 15S; 67E; 8; Moapa East, NV
- 15S; 67E; 9; Moapa East, NV
- 15S; 67E; 9; Overton NW, NV
- 15S; 67E; 10; Overton NW, NV
- 15S; 67E; 11; Overton NW, NV
- 15S; 67E; 12; Overton NW, NV
- 15S; 67E; 13; Overton NW, NV
- 15S; 67E; 13; Overton, NV
- 15S; 67E; 14; Overton NW, NV
- 15S; 67E; 14; Overton, NV
- 15S; 67E; 15; Overton NW, NV
- 15S; 67E; 23; Overton, NV
- 15S; 67E; 24; Overton, NV

- 15S; 68E; 1; Overton NE, NV
- 15S; 68E; 2; Overton NE, NV
- 15S; 68E; 3; Overton NE, NV
- 15S; 68E; 8; Overton NW, NV
- 15S; 68E; 9; Overton NW, NV
- 15S; 68E; 10; Overton NW, NV
- 15S; 68E; 10; Overton NE, NV
- 15S; 68E; 17; Overton NW, NV
- 15S; 68E; 18; Overton NW, NV
- 15S; 68E; 18; Overton, NV
- 15S; 68E; 19; Overton, NV
- 15S; 68E; 30; Overton, NV
- 15S; 68E; 31; Overton, NV
- 15S; 68E; 32; Overton, NV

- 16S; 67E; 24; Overton, NV

- 16S; 67E; 36; Overton, NV
- 16S; 67E; 36; Valley of Fire East, NV

- 16S; 68E; 5; Overton, NV
- 16S; 68E; 6; Overton, NV
- 16S; 68E; 8; Overton, NV
- 16S; 68E; 17; Overton, NV
- 16S; 68E; 18; Overton, NV
- 16S; 68E; 19; Overton, NV
- 16S; 68E; 20; Overton, NV
- 16S; 68E; 30; Overton, NV
- 16S; 68E; 31; Overton, NV

- 17S; 67E; 1; Valley of Fire East, NV

The proposed project is located in portions of T13S, R68E; T13S, R69E; T13S, R70E; T13S, R71E; T14S, R66E; T14S, R67E; T14S, R68E; T14S, R69E; ; T14S, R70E; T15S, R67E; T15S, R68E; T16S, R67E; T16S, R68E; and T17S, R67E.

The proposed project area is located on the on the Flat Top Mesa, NV 1979 (1985); Mesquite, NV/AZ 1985 (1978); Moapa East NV 1982 (1983); Moapa Peak NV 1969 (1980); Moapa Peak SE, NV 1969 (1969); Overton, NV 1983 (1982); Overton NE, NV 1982 (1983); Overton NW, NV 1982 (1983); Riverside, NV 1982 (1983); and Valley of Fire East, NV 1982 (1984) USGS 7.5 Minute Topographic Maps.

Table B-2. Legal description of the Overton Power 9-Year Plan Upgrades Project (tabular).

Township 13 South, Range 68 East			
Unsurveyed lands			
Township 13 South, Range 69 East			
Unsurveyed lands			
Township 13 South, Range 70 East			
Section 8: S½ of the SE¼ NE¼ of the SE¼ SE¼ of the NE¼	Section 9: S½ of the NW¼ S½ of the NE¼	Section 10: SW¼ of the NW¼ N½ of the NW¼ N½ of the NE¼	Section 11: N½ of the NW¼ SE ¼ of the NW 1/4 SW¼ of the NE¼ N½ of the NE¼
Section 17: W½ of the SW¼ NE¼ of the SW¼ E½ of the NW¼ NW¼ of the NE¼	Section 19: E½ of the NE¼ E½ of the SE¼	Section 20: NW¼ of the NW¼	Section 30: E½ of the NE¼ E½ of the SE¼
Section 31: E½ of the NE¼ E½ of the SE¼	Section 34: SE¼ of the SW¼ S½ of the SE¼ NE¼ of the SE¼	Section 35: NW¼ of the SW¼ S½ of the NW¼ W½ of the NE¼ NE¼ of the NE¼	
Township 14 South, Range 66 East			
Section 33: N½ of the NE¼ SE¼ of the NE¼	Section 34: NW¼ of the NW¼ S½ of the NW¼ W½ of the NE¼ NE¼ of the NE¼	Section 35: N½ of the NW¼ N½ of the NE¼	Section 36: NW¼ of the NW¼ S½ of the NW¼ S½ of the NE¼ NE¼ of the NE¼ N½ of the SE¼ SE¼ of the SE¼ SE¼ of the SE¼
Township 14 South, Range 67 East			
Section 12: S½ of the SE¼ NE¼ of the SE¼	Section 13: W½ of the NW¼ NE¼ of the NW¼ NW¼ of the NE¼	Section 14: SE¼ of the SW¼ W½ of the SE¼ NE¼ of the SE¼ SE¼ of the NE¼	Section 20: S½ of the SE¼ NE ¼ of the SE 1/4
Section 21: W½ of the SW¼ SE¼ of the SE¼	Section 22: S½ of the SW¼ NE¼ of the SW¼ NW¼ of the SE¼ S½ of the NE¼ NE¼ of the NE¼	Section 23: NW¼ of the NW¼	Section 28: N½ of the NW¼ SE¼ of the NW¼ W½ of the NE¼ NE¼ of the NE¼
Section 29: S½ of the NW¼ NE¼ of the NW¼	Section 30: S½ of the SW¼ W½ of the SE¼ NE¼ of the SE¼ SE¼ of the NE¼	Section 31: NW¼ of the NW¼ S½ of the SW¼	Section 32: SE¼ of the SW¼ S½ of the SE¼
Section 33: S½ of the SW¼ SW ¼ of the SW ¼ W½ of the SE¼ NE¼ of the SE¼		Section 34: S½ of the SE¼ NW¼ of the SE¼ S½ of the SW¼ NE¼ of the SW ¼	

Table 1-1. Legal Description of the Proposed Project Area, continued

Township 14 South, Range 68 East			
Section 3: N½ of the NW¼	Section 4: S½ of the NW¼ W½ of the NE¼ NE¼ of the NE¼	Section 5: S½ of the SW¼ NE¼ of the SW¼ N½ of the SE¼ SE¼ of the NE¼	Section 6: SE¼ of the SE¼
Section 7: N½ of the SW¼ SE¼ of the NW¼ W½ of the NE¼ NE¼ of the NE¼		Section 36: E½ of the SE¼ SW¼ of the SE¼ SE¼ of the SW¼	
Township 14 South, Range 69 East			
Section 1: E½ of the NW¼ NE¼ of the SW¼ W½ of the SE¼ SE¼ of the SE¼	Section 11: SW¼ of the SW¼ E½ of the SW¼ NW¼ of the SE¼ S½ of the NE¼	Section 12: N½ of the NW¼ SW¼ of the NW¼ E½ of the NE¼ SE¼ of the SE¼	Section 13: NE¼ of the NE¼ W½ of the NE¼ SE¼ of the NW¼ N½ of the SW¼ SW¼ of the SW¼
Section 14: NW¼ of the NW¼ SE¼ of the SE¼	Section 15: E½ of the NE¼ SW¼ of the NE¼ NW¼ of the SE¼ E½ of the SW¼ SW¼ of the SW¼	Section 16: SE¼ of the SE¼	Section 20: SE¼ of the SE¼
Section 21: NE¼ of the NE¼ W½ of the NE¼ SE¼ of the NW¼ N½ of the SW¼ SW¼ of the SW¼	Section 22: NW¼ of the NW¼ SE¼ of the SE¼	Section 23: N½ of the NE¼ SW¼ of the NE¼ SE¼ of the NE¼ N½ of the SW¼ SW¼ of the SW¼	Section 27: N½ of the NE¼ SW¼ of the NE¼ N½ of the SW¼ SE¼ of the NW¼
Section 28: S½ of the SE¼ NE¼ of the SE¼	Section 29: NW¼ of the SW¼ S½ of the NW¼ W½ of the NE¼ NE¼ of the NE¼	Section 30: S½ of the SE¼ NE¼ of the SE¼	Section 31: S½ of the NE¼ NW¼ of the NE¼ NE¼ of the NW¼ S½ of the NW¼ NW¼ of the SW¼
Section 32: S½ of the NE¼ S½ of the NW¼		Section 33: NW¼ of the NE¼ E½ of the NW¼ SW¼ of the NW¼	
Township 14 South, Range 70 East			
Section 3: W½ of the NW¼ NE¼ of the NW¼	Section 4: W½ of the SW¼ E½ of the SW¼ NW¼ of the SE¼ S½ of the NE¼	Section 5: SE¼ of the SE¼	Section 6: N½ of the SW¼ SE¼ of the NW¼ W½ of the NE¼ NE¼ of the NE¼
Section 7: S½ of the NE¼ NW¼ of the SE¼ N½ of the SW¼ SW¼ of the SW¼ SW¼ of the NW¼		Section 8: W½ of the NW¼ NE¼ of the NW¼ NW¼ of the NE¼	

Table 1-1. Legal Description of the Proposed Project Area, continued

Township 15 South, Range 67 East			
Section 2: S½ of the SE¼ NW¼ of the SE¼ NE¼ of the SW¼ S½ of the NW¼ NW¼ of the NW¼	Section 3: NE¼ of the NE¼ NW ¼ of the NW ¼	Section 4: N ½ of the NW ¼ W ½ of the NE ¼ E ½ of the NE ¼	Section 5: SE ¼ of the NW ¼ NW ¼ of the NW ¼ N½ of the SW¼ SE¼ of the SW¼ S½ of the SE¼
Section 6: NE¼ of the NW¼ N½ of the NE¼ S½ of the NE¼	Section 8: NE¼ of the NE¼	Section 9: NW¼ of the NW¼ SE¼ of the SE¼ N½ of the SE¼ SW¼ of the NE¼ S½ of the NW¼	Section 10: S½ of the SW¼
Section 11: NE ¼ of the NE ¼	Section 12: W½ of the NW¼ W½ of the SW¼	Section 13: W½ of the NW¼ W½ of the SW¼	Section 14: SW¼ of the SE¼ E½ of the SW¼ NW¼ of the SW¼ SW¼ of the NW¼
Section 15: S½ of the NE¼ NE¼ of the NW¼ NW ¼ of the NE ¼	Section 23: N ½ of the NE ¼ Se ¼ of the NE ¼	Section 24: W ½ of the NW ¼ N ½ of the SW ¼ SE ¼ of the NW ¼ E ½ of the SE ¼	
Township 15 South, Range 68 East			
Section 1: N½ of the NW¼	Section 2: NE¼ of the NE¼ S½ of the NE¼ SE¼ of the NW¼ NW¼ of the SE¼ N½ of the SW¼ SW¼ of the SW¼	Section 3: S½ of the SE¼	Section 8: SE¼ of the SE¼
Section 9: SE¼ of the NE¼ N½ of the SE¼ E½ of the SW¼ SW¼ of the SW¼	Section 10: NW¼ of the NE¼ N½ of the NW¼ SW¼ of the NW¼	Section 17: N½ of the NE¼ SW¼ of the NE¼ E½ of the NW¼ SW¼ of the NW¼ NW¼ of the SW¼	Section 18: SW ¼ of the SE ¼ N ½ of the SE ¼ S½ of the SW¼
Section 19: NW¼ of the NW¼ SW¼ of the SW¼	Section 30: W½ of the NW¼ SE¼ of the NW¼ E½ of the SW¼ SW¼ of the SE¼	Section 31: W½ of the NE¼ N½ of the SE¼ SE¼ of the SE¼	
Township 16 South, Range 67 East			
Section 24: E½ of the NE¼		Section 36: SE¼ of the NE¼ N½ of the SE¼ SW¼ of the SE¼ SE¼ of the SW¼	

Table 1-1. Legal Description of the Proposed Project Area, continued

Township 16 South, Range 68 East			
Section 5: W $\frac{1}{2}$ of the NW $\frac{1}{4}$ W $\frac{1}{2}$ of the SW $\frac{1}{4}$	Section 6: NE $\frac{1}{4}$ of the NE $\frac{1}{4}$	Section 8: NW $\frac{1}{4}$ of the NW $\frac{1}{4}$ E $\frac{1}{2}$ of the NW $\frac{1}{4}$ E $\frac{1}{2}$ of the SW $\frac{1}{4}$	Section 17: E $\frac{1}{2}$ of the NW $\frac{1}{4}$ NE $\frac{1}{4}$ of the SW $\frac{1}{4}$ W $\frac{1}{2}$ of the SE $\frac{1}{4}$
Section 19: N $\frac{1}{2}$ of the NE $\frac{1}{4}$ N $\frac{1}{2}$ of the NW $\frac{1}{4}$ SW $\frac{1}{4}$ of the NW $\frac{1}{4}$ NW $\frac{1}{4}$ of the SW $\frac{1}{4}$ E $\frac{1}{2}$ of the SW $\frac{1}{4}$	Section 20: NW $\frac{1}{4}$ of the NE $\frac{1}{4}$ N $\frac{1}{2}$ of the NW $\frac{1}{4}$	Section 30: NE $\frac{1}{4}$ of the NW $\frac{1}{4}$ W $\frac{1}{2}$ of the NE $\frac{1}{4}$ SE $\frac{1}{4}$ of the NE $\frac{1}{4}$ W $\frac{1}{2}$ of the SE $\frac{1}{4}$ NE $\frac{1}{4}$ of the SW $\frac{1}{4}$	Section 31: N $\frac{1}{2}$ of the NW $\frac{1}{4}$ SW $\frac{1}{4}$ of the NW $\frac{1}{4}$ NW $\frac{1}{4}$ of the NE $\frac{1}{4}$
Township 17 South, Range 67 East			
Section 1: N $\frac{1}{2}$ of the SW $\frac{1}{4}$ SE $\frac{1}{4}$ of the NW $\frac{1}{4}$ W $\frac{1}{2}$ of the NE $\frac{1}{4}$			