

EXECUTIVE SUMMARY

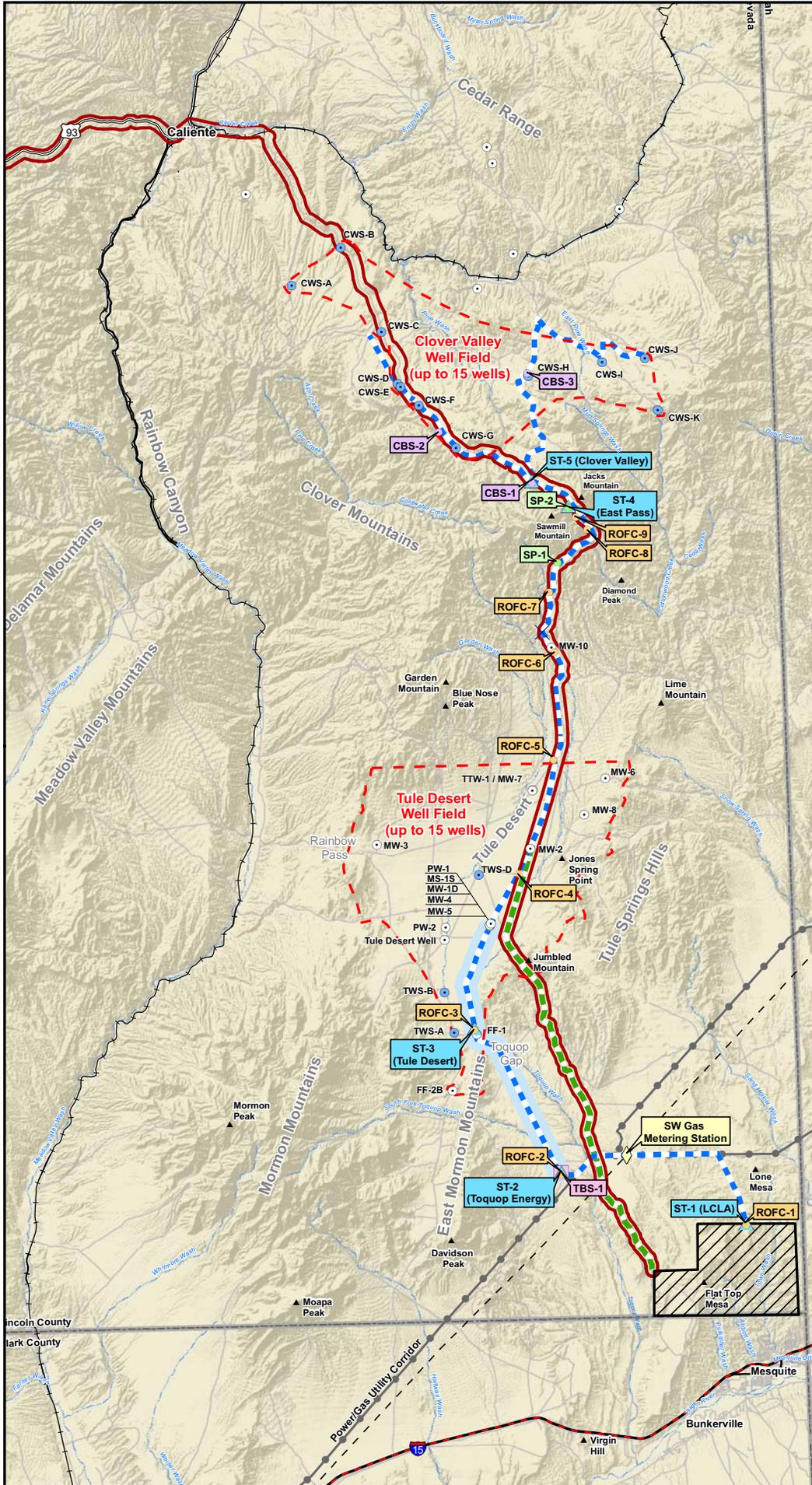
The Ely District Office of the Bureau of Land Management (BLM) has prepared this Final Environmental Impact Statement (EIS) in response to a right-of-way (ROW) application submitted by the Lincoln County Water District (LCWD or Applicant) to construct and operate the Lincoln County Land Act (LCLA) Groundwater Development and Utility ROW Project (Proposed Action). The LCWD, in cooperation with the Lincoln County Power District No. 1 (LCPD), and the Lincoln County Telephone Company (LCT), is proposing to construct groundwater facilities and ancillary utility infrastructure designed to pump and convey groundwater that has been permitted or may be permitted by the Nevada State Engineer (NSE) in the Clover Valley and Tule Desert Hydrographic Areas for use by Lincoln County customers; specifically, the LCLA development area north of Mesquite, Nevada. In addition, Southwest Gas Corporation (Southwest Gas) is proposing to construct and operate a natural gas line and metering facility within the southernmost portion of the water project corridor to serve planned development in the LCLA area. **Table ES 1** identifies the entities responsible for constructing and operating the various features of the Proposed Action.

Table ES-1 Features of the Proposed Action	
Facility	Entity Responsible for Constructing and Operating Facility
<i>Water Facilities</i>	
Groundwater production/monitoring wells (well fields in the Clover Valley and Tule Desert Hydrographic Areas)	Lincoln County Water District
Water collection/transmission pipelines	
Water pipeline booster stations	
Water storage tanks	
<i>Electric Utility Facilities</i>	
Electrical transmission/distribution lines	Lincoln County Water District or Lincoln County Power District No. 1
Electrical substations	
<i>Natural Gas Facilities</i>	
A natural gas pipeline and metering station	Southwest Gas
<i>Communication Facilities</i>	
Buried telemetry system/fiber optic lines	Lincoln County Water District or Lincoln County Telephone Company
<i>Ancillary Facilities</i>	
Temporary and permanent access roads to wells and other facilities	To be coordinated among the various utilities sharing the permitted ROW
Staging/storage areas during construction	

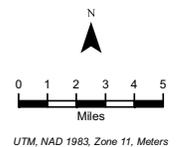
The project facilities would be located in southeastern Lincoln County, Nevada between the Clover Mountains in the northern reach and the Mormon Mountains to the west, and terminating in the LCLA development area, north of Mesquite, Nevada at the southern terminus (**Map ES 1-1**). The requested ROW generally follows existing roads and would be located within previously designated utility corridors, where feasible.

Legend

- ▲ Mountain Peak
- Clover Valley Booster Station
- Standpipe
- Rate of Flow Controller
- ▲ Storage Tank
- Tule Desert Booster Station
- ◇ Natural Gas Metering Station
- Existing Well
- Proposed Well
- Interstate
- US Highway
- Road
- Railroad
- Existing Transmission Line
- - Existing Natural Gas Pipeline
- Stream or Wash
- Proposed Action
- Alternative 1
- Toquop Energy Plant ROW
- ▨ Lincoln County Land Act Area
- ▭ LCCRDA Corridor
- - Well Field Boundary Extent



Sources: ESRI Datasets 2006; BLM Ely District Datasets; LCWD/ Vidler Water Company.



**Proposed
Action and
Alternative 1**

R:\proj\GIS\A2002056-BLM-Lincoln\ComMap\FR_Fig16.CLA_Map\Jan_2009\ES_1-1_Rev16.mxd

The majority of the ROW would be located within the 2,640-foot wide utility corridor established by the Lincoln County Conservation, Recreation, and Development Act (LCCRDA) under Public Law 108-424. Enacted on November 30, 2004, the LCCRDA designated utility corridors to be used for ROWs for roads, wells, pipelines, and other infrastructure needed for construction and operation of a water conveyance system in Lincoln County. For engineering feasibility reasons and/or to minimize environmental impacts, the ROW requested by the LCWD deviates from the LCCRDA corridor in several locations (see **Map ES 1-1**). These areas include the eastern end of the Clover Valley well field and in the Tule Desert from the northern end of the Tule Desert to the LCLA development area. The requested ROW in the Tule Desert would parallel an existing ROW issued to Toquop Energy in 2003. The Toquop Energy ROW begins in the Tule Desert well field area and terminates at the proposed Toquop Energy power plant site near Toquop Wash. The ROW for the Proposed Action would continue east past Toquop Wash and would parallel an existing utility corridor before turning south to terminate in the northern end of the LCLA development area which include two existing water storage tanks and the Mesa Substation.

As of November 2008, the NSE has granted an appropriation of 2,100 acre-feet per year (AFY) to the LCWD for groundwater withdrawal within the Tule Desert Hydrographic Area. Water rights applications for additional groundwater withdrawal in the Clover Valley and Tule Desert Hydrographic Areas are still pending before the NSE. Since groundwater development investigations are continuing, final locations of wells within the study area for this EIS have not been fully defined. The analysis in this EIS considered a project designed to pump groundwater from up to 30 deep carbonate wells; up to 14,480 AFY from 15 wells in the Clover Valley Hydrographic Area and up to 9,340 AFY from 15 wells in the Tule Desert Hydrographic Area subject to the terms and conditions imposed by the granting agencies.

Specific locations for certain project components (e.g. production wells, collector pipelines, and associated power facilities) within the study area for this EIS would be further defined after decisions on the water rights are received from the NSE, and further exploratory well drilling is completed. If necessary, the BLM would conduct subsequent site-specific National Environmental Policy Act (NEPA) analysis for any project facilities whose specific location was not known during preparation of this EIS. Any such subsequent NEPA documentation would be tiered to the analysis contained in this EIS.

Multiple ROW grants may be issued based on the analysis in this EIS or subsequent site-specific NEPA analysis and future agreements between the LCWD and LCPD/LCT. If a single ROW is issued, the LCWD would be responsible for construction and operation of all the proposed facilities needed to develop and transport groundwater subject to the terms and conditions of the grant. In the single ROW grant option, the LCWD would purchase electric and communication services from LCPD and LCT at a location(s) as designated in the agreements, but all physical facilities within the ROW would be owned and operated by the LCWD. If multiple ROWs are issued, the LCWD, the LCPD and LCT facilities would be authorized under separate ROW grants. The ROW for Southwest Gas would be a separate grant issued pursuant to Section 28 of the Mineral Leasing Act under either option. A single ROW issued to the LCWD for the water production/delivery system, electrical distribution system, and fiber optic lines, would be issued in perpetuity. This ROW would be granted

pursuant to Title III of the LCCRDA and in the case of facilities outside the boundaries of the ROW corridor, the Federal Land Policy and Management Act (FLPMA). Individual ROWs issued to the LCPD and LCT would be subject to the terms and conditions of the FLPMA and 43 Code of Federal Regulation (CFR) 2800. Project construction is estimated to take between 18 and 24 months to complete and would begin upon completion of the NEPA process and acquisition of necessary permits and approvals.

ES-1.1 PROJECT PURPOSE AND NEED

The Council for Environmental Quality (CEQ) regulations (40 CFR 1502.13) requires the purpose and need section of an EIS to “briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action.” The purpose and need section of this EIS provides a context and framework for establishing and evaluating the reasonable range of alternatives.

The Applicant is seeking a ROW from the BLM for the purpose of developing and conveying waters that have been permitted by the NSE or may be permitted to the LCWD in the Tule Desert and Clover Valley Hydrographic Areas for use by LCWD customers. The purpose of the BLM action is to provide ROW access for transporting water across areas of BLM-administered public land.

The Proposed Action would assist in meeting a portion of the growing water demands of Lincoln County and is a component of Lincoln County’s Water Plan. The three key elements identified in the 2001 Lincoln County Water Plan include:

- Assist and support the needs of local communities in Lincoln County.
- Meet the needs of future economic development within Lincoln County.
- Produce, purchase, wholesale, and transport water from sources inside of Lincoln County to meet customer water needs across the region.

Pursuant to Title III of LCCRDA, Congress directed the BLM to conduct a NEPA analysis of any ROW application submitted for the construction and operation of utility infrastructure within the designated 2,640-foot wide LCCRDA utility corridor. The BLM uses a comprehensive process to determine whether ROWs on BLM-administered public lands should be granted. This process includes compliance with the requirements of the NEPA and CEQ regulations, BLM planning regulations, manuals and handbooks, and applicable policy documents.

The LCCRDA explicitly notes that establishment of the utility ROW corridors, in and of themselves, has no bearing on water rights adjudications, which are solely under the jurisdiction of the NSE. Water rights, pumping rates, volumes of water proposed for transfer annually from the Clover Valley and Tule Desert Hydrographic Areas, or any other points of diversion, and places of use proposed for transfer across public lands are outside the jurisdiction of the BLM. However, as the lead federal agency, the BLM must consider the potential environmental impacts of the Proposed Action through the NEPA process.

This EIS evaluates the BLM action (issuance of ROW(s) on BLM-administered public lands) and the potential environmental effects that would result from implementation of the Proposed Action (construction and operation of the Proposed Action). The BLM's decision is to grant or deny all ROW applications necessary for the construction and operation of a water development and conveyance system as mandated by the LCCDRA plus a ROW grant to Southwest Gas for a natural gas pipeline.

ES-1.2 AGENCY CONSULTATION AND PUBLIC PARTICIPATION

ES-1.2.1 Public Participation

A public scoping period was provided by the BLM to allow for an early and open process for determining the scope of issues related to the Proposed Action. A Notice of Intent to prepare the Draft EIS was published in the Federal Register (Volume 71, No. 62) on March 31, 2006. The notice encouraged the public and other federal, state, local, and Tribal governments to assist the BLM in identifying issues to be considered for evaluation in the EIS. A 30-day public scoping period (March 31, 2006 through May 1, 2006) was provided for submission of comments.

The BLM held six open house meetings between April 11, 2006 and April 18, 2006. A summary report of scoping comments received during the scoping period is provided in the LCLA Groundwater Development and Utility ROW Project Environmental Impact Statement Scoping Report (BLM 2006a). A copy of this report is available for download at the BLM Nevada State Office website located at www.nv.blm.gov.

Based on comments received during the scoping process, the following general categories of issues were identified as summarized below.

- **NEPA Process** – Eighty-nine comments were received specific to the NEPA process; particularly, how closely the EIS would follow the NEPA process.
- **Social Resources** – Forty-eight comments were received specific to concerns about impacts on the human or built environment. Scoping comments were provided on the following resources: 1) Visual Resources; 2) Noise; 3) Land Use (including Transportation, Mineral Resources, and Range Resources); 4) Areas of Critical Environmental Concern, Wilderness, and Other Special Use Areas; 5) Recreation; 6) Socioeconomic Resources; 7) Solid Waste and Hazardous Materials; 8) Environmental Justice; 9) Paleontology; and 10) Cultural and Historic Resources.
- **Physical and Biological Resources** – One hundred and sixteen comments were received specific to concerns about impacts on components of the physical environment. Scoping comments were provided on the following resources: 1) Air Quality; 2) Biological Resources (including Endangered, Threatened, Proposed and Candidate Species, Fisheries, Migratory Birds, Vegetation, Noxious Weeds, and Wetlands/Riparian Habitat); 3) Geologic Resources; 4) Soil Resources; and 5) Water Resources.

The 60-day comment period for public review of the Draft EIS began with the publication of the Notice of Availability in the Federal Register on May 23, 2008. The BLM distributed press releases announcing the dates, locations, and times of the public meetings to local and regional print and broadcast media. The Draft EIS was distributed to individuals and agencies who requested copies (see Chapter 5.3), and posted on the BLM's website at www.blm.gov/nv/st/en/prog/planning/groundwater_projects. Four public meetings were held during the public comment period (May 23 to July 22, 2008) to receive comments on the Draft EIS. Dates and locations of these meetings, and the number of attendees, are as follows:

Las Vegas, Nevada – 10 Attendees

Date: June 23, 2008
Time: 6:00 – 8:00 p.m.
Location: Embassy Suites Hotel

Caliente, Nevada - 9 Attendees

Date: June 24, 2008
Time: 6:00 – 8:00 p.m.
Location: Caliente City Hall

Mesquite, Nevada – 12 Attendees

Date: June 25, 2008
Time: 6:00 – 8:00 p.m.
Location: Mesquite City Hall

Carson City, Nevada – 5 Attendees

Date: June 26, 2008
Time: 4:00 – 6:00 p.m.
Location: Plaza Hotel

In addition, the following meeting was held for residents and representatives of the Moapa Indian Reservation:

Moapa Valley – 4 Attendees

Date: June 24, 2008
Time: 12:00 – 2:00 p.m.
Location: Moapa Community Center

During the 60-day public comment period, the BLM received 19 comment documents (e.g. letters, emails, faxes) from individuals, private companies, and federal and state agencies commenting on the Draft EIS. A list of comment documents received, the content of each letter, and BLM's responses to comments are contained in Appendix F of the Final EIS. Each comment letter was assigned a reference number, and each comment was identified with a number. Where appropriate, changes and additions are reflected in the Final EIS to respond to comments.

This Final EIS has been distributed with the publication of the Notice of Availability in the Federal Register. Copies of this Final EIS have been distributed to those parties requesting the Draft EIS including those entities listed in Chapter 5.3. In addition, the Final EIS has been posted on the BLM website.

ES-1.2.2 Public Controversy

The BLM acknowledges that there are areas of controversy regarding the extraction of groundwater located beneath public lands in southeastern Nevada. There is a common misconception concerning the jurisdiction of the NSE and the BLM with respect to the appropriation of water rights in Nevada. As the federal land manager, the BLM has the responsibility to sustain the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations. Although the BLM has the authority and responsibility to coordinate with agencies and water rights applicants to manage the federal land resources, it is the responsibility of the NSE's Office to approve and control the amount and location of groundwater pumped from basins in Nevada, regardless of land ownership overlying groundwater resources (BLM 2009).

To develop infrastructure to pump and convey groundwater across the BLM lands, the groundwater developer must obtain ROW approval from the BLM. Because the application process for obtaining a groundwater right from the NSE and approval of a BLM ROW grant may take several years, the process for both permit applications normally follows a parallel path. Both agencies must consider the best available information to assist in their decision-making process.

The BLM must rely on the best available data when considering the expected environmental effects associated with granting ROWs across public lands. The data analyzed in this EIS include regional studies conducted by federal, state, and local agencies and organizations; private developers and their consultants; and more localized studies conducted by the Applicant to support their water rights applications to the NSE. In addition, the BLM conducted project-specific biological and cultural surveys as part of the NEPA process for this EIS. The data analyzed comprise the best available representation of current and predicted conditions at this time. The BLM acknowledges that the Applicant and other entities continue to expand the body of knowledge regarding groundwater development in the project area and regional aquifer system to support future water rights applications. These data will be used by the NSE in the decision to approve or deny future applications. Existing and permitted water rights will be subject to the terms and conditions directed by the NSE. Construction and operation of infrastructure associated with the Proposed Action on federal lands will be subject to the terms and conditions directed by the BLM as part of the ROW grant(s).

To date, the NSE has appropriated 2,100 AFY of groundwater from the Tule Desert Hydrographic Area to the LCWD, with additional applications pending for groundwater withdrawals in the Tule Desert and Clover Valley Hydrographic Areas. The bounded analysis for this EIS is to pump and convey up to 14,480 AFY from the Clover Valley Hydrographic Area and up to 9,340 AFY from the Tule Desert Hydrographic Area. Actions connected to the Proposed Action but outside the BLM jurisdiction include the location of

groundwater diversions and amount of groundwater permitted by the Office of the NSE; groundwater monitoring and management agreements between the Applicant and the NSE; wildlife and groundwater monitoring and management; and mitigation agreements between the Applicant and the National Park Service (NPS).

While the BLM is not a party to the water rights agreements between the Applicant and NSE (Ruling 5181), or the Stipulation for Withdrawal of Protests between the Applicant and Vidler Water Company, LLC (Vidler) and the NPS regarding groundwater withdrawals in the Tule Desert, the BLM would work collaboratively with these entities under existing agreements and protocols to mitigate any adverse effects to resources when conducting activities on BLM lands.

In addition, the Applicant has prepared a Water Resources Monitoring and Management Plan to address uncertainties from future pumping in the Clover Valley Hydrographic Basin. The Clover Valley Monitoring and Management Plan consist of four principle components:

Monitoring Requirements - related to production wells, monitor wells, elevation control, spring flow, water quality, precipitation stations, quality of data, and reporting, including locations of existing supply and monitor wells, groundwater extraction rates, groundwater level measurements, flow from springs, water quality, precipitation data, and wetland/riparian conditions.

Management Requirements – related to the creation and role of the Technical Review Panel (TRP), establishment of action criteria, and details of the decision-making process. The TRP would be established to provide technical scientific expertise necessary to impartially develop, and evaluate and analyze data. The TRP will be established with membership created from representatives from cooperating agencies and may include, but would not be limited to, the BLM, LCWD, U.S. Fish and Wildlife Service (USFWS), and the NSE.

Mitigation Measures – related to potential mitigation measures that could be implemented if “unreasonable adverse impacts” occur as a result of groundwater extraction associated with the Proposed Action. Specific quantitative criteria (action criteria) will be developed by the TRP for use to “trigger” management actions. The triggers would provide early warning of unreasonable adverse impacts to public resources and prior water rights of other appropriators. These criteria would be based on changes in groundwater levels, flow of springs, water quality, and / or changes in wetland / riparian habitat that can be attributable to groundwater extractions by the Proposed Action.

Modification of the Plan – related to procedures that could be followed to modify the Plan if future changing conditions or mitigations warrant modification.

ES-1.2.3 Agency Consultation

Federal and state agencies were contacted individually to gather input for the EIS. Other resource management agencies at the federal and state levels were consulted to identify common concerns related to the Proposed Action or Alternatives. Cooperating agencies on this EIS include the USFWS and Nevada Department of Wildlife (NDOW). Consultations

with federal, state, and local resource management and regulatory agencies, as well as interested Tribal governments, are ongoing.

A Biological Assessment has been prepared for the Proposed Action and was submitted to the USFWS as required by Section 7 of the Endangered Species Act (ESA) of 1973. A species list was requested from the USFWS at the beginning of the Section 7 process. The species list identified plant and wildlife species listed as threatened, endangered, or candidate species within the project area. At the request of the USFWS, rare plant and desert tortoise surveys have been conducted within the project area. Consultation with the USFWS is ongoing.

The BLM consulted with Native American Tribes that claim ancestral ties to, or traditional cultural use of, project area lands. In March 2006, the BLM mailed copies of an “interested parties” letter under NEPA guidance to the following groups:

- Moapa Band of Paiutes
- Paiute Indian Tribe of Utah
- Las Vegas Paiute Tribe
- Kaibab Paiute Tribe (Arizona)
- Yomba Shoshone Tribe
- Ely Shoshone Tribe
- Duckwater Shoshone Tribe
- Shoshone Paiute Business Council

The notification letter provided a brief description of the Proposed Action and requested 1) Tribal input regarding any concerns about traditional cultural practices or other issues that might be affected by the Proposed Action; 2) information on how they would like to be involved in the planning process; 3) names of other individuals or organizations that should be notified or consulted about the project; and 4) an invitation to the Tribal Coordination Meeting at the BLM Ely District office in Ely, Nevada, on May 18, 2006. A copy of the Notice of Intent, a map of the project area, and a brief description of the preliminary issues to be considered in the Proposed Action was enclosed with each of these letters.

On May 12, 2006, the Ely District Office mailed letters inviting tribes to enter into formal consultation. The BLM received responses to this request from three tribes: Las Vegas Paiute, the Paiute Tribe of Utah, and the Ely Shoshone Tribe. The Las Vegas Paiute did not provide input regarding any concerns about the Proposed Action, but wished to be kept informed of the project; the Paiute Indian Tribe of Utah had no interest in the project; and the Ely Shoshone Tribe wished to continue consultations for the Proposed Action directly with the BLM.

On April 14, 2008, the Moapa Band of Paiutes requested to enter into tribal consultation concerning the Proposed Action. On June 24, 2008, the BLM met with tribal members from the Moapa Band of Paiutes to present the Draft EIS and answer questions about the Proposed Action. The meeting was held from 12:00 p.m. to 2:00 p.m. at the Moapa Community

Center in Moapa Valley, Nevada. Four members of the tribe attended the meeting.

ES-1.3 PROPOSED ACTION AND ALTERNATIVES

ES-1.3.1 Proposed Action

The BLM's approval of a single ROW would allow LCWD to construct infrastructure required to pump and convey groundwater resources in the Clover Valley and Tule Desert Hydrographic Areas to help meet future municipal water needs in newly urbanizing areas in southeastern Lincoln County; specifically, the LCLA development area, north of Mesquite. In addition, the BLM may grant separate ROWs to the LCPD, LCT, and Southwest Gas to enable construction of electrical distribution facilities, fiber optic lines, and natural gas facilities to serve the Proposed Action and development in the LCLA area. The general locations of project components (which are common for both the Proposed Action and Alternative 1) are illustrated on **Map ES 1-1** and summarized below.

Water Facilities

- Water Pipelines: Approximately 75 miles of transmission pipeline (main water line) and well field collection pipelines for up to 30 wells total (main collection plus laterals to wells) are proposed.
- Well Field Collection System in the Clover Valley: up to 15 groundwater production wells and lateral pipelines are proposed.
- Well Field Collection System in the Tule Desert: up to 15 groundwater production wells and lateral pipelines are proposed.
- Storage Tanks (up to five storage tanks) are proposed.
 - Two (2) – 100,000-gallon storage tanks in the Clover Valley well field area
 - One (1) – 300,000-gallon storage tank in the Tule Desert well field area
 - One (1) – 500,000-gallon storage tank near the proposed Toquop Energy Project
 - One (1) – 4,000,000-gallon storage tank in the LCLA development area
- Eighteen production or monitoring wells (MWs) are currently used to monitor groundwater levels in the Tule Desert Hydrographic Area. Additional MWs (which are not covered under this NEPA analysis) may be constructed per terms and conditions associated with future water rights or Stipulation Agreements between the NPS and the LCWD.
- Water pipeline booster stations (up to four): each booster station would include an above ground-set forebay storage tank with a capacity of up to 200,000 gallons and aboveground piping and pumping equipment contained within a booster station building.

Electric Utility Facilities

- A new 138-kilovolt (kV) double-circuit overhead transmission line (currently estimated at 23.5 miles long) is proposed between the existing Mesa Substation located north of Mesquite and the proposed Tule Substation.
- A new substation in the Tule Desert (Tule Substation) is proposed.
- A new 22.8 kV double-circuit overhead distribution line (currently estimated at 20 miles long) is proposed between the proposed Tule Substation to groundwater facilities in the Clover Valley.
- New 22.8 kV and 4.16 kV overhead distribution lines are proposed to provide electric service to wells within the Tule Desert and Clover Valley Hydrographic Areas.
- New 22.8 kV – 4,160/480-volt aboveground substations are proposed at each well site, booster station, and flow control station.

Natural Gas Facilities

- A natural gas pipeline up to 16 inches in diameter is proposed between the proposed Toquop Energy Project and the LCLA development area.
- A new natural gas metering station (tie-in to the existing Kern River Natural Gas pipeline) is proposed immediately east of the proposed Toquop plant site.

Fiber Optic Lines

- Radio Telemetry or Fiber Optic Cable Control Systems (to be buried with the groundwater pipelines) would be used to monitor groundwater operating system information in addition to routine checks by maintenance personnel.

Ancillary Project Components

- Extra Work Space: Up to 50 acres (temporary): typical dimensions of 60 by 200 feet and 150 feet by 150 feet, located approximately every mile along the pipeline ROW. Some larger 1- to 2-acre extra work space areas may be designated to facilitate material storage or temporary offices.
- Construction Staging Areas: Up to 100 acres (temporary) assumes up to 20 five-acre sites.
- Temporary and permanent access roads are proposed.

Throughout this EIS, the term “project area” refers to the area that encompasses the proposed ROW and associated Proposed Action components, as well as the area immediately adjacent to the proposed facilities. The study area, or Region of Influence (ROI) varies depending on the resource being analyzed and the predicted locations of direct and indirect impacts from the Proposed Action or alternatives. The Area of Potential Effect (APE), as used in the Cultural and Historic Resources section, is synonymous with the project area.

Project construction is estimated to require between 18 and 24 months, and would begin upon completion of the NEPA process and acquisition of necessary permits and approvals. The groundwater production facilities, groundwater collection and transmission pipelines, electric transmission and distribution system, and fiber optic line would be constructed during the same construction spread. Construction of the natural gas pipeline and metering station is expected to take 4 to 6 months. Before starting construction, the final project design would be coordinated among the utility agencies and the BLM. Each utility agency would be required to submit a final Plan of Development (POD) to the BLM prior to the issuance of the BLM Notice to Proceed (Form 2800-15). Each utility agency would be required to comply with the approved PODs and any stipulations attached to the ROW.

Construction activities for each utility agency would generally follow a sequential set of activities performed by a number of small crews proceeding along the length of the ROW. Construction activities, including construction of temporary and permanent access roads, would be coordinated among the various utility agencies sharing the permitted ROW.

Construction of the electric utility and groundwater facilities, natural gas pipeline, and the fiber optic line would involve the following sequence and would be coordinated among all utilities:

- Engineering surveys and staking;
- Topsoil salvage and storage (applicable to all construction activities);
- Clearing and grading including access road construction;
- Trenching and blasting;
- (Electric Transmission Lines) - Prepare wire handling areas and laydown sites, structure holes, distributional structure assembly and erection, conductor shield wire stringing (electric facilities);
- (Substations) - Pouring of concrete foundations and ground grid; Installation of below-grade raceway; Installation of equipment, structural steel, and bus; Installation of above-grade raceway; Construction of control building; Installation of low-voltage wiring; Installation of security fencing; Yard surfacing; Equipment testing;
- (Groundwater Facilities) – Pipeline stringing/Installation; Installation of fiber optic line in common pipeline trench; Backfilling; Hydrostatic testing;
- Regrading and post-construction cleanup and reclamation (would be conducted by each utility at the end of each construction spread); and
- Reclamation monitoring.

Table ES-2 lists estimated temporary and permanent disturbance acreage required for construction and operation of the Proposed Action. The estimated disturbance acreage is based on preliminary engineering plans and does not account for areas of overlap among utilities. The disturbance acreage is likely to be reduced based upon refinement of the project layout and design; however, all construction and operations activities would occur within the permitted ROW. The fiber optic lines would be installed within the surface disturbance area

for groundwater extraction, transport, and storage. Final ground disturbance would be recalculated by BLM when final design is complete and the exact locations of structures and roads are known. For purposes of NEPA analysis and disclosure of possible environmental impacts, the acreages included in **Table ES-2** are considered the maximum required to construct and operate the Proposed Action. Temporarily disturbed areas are those areas that would be reclaimed and revegetated following construction. Reclamation would consist of reestablishing existing contours, planting approved plant species, and monitoring the success of the revegetation. Success criteria, rehabilitation standards, and monitoring timeframes would be developed in consultation with the appropriate BLM resource staff.

Table ES-2 Estimated Surface Disturbance by Utility Type		
	Temporary (acres)	Permanent (acres)*
Groundwater Extraction, Transport, and Storage	1,417	33
Electrical Distribution Service Facilities	306	186
Natural Gas Distribution Facilities	155	21
Total	1,878	240

* Permanently disturbed areas are those that would be impacted for the life of the project by a facility footprint (e.g., well house, substation access road).

ES-1.3.2 Alternative I – Lincoln County Conservation, Recreation, and Development Act Corridor

Under Alternative 1, the ROW corridor would remain within the LCCRDA corridor from the north end of Tule Desert to the LCLA development area (see **Map ES 1-1**). The location of the Tule Desert and Clover Valley groundwater wells fields would be the same under the Proposed Action and Alternative 1. Under Alternative 1, the main water transmission line and appurtenant electrical utilities and fiber optic lines would remain within the LCCRDA corridor to a terminal point at the northwest corner of the LCLA development area. Currently there is no infrastructure in this portion of the LCLA development area. Under Alternative 1, a new access road, up to five miles in length (as opposed to approximately three miles under the Proposed Action), would be constructed between the existing utility corridor running east and west near Toquop Wash, to the northwest corner of the LCLA development area. The new access road would result in direct impacts to previously undisturbed desert land within the Beaver Dam Slope Area of Critical Environmental Concern (ACEC). Any new access road through an ACEC would be constructed to meet BLM stipulations for road construction within an ACEC, including preconstruction biological and cultural clearances prior to any ground-disturbing activities.

Construction under Alternative 1 would temporarily disturb approximately 1,733 acres. Following construction, approximately 221 acres would be maintained as permanent ROW and aboveground features. The remaining 1,512 acres would be restored and allowed to revert to former uses. Under Alternative 1, all disturbances in the Tule Desert and southern end of the project area would be located within the designated LCCRDA utility corridor.

ES-1.3.3 No Action Alternative

The No Action Alternative represents the status quo — not approving or implementing the Proposed Action or Alternative 1. Analysis of the No Action Alternative is required by NEPA guidelines. Under the No Action Alternative, the BLM would not approve LCWD's ROW application, as submitted, and the Proposed Action would not be constructed on federally managed lands. As a result, impacts associated with construction and operation of the Proposed Action on public land would not occur. The NSE has permitted 2,100 AFY of groundwater from the Tule Desert Hydrographic Area. Selection of the No Action Alternative would not preclude LCWD from pumping their permitted water rights in accordance with the NSE's Ruling, nor would it preclude another entity from constructing other projects within the same corridor, subject to approval by the BLM.

ES-1.3.4 Other Alternatives Considered But Not Evaluated in Detail

An Interdisciplinary (ID) Team of resource specialists from various BLM offices, representatives from cooperating agencies, the Applicant's consultants, and the EIS consultant team were assembled to assist in evaluating the environmental issues to be addressed in the EIS. The ID Team analyzed the Proposed Action, alternatives to the Proposed Action, and the No Action Alternative. The following criteria were used to establish a threshold for developing potential alternatives that respond to the purpose of, and need for, the Proposed Action and meet the BLM policy and direction.

- The alternative should be consistent with management guidance contained in the Ely District Record of Decision (ROD) and Approved Resource Management Plan (RMP) and other applicable BLM policy and direction.
- The alternative must meet the purpose of and need for action.
- The alternative must be feasible from technical and economic standpoints while remaining environmentally responsible.
- The alternative must be capable of implementation in a timely manner.

In addition to the Proposed Action and No Action Alternative, one other alternative (Alternative 1) was identified for detailed study. Two other alternatives were considered during initial project planning. They included burying the electrical lines and installing all groundwater pipelines entirely aboveground. These alternatives were eliminated from detailed analysis because they were not reasonable or were not feasible from a technical or economic standpoint. More detail is provided in the following subsections.

ES-1.3.4.1 Aboveground Water Transmission Pipeline

This alternative would involve constructing the water transmission pipeline aboveground over the entire distance. Constructing the water transmission pipeline aboveground would result in greater visual impacts and may act as a barrier to wildlife. The potential for vandalism and road safety issues would also be greater. Also, this alternative would result in greater surface disturbance of vegetation and related impacts to desert tortoise habitat. This

alternative does not appear to offer any environmental advantage over the Proposed Action or Alternative 1.

ES-1.3.4.2 *Underground Electrical Transmission and Distribution Lines*

Selection of this alternative would require the transmission line and distribution lines to be buried. This alternative was eliminated from further analysis in the EIS because, while it is technically feasible to bury transmission lines, it is not cost-effective for construction and maintenance. The cost of burying transmission lines is estimated to be 7.5 to 12 times higher than traditional overhead construction for a given project (Johnson 2003). Also, this alternative would result in greater surface disturbance of vegetation and related impacts to desert tortoise habitat. This alternative does not appear to offer any environmental advantage over the Proposed Action or Alternative 1. It is standard operational procedure for transmission lines within road ROWs to be constructed aboveground to minimize infrastructure constraints within public easements (e.g., installation of public works such as water pipeline and sewer).

ES-1.3.5 **Agency Preferred Alternative**

The BLM has identified an agency preferred alternative as required by NEPA implementing regulations. The Applicant's Proposed Action was selected as the agency preferred alternative because it best fits the stated purpose and need. In addition to the environmental benefits, which include constructing utilities within designated BLM utility corridors and/or adjacent to existing BLM granted utility ROW's to limit the fragmentation of habitat, the Proposed Action would deliver water and power to the LCLA development area in a location that is technologically advantageous for the delivery, operation and maintenance of the entire LCLA development. The technological advantages include:

- Delivery of the water to a point on the LCLA development property which is located at an elevation which is necessary and beneficial for the engineering of the water transmission system and the future utility distribution of the water to the entire LCLA development lands.
- Electrical power for the well fields would be routed north out of the Overton Power District's existing Mesa Substation which is located near the southeastern boundary of the LCLA development lands.

Construction of the project facilities in the Alternative 1 corridor would require the delivery of water to a point with one of the lowest elevations located on the LCLA development lands and on the west side of Mormon Mesa thus requiring significant capital and ongoing energy costs to construct and operate a pump station to serve the majority of the LCLA development area.

The environmental consequences of the Agency Preferred Alternative and alternatives to the Proposed Action are summarized and compared in **Table ES-3** below.

Table ES-3 Summary of Impacts by Resource for the Lincoln County Land Act Groundwater Development and Utility Right-of-Way Project Proposed Action, Alternative 1, and No Action Alternative		
Proposed Action	Alternative 1	No Action Alternative
Geological Resources – Sections 3.1 and 4.1		
The Proposed Action would not result in impacts to geologic resources. However, seismic activity in the region could potentially impact the structures and facilities constructed under the Proposed Action. All project components would be constructed in accordance with applicable regulations, engineering protocols, and safety standards to minimize any potential impacts to structures from seismic activity.	Impacts to geological resources under Alternative 1 would be same as those described under the Proposed Action (i.e., no impact).	No project-related impacts to geological resources would occur on public lands.
Soil Resources – Sections 3.2 and 4.2		
<p>Potential direct impacts to soil resources associated with construction activities could include increased soil compaction and erosion from wind and water, and chemical changes resulting from mixing surface soils with subsurface during salvage activities. Temporary disturbance would be 1,878 acres, and permanent disturbance would be 240 acres. There would be no direct or indirect impacts to soil resources associated with operation and maintenance of the Proposed Action.</p> <p>Site-specific BMPs to minimize soil erosion and sedimentation would be implemented during construction. The selected erosion and sediment control BMPs and environmental protection measures would be based on the type of disturbance expected, soil type, and the location of the site relative to sensitive resources.</p>	Impacts to soil resources under Alternative 1 would be the same as those described under the Proposed Action. The Proposed Action and Alternative 1 differ primarily in the location of the proposed ROW alignment in the Tule Desert. The acreages of particular soil types disturbed under Alternative 1 would vary slightly from those of the Proposed Action; however, the impacts would be the same.	No project-related impacts to soil resources would occur on public lands.
Water Resources – Sections 3.3 and 4.3		
<p>Potential impacts to surface water may include increased erosion and sedimentation from surface disturbance related to construction activities and hydrostatic testing water discharges, and impacts to water quality from accidental spills.</p> <p>Potential direct impacts to groundwater include impacts to groundwater quantity as a result of drawdown (lowering of the water table) and potential indirect impacts may be related to lowered yields at local and regional groundwater and surface water expressions.</p>	Impacts to water resources under Alternative 1 would be the same as those described under the Proposed Action.	No project-related impacts to water resources would occur on public lands.

Table ES-3 Summary of Impacts by Resource for the Lincoln County Land Act Groundwater Development and Utility Right-of-Way Project Proposed Action, Alternative 1, and No Action Alternative		
Proposed Action	Alternative 1	No Action Alternative
<p>Groundwater pumping in the Tule Desert is subject to the terms and conditions proscribed by the NSE in Ruling #5181 dated November 26, 2002 (Appendix A1). Uncertainties related to groundwater pumping in the Tule Desert, would be managed pursuant to the Stipulated Agreement between the NPS and the LCWD/Vidler (Appendix A2), and commitments outlined in the Monitoring Plan for Groundwater Development in the Tule Desert (Appendix A3).</p> <p>In addition, as part of the Proposed Action, upon award of water rights in the Clover Valley Hydrographic Area, the LCWD would implement the Clover Valley Water Resources Monitoring and Management Plan (Appendix B). The Clover Valley Monitoring and Management Plan was developed in consultation with the BLM and USFWS.</p>		
Vegetation Resources – Sections 3.4 and 4.4		
<p>Potential direct impacts to vegetation resources associated with construction activities could include crushing and/or removal of native vegetation and introduction of invasive and noxious weeds. Temporary disturbance would be 1,878 acres, and permanent disturbance would be 240 acres. There would be no direct or indirect impacts to vegetation resources associated with operation and maintenance of the Proposed Action.</p> <p>No potential habitats for federally listed threatened or endangered species occur within the Proposed Action ROW. However, 72 acres of occupied habitat for the Las Vegas buckwheat, a candidate for listing under the Endangered Species Act (ESA) exists near the project area. Populations of BLM Sensitive species Needle Mountain milkvetch, sticky buckwheat, Parry’s sandpaper plant, and Palmer’s phacelia were found within the project area. While construction activities may result in the destruction of a few individuals of all these species, populations are not expected to be impacted over the long term. Cacti species protected by Nevada law would be salvaged and restored as a part of the Proposed Action’s Reclamation Plan.</p>	<p>The types and magnitudes of impacts resulting from Alternative 1 would be similar to those described for the Proposed Action. Alternative 1 would result in 1,733 acres of temporary disturbance and 221 acres of permanent disturbance. Although not observed during field surveys of the alignment corridor, sticky buckwheat, Parry’s sandpaper plant and Palmer’s phacelia, both BLM listed sensitive plant species, are known to occur in the area. While construction activities may result in the destruction of a few individuals of all these species, populations are not expected to be impacted over the long term. Cacti species protected by Nevada law would be salvaged and restored as a part of the Proposed Action’s Reclamation Plan.</p>	<p>No project-related impacts to vegetation resources would occur on public lands.</p>

Table ES-3 Summary of Impacts by Resource for the Lincoln County Land Act Groundwater Development and Utility Right-of-Way Project Proposed Action, Alternative 1, and No Action Alternative		
Proposed Action	Alternative 1	No Action Alternative
Wildlife Resources – Sections 3.5 and 4.5		
<p>Direct effects on wildlife resources can result from ground disturbance caused by construction-related activities, which can impact wildlife habitat by removing vegetation, altering plant composition or structure, and/or by altering soil characteristics. Potential indirect effects during construction activities include degradation of soil due to fuel contamination, harassment from human presence, and increased levels of noise and vibration due to construction, equipment movement, or blasting.</p> <p>Long-term direct impacts can occur from loss of vegetation and wildlife habitat resulting from continued disturbance from operation and maintenance. Additionally, wildlife species could be temporarily displaced from areas of human activity during operation and maintenance activities. Indirect long-term impacts can result from increased public access and project maintenance. Impacts to surface water and/or spring discharges (that act as habitat for several species) resulting from groundwater pumping are not expected.</p> <p>The desert tortoise is the only federally listed species that occurs within the Proposed Action ROW. During construction approximately 848.5 acres of desert tortoise habitat would be temporarily disturbed, of which approximately 254 acres are located within the Beaver Dam Slope Critical Habitat Unit. Approximately 6.7 miles or 211 acres of disturbance in the Beaver Dam Slope Critical Habitat Unit would be adjacent to an existing utility corridor. Following construction approximately 108 acres would be permanently disturbed by project facilities (roads, wells pads, etc.), of which approximately 43 acres would be located in the Beaver Dam Slope Critical Habitat Unit. The majority of this disturbance would result from installation of project facilities between the existing utility corridor to the terminus of the water pipeline and electrical utility lines in the LCLA development area. All disturbance area not covered by project facilities would be reclaimed in accordance with BLM protocols.</p>	<p>With the exception of impacts to desert tortoise habitat, the types and magnitudes of impacts to wildlife resources resulting from Alternative 1 would be similar to those described for the Proposed Action.</p> <p>Under Alternative 1, approximately 697 acres of desert tortoise habitat would be temporarily disturbed during construction. Of this amount, approximately 237 acres are located within the Beaver Dam Slope Critical Habitat Unit. The majority of the Alternative 1 corridor south of the proposed Toquop Power project is currently undisturbed desert lands adjacent to the Toquop Wash.</p> <p>Following construction approximately 89 acres would be permanently disturbed by project facilities (roads, wells pads, etc.), of which 30 acres would be located in the Beaver Dam Slope Critical Habitat Unit. In consultation with the USFWS and BLM biologists, the Applicant and its contractors would incorporate desert tortoise protections measures to reduce the potential for effects associated with the Proposed Action. Additionally, the LCWD and/or the other utility agencies would be required to pay a remuneration fee for each acre of surface disturbance to desert tortoise habitat.</p> <p>As described for the Proposed Action, the environmental protection measures that would be implemented as part of this alternative would reduce potential direct impacts to fish and wildlife species.</p>	<p>No project-related impacts to wildlife resources would occur on public lands.</p>

Table ES-3 Summary of Impacts by Resource for the Lincoln County Land Act Groundwater Development and Utility Right-of-Way Project Proposed Action, Alternative 1, and No Action Alternative		
Proposed Action	Alternative 1	No Action Alternative
<p>In consultation with the USFWS and BLM biologists, the Applicant and its contractors would incorporate desert tortoise protections measures to reduce the potential for effects associated with the Proposed Action. Additionally, the LCWD and/or the other utility agencies would be required to pay a remuneration fee for each acre of surface disturbance to desert tortoise habitat.</p> <p>There is no suitable habitat for the southwestern willow flycatcher in the project area; however, the southwestern willow flycatcher and its riparian habitat have been documented in the ROI. Because groundwater removal is not expected to affect surface waters, construction, operation, and maintenance of the Proposed Action will not directly or indirectly impact the southwestern willow flycatcher or its habitat or Designated Critical Habitat.</p> <p>There is no habitat for the Yuma clapper rail within the project area. The closest potential habitat for the Yuma clapper rail to the project area is along the Virgin River, approximately 3 miles south of the southern end of the LCLA development area and within the ROI. Because groundwater removal is not expected to affect surface waters, construction, operation, and maintenance of the Proposed Action will not directly or indirectly impact the Yuma clapper rail or its habitat.</p> <p>There is no habitat for the western yellow-billed cuckoo within the project area. Suitable riparian habitat for the western yellow-billed cuckoo occurs within the ROI in the Meadow Valley Wash and along the Virgin River. This species has also been documented within Meadow Valley Wash. Because groundwater removal is not expected to affect surface waters, construction, operation, and maintenance of the Proposed Action will not directly or indirectly impact the western yellow-billed cuckoo or its habitat.</p> <p>There is no habitat for the Virgin River chub or the woundfin within the project area. Within the ROI, the Virgin River near Mesquite, Nevada is the closest potential habitat for the endemic Virgin River</p>		

Table ES-3 Summary of Impacts by Resource for the Lincoln County Land Act Groundwater Development and Utility Right-of-Way Project Proposed Action, Alternative 1, and No Action Alternative		
Proposed Action	Alternative 1	No Action Alternative
<p>chub and woundfin. This area is approximately 3 miles south of the LCLA development area. Because groundwater removal is not expected to affect surface waters, construction, operation, and maintenance of the Proposed Action will not directly or indirectly impact Virgin River fish species or their habitat.</p> <p>Potential impacts to Nevada BLM Sensitive and/or state protected species, including banded Gila monster, chuckwalla, and western burrowing owl, would be mitigated by specific protection measures described in the Standard Construction and Operation Procedures in Appendix C for the EIS.</p> <p>Direct impacts to birds in the vicinity of the project area include direct mortality from increased human traffic during operation and maintenance activities, direct disturbance of nests, and nest abandonment as a result of increase human presence and/or operation noise.</p>		
Land Use – Sections 3.6 and 4.6		
<p>Construction of the Proposed Action would temporarily disturb approximately 1,878 acres. Following construction, approximately 240 acres would be maintained as permanent ROW and aboveground facilities. The remaining 1,638 acres would be restored and allowed to revert to former use. Most of the ROW would be located within the designated LCCRDA utility corridor or along existing roads or other utility corridors.</p> <p>While land ownership would remain unchanged, grazing operations and public use of the area may experience short-term disruption during construction. Cattle or other livestock would need to be temporarily removed from the most intensive construction areas. The proposed pipelines would be buried and would not permanently restrict movement of cattle among pastures.</p> <p>Implementation of the Proposed Action, and the resultant groundwater pumping activities, would not reduce forage levels in the project area that would lead to a decrease in permitted Animal Unit Months</p>	<p>With the exception of the lands south of the proposed Toqoup Project power plant site, the direct and indirect impacts to land use would be similar under both the Proposed Action and Alternative 1. Under Alternative 1, installation of project facilities between the proposed Toqoup Power Plant site and the LCLA development area would result in approximately 157 acres of temporary disturbance (as opposed to approximately 95 acres under Proposed Action). Following construction, all areas not covered by project facilities, would be reclaimed in accordance with BLM protocols.</p>	<p>Land use would not change on federal lands. However, land use changes would continue on adjacent private lands including the build-out of the LCLA development area, Mesquite Lands Act area, and other approved developments.</p>

Table ES-3 Summary of Impacts by Resource for the Lincoln County Land Act Groundwater Development and Utility Right-of-Way Project Proposed Action, Alternative 1, and No Action Alternative		
Proposed Action	Alternative 1	No Action Alternative
<p>(AUM) within any active allotment.</p> <p>Implementation of the Proposed Action would have short-term impacts on traffic flows and volumes on area roadways. Increased construction traffic on dirt and gravel roads in the Tule Desert and Clover Valley areas may contribute to road deterioration. The LCWD has prepared an Access Road Plan which describes environmental protection measures and standard operating procedures for transportation-related activities.</p> <p>The Proposed Action would not affect access to, nor availability or development of, oil and gas or any locatable/saleable mineral resources in the project area.</p>		
Areas of Critical Environmental Concern, Wilderness, and Other Special Use Areas – Sections 3.7 and 4.7		
<p>Under the Proposed Action, construction activities would occur adjacent to existing roads or previously permitted utility corridors. The exception is an approximately 3 mile segment in the Beaver Dam Slope ACEC between the permitted utility corridors east of the proposed Toquop power plant site to the north end of the LCLA development area.</p> <p>The majority of the disturbance in this segment would result from installation of project facilities between the existing utility corridor to the terminus of the water pipeline and electrical utility lines in the LCLA development area. All disturbance areas not covered by project facilities would be reclaimed in accordance with BLM protocols. Following construction, approximately 43 acres in the Beaver Dam Slope ACEC would be permanently covered by project facilities.</p>	<p>With the exception of the lands south of the proposed Toquop Project power plant site, the direct and indirect impacts to land use would be similar under both the Proposed Action and Alternative 1.</p> <p>Under Alternative 1, the southern end of the proposed ROW would be located entirely within the designated LCCRDA utility corridor. Direct and indirect impacts to ACECs, wilderness, and special use areas would be similar to those described under the Proposed Action except that Alternative 1 would result in approximately 157 acres of temporary disturbance in the Beaver Dam Slope ACEC (as opposed to approximately 95 acres under Proposed Action). Following construction, all areas not covered by project facilities, would be reclaimed in accordance with BLM protocols.</p> <p>Following construction, approximately 30 acres in the Beaver Dam Slope ACEC would be permanently covered by project facilities.</p>	<p>There would be no project-related impacts to ACECs, wilderness, or other special use areas under the No Action Alternative.</p>

Table ES-3 Summary of Impacts by Resource for the Lincoln County Land Act Groundwater Development and Utility Right-of-Way Project Proposed Action, Alternative 1, and No Action Alternative		
Proposed Action	Alternative 1	No Action Alternative
Recreation – Sections 3.8 and 4.8		
Construction activities within the Clover Valley and Tule Desert areas may temporarily restrict access into the Clover Mountain and Mormon Mountains Wildernesses. The Proposed Action would not preclude the use of these areas, but rather would require recreational users to temporarily relocate to surrounding recreation areas if access roads are restricted due to construction. Operation and maintenance of the project facilities would not limit public access to recreation opportunities in the surrounding area.	Impacts to recreation under Alternative 1 would be the same as those described under the Proposed Action.	No project-related impacts to recreational use of public lands would occur under the No Action Alternative.
Air Quality – Sections 3.9 and 4.9		
Construction activities would result in temporary emissions of fugitive dust (particulate matter). These emissions would dissipate following completion of construction and would not be expected to travel great distances from the generation site. Temporary gaseous emissions would be generated during construction from diesel-powered well-drilling and other construction equipment. Emissions would be limited by state and federal regulations, and would be minimized through proper operation and maintenance.	Impacts to air quality under Alternative 1 would be the same as those described under the Proposed Action.	Under the No Action Alternative, there would be no short-term construction-related exhaust or fugitive dust impacts. No impacts to air quality would occur under the No Action Alternative.
Noise – Sections 3.10 and 4.10		
Major sources of noise associated with the Proposed Action would be from construction-related equipment and are predicted to be below levels of concern. Equipment used during construction activities would include standard construction and earth moving equipment and well development equipment such as drill rigs. Construction noise levels would be short-term, brief, and intermittent. Long-term noise levels associated with well head, pump station, and pipeline operations would generally be steady and continuous, and are predicted to be at lower levels than construction noise.	Impacts to noise under Alternative 1 would be same as those described under the Proposed Action.	Under the No Action Alternative, the Proposed Action would not be built on public lands. Therefore, there would be no short-term construction noise impacts nor any long-term operation impacts associated with the Proposed Action.
Visual Resources – Sections 3.11 and 4.11		
Short-term visual impacts would occur during construction as views of construction equipment, increased traffic, and construction activities are introduced into the local viewshed. Clearing and excavation activities associated with the installation of project components would remove vegetation communities within the	Impacts to visual resources under Alternative 1 would be similar to those described for the Proposed Action. However, under Alternative 1, the pipeline and aboveground facilities would be constructed entirely within the southern end of the LCCRDA corridor.	The No Action Alternative would result in no project-related impacts to visual resources because no new facilities would be constructed or operated on

Table ES-3 Summary of Impacts by Resource for the Lincoln County Land Act Groundwater Development and Utility Right-of-Way Project Proposed Action, Alternative 1, and No Action Alternative		
Proposed Action	Alternative 1	No Action Alternative
pipeline alignment. Immediately following installation, these areas would be reclaimed and revegetated to pre-construction levels. The visual impact of vegetation removal would be minimal because of low color contrast associated with the characteristic vegetation and the underlying soils.		public lands.
Socioeconomic Resources – Sections 3.12 and 4.12		
Implementation of the Proposed Action would have a minimal affect on the social and economic resources from the associated increase in the level of economic activity. Increased economic activity would result from increased payroll earnings during project construction, which would be spent on items such as housing, food, goods, and services. The Proposed Action would not have direct growth-inducing effects because it requires a construction work force of no more than 160 workers for a period of 2 years and they would come from the existing construction workforce in the area. Indirect effects may result from continuing planned developments in Clark and Lincoln Counties.	Impacts to socioeconomic resources under Alternative 1 would be same as those described under the Proposed Action.	No project-related impacts to socioeconomic resources would occur.
Environmental Justice – Sections 3.13 and 4.13		
Potential direct and indirect impacts associated with the Proposed Action would not have a disproportionate effect on low-income or minority populations, because these populations are not present in the vicinity of the project area. Therefore, implementation of the Proposed Action would have no impact on environmental justice issues.	Impacts to environmental justice under Alternative 1 would be same as those described under the Proposed Action.	The No Action Alternative would result in no project-related impacts to environmental justice.
Hazardous Materials and Solid Waste – Sections 3.14 and 4.14		
Potential for accidental release of hazardous and toxic materials would be minimized through the implementation of Environmental Management Plan and Spill Prevention Containment and Countermeasure (SPCC) Plan prepared by the LCWD as part of their POD.	Impacts from hazardous materials and solid waste under Alternative 1 would be same as those described under the Proposed Action.	There would be no project-related hazardous materials or solid waste produced under the No Action Alternative.

Table ES-3 Summary of Impacts by Resource for the Lincoln County Land Act Groundwater Development and Utility Right-of-Way Project Proposed Action, Alternative 1, and No Action Alternative		
Proposed Action	Alternative 1	No Action Alternative
The amount of solid wastes generated from construction and operation would not affect the life expectancy of the municipal solid waste facilities currently operating in area. Any hazardous materials would be disposed at an Environmental Protection Agency (EPA) approved hazardous waste facility. Therefore, there would be no impact from the Proposed Action on existing waste facilities in the region.		
Paleontological Resources – Sections 3.15 and 4.15		
No significant paleontological resources have been identified in the vicinity of the project area. Therefore, no known impacts would result from construction, operation, and maintenance of the Proposed Action. However, construction may result in unanticipated exposure of paleontological resources in Holocene and late Pleistocene deposits. If paleontological resources are discovered during construction, the BLM would be contacted, according to the SOPs in Appendix C, to determine steps necessary to evaluate the need to preserve the paleontological resources.	Impacts to paleontological resources under Alternative 1 would be the same as those described under the Proposed Action.	Under the No Action Alternative, no project-related impacts would occur to paleontological resources.
Cultural and Historic Resources – Sections 3.16 and 4.16		
Fifty-two cultural resource sites and 139 isolated finds have been documented within the area of potential effects (APE) of the Proposed Action. Twenty-five of the cultural resource sites are recommended eligible for the National Register of Historic Places (NRHP), and are therefore considered historic properties. Only historic properties are considered for impacts. The 25 historic properties include 23 prehistoric sites and two sites with both prehistoric and historic components. All but one of the sites have been recommended eligible for the NRHP under Criterion D, for the presence of archaeological deposits that may have the potential to yield information important in the history or prehistory of the region. The other site is a rock art site that is recommended eligible under Criterion C for its ability to embody the distinctive characteristics of a cultural type ore period and its possession of high artistic values. By	All but one of the identified historic properties are within portions of the project area shared by the Proposed Action and Alternative 1. The historic property that is not shared by both alternatives is the rock art site. Adverse effects Potential direct adverse effects to historic properties under Alternative 1 would be same as those described under the Proposed Action. There are 24 historic properties within the APE of Alternative 1, all of which are archaeological sites eligible under Criterion D for their potential to yield information important in prehistory or history. Potential indirect effects to these sites would be effects that could occur later in time as a result of improved public access to these areas. These could include	No historic properties would be affected by project-related activities under the No Action Alternative.

Table ES-3 Summary of Impacts by Resource for the Lincoln County Land Act Groundwater Development and Utility Right-of-Way Project Proposed Action, Alternative 1, and No Action Alternative

Proposed Action	Alternative 1	No Action Alternative
<p>definition direct effects to historic properties could occur as a result of ground-disturbing activities associated with the construction and operation of the Proposed Action.</p> <p>Indirect effects could include the potential for artifact removal, feature damage, or the destruction of intact archaeological deposits made possible by improved public access. There have been no historic landscapes, geoglyphs, or toolstone quarries identified in the project area that may be subject to direct or indirect impacts. Indirect visual effects to the rock art site will be temporary effects during construction.</p> <p>As outlined in the Historic Properties Treatment Plan (HPTP), treatment plans will be prepared in consultation with the BLM and the State Historic Preservation Office (SHPO) for each of the historic properties that may be affected. The preferred treatment is avoidance and protection of the sites. If previously unidentified cultural resources), human remains or funerary items are discovered, the procedures outlined in State Protocol Agreement, Section VIII (Discovery Situations) will be implemented.</p>	<p>unauthorized artifact removal and deliberate or inadvertent damage to archaeological features or deposits. Archaeological deposits are generally not significant for their setting or feeling, and are not affected by visual or auditory intrusions.</p> <p>As under the Proposed Action, treatment plans will be prepared in consultation with the BLM and the SHPO for each of the historic properties that may be affected. The preferred treatment is avoidance and protection of the sites. If previously unidentified cultural resources, human remains or funerary items are discovered, the procedures outlined in State Protocol Agreement, Section VIII (Discovery Situations) will be implemented.</p>	

This page intentionally left blank.