

APPENDIX F

**COMMENTS ON THE LINCOLN COUNTY LAND ACT
GROUNDWATER DEVELOPMENT AND UTILITY RIGHT OF
WAY PROJECT DRAFT EIS
AND
BLM'S RESPONSES TO COMMENTS**

APPENDIX F - RESPONSES TO COMMENTS

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. The BLM held four public meetings in Nevada during the 60-day comment period, one each in Mesquite, Caliente, Carson City and Las Vegas. 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 (i.e. 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 provided in Appendix F. Each comment document was assigned a reference number, and each comment within the document was identified with a number. BLM's responses are listed next to the comment or following the comment document.

**Lincoln County Land Act Groundwater Development and
Utility Right-of-Way Project
Draft Environmental Impact Statement
Comment Form**

Public participation is critical to helping ensure BLM has considered the views of the public in the decision on this groundwater development project. BLM encourages you to get involved. Please take a few minutes to complete this form and provide any comments or questions you would like addressed. **The comment period ends on Tuesday, July 22, 2008.** Written comments can be sent via mail, fax, or e-mail to the BLM Nevada Groundwater Projects Office or submitted in person at the public meetings (see details below). Please contact the Groundwater Projects Office if you wish to receive a paper copy or CD of the Draft EIS.

Groundwater Projects Office Contact Info:

Phone: 775-861-6681 Fax: 775-861-6689 E-mail: nvgwprojects@blm.gov

Mailing Address:
P.O. Box 12000
Reno, NV 89520

Fed-Ex/Physical Address:
1340 Financial Blvd
Reno, NV 89502

Public Meeting Info:

Las Vegas, NV: Monday, June 23, 2008, 6-8pm, Atrium Suites Hotel
Caliente, NV: Tuesday, June 24, 2008, 6-8pm, Caliente City Hall
Mesquite, NV: Wednesday, June 25, 2008, 6-8pm, Mesquite City Hall
Carson City, NV: Thursday, June 26, 2008, 4-6pm, Plaza Hotel

Name: Charley Bulletts E-mail: cbulletts@kaibabpainte-11sn.gov
Organization: Kaibab Band of Paiute Indians Title: Cultural Coordinator
Mailing Address: H.C. 65 Box 2
City: Fredonia Az 86022 State: AZ Zip: 86022

Add my name to the mailing list Withhold my name and address from public review**

**Before including your address or other personal identifying information, you should be aware that this information may be made publicly available at any time. While you can ask us to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

COMMENT (continue on separate sheet if necessary)

The proposed LCIA GD & UROW seem pretty outrageous to transport water across lands to a place that should be trying to conserve its resources is extreme. The Kaibab Paintes would like you to know that water is considered a Cultural Resource. Its part as a life giver and life take should be noted. We deal with all of these Right of Ways being proposed that the creator will show us all in time that water shouldn't travel many distances. Its intent for being here is for drinking and cleaning (not for toilets, gut courses, and swimming pools). We would like more information and to be kept up to date on all activities pertainig to this project.

Comment
No. 1-1

Response to Comment No. 1-1

The BLM appreciates the commentor's interest in the proposed project and participation in the NEPA process. Water as a cultural resource has been added to the text of the Final EIS in Section 5.2.

Comment
No. 2-1

BLM Nevada Groundwater Projects Office
P. O. Box 12000
Reno, NV 89520

REC'D - BLM - NSO
9:00 A.M. JUN 30 2008

June 26, 2008

To Whom It May Concern:

RE: Lincoln County Land Act Groundwater Development
And Utility Right-of- Way Project
Draft Environmental Impact Statement

I attended the meeting on June 23, 2008 In Las Vegas. I came away from that meeting very concerned with the LACK of archaeology being given to the southern part of the project . ,I have recreated in this area for years, and no for a fact that this project might effect rock rings, petroglyphs, and lithic scatters. Yet at the meeting all I could get from there representative, was that the area I was focusing on was in the works. I thought that the purpose of a Draft EIS , was to disclose to the public, potential possible problems with the routes upon release of the Draft EIS (May 2008). My area of concern goes from The Toquop Gap to it's terminus near Mesquite. And associated alternates.

Sincerely Yours

Mike McGrew
716 Overview Dr.
Las Vegas, NV 89145
E-Mail mkm1944@net zero. Net

Response to Comment No. 2-1

A Class III Pedestrian Survey of the proposed right of way has been conducted in accordance with BLM's Programmatic Agreement with the Nevada State Historic Preservation Office, and BLM guidelines and protocols and Ely District requirements. The results of the survey have been submitted to the Nevada SHPO and have been described in this Final EIS in section 3.16.

JIM GIBBONS
Governor

STATE OF NEVADA

ANDREW K. CLINGER
Director



DEPARTMENT OF ADMINISTRATION

209 E. Musser Street, Room 200
Carson City, Nevada 89701-4298
(775) 684-0222
Fax (775) 684-0260
<http://www.budget.state.nv.us/>

July 16, 2008

Penny Woods
US Department of the Interior
Bureau of Land Management
Nevada State Office
P.O. Box 12000
Reno, NV 89520-0006

Re: SAI NV # **E2008-487**

Reference:

Project: **DEIS for Lincoln County Land Act Groundwater Development and ROW Project**

Dear Penny Woods:

Enclosed are comments from the agencies listed below regarding the above referenced document. Please address these comments or concerns in your final decision.

Division of State Lands

The following agencies support the above referenced document as written:

State Historic Preservation Office

This constitutes the State Clearinghouse review of this proposal as per Executive Order 12372. If you have questions, please contact me at (775) 684-0209.

Sincerely,

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

R. Tietje
Nevada State Clearinghouse

Nevada State Clearinghouse

From: Skip Canfield
Sent: Thursday, June 19, 2008 2:17 PM
To: Nevada State Clearinghouse
Subject: RE: E2008-487 DEIS for Lincoln County Land Act Groundwater Development and ROW Project - Bureau of Land Management

The Nevada Division of State Lands provides the following comments:

There is a concern about the cumulative visual impacts to public lands users' experiences.

As multiple use concepts are employed on our public lands, a comprehensive and consistent look at visual impacts must be considered. Small and inexpensive mitigation measures can play a large role in the compatibility of the built and natural environment.

Utilize appropriate lighting:

- Utilize consistent lighting mitigation measures that follow "Dark Sky" lighting practices. Dark sky measures are inexpensive, simple to implement, and very mainstream. The result is a less obtrusive impact to other users of adjacent public lands. www.darksky.org
- Effective lighting should have screens that do not allow the bulb to shine up or out. In fact, lighting that is installed using dark sky fixtures (light is only aimed at the subject property) is more efficient, safer, and results in reduced electricity costs.
- Federal agencies should include light shields as a condition of approval for all permanent and temporary applications such as exploratory drilling rigs.

Utilize building materials, colors and site placement that are compatible with the natural environment:

- Utilize consistent mitigation measures that address logical placement of improvements and use of appropriate screening and structure colors. Existing utility corridors, roads and areas of disturbed land should be utilized wherever possible.
- For example, the use of compatible paint colors such as "sudan brown" for water tanks and other vertical structures reduces the visual impacts of the built environment. Using screening, careful site placement, and cognitive use of earth-tone colors/materials that match the environment go a long way to improve the user experience for others who might have different values than what is fostered by built environment activities.
- Federal agencies should require these mitigation measures as conditions of approval for all permanent and temporary applications.

Skip Canfield, AICP
State Land Use Planning Agency

6/19/2008

Comment
No. 3-1

Comment
No. 3-2

Response to Comment No. 3-1

Measures to reduce project-related effects to visual resources are described in Appendix C - Standard Construction and Operation Procedures (V-1 thru V-7) in both the Draft and Final EIS. These measures follow "dark sky" lighting practices.

Response to Comment No. 3-2

Measures to reduce project-related effects to visual resources are described in Appendix C - Standard Construction and Operation Procedures (V-1 thru V-7) in both the Draft and Final EIS.

6/30

Rebecca Palmer

From: Nevada State Clearinghouse [Clearinghouse@budget.state.nv.us]
Sent: Friday, May 30, 2008 10:30 AM
To: Rebecca Palmer
Subject: E2008-487 DEIS for Lincoln County Land Act Groundwater Development and ROW Project - Bureau of Land Management

<http://budget.state.nv.us/images/state_seal.jpg> NEVADA STATE CLEARINGHOUSE
Department of Administration, Budget and Planning Division
209 East Musser Street, Room 200, Carson City, Nevada 89701-4298
(775) 684-0209 Fax (775) 684-0260

TRANSMISSION DATE: 5/30/2008

State Historic Preservation Office

Nevada SAI # E2008-487

Project: DEIS for Lincoln County Land Act Groundwater Development and ROW Project

Follow the link below to download an Adobe PDF document concerning the above-mentioned project for your review and comment.

E2008-487
<http://www.blm.gov/nv/st/en/prog/planning/groundwater_projects/eis_home_page/lcla_groundwater_project/issue_draft_eis_for.html>

Please evaluate it with respect to its effect on your plans and programs; the importance of its contribution to state and/or local areawide goals and objectives; and its accord with any applicable laws, orders or regulations with which you are familiar.

Please submit your comments no later than Tuesday, July 15, 2008.

Use the space below for short comments. If significant comments are provided, please use agency letterhead and include the Nevada SAI number and comment due date for our reference.
Questions? Krista Coulter, (775) 684-0209 or clearinghouse@state.nv.us
<<mailto:clearinghouse@budget.state.nv.us>>

No comment on this project Proposal supported as written

AGENCY COMMENTS:

Signature: 

Date: 7/8/08

Distribution: Ed Foster, Department of Agriculture Sandy Quilici, Department of Conservation & Natural Resources Stephanie Martensen, Division of Emergency Management Jodi Stephens, Governor's Office Stan Marshall, State Health Division Karen Beckley, State Health Division Kirk Bausman, Hawthorne Army Depot Skip Canfield, AICP, Division of State Lands Zip Upham, NAS Fallon Ed Rybold, NAS Fallon Jerry Sandstrom, Commission on Economic Development Sandi Gotta, Division of Conservation Districts John Walker, Nevada Division

SUSTAINABLE GRAZING COALITION

Nevada State Board of Agriculture • Nevada Rangeland Resources Commission •
Nevada Cattlemen's Association • Nevada Farm Bureau •
Nevada Central Grazing Committee
P.O. Box 310, Elko NV 89803

July 11, 2008

RE: LCLA Groundwater Development EIS Comments.

We appreciate the opportunity to provide comments on the Draft LCLA Groundwater Development and Utility Right-of Way Project. This is a significant undertaking that has the potential to greatly benefit the Economy of the County but also to have potential catastrophic effects on the continued and historic economy of Lincoln County if not developed, monitored, and mitigated appropriately and completely. With that said we feel there are several comments to consider that will improve the analysis as well as more completely address resource concerns. We will organize comments by section using the topical section numbering system in the EIS and where necessary, the page and paragraph number.

Though the Summary of Impacts table is meant to be brief, there are some points that are inadequately covered both here in the table and in the detailed discussion later in the document.

*Comment
No. 4-1*

Table ES-3, Water Resources-sections 3.3 and 4.3; The summary does not mention or site where in the document the stipulated agreement and action criteria for early warning and adverse impacts is located in this document. This is probably the single greatest issue and or concern to the public as to how we are going to recognize effects, how will they be identified prior to permanent damage, and how impacts will be fully and completely mitigated so as to maintain full availability of any prior existing water rights and their associated beneficial uses.

*Comment
No. 4-2*

Table ES-3, Vegetation resources-sections 3.4 and 4.4; The discussion does not address or take into account the highly variable nature of successful reseeding and rehabilitation and the fact that other Federal Agencies, (Natural Resources Conservation Service) do not recommend reseeding in areas of less than eight inches of annual precipitation due to the extremely limited chance of success. This then means that the entire Tule Desert portion of the project could be subject to very poor if any rehabilitation success without some method of supplemental watering. This discussion is needed to insure mitigation and rehab will occur. Additionally the analysis does not take into account that the entire project area is within the South Lincoln Soil Survey project area and has Ecological Site Descriptions correlated to every soil series in the project area. Using these Ecological Site Descriptions would greatly improve the detailed description of the existing vegetative communities in later chapters in relationship to what they should be, and to the potential desired composition of seed mixtures for rehabilitating these sites.

Responses to these comments are provided on a separate page following this comment letter.

Comment No. 4-3 | Table ES-3, Wildlife Resources-sections 3.5 and 4.5; We did not see any discussion here or in the text as to the potential impacts to wildlife of some new roads that will be present after the completion of construction.

Comment No. 4-4 | Table ES-3, Land Use-sections 3.6 and 4.6; The discussion indicated there could be temporary displacement of Livestock during construction. This needs to be addressed in more detail because if it involves a simple change in a pasture rotation system, there may not be any effect. If the change involves removal of the livestock from the allotment for the duration of construction, this could be very costly to the producer in transportation costs, pasture leases, or purchase of hay. The permit holders, if effected to this level, should not have to stand that cost as it is brought about by actions by a third party which is impeding their ability to use their valid right. In addition, there is not a discussion of the potential for impact or damage to range improvements when and where roads or pipeline construction cross the route of these existing improvements. Improvements include fences, and stock water pipelines running from spring sources or wells.

Comment No. 4-5 | Section 1.8.3; The Army Corps of Engineers office responsible for permitting and regulating Waters of the United States and 404 permits for Nevada is located in the Federal Building in Reno, NV and not in St. George, UT.

Comment No. 4-6 | Table 1-6, page 1-15; Jurisdictional waters again are administered out of Reno.

Comment No. 4-7 | Section 2.1.1.1, paragraph 6, page 2-5; Periodic deliveries of chemicals to well sites once every three weeks will require snow plowing and or snow cat work and a greatly improved compacted gravel base on access roads with all weather surfacing in at least 4 out of 10 years in the Clover Mountain well field area. Long term weather records do not indicate significant snow build up in Caliente; however, the problem is not always snow depth. Soil types in this area have very low liquid limits and therefore are far less stable when saturated. The typical winter weather condition in this area is to have nights cold enough to freeze the ground to a shallow depth so road surfaces are firm early in the morning. By afternoon, the ground has thawed and the saturated soil will have no structural strength allowing vehicles to get very easily and deeply STUCK. There is no discussion of soil engineering properties presented here which is critical to long term road way stability and required pipeline stability and cover requirements.

Comment No. 4-8 | Table 2-3, Land Use-sections 3.6 and 4.6; This section does not discuss (and this topic is only lightly covered in the remainder of the document) the potential for possible effects to surface waters or shallow wells and does not reference to the Stipulated Agreement contained in the appendix of this document.

Comment No. 4-9 | Table 2-3, Paleontological Resources-section 3.15 and 4.15; We see no references to the existence of Petrified Wood resources located in the Tule Desert in the vicinity of the pipeline in the Tule Springs Hills and Jumbled Mountain region.

Comment No. 4-10 | Section 3.3.1.5 Paragraph 4, page 3-19; This is one of several references to the statement that "many of the springs discharge only small amounts of water and that all of these

Responses to these comments are provided on a separate page following this comment letter.

springs dry up during the summer”. This is a hypothetical and anecdotal statement based on a limited amount of data and is incorrect. There are well over 100 spring sources in the Clover Mountains (both North and South of the Main Ridge, See BLM water resource inventories conducted in the mid 80’s) and the majority of them maintain a level of source flow year round even though the extent of overland flow may diminish. Many of the livestock water pipelines depend on these sources. The grazing season for permits in this area overlaps the summer dry period. If the springs dry up then there would be no reason to authorize grazing as animals need from 10 to 20 gallons of water a day to survive depending on animal size and daytime temperatures. Likewise there would be no large wildlife species present in the area.

*Comment
No. 4-11*

Section 3.3.2.4.1, Paragraph 1, Page 3-26; The broad scope of regional discharge in the area also should include Hiko, Ash and Crystal Springs in the Pahrangat Valley. The total scope of water potentially coming from Panaca and Moapa Springs is far lower than what would be expected from the Regional Aquifer. Especially since Moapa Spring is in the same general vicinity as the junction of the White River Drainage and Meadow Valley Wash and may be receiving significant inflow from that area as well. There needs to be research as to the real source of Ash, Crystal, Hiko and Moapa Springs before these assumptions can be made. Sufficient documentation has not been presented to definitively separate the source of these waters.

Responses to these comments are provided on a separate page following this comment letter.

*Comment
No. 4-12*

Section 3.3.2.4.2.2, Paragraph 2 Page 3-34 and Paragraph 1, page 3-35; Information presented here seems to support that there is indeed interconnectivity between the Shallow Aquifer and the Deep Carbonate Aquifer in the Tule Desert Basin. The conclusion presented here and in other locations throughout the document that there would be no effect from pumping, does not follow this data presentation. In fact you show it is possible based on your own studies. To say that all ground water being pumped by stock water wells in the Tule Desert Basin is perched is a major assumption. In fact, it is more plausible as being a mixing of water from both shallow and deep sources as you eluded. This section is inadequately documented and the basin requires much further study prior to any drilling or pumping being allowed.

*Comment
No. 4-13*

Section 3.3.2.7, Paragraph 4; There are four wells in the Tule Desert Basin, Tule Desert Well, Upper Lime Mountain Well, Lower Lime Mountain Well and Sam’s Camp Well. All of these have been used to provide water for livestock during the winter grazing period.

*Comment
No. 4-14*

Section 3.4.2 through 3.4.4 and all associated tables; These sections do not adequately describe the existing vegetation and its relationship to the Ecological Sites developed by NRCS for vegetative communities and potential native communities. These site descriptions identify the variety of vegetative communities one would expect to find associated with particular soil and ecological conditions. This limited analysis in the EIS does not properly describe the opportunities to address invasive species or restoration as a result of this oversight. This information can be found in the available published soil surveys for the project area. BLM policy states that all vegetative management will be

based on soils and their correlated ecological/range sites. All this information is available from the NRCS State Office in Reno.

*Comment
No. 4-15*

Section 3.6.3, Table 3-22; The table inaccurately lists the total adjudicated AUM's for the listed allotment as the amount that each individual permittee holds. This is incorrect. Each individual holding a permit in an allotment has a portion of the total adjudicated AUM's which when all those are totaled together, would match the number shown in the table. The way this information is displayed, for example, indicates that the total of all AUM's on the Snow Springs allotment is over 21,000 AUM's when in fact the total is 3,567 AUM's for all 6 permits added together. You also listed the ephemeral permit as having no adjudication. This is in fact, incorrect, as it is a permit established by Executive Order to be based on the amount of forage produced on an annual basis and will change each year. The permit went through the priority period just like any perennial permit and has a term permit just as any other allotment even though it does not have a perennial preference of AUM's. The adjudication is an ephemeral number of AUM's.

*Comment
No. 4-16*

Section 3.6.5.1, Paragraph 3; You indicate here that "many (roads and trails) are not actively used". This is incorrect in that every road or trail in the Tule desert area is used for maintenance of improvements and management of livestock. There is indeed little use during the summer when livestock are not present in the area. All grazing permits in this area are winter permits so any summer storms would create the appearance that the roads get little use.

*Comment
No. 4-17*

Same section, Paragraph 6 bottom of the page; Part of what appears to be informal routes is partially caused by the fact that priorities for road maintenance are low on roads that are located over 200 miles from the BLM District Office having responsibility for road maintenance. Many of the so called informal routes are by passes or ways to go around washed out roads that have not been maintained since the last major storms. Poor or nonexistent road maintenance is partially to blame for this proliferation. Road maintenance is not the responsibility of the permittees.

*Comment
No. 4-18*

Section 3.12.2, Table 3-27; The population projections shown here do not indicate the great potential by 2025 for build out of the LCI.A development area which this project is intended to serve. In addition, it does not take into account development in Coyote Springs which will have construction in Lincoln County by that date. The mass shift that these two projects will cause to a highly urbanized and regionally isolated population center will play heavily on the socio-economic structure of the County and its resources.

*Comment
No. 4-19*

Section 4.3.1.2.2, Paragraph 1; This relates back to the first comment of this letter. There is not a good discussion of mitigation presented here and you only find a reference to the stipulated agreement and actionable conditions in the last sentence in this section. The biggest issue of concern to most people is "How are existing rights going to be protected". There is no mention in the body or in the stipulated agreement as to how all existing water users will be provided their appropriate share of water if there is an effect.

Responses to these comments are provided on a separate page following this comment letter.

Comment No. 4-20 | Section 4.3.1.3.2, Page 4-14, paragraph 3; It is obvious, from the mixed message your data presents concerning the interconnectivity of the shallow and deep ground water tables in the Tule Basin, that much further study is warranted. It would also seem to follow logically that we would hold off on any production well development in the Tule Basin until after many of these questions are answered.

Comment No. 4-21 | Section 4.3.1.3.4, last paragraph; This again follows from the above comment. There is too little data, and to mixed a message from the data you have presented to conclude here that pumping will not cause an effect. The data you have summarized on the Tule Basin both proves and disproves your assertion that there will not be an effect.

Comment No. 4-22 | Section 4.3.4, Paragraph 2; Discussions of mitigation do not state clearly what will be done to fully replace the adjudicated water rights that are held in the area should there be an effect.

Comment No. 4-23 | Section 4.4.2, entire section; Again we reference to the soil survey and correlated ecological sites. Current vegetative communities may be invaded. The best available approximation of the appropriate vegetative community for a given soil is found in the soil/site correlation tables in the soil surveys. For example, many sites in the Clover Mountains are currently dense pinion/juniper woodlands. According to the soil survey and correlated ecological site information, many of these sites should be sage brush bunchgrass with scattered P/J. If this information is not consulted, you may attempt to rehabilitate the site to an inappropriate vegetative community of dense P/J which is an invaded condition.

Comment No. 4-24 | Section 4.6.1.1, entire section; The fact that several allotments in the Tule Desert are currently closed is relevant only if they remain so during construction. The closures for most of the allotments were due to the need to recover from the large fires that occurred in 2005 and can be lifted at such time as recovery conditions are met.. The discussion of mitigating for livestock should be centered on restoring disturbance along the pipeline route to the vegetative community that the soil should support, and to mitigating all lost water resources to the prior existing rights should the project create any effect. This entire paragraph is out of context to the purpose of this section. Remember that not having a reduction in forage levels after restoration is of concern but it is not the major concern. All the permits are worthless even if they have abundant forage if they do not have water to support the stock.

Comment No. 4-25 | Section 4.12.1.1 and 4.12.1.2, entire section; This refers back to the comment of section 3.12.2. Population, housing, and employment figures do not discuss the area in relation to the resulting population increases to be expected from this LCLA and the Coyote Springs developments. There will be an increase on water demand, a housing demand, and a larger employment pool as many of the projects identified in the cumulative effect come on line at the same time. A more thorough discussion of the impacts of this is needed.

Responses to these comments are provided on a separate page following this comment letter.

*Comment
No. 4-26*

Section 4.18, entire section; Conclusions in the body of the document indicates that there will be resulting drawdown of water table levels in the vicinity of the well fields yet the section on irreversible and irretrievable commitments of resources does not include this in the discussion. Virtually every large aquifer in the US that is under heavy pumping is dealing with large scale lowering of water tables and managing entities have little or no knowledge of if historic levels will ever be achieved again. In many cases, the strata that holds water in abundance is likely very porous but will collapse when water is extracted. Once this collapse occurs, the strata will never support the same capacity again. There is no discussion of the likelihood of such loss. As an example, LVVWD has not achieved historic water table levels after several years of injection pumping in the old LV well field area. As most of Nevada is heavily faulted and is prone to subsidence, this is a very real possibility.

*Comment
No. 4-27*

Appendix B; We would like to know why there is only a monitoring and pumping management plan for the Clover Mountains included in the document. It is critical to have this for the Tule Basin as well, as this is where, by your own data showing potential for interconnectivity between shallow and deep aquifers, we are more likely to have effects.

*Comment
No. 4-28*

Appendix B, Attachment 1; The test and monitoring wells should include, by agreement with the water right holder, all the stock water wells on the Clover Mountain area. In addition, the springs listed in section 4 of this attachment refers only to high volume flow springs. There are, according to the BLM water inventory of the Clover Mountains conducted in the mid 80's, over 100 springs that originate and flow out of the Clovers mountains (both north and south of the main ridge). Most of these are perennial and do not dry up in the summer as was stated in this document. Several low volume sources should be added to the sample as well to improve the potential to identify early effects. These same testing and monitoring issues need to be included in the Plan for the Tule Desert Basin as well.

Thank you for the opportunity to comment.

Sincerely;

Richard A. Orr
Certified Professional in Range Management

Responses to these comments are provided on a separate page following this comment letter.

Responses to Comment No. 4-1 thru 4-28

Response to Comment No. 4-1

Table ES-3 in the Final EIS has been modified to reference the appropriate appendices which address the comment. Appendix A1, in both the Draft and Final EIS includes the Office of the State Engineers Ruling #5181 in the matter of water rights applications in the Tule Desert. Appendix A2 in both the Draft and Final EIS includes the Stipulation for Withdrawal of Protest between the LCWD / Vidler Water Company and the National Park Service. Appendix A3 in both the Draft and Final EIS includes the Monitoring Plan for Groundwater Development in the Tule Desert. Appendix B in both the Draft and Final includes the Proposed Water Resources Monitoring and Management Plan for Future Groundwater Pumping in the Clover Valley as it relates to the Proposed Action.

Response to Comment No. 4-2

The Applicant will follow BLM protocols for vegetation salvage and replanting in accordance with current established guidelines. See Appendix C - *Standard Construction and Operation Procedures* (BR-5 thru BR-8) in the Final EIS.

Response to Comment No. 4-3

Potential effects to wildlife from project construction and operation are described in Chapter 4.5.1 in both the Draft and Final EIS. The proposed right of way would parallel existing disturbance corridors (e.g. roads, two-track roads, utility corridors) where possible, limiting the amount of disturbance to and new fragmentation of existing wildlife habitat. Applicant proposed environmental protection measures to minimize wildlife effects during construction and operation are described in Appendix C - *Standard Construction and Operation Procedures* (Biological Resources) in both the Draft and Final.

Response to Comment No. 4-4

The LCWD will coordinate construction activities with the appropriate BLM staff and grazing lessee's to minimize effects to livestock grazing activities, as appropriate.

Response to Comment No. 4-5

The project area is located in the USACE Sacramento District. The St. George, Utah office has permitting authority over activities affecting waters of the U.S. in Lincoln County, Nevada.

Response to Comment No. 4-6

See response to Comment 4-5.

Response to Comment No. 4-7

In response to the writer's comment, this information has been provided to the Applicant to ensure they consider these conditions in their engineering design standards. The terms and conditions of the right-of-way grant will require the Applicant to repair any BLM-managed roads damaged by construction and operation of the proposed project.

Response to Comment No. 4-8

Possible effects to local water users are described in Section 4.3.1.3.6 in both the Draft and Final EIS. The Stipulated Agreement is included as Appendix A2 in both the Draft and Final EIS. The referenced section of Table 2.3 in the Final EIS has been reworded to say that "the Proposed Action, and the resultant groundwater pumping activities, would not reduce forage levels in the project area and therefore would not lead to a decrease in permitted AUMs within any active allotment."

Response to Comment No. 4-9

The proposed pipeline would not impact any known paleontological resource areas. If paleontological resources are discovered during construction activities, the appropriate BLM Authorized Officer would be contacted and protocols outlined in the Paleontological Resources Management section of the BLM 8270 Handbook would be implemented.

Response to Comment No. 4-10

In response to the comment, the referenced paragraph has been amended in Section 3.3.1.5 to clarify that ... "the USGS found 31 springs, which "at times dry up in the summer" (McHugh and Ficklin 1984). The discussion in this section is in regard to groundwater recharge and is not meant to imply there is insufficient water for large animal grazing.

Response to Comment No. 4-11

Early investigations starting in 1971 (Rush et al), followed by Harrill and Prudic (1998) indicated that the regional flow through the White River System was distinct from the Meadow Valley System; the two separated by the Delamar and Meadow Valley Mountains. Recent geochemical data supports the earlier geologically based basin boundaries (CH2MHill, May 2002). In addition, the Pahrnagat Valley is separated from Lower Meadow Valley by the Delamar Valley, making it highly unlikely that groundwater is connected through a common flowpath.

Response to Comment No. 4-12

In response to the comment, text has been added to Section 3.3.2.4.2.2 to clarify that some connectivity exists at the local scale, but that at distances of greater than 0.25 mile, pumping in the rock aquifer does not show any effect in the alluvial aquifer.

Response to Comment No. 4-13

A search of the NDWR Well Driller's database shows four privately owned wells in Tule Desert Basin. Thank you for supplying their common names. The text has been modified in Section 3.3.2.7 to reflect that there are 4 wells and not 3.

Response to Comment No. 4-14

See response to 4-2.

Response to Comment No. 4-15

The information provided in the Draft EIS inaccurately listed the total adjudicated AUM's for the listed allotments. Table 3-22 in the Final EIS has been updated with the corrected information.

Response to Comment No. 4-16

In response to comment, text has been changed in section 3.6.5.1 in the Final EIS.

Response to Comment No. 4-17

Comment Noted. See response to comment 4-16.

Response to Comment No. 4-19

The text in Section 4.3.1.2.1 in the Final EIS has been modified to more clearly state "To reduce these uncertainties, the NSE as part of Ruling #5181 which allocated 2,100 afy of water to the applicant, brokered a stipulated agreement which includes a Monitoring, Management and Mitigation Plan for Tule Desert (Appendix A). In addition, a separate Water Resources Monitoring and Management Plan for Clover Valley has been submitted to the BLM (Appendix B). References to these appendices have also been added to several other sections of the EIS.

Response to Comment No. 4-20

See response to comment 4-12.

Response to Comment No. 4-22

As part of the water appropriation permit application review and authorization process, the Nevada State Engineer has the authority to approve and control the amount of groundwater pumped from basins in Nevada. The response to Comment 4-19 addresses the monitoring and mitigation plans.

Response to Comment No. 4-23

See response to comment 4-2.

Response to Comment No. 4-24

See response to comment 4-4.

Response to Comment No. 4-25

See response to comment 4-18.

Response to Comment No. 4-26

Subsidence is usually found where groundwater elevations have changed on the order of hundreds of feet. As described in the revised section 3.3.2.4.2.2 in the Final EIS and Response to Comment 4-12, at distances of greater than 0.25 mile, pumping in the rock aquifer does not show any effect in the alluvial aquifer. Therefore, no subsidence is expected. See also Section 3.2.3 in the Final EIS which has been modified to directly address this issue.

Response to Comment No. 4-27

See Appendix A-3 in both the Draft and Final EIS. In addition there is a Tule Desert Monitoring and Mitigation Plan. A table of contents has been added to the Appendices for ease of reference.

Response to Comment No. 4-28

Please see Response to Comment 4-10 regarding number of springs. The intent of the Monitoring and Management Plan is to identify key diagnostic springs that flow consistently and could reflect long term changes. The three selected meet the specified criteria.

Lincoln County Land Act Groundwater Development and
Utility Right-of-Way Project
Draft Environmental Impact Statement
Comment Form

Public participation is critical to helping ensure BLM has considered the views of the public in the decision on this groundwater development project. BLM encourages you to get involved. Please take a few minutes to complete this form and provide any comments or questions you would like addressed. **The comment period ends on Tuesday, July 22, 2008.** Written comments can be sent via mail, fax, or e-mail to the BLM Nevada Groundwater Projects Office or submitted in person at the public meetings (see details below). Please contact the Groundwater Projects Office if you wish to receive a paper copy or CD of the Draft EIS.

Groundwater Projects Office Contact Info:

Phone: 775-861-6681

Fax: 775-861-6689

E-mail: nvgwprojects@blm.gov

Mailing Address:

P.O. Box 12000
Reno, NV 89520

Fed-Ex/Physical Address:

1340 Financial Blvd
Reno, NV 89502

Public Meeting Info:

Las Vegas, NV: Monday, June 23, 2008, 6-8pm, Embassy Suites Hotel
Caliente, NV: Tuesday, June 24, 2008, 6-8pm, Caliente City Hall
Mesquite, NV: Wednesday, June 25, 2008, 6-8pm, Mesquite City Hall
Carson City, NV: Thursday, June 26, 2008, 4-6pm, Plaza Hotel

Name: Robert & Luane Stone E-mail: _____
Organization: INDIVIDUAL CITIZENS Title: _____
Mailing Address: 820 GAZLAY CT
City: MESQUITE, NV 89027 State: NV Zip: 89027

Add my name to the mailing list Withhold my name and address from public review**

**Before including your address or other personal identifying information, you should be aware that this information may be made publicly available at any time. While you can ask us to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

COMMENT (continue on separate sheet if necessary)

We STRONGLY object to the GRANT of this water request.
① Since Mesquite is downhill from the area where the water will be drawn and the water in that area flows down to Mesquite's acquifer, this water taking will directly impact and diminish Mesquite's water supply. ② Videns Water Company has demonstrated a willingness to sell its own water it obtains from the proposed coal fired plant project. Toxop is a bad for health & dangerous idea that should not be built upwind of and close to a metropolitan area.

Bob Stone
Luane Stone

Comment
No. 5-1

Response to Comment No. 5-1
Comment Noted.

REC'D - BLM - N~~36~~
 9:00 JUL 18 2008
 A.M.

**Lincoln County Land Act Groundwater Development and
 Utility Right-of-Way Project
 Draft Environmental Impact Statement
 Comment Form**

Public participation is critical to helping ensure BLM has considered the views of the public in the decision on this groundwater development project. BLM encourages you to get involved. Please take a few minutes to complete this form and provide any comments or questions you would like addressed. **The comment period ends on Tuesday, July 22, 2008.** Written comments can be sent via mail, fax, or e-mail to the BLM Nevada Groundwater Projects Office or submitted in person at the public meetings (see details below). Please contact the Groundwater Projects Office if you wish to receive a paper copy or CD of the Draft EIS.

Groundwater Projects Office Contact Info:

Phone: 775-861-6681 Fax: 775-861-6689 E-mail: nvgwprojects@blm.gov

Mailing Address: P.O. Box 12000 Reno, NV 89520
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Carson City, NV: Thursday, June 26, 2008, 4-6pm, Plaza Hotel

Name: Ron & Polly Strunk E-mail: VTAL35@mesquiteweb.com
 Organization: Defend Our Desert Title: Home Owner
 Mailing Address: 600 Palos Verdes Dr
 City: Mesquite State: NV Zip: 89027

Add my name to the mailing list Withhold my name and address from public review**
 **Before including your address or other personal identifying information, you should be aware that this information may be made publicly available at any time. While you can ask us to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

COMMENT (continue on separate sheet if necessary)

That any groundwater be used of residential use only - per agreement for use of the water. That we be informed on any changes made by the Lincoln County Land Act Groundwater Development and Utility Right-of-Way Project

Comment No. 6-1

Response to Comment No. 6-1
 Comment Noted.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

75 Hawthorne Street
San Francisco, CA 94105-3901

July 18, 2008

Penny Woods
Project Manager
Bureau of Land Management
Nevada Groundwater Projects Office
Nevada State Office (NV-910-2)
P.O. Box 12000
Reno, NV 89520-0006

Subject: Draft Environmental Impact Statement for the Lincoln County Land Act
Groundwater Development and Utility Right-of-Way Project (CEQ#
20080197)

The Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement (DEIS) for the above project. Our review and comments are pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act.

Based on our review, we have rated the Lincoln County Land Act (LCLA) Groundwater Development and Utility Right-of-Way Project as Environmental Concerns - Insufficient Information (EC-2). A *Summary of EPA Rating Definitions* is enclosed. EPA has significant concerns with the long-term reliability and sustainable use of the water provided by this project. Our concern stems from the many pending water right applications all of which anticipate use of the same carbonate-rock aquifer; uncertainties regarding the long-term sustainable yield of this aquifer; and the effects of changing climate and drought.

We acknowledge regional efforts through the Lincoln County Water District and US Fish and Wildlife Service Stipulation Agreement and the Nevada State Engineer's potential regional plan to evaluate the Lower Colorado Flow system. We urge the Bureau of Land Management, Cooperating Agencies, Lincoln County Water District, Vidler Water Company, Coyote Springs Investments, and other water right applicants to build on these regional efforts to develop a regional groundwater framework to ensure: 1) efficient long-term sustainable use of the deep carbonate-rock aquifer and 2) avoidance of adverse impacts to third parties and surface and groundwater quality/quantity. We also recommend that water allocations from this project occur only after a clear demonstration by beneficiaries that a comprehensive and integrated demand management program including conservation, efficiency, and reuse components would be implemented.

We acknowledge the direct effects of the right-of-way grant and associated utility construction would be temporary and mitigable. However, operation of the groundwater project and associated build-out of the LCLA and Mesquite Land Act Areas will have significant indirect and cumulative impacts. These developments would result in a population increase of more than 500,000 and more than 44,000 dwellings over a 30-year period. Thus, we continue to have concerns with the indirect and cumulative impacts on scarce and vulnerable desert springs, seeps, wetlands, and streams; and at-risk habitats and wildlife species. We recommend the final environmental impact statement (FEIS) provide additional information on mitigation measures to avoid these indirect and cumulative impacts.

The proposed project and associated land developments are located in the Mojave Desert characterized by low humidity, minimal annual rainfall, and scarce water supply sources. The effects of changing climate and drought could have significant adverse effects. We recommend the FEIS evaluate, list, and commit to specific climate change adaptation measures and fall-back options if the quantity and/or quality of appropriated water is not sufficient to meet proposed beneficial uses.

We appreciate the opportunity to review this DEIS. We are available to discuss our comments. When the FEIS is released for public review, please send one copy to the above address (mail code: CED-2). If you have questions, please call me at 415-972-3846 or Laura Fujii, of my staff, at 415-972-3852 or fujii.laura@epa.gov.

Sincerely,


Nova Blazej, Manager
Environmental Review Office

Enclosures:
Summary of EPA Rating Definitions
Detailed Comments

cc: Jeff Weeks, Bureau of Land Management, Ely District Office
Robert Williams, US Fish and Wildlife Service, Nevada Fish and Wildlife Office
Janet Bair, US Fish and Wildlife Service, Southern Nevada Field Office
Ronda Hornbeck, Lincoln County Water District
Richard A. Felling, Nevada Dept. Of Conservation and Natural Resources
Tracy Taylor, P.E., State Engineer, Nevada Division of Water Resources
David A. Pattalock, P.E., Vidler Water Company

SUMMARY OF EPA RATING DEFINITIONS

This rating system was developed as a means to summarize EPA's level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the EIS.

ENVIRONMENTAL IMPACT OF THE ACTION

"LO" (Lack of Objections)

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

"EC" (Environmental Concerns)

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

"EO" (Environmental Objections)

The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

"EU" (Environmentally Unsatisfactory)

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the CEQ.

ADEQUACY OF THE IMPACT STATEMENT

Category 1" (Adequate)

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

"Category 2" (Insufficient Information)

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analysed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

"Category 3" (Inadequate)

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analysed in the draft EIS, which should be analysed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640, "Policy and Procedures for the Review of Federal Actions Impacting the Environment."

Sustainable Use of Groundwater Resources

Promote formation of a regional carbonate-rock groundwater framework to ensure efficient long-term sustainable use. EPA has significant concerns with the long-term reliability and sustainable use of the water provided by this project. Our concern is based upon: 1) the many pending water right applications in Nevada and Utah for the same carbonate-rock aquifer system; 2) the uncertainties regarding the amount of ground-water recharge, quantification of subsurface inflows and outflows, the interconnection of the Tule Desert and Clover Valley groundwater flow systems with other multiple flow systems and hydrographic basins; and, 3) impacts on senior appropriated water rights and sensitive aquatic resources in down-gradient basins. The draft environmental impact statement (DEIS) clearly states the potential for impacts to groundwater quantity from drawdown and indirect impacts related to lowered yields at local and regional springs and surface water expressions (p. ES-13).

Recommendations:

EPA commends the collaboration between the water right applicants and U.S. Fish and Wildlife to address potential impacts to springs in the Overton Arm of Lake Mead National Recreation Area, including Rogers and Blue Point Springs and depletion of surface flows of the Virgin River. We also commend the commitment to participate in any regional plan organized by the Nevada State Engineer to evaluate potential effects on the Lower Colorado Flow System region (Appendix 2A Stipulation Agreement).

We recommend the Bureau of Land Management (BLM), Cooperating Agencies, Lincoln County Water District (LCWD), Vidler Water Company (VWC), Coyote Springs Investments (CSI), and other water right applicants build on these regional efforts to develop a regional groundwater framework to ensure: 1) efficient long-term sustainable use of the deep carbonate-rock aquifer and 2) avoidance of adverse impacts to third parties and surface and groundwater quality and quantity. Opportunities for such collaboration should be discussed in the final environmental impact statement (FEIS).

Describe water use efficiency, conservation, and reuse management measures that will be implemented by all water supply users. Operation of the groundwater project and associated build-out of the Lincoln County Land Act (LCLA) and Mesquite Land Act Areas could result in a population increase of more than 500,000 and more than 44,000 dwellings over a 30-year period (pps. 4-64, 4-75). EPA strongly supports the implementation of water management tools to maximize water conservation and water use efficiencies – key components of supply and demand management. Innovative and aggressive supply and demand management is essential in assuring a long-term, sustainable balance between available water supplies, demand, and ecosystem and public health. Efforts to improve water supply system flexibility, conservation, and water use

Comment
No. 7-1

Comment
No. 7-2

Responses to these comments are provided on a separate page following this comment letter.

efficiencies are even more urgent given the projected growth in Clark and Lincoln Counties, the adverse effects of the current multi-year drought, and the potential adverse effects of climate change on scarce water supplies.

Recommendations:

EPA recommends the FEIS clearly demonstrate whether there is sufficient groundwater for the lifetime of this project and other reasonably foreseeable projects in the study area. We also recommend the FEIS address what measures would be taken, and by whom, should groundwater resources in the basin become overextended due to additional growth, continued drought, and the utilization of existing or pending water rights in the basin(s).

We recommend that water from the groundwater development be allocated only after a clear demonstration by beneficiaries that a comprehensive and integrated demand management program, including water conservation, efficiency, and reuse components, has or will be implemented.

We recommend the FEIS describe the water use efficiency, conservation, and reuse management measures that will be implemented by all water supply users. We recommend a list of supply and demand management measures be provided in an appendix to serve as a resource for Lincoln County, as well as other users of the carbonate-rock aquifer, the Nevada State Engineer, and water right applicants who wish to maximize the effective use of scarce water supplies. The appendix should describe the full range of tools available to water users to improve water quality and reuse, maximize water use efficiencies, balance supply and demand, and avoid and minimize adverse effects to third parties.

Efficient water use can be enhanced through development, infrastructure, and drinking water policies. We recommend the FEIS discuss the linkages between water use and these factors and describe potential mechanisms to support water use efficiencies. We recommend the FEIS provide a short discussion of who could best implement the identified mechanisms. The following reports may be of assistance as a starting point for the evaluation:

- *Growing Toward More Efficient Water Use: Linking Development, Infrastructure, and Drinking Water Policies.* EPA Publication 230-R-06-001, EPA National Service Center for Environmental Publications, (800) 490-9198 or nscep@bps-lmit.com.
- *Protecting Water Resources with Higher-Density Development.* EPA publication 231-R-06-001. EPA National Service Center for Environmental Publications, (800) 490-9198 or nscep@bps-lmit.com.

Describe back-up water supplies. Lincoln County and VWC has submitted water right permit applications to the Nevada State Engineer for 14,480 acre-feet per year (afy) from the Clover Valley Hydrographic Area and 9,340 afy from the Tule Desert Hydrographic

*Comment
No. 7-2
Continued*

Responses to these comments are provided on a separate page following this comment letter.

Area (p. ES-2); of which only 2,100 afy from Tule Desert has been granted. There are many uncertainties regarding the perennial yield of the Tule Desert and Clover Valley Hydrographic Basins (Section 3.3.2.4 and Appendix A), interconnection with other hydrographic basins, and the effects of changing climate and drought. Therefore, the availability of alternative water sources may be necessary to ensure a reliable supply.

Comment
No. 7-3

Recommendations:

We recommend the FEIS describe back-up water sources which can be used if actual groundwater yields or granted water rights are below the requested 23,820 afy. In addition, we recommend the FEIS describe the rationale for the requested groundwater quantity for appropriation and the status of the water right permit applications for Clover Valley and Tule Desert.

Effects on Groundwater Resources

Provide additional supporting data for the conclusion of minimal adverse effects on groundwater levels. The DEIS concluded that pumping water from the fractured-rock aquifer in the Tule Desert and Clover Valley hydrographic basins would not result in substantial decline of groundwater levels or a significant reduction in groundwater resources (Sections 4.3.1.2 and 4.3.1.3). The DEIS acknowledges that there is a lack of data in three principle areas: 1) the amount and movement of groundwater in the basin-filled deposits within the Tule Desert and Clover Valley; 2) the amount and movement of groundwater in the fractured-rock aquifer underlying the Tule Desert, Clover Valley, and Virgin River Valley hydrographic areas; and 3) the location and amount of groundwater discharge and recharge from the fractured-rock aquifer underlying the Tule Desert and Clover Valley. The actual extent of the groundwater level decline in the Tule Desert and Clover Valley basin fill deposits is uncertain, because of the aquifer's complexity and limited available data.

Comment
No. 7-4

Recommendations:

EPA recommends the FEIS discuss how the determination was made that there will be no substantial decline of groundwater levels given the level of uncertainty regarding hydrogeology of the groundwater flow systems in the Tule Desert and Clover Valley. We recommend the FEIS provide additional information on the proposed well fields in the Tule Desert and Clover Valley and clarify whether the wells will tap into the fractured-rock aquifer or the basin-fill aquifer, since there may be hydraulic interconnection between the two units.

Provide information on the adequacy of the monitoring plan and mitigation measures.

The DEIS also anticipates minimal adverse effects of groundwater pumping due to the Stipulation Agreement between the LCWD and the National Park Service that requires LCWD to monitor, manage, and mitigate unanticipated impacts that result from the development of groundwater resources (Appendix A2). The *Monitoring, Management, and Mitigation Plan* provides for two early-warning monitoring wells, one in the shallow aquifer and one between the Tule Desert and Virgin Valley hydrographic areas. The Nevada State Engineer's Ruling #5181 for Tule Desert and the DEIS clearly describe the

Comment
No. 7-5

Responses to these comments are provided on a separate page following this comment letter.

geological complexity of the groundwater basins and the many unknowns. It is not clear whether these two monitoring wells would be sufficient to avoid adverse effects or how adverse effects would be mitigated if detected.

Recommendation:

EPA recommends the FEIS provide: 1) data demonstrating the two monitoring wells would be sufficient to avoid adverse effects and 2) a list of measures that would be implemented to mitigate adverse effects of groundwater pumping, if detected.

Comment
No. 7-5
Continued

Describe effects of groundwater pumping on groundwater-dependent vegetation. The DEIS states that operation and maintenance of the groundwater pumping are not anticipated to result in indirect impacts to vegetation resources within the project area or in the region-of-influence (p. 4-20). The evaluation appears to focus on potential effects on surface flows, springs, and their associated sensitive species. The DEIS does not appear to describe potential effects on vegetation, such as phreatophytes, that rely upon the groundwater table.

Recommendation:

We recommend the FEIS describe potential indirect effects of groundwater pumping on vegetation such as phreatophytes that may be dependent on the deep water table. The FEIS should describe whether there would be a loss of surface vegetation and potential habitat. Any air quality effects of this vegetation loss should also be described.

Comment
No. 7-6

Provide a summary of the water rights permit process and hydrogeology of the carbonate-rock aquifer. The DEIS states that the Clark, Lincoln, and White Pine Counties Groundwater Development Project and Kane Springs Valley Groundwater Project would not have cumulative effects because their withdrawals occur in hydrologic basins located in separate groundwater flow systems (White River Flow System and Great Salt Lake Desert Flow System)(p. 4-67). However, it is our understanding that all of the proposed groundwater development projects would draw from the regional carbonate-rock aquifer system which encompasses the different flow systems and underlies the many hydrologic basins. Thus, we remain concerned with regional connections within the deep carbonate-rock aquifer system and potential cumulative adverse impacts of multiple groundwater pumping projects.

Recommendation:

EPA recognizes and understands the responsibility of the Nevada State Engineer and Nevada Department of Water Resources over Nevada water rights and water resources. Therefore, we recommend the FEIS summarize: 1) the status of the Nevada State Engineer water rights permit process, 2) currently known hydrogeology of the carbonate-rock aquifer system and its various flow systems, and 3) proposed research and studies to reduce the uncertainties regarding groundwater flows, quantities, and quality.

Comment
No. 7-7

Responses to these comments are provided on a separate page following this comment letter.

Energy and Water Supply

Provide a discussion of the relationship between water supply and power availability.

Water use and power are inextricably linked where water use, from source and conveyance to wastewater treatment, requires energy. Given power shortages and water scarcity across the West, it is important that policy makers, water and energy experts, and the public understand and consider these links.

Comment
No. 7-8

Recommendation:

We recommend the FEIS discuss and evaluate the relationship between water supply and power requirements. The FEIS should include a description of the projected power needs of the LCLA Groundwater Development Project; associated LCLA development, Mesquite Land Act development, and Toquop Energy Project; and the long-term availability of this power.

Climate Change

Provide a short discussion of climate change and its potential effects on the proposed action and related LCLA and Mesquite developments. A number of studies specific to the Colorado River Basin, which includes the project area, indicate the potential for significant environmental impacts as a result of changing temperatures and precipitation. A more extensive discussion of climate change and its potential effects on the proposed groundwater development action would better serve decision-making on this project, as well as long-term, regional water management planning and planned development.

Comment
No. 7-9

Recommendation:

We recommend the FEIS include a separate discussion of climate change and its potential effects on the proposed groundwater development project and associated development. We recommend this discussion provide a short summary of the climate change studies specific to the project area and Colorado River Basin¹, including their findings on potential environmental and water supply effects and their recommendations for managing and adapting to these effects.

We recommend the FEIS evaluate, list, and commit to specific climate change adaptation measures and fall-back options if the quantity and/or quality of appropriated water is not sufficient to meet proposed beneficial uses.

Responses to these comments are provided on a separate page following this comment letter.

General Comments

Off-Road and Off-Highway Vehicle Use. EPA is concerned with effects on air quality, habitat, wildlife, and nearby Areas of Critical Environmental Concern, Wilderness, and other Special Use Areas associated with increased recreational off-highway vehicle (OHV) traffic which may occur on the improved project right-of-way access roads.

Comment
No. 7-10

¹ A number of studies specific to the Colorado River Basin indicate the potential for significant environmental impacts as a result of changing temperatures and precipitation (Colorado River Basin Water Management: Evaluating and Adjusting to Hydroclimatic Variability, National Research Council, 2007).

Comment
No. 7-10
Continued

Recommendation:

EPA recommends project proponents work with the Bureau of Land Management (BLM) to reduce the potential of inappropriate OHV use of the pipeline right-of-way by developing an access management plan. We recommends the access management plan describe the: 1) agency or agencies responsible for implementation and enforcement of the access plan; 2) frequency of monitoring; 3) methodology for reassessing the implemented measures in the future; and 4) enforcement measures.

Air Quality Cumulative Impacts. The DEIS concludes that there would be no cumulative impacts because all construction and operation activities would have to comply with local, state, or federal policies including a Fugitive Dust Control Plan (p. 4-73). However, operation of the groundwater project and associated build-out of the LCLA and Mesquite Land Act Areas could have significant indirect and cumulative air quality impacts given the potential population increase of more than 500,000 and more than 44,000 dwellings over a 30-year period.

Recommendation:

We recommend the FEIS include an evaluation of the indirect and cumulative air quality impacts of the projected growth enabled by this groundwater development project.

Comment
No. 7-11

Describe the current housing market and local economy and implications for this project and associated developments. The Proposed Action would assist in meeting a portion of the growing water demands of Lincoln County, and, specifically, the groundwater and utility infrastructure needs of the LCLA Development Area (Maps, ES 1-1). This land is currently undeveloped but is being planned by Lincoln County as Planned Unit Development (self-contained villages) for a total build-out at 44,000 dwelling units over a 30-yr period.

Recommendation:

We recommend the FEIS describe the current housing market and local economy and the implications for this project and associated developments.

Comment
No. 7-12

We also recommend that the FEIS include an analysis of induced growth and identify the model used to determine land-use impacts caused by the project. EPA recommends the FEIS make both the methodology and the assumptions in the growth-inducing analysis as transparent as possible to the public and decision makers.

- Discuss the model's strengths and weaknesses, and describe why it was selected.
- Identify the assumptions used in the model, the strengths and weaknesses of the assumptions, and why those assumptions were selected. For example, describe which method will be used to allocate

Responses to these comments are provided on a separate page following this comment letter.

*Comment
No. 7-12
Continued*

growth to analysis zones, its strengths and weaknesses, and why that method was selected.

- Ground-truth the results of the land use model by enlisting local expertise involved in land use issues, such as local government officials, land use and transportation planners, home loan officers, and real estate representatives. Use their collective knowledge to validate or modify the results of the land use model.

Responses to these comments are provided on a separate page following this comment letter.

Responses to Comment No. 7-1 thru 7-12

Response to Comment No. 7-1

As required under the Federal Land Policy and Management Act of 1976 (FLPMA), the BLM must coordinate with other federal, state, and local entities and stakeholders when making resource decisions regarding the Proposed Action. Table 1-2 (Authorizations, Permits, Review, and Approvals) in both the Draft EIS and the Final EIS, provides a listing of agencies and their responsibilities relating to the Proposed Action.

Although the BLM has the authority and responsibility to coordinate with other agencies when actions affect the health, diversity, and productivity of the public lands they manage, it is the responsibility of the Nevada Office of the State Engineer to approve and control the amount of groundwater pumped from basins in Nevada, including federally managed lands; thus ensuring efficient long-term sustainable use of Nevada's water resources.

One such collaboration is presented in the Stipulation Agreement between LCWD/Vidler Water Company and the National Park Service (Appendix A-1) which represents a separate process not required under FLPMA or any other law.

Response to Comment No. 7-2

The BLM's action for this EIS is to either grant or deny the LCWD's application for a right of way across public lands managed by the BLM. The BLM must decide whether, and if so, under what conditions it will grant ROW(s) to enable construction and operation of the proposed groundwater facilities and related infrastructure. The BLM has no authority to make a determination as to the sufficiency of groundwater to support future development in the project area. However, the BLM has developed monitoring and mitigation that will reduce the uncertainty of the impacts to surface resources through the development of the monitoring plans and future use of groundwater models. As part of the water appropriation permit application review and authorization, the Nevada State Engineer has the authority to approve and control the amount of groundwater pumped from basins in Nevada. The Nevada State Engineer will determine what measures would be taken should a basin become overextended due to additional growth, drought conditions, or uses by existing or pending water right holders in the basin.

The distribution, use, and potential reuse of water to be developed by the LCWD would be governed by a General Improvement District, or other regulatory agency tasked with overseeing these resources in the place of use.

Response to Comment No. 7-3

The Nevada State Engineer has permitted 2,100 afy in the Tule Desert Hydrographic Basin to LCWD. Additional groundwater studies are ongoing in the area to support the request. The amount and timing of any future water allocations would be speculative at this time. However, it is the intent of the LCWD to develop and convey any and all permitted water rights approved by the State Engineer to their service territory, subject to all regulation and stipulations imposed by the State Engineer or other permitting agencies.

Response to Comment No. 7-4

Text has been added to Section 3.3.2.4.2.2 in the Final EIS to clarify that while some connectivity exists at the local scale in Tule Desert, at distances of greater than 0.25 mile, pumping in the rock aquifer does not show any effect on the alluvial aquifer. In addition, the proponent has stated publicly that it intends to only install its wells in the rock aquifers. The data presented in the referenced section shows that wells completed in the alluvial aquifer do not yield sufficient water to be used for groundwater production. With regard to Clover Valley, no data is currently available to assess the connectivity between the shallow and fractured rock aquifers. Consequently, the Water Resources Monitoring and Management Plan has been developed (Appendix B).

Response to Comment No. 7-5

The Tule Desert Monitoring and Mitigation Plan, approved and deemed adequate by the Nevada State Engineer, described the use of two monitoring wells to determine potential impacts of groundwater pumping by the LCWD in the Tule Desert. The Nevada Division of Water Resources, Office of the State Engineer is responsible for administering and enforcing Nevada water law, which includes permitting, adjudication and appropriation of groundwater and surface water in the State. Additional monitoring wells could be developed based on the current monitoring and mitigation program. During the site specific development of production wells and collection lines, additional environmental analysis and modeling will occur and as a result, additional mitigation and monitoring could be established.

Response to Comment No. 7-6

All groundwater pumping will be from the carbonate aquifer, which ranges from several hundred to several thousands of feet below ground surface, depending on location. Phreatophytic vegetation does occur in the Virgin River and the Clover Creek and Meadow Valley Wash drainages; however, groundwater pumping associated with the Proposed Action is not anticipated to impact flow rates or the groundwater table in these riverine systems. The Tule Desert Monitoring and Management Plan and the Clover Valley Monitoring and Management Plan, describes agency agreed-upon mitigation measures to be implemented to ensure no impacts will occur to these areas.

Response to Comment No. 7-7

The status of Lincoln County Water District's water rights applications for groundwater withdrawal in the Tule Desert and Clover Valley Hydrographic Areas is described in Section 1.5.2.1(Water Rights). A general discussion of the carbonate aquifer system and its various flow systems is provided in Section 3.3 (Water Resources) in both the Draft and Final EIS. No comprehensive analysis of regional groundwater development has been written – this would require the joining of several local, state, and federal agency mandates, which has yet to occur.

Response to Comment No. 7-8

Projected power needs of the LCLA Groundwater Development project are described in Section 4.9.1 in both the Draft and Final EIS. The BLM action for this EIS is a decision to grant or deny LCWD's request for a right of way to construct and operate the LCLA Groundwater Development

and Utility Right of Way project. The LCWD's intends to supply permitted groundwater to its customers within their service territory in southeastern Lincoln County. The Lincoln County Power District is the entity responsible for providing power to customers within their service territory. While the BLM acknowledges there is a direct relationship between water supply and power requirements, setting regional policy in this area are issues beyond the scope of this EIS and BLM's mandates.

Response to Comment No. 7-9

The BLM acknowledges that the potential effect of climate change on water availability and future use is a dynamic and controversial topic. In the context of the Proposed Action, it is beyond the scope of this EIS. Section 4.20.3.1 in both the Draft and Final EIS describes climate change issues.

Response to Comment No. 7-10

The LCWD will work with the BLM to reduce the potential of inappropriate OHV use along the permitted right of way. The Applicant's final Plan of Development will include a Project Access Plan to be developed in consultation with the appropriate BLM staff.

Response to Comment No. 7-11

All construction activities associated with the build-out of both the LCLA and Mesquite Land Act areas would be required to comply with local, state, and federal regulations governing air quality.

Response to Comment No. 7-12

Baseline economic data for Lincoln and Clark Counties in Nevada and Washington County in Utah is provided in Chapter 3.12 in both the Draft and Final EIS. The direct and indirect effect of the Proposed Action on socioeconomic resources is provided in Chapter 4.12 in both the Draft and Final EIS. A discussion on cumulative impacts of past, present, and future actions in the area are described in Section 4.20.4.11 in both the Draft and Final EIS. The Lincoln County Master Plan, adopted in 2006 is the planning document guiding growth and land use in Lincoln County (see Section 3.12.6 in both the Draft and Final EIS).



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July 22, 2008

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Regarding: Draft EIS: Lincoln County Land Act Groundwater Development and Utility
Right of Way Project

Dear Ms. Woods:

Please accept these comments on behalf of The Center for Biological Diversity, a national non-profit conservation organization with over 40,000 members including many members in Nevada. The Center works through science, law, and creative media to secure a future for all species, great or small, hovering on the brink of extinction. The Center's Public Lands Program monitors activities that do harm to species and their habitat on lands held in trust for the common good, including land and habitat disturbances and the mining of ground water resources upon which the species and their habitats depend.

The Center is concerned about the information gaps and lack of credible and peer reviewed information that provides the unstable foundation for this DEIS. Specific Comments follow.

- A. As detailed below, the DEIS fails to meet the requirements of the National Environmental Policy Act ("NEPA"). In addition, the BLM's review of this project fails to meet its obligations under the FLPMA and the Endangered Species Act. These comments focus largely on BLM's failure to adequately identify and analyze the project's potential impacts to rare, threatened and endangered species or to examine any alternative that would protect these imperiled resources. In addition, the DEIS is invalid because, among other shortcomings, it fails to provide a complete and accurate environmental baseline from which the impacts of the action can be measured; fails to consider a reasonable range of alternatives; fails to undertake a meaningful cumulative impacts analysis; fails to provide adequate data on the likely impacts to biological resources of these public lands including rare, threatened and endangered species; fails to adequately protect water resources on public lands; and fails adequately identify and analyze the impacts of global warming on the resources or this project's

*Comment
No. 8-1*

Responses to these comments are provided on a separate page following this comment letter.

contribution to global warming. BLM has also failed to protect reserved Federal water rights on public lands and to prioritize the use of public water resources by native wildlife and riparian dependent species.

- 1) Environmental Baseline: The description of the affected environment or environmental baseline fails to accurately identify current status of the full contingent of rare, sensitive, threatened and endangered species in the project area that may be directly or indirectly affected by the proposed project as well as the cumulative impacts to such species. For example, BLM only surveyed for plants in the proposed right of way (ROW) and a 300-500 adjacent corridor centered on the ROW (DEIS at 3.4.5). However, the project will draw down ground water in a large area and will clearly affect plants outside of the "project area." This inappropriate focus on the area of surface disturbance and construction, and consequent failure to take a hard look at the impacts of the water extraction project, pervades the DEIS. BLM's explanation that the DEIS uses three different "areas" does little to clarify the situation. (DEIS 3.0, describing project area, study area or ROI, and Area of Potential Effect). The definition of the so-called "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." (DEIS 3.0). This methodology is circular and leads the agency to examine only the most obvious and already well-documented likely impacts of the proposed action. It cannot be used to justify ignoring impacts in areas where the agency has not pre-determined that they will occur. Unfortunately this appears to be an attempt to shore up BLM's decision to unlawfully narrow its examination of the far-reaching impacts of the proposed action.
- 2) NEPA requires BLM to "describe the environment of the areas to be affected or created by the alternatives under consideration." 49 C.F.R. § 1502.15. In Half Moon Bay Fisherman's Marketing Ass'n v. Carlucci, 857 F.2d 505, 510 (9th Cir. 1988), the Ninth Circuit stated that "without establishing . . . baseline conditions . . . there is simply no way to determine what effect [an action] will have on the environment, and consequently, no way to comply with NEPA." FLPMA also requires that BLM prepare and maintain a current inventory of all public lands and their resources. 43 U.S.C. § 1711(a). The DEIS and BLM's decision must be based on an adequate inventory of the resources of the public lands that may be affected by the proposed project including, but not limited to: special status, rare, and sensitive species; water resources including both groundwater and surface water resources; and riparian vegetation communities. Without a clear understanding of the current status of the affected public lands BLM cannot comply with NEPA or FLPMA. Unfortunately, the DEIS clearly shows that BLM has not adequately inventoried the resources of the public lands that may be affected by this proposed action, opting instead to focus primarily on the construction of

*Comment
No. 8-1
(Continued)*

Responses to these comments are provided on a separate page following this comment letter.

*Comment
No. 8-1
(Continued)*

the well field and pipelines. While these areas are important, this massive groundwater extraction project will impact a far greater area and many other resources for which additional baseline data should have been provided.

*Comment
No. 8-2*

B. An EIS must include a reasonable range of alternatives including alternatives that will avoid or minimize impacts to rare, sensitive and special status species. The DEIS failed to include any alternative that would lessen the impacts on these species or support the recovery of these species in the whole project area in order to fulfill BLM's obligations under the Endangered Species Act ("ESA") to promote conservation of listed species and work towards recovery of these species. See ESA § 7(a)(1).

NEPA requires that, in preparing and EIS, each agency "[r]igorously explore and objectively evaluate all reasonable alternatives" to the proposed action. 40 C.F.R. § 1502.14. The "existence of a viable but unexamined alternative renders and [EIS] inadequate." *Idaho Conservation League v. Mumma*, 956 F.2d 1508, 1519 (9th Cir. 1992). See *Resources Ltd., Inc. v. Robertson*, 35 F.3d 1300, 1307 (9th Cir. 1993). An alternative is not rendered unviable if it is outside the jurisdiction of the lead agency. 40 C.F.R. § 1502.14(c). Quite to the contrary, analysis of "reasonable alternatives not within the jurisdiction of the lead agency" is required. *Id.*

BLM simply assumes that the proposed groundwater pumping will go forward with or without the proposed action. This undermines BLM's examination of the full impacts of the proposed action and a reasonable range of alternatives. In fact, the DEIS does not analyze any alternative that would have fewer impacts on surface or ground water resources, or the rare and imperiled species found in the study area, aside from one with a slightly lesser impact on the desert tortoise and its occupied habitat including critical habitat. For example, BLM fails to examine any alternative sites or a project that would extract less groundwater. Comments from scoping suggested a much wider range of possible alternatives, which could meet BLM's criteria for feasibility, but none were brought forward into the analysis.

*Comment
No. 8-3*

C. Council on Environmental Quality (CEQ) regulations require that the responsible agency consider, "connected, cumulative and similar actions" associated with a proposed action in a single impact statement (40 C.F.R. §§ 1508.25 (a) (1)-(3)). Actions are considered connected if they:

- Automatically trigger other actions that may require environmental impact statement;
- Cannot or will not proceed unless other actions are taken previously or simultaneously;
- Are interdependent parts of a larger action and depend on the larger action for their justification.

Responses to these comments are provided on a separate page following this comment letter.

*Comment
No. 8-3
(Continued)*

BLM correctly notes that it does not hold the authority to allocated water rights, a right in Nevada reserved to the State Engineer (NSE). However, BLM cannot escape the responsibility to thoroughly and sufficiently analyze and address the connected action of pumping an allocated right and delivering the water through the pipeline in the proposed action.

The BLM has erred in the DEIS by largely isolating from consideration in this document the findings of the NSE in Ruling 5181 (Ruling), dated November 26, 2002, pertaining to the Tule Desert Hydrographic Basin.

In this ruling, the NSE found time and time again that the science offered to support pumping an amount of ground water above 2100 acre-feet annually was flawed or non-existent. Throughout the Ruling the NSE expressed concerns about the reliability of ground water models being used to estimate perennial yield and area of effects from pumping. In justifying the decision to grant the quantity of 2100 acre-feet annually rather than the 7240 acre-feet annually being requested, the NSE stated, "... this is a reasonable amount in light of all the conflicting evidence and uncertainty as to whether this basin can support that large of a quantity of water diverted over time without depleting the storage in the basin and in light of the potential of impacting the senior existing water rights in the Virgin River Valley" (Ruling, page 32-33).

Throughout the DEIS BLM uses studies and data by or funded by the proponent without subjecting them to third-party independent peer review. This is particularly disturbing in that the NSE raised the same concerns as evidenced by the following statements found in the Ruling:

- "The witness recognized his report has not been peer reviewed and the United States Geological Survey or the Department of Conservation and Natural Resources, Division of Water Resources have not accepted these figures" (page 22).
- "Therefore, the State Engineer is not extremely confident in the Applicant's witness's predictions as to water availability or impacts, particularly as noted when based on a model that does not appear to be calibrated or validated, and for which there is little real world data input" (page 23).
- "The testimony and evidence presented in this case raises the issue of when does the State Engineer accept evidence by a witness qualified as an expert as to the recharge of a groundwater basin, over the peer reviewed, decades accepted, independent evidence of recharge to a groundwater basin published by the United States Geological Survey in conjunction with the Nevada Department of Conservation and Natural Resources, Division of Water Resources. The State Engineer is very hesitant to accept the testimony of witnesses who come in to testify on evidence as to recharge values that has not been peer reviewed and accepted by the independent third party analysis historically relied on by the State Engineer, particularly in a region with so little rainfall and the potential for such great and lasting impacts" (page 31).

Responses to these comments are provided on a separate page following this comment letter.

Given the paucity of reliable information in the Tule Desert basin, the information for the Clover Valley basin is even worse or non-existent.

By relying on faulty studies not subjected to independent peer review, the BLM failed to adequately and accurately analyze the impacts of from the groundwater pumping that would be conveyed through the pipeline in the ROW proposed in this DEIS.

The BLM has also failed to adequately consider and address the cumulative effects of this action by limiting its analysis to the down-flow basins of Tule Desert and Clover Valley, while ignoring the situations and activities in the up-flow basins of the regional flow system(s). There are very good possibilities, confirmed, by scientific studies, that groundwater basins are hydrologically interconnected and pumping in one will have water availability and biological impacts far from the site of pumping. Additionally, groundwater is renewable only in the long term and to the extent recharge balances out or exceeds withdrawals. Given the other groundwater projects, such as those in the Coyote Springs and Kane Springs areas, that potentially impact the same or inner-connected flow systems, the cumulative effects analysis must consider these actions as well as the impacts from the immediate pumping in Tule Desert and Clover Valley. BLM's decision to analyze only four basins local to the proposed project and to ignore the impacts to or from the up-flow and down-flow basins does not comply with NEPA's requirements for a cumulative effects analysis and results in a violation of 40 C.F.R. §§ 1508.25(a)(1)-(3) and 40 C.F.R. §§ 1502.22(b)(4).

Of particular concern are the impacts on aquifers (valley fill, fractured rock and carbonate), springs, seeps, meadows, areas of phreatophytic vegetation and riparian areas. The surface water features form the areas of highest species richness in the harsh desert environment, including habitats for imperiled species such as the Southwest willow flycatcher, yellow-billed cuckoo, Arizona toad and various desert fishes.

D. The direct, indirect and cumulative impacts from the proposed project have potential dire consequences for wildlife and plant species and their habitats.

- 1) Desert tortoise – The desert tortoise (tortoise) is a species listed as Threatened under the Endangered Species Act. Both action alternative would result in a permanent loss of tortoise habitat, ranging from 89 – 108 acres by the DEIS's calculations. Both alternatives are disclosed as also disturbing from 697 – 848 acres on a temporary basis.

Of concern are the acres that would be "temporarily" disturbed. BLM grossly understates the impacts to tortoises from this type of disturbance, leading the reader to believe that habitat recovery would be certain and complete – such is far from what can be reasonable expected to occur.

Responses to these comments are provided on a separate page following this comment letter.

*Comment
No. 8-3
(Continued)*

*Comment
No. 8-4*

Comment
No. 8-4
(Continued)

Lathrop and Rowlands stated in a paper published in 1983 regarding recovery of desert ecosystems after disturbance, "It is important in this regard to remember that irrespective of "claims" to the contrary, *no study or attempt at artificial rehabilitation and revegetation of desert disturbance has been an unqualified or even a qualified success*" (Lathrop and Rowlands, 1983)(original italics) . They also concluded, "As in ecosystems of the world, the time required for complete recovery after denudation of arid and semi-arid vegetation is on the order of centuries or even millennia".

Kay and Graves (1983) reported that, "Because of the harsh environment of the desert (low and erratic rainfall and high temperatures), revegetation efforts resulted in many failures. Even the relatively more expensive and reliable techniques of transplanting container-grown shrubs or irrigation have had very limited success". The further go on to conclude, "Results from revegetation efforts in arid regions can be expected to be poor and erratic even if the best techniques are used. Site disturbances should be avoided if possible, and they should be kept to a minimum if unavoidable...Even the best revegetation successes will probably not replace the original ecosystem as measured by number of plants or species diversity".

Web et.al. (1983), reported that, "An important management consideration for desert areas is the amount of time required for disturbed areas to recover naturally, because artificial reclamation techniques are very expensive and prone to failure when applied to large arid areas".

Even more relevant to the welfare of the desert tortoise and its ecological associations, Lathrop and Rowlands (1983) also observed, "Because of the extremely long periods of time necessary to develop certain scrub communities, that is, creosote bush scrub with clone formation (Vasek, 1980), the factor of evolutionary changes in plant species within the sequence of vegetation change cannot be ignored". This plant community constitutes one of the most important for tortoises in the Mojave Desert. From the studies cited above, it is clear that any disturbance of desert soils or vegetation in the project area is far from "temporary". This is particularly relevant give the fact that 286 acres of the Beaver Dam Slope Critical Habitat Unit would be disturbed, as well as the other areas of tortoise habitat outside this Critical Habitat Unit.

Further pertinent discussion of the impacts of change in desert communities upon tortoises can be gained in section D. 3), which follows.

With respect to impacts of the project on desert tortoises, the BLM has also failed to consider and disclose the cumulative impacts from the 2005

Responses to these comments are provided on a separate page following this comment letter.

*Comment
No. 8-4
(Continued)*

wildfires which heavily impacted tortoise habitat in the Beaver Dam Slope and Mormon Mesa Critical Habitat Units, as well as tortoise habitat outside of the critical units (DEIS map 3-8). Wildfire has ecologically been an infrequent event in Mojave Desert ecosystems, until human-caused disturbances created circumstances favorable to invasive, and often non-native, plant species that inherently more combustible than the native vegetation (Brooks and Matchett, 2006). Lovich and Bainbridge (1999) when considering the impacts of fire in desert ecosystems, "If California desert perennial plant communities are not well adapted to fires, animals that coevolved in the ecosystem should not be expected to respond favorable to fire either".

When added to the loss of habitat that can be predicted from the impacts of the project, serious concerns arise concerning the long term viability, survival and recovery of desert tortoises. The DEIS has failed to adequately analyze and disclose these impacts of the project and wildfire disturbances on desert tortoises.

- 2) Listed or imperiled species found in the Meadow Valley Wash and Virgin River Systems and Big Springs – Numerous listed, imperiled or species of concern inhabit the ecosystems of the Meadow Valley Wash, Virgin River or the Big Springs. Specifically, the Southwestern willow flycatcher, Yuma clapper rail, Virgin River chub, and the woundfin are listed as Endangered; the Big Spring spinedace as Threatened; and the yellow-billed cuckoo, a Candidate species. Additionally, there are several dozen "special status species" recognized as in need of special conservation considerations by the BLM and the State of Nevada. Included are eleven species of bats, the Arizona toad, the Meadow Valley Wash desert sucker and the Meadow Valley Wash speckled dace, as well as dozens of migratory birds which utilize the riparian vegetation along these water courses.

*Comment
No. 8-5*

BLM repeatedly uses applicant data to support the contention that groundwater pumping, associated with the proposed pipeline, in Clover Valley and Tule Desert Hydrographic Areas is not anticipated to impact flows in the Meadow Valley Wash system, Virgin River or Big Springs. By doing so they easily write off having to analyze or disclose any possible impacts to the species of concern in these habitats (for example, Sections 4.5.1.1 and 4.5.1.2).

This is not just short-sighted, it is plain wrong given evidence that supports the contention that there could well be hydrologic connectivity between the Meadow Valley Wash, Virgin River and Big Springs and the Clover Valley and Tule Desert Basins.

The supporting evidence comes from the NSE's Ruling #5181 of 2002.

Responses to these comments are provided on a separate page following this comment letter.

Comment
No. 8-5
(Continued)

- The applicant's own data showed, "The deuterium and chloride values could tie the ground water to areas as far away as Dry Valley, but it cannot be ruled out that Dry Valley is part of the Meadow Valley flow system" (page 16).
- "The geochemical testimony is highly conceptual", page 17.
- The Protestant, Virgin Valley Water District stated, "There are three possible sources for the carbonate-rock aquifer water found in Tule Desert, but the data does not exist to answer the question. Potential sources for the deep water found in Tule Desert could be Panaca Valley, under Lower Meadow Valley Wash or *northern Beaver Dam Wash*", page 18.
- The NSE found, "...the geochemical evidence is very sketchy and contradictory. The State Engineer finds the lack of sufficient data indicates that ***the geochemical data should not be given a great deal of weight in the decision making process***" (bold italics added), page 18.
- "Therefore, the State Engineer is not extremely confident in the Applicants' witness's predictions as to water availability or impacts, particularly as noted when based on a model that does not appear to be calibrated or validated, and for which there is little real world data input", page 22.
- "The Protestant's evidence further indicates that potential significant groundwater drawdowns of hundreds of feet could be created over a 20-40 year period of pumping 7000-14,000 acre-feet annually that could extend outside the boundaries of the Tule Desert", page 34.
- "The State Engineer finds there is evidence that the regional flow of carbonate-rock aquifer feeds the alluvium of the lower Virgin River Valley", page 34.

The concern and question exists as to how the BLM can ignore the data and scientific evidence and not analyze and disclose the alternative possibility that indeed the envisioned pumping could be harmful to listed or species of concern and their habitats. The relegation of any future effects to a Water Resources Monitoring and Management Plan does not satisfy the statutory requirement of NEPA to fully analyze and disclose (40 C.F.R. § 1502.22(b)(1)-(4)).

Comment
No. 8-6

- 3) Desertification and impacts on ecological communities –
Groundwater extraction projects can often have dire consequences for surface vegetation communities. The impacts arise from both the site effects of changes to water availability for riparian and spring dependent vegetation, as well as more widespread impacts to phreatophytic species

Responses to these comments are provided on a separate page following this comment letter.

*Comment
No. 8-6
(Continued)*

spread across the greater landscape. Zektser et.al., (2005), correctly note that the southwest United States is home to a thriving and growing urban center, while also being one the driest places in North America, with highly variable seasonal and inter-annual precipitation regimes with frequent drought. They go on the state that the combination of large demand for usable water and the semi-arid climate has led to groundwater overdrafts in many of the region's aquifers. The results of overdrafts, when extraction exceeds recharge, are declines in surface-water levels and streamflows, reduction or elimination of vegetation, and land subsidence.

Reheis (1997) concurs with this assessment, adding: "As surface and groundwater diversion increases, arid-land surfaces that were previously wet or stabilized by vegetation are increasingly susceptible to deflation by wind, resulting in desiccation and dust storms".

Naumburg et.al. (2005), noted that, "Although changes in depth to groundwater occur naturally, anthropogenic alterations may exacerbate these fluctuations and, thus, affect vegetation reliant on groundwater. These effects include changes in physiology, structure, and community dynamics, particularly in arid areas where groundwater can be an important source of water for plants. To properly manage ecosystems subject to changes in depth to groundwater, plant responses to both rising and falling changes in depth to groundwater tables must be understood."

The definition of desertification accepted by conferences and summits convened by the United Nations, including the Earth Summit on Environment and Development held in Rio de Janeiro in 1992 is: "arid, semi-arid and dry-subhumid land degradation resulting from various factors, including climatic variations and human activities." (Mouat et.al., 1997).

Jayne Belnap of the U.S. Geological Service has done extensive research on desert soils and the process of desertification in the southwest United States. Belnap has found, "Maintaining soil stability and normal water nutrient cycles in desert systems is critical to avoiding desertification. These particular ecosystem processes are threatened by trampling of livestock and people, and by off-road vehicle use. Soil compaction and disruption of cryptobiotic soil surfaces (composed of cyanobacteria, lichens, and mosses) can result in decreased water infiltration and increased albedo with possible decreased precipitation. Surface disturbance may also cause accelerated soil loss through wind and water erosion and decreased density and abundance of soil biota" (Belnap, 1995).

Belnap further states that, "Desert soils may recover slowly from surface disturbances, resulting in increased vulnerability to desertification.

Responses to these comments are provided on a separate page following this comment letter.

*Comment
No. 8-6
(Continued)*

Recovery from compaction and decreased soil stability is estimated to take several hundred years. Re-establishment rates for soil bacteria and fungal populations are not known. Recovery of crusts can be hampered by large amounts of moving sediment, and re-establishment can be extremely difficult in some areas. Given the sensitivity of these resources and slow recovery times, desertification threatens millions of hectares of semiarid lands in the United States” (Belnap, 1995).

Elmore and others (2006), studied the impacts to alkali meadow vegetation following groundwater extraction in the midst of a drought in California. This type of community is common in Nevada, including in the area of the proposed groundwater extractions of the area considered in this DEIS. Elmore et.al found that plant cover in this vegetative community was correlated to groundwater depth, but not annual precipitation. They also found that in this plant community it’s dependency on groundwater buffers it from the effects of drought. They concluded, “Sustainable water development that seeks to pump groundwater without adversely affecting vegetation cover and plant assemblages must recognize the maximum rooting depth of groundwater-dependent plant species. When groundwater is within the root zone, management decisions can be made to either increase or decrease vegetation cover through modification of groundwater depth.”

The International Panel on Climate Change (IPCC) has stated that the evidence for global warming is “unequivocal” and predicts that the globally averaged surface temperature will increase by 1.1 to 6.4° C with a sea level will rise of 18 and 60 cm by the end of this century. (Alley et al, 2007). The more greenhouse gases are emitted into the atmosphere, the more warming will occur, and it is very likely that the changes in the global climate system as a result would be larger and more pronounced than the ones already observed. Climate change and its attendant consequences will serve to exacerbate the impacts from the proposed project’s activities.

BLM has failed to adequately analyze and disclose the impacts of changes in plant community and desertification from the proposed project. As previously noted, BLM has relied upon the questionable data and studies from the proponent to conclude that the local and regional springs and seeps will not be affected. BLM has not in any way provided a detailed study of the area’s soil resources, their susceptibility to erosion and compaction, nor has it adequately described the cryptobiotic soil resources of the area or the impact of the project, and notably the “temporary disturbances” upon these soils. As noted by Belnap, recovery rates can be in the length of centuries, yet BLM terms the disturbances outside the linear pipeline corridor as temporary. The impacts can only be viewed as temporary in terms of geologic timeframes.

Responses to these comments are provided on a separate page following this comment letter.

*Comment
No. 8-6
(Continued)*

BLM has failed repeatedly in the DEIS to consider, analyze and disclose the connected impacts from increased future temperatures and drought reasonably expected as a result of climate change.

From the available scientific information generally available to the public, it is apparent that this project, particularly when coupled with the impacts from wildfires to the area, has a high potential to experience degradation in the form of long term desertification.

*Comment
No. 8-7*

D. Impacts on imperiled plant species –

In Section 3.4.5 of the DEIS the BLM reports that it surveyed a 200-500' corridor centered on the proposed pipeline alignment. The Center questions why the survey area was confined to so narrow a band. The Lincoln County Land Act identified a much broader half-mile wide corridor. Is the BLM confident that all impacts, including the areas of "temporary disturbance" will fall within the surveyed area?

BLM reports that the federal Candidate species, the Las Vegas buckwheat has no known populations within the proposed ROW (DEIS 3.4.5). Yet, Map 3-7 clearly shows the proposed ROW going through the center of an area labeled as "Potential Las Vegas buckwheat habitat". Has this potential habitat area been adequately inventoried and surveyed, including areas outside of the "200-500' corridor" that could be disturbed in the construction process?

What protection and mitigation activities will the BLM require to protect Las Vegas buckwheat, sticky buckwheat, Needle Mountain milkvetch, Parry's sandpiper plant, and Palmer's phacelia?

*Comment
No. 8-8*

E. The project, through its extensive disturbance, will result in a widespread invasion of noxious weeds resulting in an altered fire regime that will further threaten native plant and animal communities, including the Threatened desert tortoise.

Section 4.4 of the DEIS acknowledges the threat from invasive non-native plants and noxious weeds, but fails to put forth a persuasive plan for addressing the serious impacts from this highly likely change in ecosystem composition, structure and function. The plans found in Appendix C of the DEIS are generic and under-estimate the level of effort that will be required to reclaim and restore the disturbed areas given the arid environment, project caused impacts from erosion and wind scouring and likely drop of groundwater levels in the area (Okin et.al., 2001).

Sections D. 1) and D. 3) of these Comments have presented scientific evidence that raise concerns and questions regarding how long, if ever the disturbed lands will take to recover and regain their present composition,

Responses to these comments are provided on a separate page following this comment letter.

Comment
No. 8-8
(Continued)

structure and function in supporting native ecosystems and assemblages of wildlife and plant species. Brooks and Pyke (2001) reported that invasive plants can compete with native plants, alter wildlife habitats, and promote the spread of fire where it was historically infrequent. In turn, the fires convert native shrublands into alien annual grasslands. They further stated, "Invasive alien grasses especially benefit from fire, and promote recurrent fire, in many cases to the point where native species cannot persist and native plant assemblages are converted to alien-invaded annual grasslands. This vegetation type conversion can affect wildlife ranging from herbivores to carnivores and reduces overall biodiversity. The effective management of many wildlife species can depend on the control of invasive plants and the maintenance of appropriate fire regimes".

It is a well observed fact that federal agencies, including the BLM, are vastly underfunded and understaffed to even begin to meet the stewardship demands associated with the federal public lands under their responsibility. Noxious weed control will be required on over 2000 acres due to the impacts from this project. Further, the control will require an expensive, on-going effort over many years if it is to have a chance at success at all (Hershendorfer et.al., 2007; Randall, 1996).

BLM through its "fantasy" that over 2000 acres of disturbed desert can be effectively and reliably rehabilitated are inviting an ecological disaster from invasive species, altered fire regimes and the resulting desertification.

- F. Implementation of the proposed project will result in increased dust pollution leading to adverse human health impacts and degraded ecosystems.

The appropriate analogy of water developments in Nevada to the infamous Owens Valley ecological disaster is often made, and correctly so.

Neff et al. (2008) reported that "Mineral aerosols from dust are an important influence on climate and on marine and terrestrial biogeochemical cycles. These aerosols are generated from wind erosion of surface soils. The amount of dust emission can therefore be affected by human activities that alter surface sediments".

In researching the degradation of Mojave Desert shrublands, Okin et. al. (2001) reported, "Aeolian removal and transport and dust, sand, and litter are the primary mechanisms of degradation, killing plants by burial and abrasion, interrupting natural processes of nutrient accumulation, and allowing the loss of soil resources by abiotic transport. ***It is concluded that any arid shrubland with wind-erodible soils is susceptible to degradation, and where possible development of these lands should be avoided***" (bold italics added).

Comment
No. 8-9

Responses to these comments are provided on a separate page following this comment letter.

Comment
No. 8-9

Looking specifically at the Owens (dry) Lake example, the dry lake bed has become the largest single source of PM 10 dust in the United States (Gill and Gillette, 1991).

PM10 dust is regulated by the United States EPA because of its ability to penetrate deeply into the human respiratory tract causing a variety of significant health consequences and risks, including death from respiratory and cardiovascular causes, increased number of heart attacks, increased risk of asthma, and increased risk of dying from lung cancer (American Lung Association, 2008).

The large-scale disturbances of desert lands by the activities of the construction of the pipeline and utilities in the proposed corridor, along with the indirect effects of the drying of ecosystems through groundwater withdrawals leads to the reasonable expectation that dust and human health effects from this project will be substantial in the long term. BLM has failed to adequately analyze and disclose this environmental impact.

Responses to these comments are provided on a separate page following this comment letter.

The Center for Biological Diversity appreciates this opportunity to comment on this fatally flawed DEIS, and urges the BLM to seriously consider the comments provided in preparing the final EIS.

Sincerely,



Rob Mrowka
Nevada Conservation Advocate

Cc: Mr. Robert Williams, U.S. Fish & Wildlife Service, Nevada

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Responses to Comment No. 8-1 thru 8-9

Response to Comment No. 8-1

The BLM believes that the EIS is consistent with NEPA requirements and that the level of information and analysis reasonably represents baseline conditions in the ROI. The BLM consulted with the USFWS and NDOW (both Cooperating Agencies) regarding federal and state listed rare, sensitive, and threatened and endangered species in the ROI. Desert tortoise and rare plant surveys were conducted within the area of direct effects (construction right of way). These surveys were conducted in accordance to protocols developed and approved by the USFWS. Applicant proposed environmental protection measures to minimize construction related impacts are incorporated in the project design and outlined in Appendix C (Standard Construction and Operation Procedures). The BLM would monitor the effectiveness of approved mitigation measures (i.e. desert tortoise fencing, installation of perch inhibitors, and revegetation). The BLM believes that the EIS is consistent with NEPA requirements and that the level of information and analysis reasonably represents baseline conditions in the ROI.

The BLM is consulting with the USFWS through the ESA Section 7 process and a Biological Assessment has been prepared for the project. The USFWS may request additional terms and conditions or mitigation measures with the release of the Biological Opinion. In addition, the Applicant would also be required to comply with stipulations mandated by the Nevada State Engineer for allocation of water supplies.

Chapters 3.4.4 and 3.5.5 of the Draft and Final EIS describe the environmental baseline for special status plant species; Chapters 3.5.2 and 3.5.3 of the Draft and Final EIS describe the environmental baseline for special status wildlife species. Direct and indirect effects of the project on special status plants and wildlife are described in Chapters 4.4.1.2, 4.4.1.3, 4.5.1.1, and 4.5.1.2 in the Draft and Final EIS. Cumulative impacts are described in Chapters 4.20.4.3 and 4.20.4.4 in the Draft and Final EIS. The project area, Region of Influence, and cumulative resource analysis areas for special status species are based on the anticipated impacts on surface water and groundwater in Chapters 4.3.1.1, 4.3.1.2, 4.3.1.3, 4.3.1.4, and 4.3.1.5 in the Draft and Final EIS. Groundwater drawdown would occur in the deep carbonate aquifer (greater than 900 feet below ground surface). Therefore, there would be no impact on vegetation.

Response to Comment No. 8-2

Chapters 1.4.3 and 2.0 in both the Draft and Final EIS address alternatives development. The BLM analyzed three separate alternatives – 1) Proposed Action: The Applicant's requested right of way, which is primarily located within the LCCRDA corridor, but deviates from the LCCRDA corridor in the Tule Desert. 2) Alternative 1 which would be the same as the Proposed Action, but would remain entirely within the LCCRDA corridor in the Tule Desert; and 3) The No Action Alternative: The BLM would not approve the LCWD's right of way application. The BLM believes that both the Draft and Final EIS do consider a reasonable range of alternatives per BLM's requirement to analyze impacts of granting or denying the right of way request, pursuant to LCCRDA and the EIS's stated purpose and need.

Response to Comment No. 8-3

The BLM believes that the level of information provided in the EIS is consistent with NEPA requirements (40 CFR 1502.22). The data analyzed in the Draft and Final EIS is the best available representation of current and predicted conditions at this time. The BLM acknowledges there is disagreement among scientists and policymakers on the details of the regional groundwater flow system. However, as required by NEPA, the BLM has disclosed that uncertainties exist and assumptions for analysis were required to analyze the impacts of granting the right of way (See Section 4.0 in both the Draft and Final EIS). Further, each of the projects mentioned are separate and distinct with their own unique issues and timelines as defined by the BLM Handbook H-1790-1 in Section 6.5.2.1. Each represents a discreet hydrographic basin for which the allocation of water rights is with the purview of the Nevada State Engineer. Thus, it is not possible to combine in a timely manner to address the needs of the Proposed Action.

Response to Comment No. 8-4

The BLM is consulting with the USFWS through the ESA Section 7 process. A Biological Assessment has been prepared for the project. The USFWS may request additional terms and conditions or mitigation measures with the release of the Biological Opinion and to follow specific design criteria to mitigate impacts to the desert tortoise and their habitat. At a minimum, 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. The amount of the fee would be calculated by the USFWS and BLM and would be used to fund conservation measures benefitting the desert tortoise.

Response to Comment No. 8-5

The Tule Desert and Clover Valley Monitoring and Mitigation Plans include protective measures to ensure that groundwater pumping in the LCWD's well field would not impact the Meadow Valley Wash and Virgin River Systems. The Nevada State Engineer has awarded 2,100 afy of groundwater in the Tule Desert to LCWD subject to terms and conditions described in Ruling 5181 and the subsequent Tule Desert Monitoring and Management Plan. The Applicant would be required to comply with the stipulations mandated by the Nevada State Engineer for future water supply allocations. Additional monitoring wells could be developed based on the current monitoring and mitigation program. During the site specific development of production wells and collection lines, additional environmental analysis and modeling will occur and as a result, additional mitigation and monitoring could be established.

The conclusions reached in this EIS are based upon the best available data; however, the BLM did not use the proponent's geochemical to support the analysis as stated in the Final EIS.

The BLM is consulting with the USFWS through the ESA Section 7 process. A Biological Assessment has been prepared for the project. The USFWS may request additional terms and conditions or mitigation measures with the release of the Biological Opinion.

Response to Comment No. 8-6

The BLM grant will require that all construction activities occur within the permitted corridor. Prior to any earth-disturbing activities, the Applicant would consult with the appropriate BLM staff to ensure construction operations follow BLM protocols and best management practices for soil

erosion control, dust control, noxious weed management, plant salvage and revegetation, and other environmental protection measures as required by BLM guidelines and as described in Appendix C in the Final EIS.

Response to Comment No. 8-7

See response to Comment 8-6 and Comment 15-1

Response to Comment No. 8-8

See response to Comment 8-6.

Response to Comment No. 8-9

See response to Comment 8-6. The Applicant would be required to comply with all Federal, state, and local air quality laws and regulations during construction and operation of the proposed project. Standard construction and operations environmental protection measures are listed in Appendix C in the Final EIS.

**Lincoln County Land Act Groundwater Development and
Utility Right-of-Way Project
Draft Environmental Impact Statement
Comment Form**

Public participation is critical to helping ensure BLM has considered the views of the public in the decision on this groundwater development project. BLM encourages you to get involved. Please take a few minutes to complete this form and provide any comments or questions you would like addressed. **The comment period ends on Tuesday, July 22, 2008.** Written comments can be sent via mail, fax, or e-mail to the BLM Nevada Groundwater Projects Office or submitted in person at the public meetings (see details below). Please contact the Groundwater Projects Office if you wish to receive a paper copy or CD of the Draft EIS.

Groundwater Projects Office Contact Info:

Phone: 775-861-6681 Fax: 775-861-6689 E-mail: nvgwprojects@blm.gov

Mailing Address:
P.O. Box 12000
Reno, NV 89520

Fed-Ex/Physical Address:
1340 Financial Blvd
Reno, NV 89502

Public Meeting Info:

Las Vegas, NV: Monday, June 23, 2008, 6-8pm, Embassy Suites Hotel
Caliente, NV: Tuesday, June 24, 2008, 6-8pm, Caliente City Hall
Mesquite, NV: Wednesday, June 25, 2008, 6-8pm, Mesquite City Hall
Carson City, NV: Thursday, June 26, 2008, 4-6pm, Plaza Hotel

Name: LINDA FAAS E-mail: linda faas@yahoo.com
Organization: _____ Title: _____
Mailing Address: 499 VIA DE FORTUNA WAY
City: MESQUITE State: NV Zip: 89027

Add my name to the mailing list Withhold my name and address from public review**

**Before including your address or other personal identifying information, you should be aware that this information may be made publicly available at any time. While you can ask us to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

COMMENT (continue on separate sheet if necessary)

LINCOLN CO. NEEDS WATER TO DEVELOP A RESIDENTIAL AND BUSINESS AREA, BUT SHOULD NOT BE ALLOWED TO PUMP AQUIFER WATER FOR THE PURPOSE OF SERVING A COAL-FIRED POWER PLANT THAT WOULD BE DETRIMENTAL TO HEALTH AND ENVIRONMENT.

Comment
No. 9-1

Response to Comment No. 9-1
Comment Noted.



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Nevada Fish and Wildlife Office
4701 North Torrey Pines Drive
Las Vegas, Nevada 89130
Ph: (702) 515-5230 ~ Fax: (702) 515-5231

Date: July 25, 2008
File No. 84320-2007-FA-0095

Memorandum

To: Project Manager, Nevada Groundwater Projects Office, Nevada State Office,
Bureau of Land Management, Reno, Nevada (Attn: Penny Woods)

From: Field Supervisor, Nevada Fish and Wildlife Office, Reno, Nevada

Subject: Comments on the May 2008 Draft Environmental Impact Statement for the
Lincoln County Land Act Groundwater Development and Utility Right of Way
Project, Lincoln County, Nevada

Following are the Fish and Wildlife Service's (Service) comments on the May 2008 draft Environmental Impact Statement (EIS) for the Lincoln County Land Act Groundwater Development and Utility Right of Way Project (LCLA GDP). During the last couple years, we have worked with you as a cooperating agency on the development of the EIS and have provided comments on previous administrative drafts of the document. The following comments are either new or were previously submitted but not addressed in the current version of the EIS.

We appreciate the opportunity to participate in the development of the EIS as a cooperating agency. If you have any questions or concerns regarding our comments, please contact Janet Bair or Jeri Krueger in the Nevada Fish and Wildlife Office in Las Vegas at (702) 515-5230.


For Robert D. Williams

Attachment

Attachment

Service Comments on the May 2008 Draft Environmental Impact Statement for the Lincoln County Land Act Groundwater Development and Utility Right of Way Project

Page ES-13 Table ES-3:

This Table states that “potential direct impacts to groundwater include impacts to groundwater quantity as a result of drawdown (lowering of the water table) within the wellhead, and potential indirect impacts may be related to lowered yields at local and regional groundwater and surface water expressions.” We recommend revising this statement to read: “Potential direct impacts to groundwater include impacts to groundwater quantity (a general lowering of the water table) as a result of drawdown in production wells, and potential indirect impacts including the lowering of yields at local and regional groundwater and surface water expressions such as springs and streams.”

Page 3-22, section 3.3.2.1, paragraph 2:

Please add citations for U.S. Geological Survey (USGS) reports and maps reviewed to prepare the draft EIS. Citations for all other publications/reports used should also be referenced.

Page 3-25, section 3.3.2.3, last paragraph:

We recommend deleting the sentence beginning with: “These estimates are based on very general assumptions for conditions in the Tule Desert and Virgin River Valley ...,” since the previous discussion and estimates are for large portions of the Carbonate-Rock Province and were based on conditions over a large area, and not limited or reflective of conditions in the Tule Desert and Virgin River Valley.

Page 3-30, section 3.3.2.4.2.2:

1. Throughout this section, change the reference for Figure 3-9 to Figure 3-10. Figure 3-9 is a representation of a geologic cross section in the Clover Valley Hydrographic Area, but section 3.3.2.4.2.2 describes the hydrogeology of the Tule Desert Hydrographic Area. In addition, all references to figures and maps throughout the document should be checked for errors.
2. References to Map 3-9 on page 3-32 should show groundwater inflow to Tule Desert. But Map 3-9 depicts Virgin River fish and southwestern willow flycatcher habitat. Please insert the correct map and change references to Map 3-9 accordingly.
3. Please clarify the difference between the “Paleozoic Carbonates” and the Regional Carbonate Aquifer depicted in Figure 3-10.
4. The hydrogeologic characterization of the Tule Desert depicted in Figure 3-10 is not consistent with that depicted by Page et al. in Figure 3-6. It would be helpful to have at

Comment
No. 10-7
(Continued)

least two East-West cross sections and two North-South cross sections supported by borehole data and surface geology to clarify Vidler's conceptual stratigraphic framework. Figure 3-10 represents only a small piece of the Tule Desert area since it runs down the center of a narrow graben. This cross section intersects A-A', B-B', C-C', and J-J' of Page et al. depicted in Figure 3-6, but does not use consistent units which allow for comparison in interpretation. Since the water desired by Vidler is expected to come from the carbonates, the Paleozoic carbonates should be broken into sub-units. We suggest categorization consistent with that of Page et al. (2006). Faults and transitions between areas/units with different physical properties need to be indicated on the sections.

Comment
No. 10-8

5. In Figure 3-10, PW-2 is located between FF-2B and MW-4/-5. However, in Maps 3-3 and 3-4, PW-2 is located at MW-6 several miles to the northeast. Please correct this error.

Comment
No. 10-9

6. In Figure 3-10, indicate and label prominent structural features such as the Mormon thrust and its relationship to any geologic interpretations that it may affect.

Page 3-53, first complete paragraph:

The sticky buckwheat is fully protected by the State of Nevada (N.A.C. 527.010). No individuals may be removed or destroyed at any time by any means except under special permit issued by the State forester fire warden, Nevada Division of Forestry (NRS 527.270). Since individuals of this species were found in the vicinity of the proposed project, we recommend including the above language in the document, and adding a statement that the proposed project will avoid soil-disturbing activities in areas where sticky buckwheat has been observed, or be subject to a permit and appropriate measures to minimize and mitigate effects to the species.

Comment
No. 10-10

Page 3-54, section 3.5.1, top of page:

This section mentions the potential for indirect effects to the Meadow Valley Wash from groundwater pumping in the Tule Desert Hydrographic Area. Therefore, any groundwater flow models developed to simulate effects of groundwater pumping in the Tule Desert should include consideration of effects to surface water flows in Meadow Valley Wash. On June 27, 2008, we received the latest Peter Mock report on his model developed to project impacts to groundwater from pumping in the Tule Desert, and it does not include a drawdown simulation for a point near the Meadow Valley Wash. If the Region of Influence (ROI) for pumping in the Tule Desert includes the Meadow Valley Wash, then either the model should include simulations of drawdown effects to the Meadow Valley Wash, or the document should include a clear and logical explanation for why effects to surface water flow in the wash from pumping in Tule Desert are not expected.

Comment
No. 10-11

Page 3-57, section 3.5.3.1.2, last paragraph of this section:

Comment
No. 10-12

This paragraph states that four observations of southwestern willow flycatchers were made in Rainbow Canyon in 2004. Please provide the reference for these observations, or check on the accuracy of this statement. We are not aware of the existence of these records.

Page 4-10, section 4.3.1.3.1 (Impacts to Groundwater Resources – Methods), paragraph 1:

Comment
No. 10-13

The text correctly states that “impacts to groundwater levels can be measured by changes in aquifer [groundwater] levels and water quality,” but goes on to imply that monitoring and ‘impact analysis’ are one and the same. Please amend text to clarify the role/value of monitoring data versus impact analyses, the purpose of the latter being to anticipate (rather than document) changes in groundwater levels and groundwater quality due to the proposed pumping.

Page 4-11, section 4.3.1.3.2 (Drawdown and Depletion of Groundwater Resources – Clover Valley), paragraph 2:

Comment
No. 10-14

The text correctly states that “available information on the local hydrogeology of Clover Valley is limited” and that no studies have been conducted to characterize groundwater recharge and discharge from the fractured-rock aquifer of Clover Valley or its degree of connection to overlying basin-fill. Consequently, it is not feasible at this time to construct and utilize a groundwater flow model to anticipate impacts to groundwater levels (or groundwater quality) in Clover Valley due to the proposed pumping. Rather, the analysis presented relies on a general conceptual evaluation of potential impacts based on available, but limited geologic/hydrogeologic information. Therefore, the results of the analysis are preliminary in nature. Please revise the text to reflect this information.

Page 4-11, section 4.3.1.3.2 (Drawdown and Depletion of Groundwater Resources – Clover Valley), paragraph 6:

Comment
No. 10-15

Paragraph 2 of this section correctly states that no studies have been conducted that characterize the degree of interconnection between the fractured-rock aquifer and overlying basin-fill in Clover Valley. Yet the text of paragraph 6 (bullet #3) proposes the “presence of a confining unit represented by more than 3,000 feet of volcanic material serving as a hydraulic barrier between the local and the fractured-rock aquifers.” In view of potential localized fracturing of the lava flows and ash-fall tuffs underlying Clover Valley, as well as the presence of “numerous strike-slip and normal faults which may provide important conduits for groundwater flow in the area” (page 3-7 of the DEIS), this conclusion may not be warranted, at least not in the absence of additional information. Please modify text to indicate that the “presence of a potential confining unit represented by more than 3,000 feet of volcanic material may serve as a hydraulic barrier between local aquifers and the fractured-rock aquifer” (bullet 3, page 4-11). That is, please acknowledge that there is uncertainty associated with the connection between the fractured-rock aquifer and the basin fill.

This same qualification should be added to the text of paragraph 3 (sentence 1) and paragraph 5 of page 4-12. As currently drafted, the latter concludes that “impacts to local users (wells completed in basin-fill and shallow volcanic rocks) resulting from pumping at planned depths between 1,200 and 1,500 feet bgs are not anticipated.” The text of paragraph 4, page 4-12, more generally asserts that “any drawdown related to pumping would occur at considerable depths and would be independent of surface hydrologic conditions.” Again, the text of paragraph 4 should be modified to reflect the possibility that volcanic rocks will act as a hydraulic barrier in Clover Valley.

Comment
No. 10-15
(Continued)

Page 4-12, section 4.3.1.3.2 (Drawdown and Depletion of Groundwater Resources – Clover Valley), paragraph 11:

The text correctly states that “.. there is insufficient information to confirm the presence of the regional flow system beneath Clover Valley,” although “... groundwater levels can be mapped as a continuum from the White Pine County boundary (80 miles north of Caliente) to the Virgin River (south of the project area).” That is, significant uncertainties exist concerning the presence of the carbonate aquifer in Clover Valley. Additionally, the text acknowledges that “... until test wells are installed to determine the local hydraulic parameters, it is not possible to quantify the predicted drawdown from pumping in the Clover Valley.” Therefore, impacts to groundwater levels and surface water flows cannot be quantitatively predicted at this time, and subsequent effects to associated biological resources are difficult to anticipate. Please revise the text in this section to reflect this information.

Comment
No. 10-16

Page 4-12, section 4.3.1.3.2 (Drawdown and Depletion of Groundwater Resources – Tule Desert), paragraph 1:

The text indicates that DEIS conclusions concerning potential impacts to groundwater levels (and groundwater quality) in Tule Desert as a result of project pumping are based only on information provided by the report titled “Focused Hydrologic Assessment of the Tule Desert Hydrographic Area Including Relevant Aspects of the Virgin River Hydrographic Area in Southern Nevada” [CH2MHill, 2002a]. Please clarify the adequacy of the information in this report as a basis for the present impact analysis, in view of its preparation in 2002 (does the report evaluate the same amount of pumping as is proposed in the EIS?) and the need for additional studies, which is acknowledged later on in this paragraph.

Comment
No. 10-17

Page 4-13, section 4.3.1.3.2 (Drawdown and Depletion of Groundwater Resources – Tule Desert), paragraphs 3 and 6:

The results of impact analyses conducted for the Toquop Energy Project (CH2MHill, 2002a) are cited to describe the anticipated impacts of project pumping on groundwater levels in Tule Desert (e.g., anticipated declines in water levels within the carbonate aquifer of less than 0.5 feet at [radial] distances exceeding 1.5 miles from pumping wells). However, the basis/nature of the analysis used to produce these results is not described. Given the importance of these conclusions, text should be added to Section 4.3.1.3.2 which describes the analysis used to produce these estimates, including assumptions and uncertainties inherent in the analysis and the degree to which available data were used to perform the analysis.

Comment
No. 10-18

Page 4-14, section 4.3.1.3.2 (Drawdown and Depletion of Groundwater Resources – Tule Desert), paragraph 7:

The text correctly states that “In the Tule Desert basin-fill deposits, the actual extent of the water level decline that would be caused by project pumping is unknown because of the aquifer complexity and the limited available data.” We interpret this to mean that impacts to groundwater levels in basin fill deposits are omitted from the present analysis. Therefore, the extent of impacts to groundwater levels in the basin fill from project pumping is difficult to anticipate. Please revise text in this section to reflect this uncertainty.

Comment
No. 10-19

Page 4-14, section 4.3.1.3.2 (Drawdown and Depletion of Groundwater Resources – Tule Desert), paragraph 8:

The text states that “Impacts due to groundwater withdrawal on the Virgin River south of the project area are not expected because it has been shown that the river in this location is losing water and hence supplying water to the basin [groundwater system] rather than extracting it (BLM 2007b).” Assuming that this reach of the Virgin River is in hydraulic connection with groundwater (as implied), a lowering of groundwater levels beneath the river would, in fact, increase the rate of loss of water from the river to the local groundwater system. That is, the presence of a losing reach cannot be used to argue for a disconnect between the river and local groundwater system. Please modify text accordingly.

Comment
No. 10-20

Page 4-27, section 4.5.2.1, last complete paragraph:

Please add the following statement at the end of the paragraph ending with “... initial funds for mitigation would come from a land disturbance fee assessed at the time of construction permitting.”

Comment
No. 10-21

“An HCP must be completed and a section 10(a)(2)(B) incidental take permit issued prior to commencement of surface-disturbing activities that may adversely affect the desert tortoise on non-Federal land in Lincoln County.”

Page 4-72, Migratory Birds, end of section:

The last sentence of this section states that projects located on private lands would be subject to the Southeastern Lincoln County HCP (as related to effects to migratory birds). This is not an accurate statement. Only those migratory birds that are covered under Lincoln County’s HCP would be subject to the HCP. At this time, the Lincoln County HCP only includes one migratory bird, the southwestern willow flycatcher. All other migratory birds protected by the Migratory Bird Treaty Act are not subject to Lincoln County’s HCP. We recommend deleting the last sentence of this section.

Comment
No. 10-22

Page 4-18, section 4.3.4, paragraph 2:

This paragraph does not indicate whether it is discussing Tule Desert, Clover Valley, or both. We assume it is discussing Clover Valley since it is the only basin with a “series of existing

Comment
No. 10-23

wells,” and there is only one existing well in Tule Desert and it is already being used. If this is true, a reference needs to be included to Appendix B and the word “would” should be replaced with the word “will” throughout this paragraph pending access to existing wells.

Comment
No. 10-23
(Continued)

The following comments on the proposed Water Resources Monitoring and Management Plan for Future Pumping in Clover Valley, Nevada were previously submitted via email on March 26, 2008, but were not addressed in the current version of the EIS. We are therefore submitting them again, with a request to address them in the final version of the EIS.

Appendix B:

1. No explanation was given about what factors were considered in the selection of the four private monitoring wells listed in Table 1 on page 9. Please add an explanation of these factors in the plan.
2. In Table 1, Private Wells #2 and #3 are located less than a mile apart and are completed at 100 and 106 ft bgs, respectively in the same geologic formation. We recommend removing one of these wells from the monitoring plan and substituting it with one of the three wells located just south of CWS-B in Figure 8 from the Clover Valley Well Siting Memo. One of these three wells is a BLM well (well log number 7046) which is completed in the volcanics at a depth of 200 feet, which might be a good candidate for monitoring, if access is permitted. Using one of these three wells would provide better spatial water-level elevation data coverage in Clover Valley and these wells are also the closest existing wells to Big Spring.
3. In section 4.0, East Spring should be referred to as “East Settling Spring” according to the USGS topographic maps. Furthermore, there is an “East Spring” just east of the town of Barclay on these maps, which can cause confusion to the reader.

Comment
No. 10-24

Comment
No. 10-25

Comment
No. 10-26

Responses to these comments are provided on a separate page following this comment letter.

Responses to Comment No. 10-1 thru 10-26

Response to Comment No. 10-1

Using the word “may” is appropriate as leaving it out implies that there will be an indirect impact that would cause lowering of the yields at local and regional springs and streams. Section 3.3.2.4.2.2 in the Final EIS has been expanded to discuss the lack of connectivity between the deep rock aquifers (in which the pumping will occur) and surficial aquifers, including a discussion of observations from the aquifer tests. It follows that groundwater pumping from the Proposed Action would not affect local springs as they are sustained by local recharge, i.e., local precipitation and including snowfall.

Response to Comment No. 10-2

Comment noted and appropriate references clarified in Section 3.3.21 in the Final EIS.

Response to Comment No. 10-3

Text has been modified in Section 3.3.2.3 in the Final EIS to reference the regional BARCASS study.

Response to Comment No. 10-4

In response to the comment, the references to maps and figures in Chapter 3 have been corrected.

Response to Comment No. 10-5

In response to the comment, the correct map has been referenced in the Final EIS. .

Response to Comment No. 10-6

There is no difference as the existence of the Paleozoic Carbonates makes up the regional aquifer. The significance in the diagram and the distinction being made is actually the values for hydraulic conductivity. In the region to the north, the Paleozoic Carbonates that make up the regional aquifer are reported to be less fractured than the Paleozoic Carbonates to the south, i.e., 8.5 gpd/ft² versus 92 gpd/ft². It's all the same unit but more fractured to the south than in the northern part of the basin.

Response to Comment No. 10-7

Figure 3-10 is for illustrative purposes only. The information shown on the figure is based upon further refinement of the Page et al. (2006) maps using more detailed information from drill cuttings returned from each of the wells illustrated on the cross-section. The cross-section was extended, based on Page's interpretations, to illustrate that the regional carbonate rock aquifer extends below the deepest well.

Response to Comment No. 10-8

The PW-2 well symbol shown on Figure 10 has been moved to the correct location which is adjacent to the Tule Desert Well.

Response to Comment No. 10-9

Figure 3-10 is for illustrative purposes only. It is intended to show that the predominant groundwater flow patterns in the Tule Desert are not controlled by the Mormon Thrust. The Mormon thrust is shown in the structural diagrams presented in Figure 3-6.

Response to Comment No. 10-10

The following statement has been added to the Final EIS. *“The sticky buckwheat is fully protected by the State of Nevada (N.A.C 527.010). No individuals may be removed or destroyed at any time by any means except under special permit issued by the State forester fire warden, Nevada Division of Forestry (NRS 527.270). Individuals of this species were found north of the proposed right of way corridor during surveys for rare plants (ARCADIS 2006). If these species are found during construction, a permit and appropriate measures to minimize and mitigate effects of the species will be implemented.”*

Response to Comment No. 10-11

This analysis does not include the use of the Peter Mock model (see section 4.3.1.3.4). Any future modeling effort would include effects of the Tule Valley pumping on the Meadow Valley Wash.

Response to Comment No. 10-12

The 2005 Bio-West report (See References) cited that four observations of southwestern willow flycatchers were made in the Rainbow Canyon area in 2004.

Response to Comment No. 10-13

Depending on the location of the monitor well(s) the data collected can provide an indication of what is to be expected further down gradient from the monitor well(s) location. This information can then be used to “anticipate” changes in groundwater levels and groundwater quality due to the proposed pumping as well as document what is occurring in the aquifer at that point. The EIS has been modified to indicate that LCWD/Vidler have constructed and are currently monitoring two monitor wells (FF-1 and FF-2B) in Tule Desert to serve this function. These wells are located in the basin and are not located near any critical surface water features. They will be used to document changes in water levels and water quality down gradient of the pumping centers in Tule Desert that hence give advance notice of any impacts, if any, that may occur outside of the Tule Desert Groundwater Basin. Additional monitoring wells could be developed based on the current monitoring and mitigation program. During the site specific development of production wells and collection lines, additional environmental analysis and modeling will occur and as a result, additional mitigation and monitoring could be established.

Response to Comment No. 10-14

Comment noted and text has been modified in Section 4.3.1.3.2 in the Final EIS to clarify that the existing evaluation is conceptual in nature.

Response to Comment No. 10-15

Text in Section 4.3.1.3.2 in the Final EIS has been modified accordingly.

Response to Comment No. 10-16

See response to comment 10-15.

Response to Comment No. 10-17

Text in Section 4.3.1.3.2 in the Final EIS has been updated to describe the various reports and documents recently submitted to the Nevada State Engineers and peer reviewed by the USGS in cooperation with the Nevada Division of Water Resources and the National Park Service.

Response to Comment No. 10-18

See response to comment 10-17.

Response to Comment No. 10-19

See response to comment 10-17.

Response to Comment No. 10-20

See response to comment 10-17.

Response to Comment No. 10-21

The following sentence has been added to Section 4.5.2.1 in the Final EIS – *A Habitat Conservation Plan must be completed and a section 10(a)(2)(B) incidental take permit issued prior to commencement of surface disturbing activities that may adversely affect the desert tortoise on non-Federal land in Lincoln County.*

Response to Comment No. 10-22

The last sentence in Section 4.20.4.4 (Migratory Birds) has been deleted.

Response to Comment No. 10-23

This paragraph is referring to both basins, as there are existing wells in Tule Desert and in Clover Valley. There is an existing monitoring and management plan for Tule Desert that is currently in place and adhered to, and there is the proposed monitoring and management plan for Clover Valley that is proposed. Additional monitoring wells could be developed based on the current monitoring and mitigation program. During the site

specific development of production wells and collection lines, additional environmental analysis and modeling will occur and as a result, additional mitigation and monitoring could be established.

Response to Comment No. 10-24

The text on page 8 of the attachment to the Proposed Water Resources Monitoring and Management Plan for Future Pumping in the Clover Valley identifies four existing wells within Clover Valley that are viable for groundwater monitoring and hence are potential monitoring points. Table 1 is titled “Proposed ...Monitor Wells). The final selection will be made in consultation with all parties and will be subject to change if any impacts and or uses so indicate. Additional monitoring wells could be developed based on the current monitoring and mitigation program. During the site specific development of production wells and collection lines, additional environmental analysis and modeling will occur and as a result, additional mitigation and monitoring could be established.

Response to Comment No. 10-25

Comment noted; the monitoring point can be changed to well Log no. 74914, which has historic water level data and is one of the wells located south of well site CWS-B.

Response to Comment No. 10-26

In response to the comment, the BLM has asked LCWD to change the reference in the Proposed Water Resources Monitoring and Management Plan for Future Pumping in the Clover Valley from East Spring to East Settling Spring.

ADVOCATES FOR COMMUNITY AND ENVIRONMENT

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SENT VIA E-MAIL

July 22, 2008

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**Re: Comments on the BLM's Lincoln County Land Act Groundwater
Development and Utility Right of Way Project Draft Environmental Impact
Statement**

Dear Ms. Woods:

Thank you for providing this opportunity to offer comments on the Bureau of Land Management's (BLM's) draft environmental impact statement (DEIS) for the Lincoln County Land Act Groundwater Development and Utility Right of Way Project (hereinafter "Project," or "proposed action,") These comments are submitted by Advocates for Community and Environment on behalf of the Great Basin Water Network ("GBWN"). Additional comments may also be submitted separately by members of GBWN, its employees/officers, and other interested citizens associated with GBWN. These comments incorporate by reference all such comments, as well as the comments of the Toiyabe Chapter of the Sierra Club. Many of GBWN's members live in Lincoln and Clark Counties or recreate on public lands in southeastern Nevada and are very concerned about the potential impacts of this proposed project, both environmental and socioeconomic.

GBWN requests that these comments be included as part of the administrative record. GBWN further requests that all documents, articles, and/or reports cited in these comments and those incorporated by reference be included as part of the administrative record of this action. See County of Suffolk v. Secretary of Interior, 562 F.2d 1368, 1384 n.9 (2d Cir. 1977) (addressing scope of NEPA administrative record), cert. denied, 437 U.S. 1064 (1978); Silva v. Lynn, 482 F.2d 1282 (1st Cir. 1973) (same); see also Thompson v. United States Dep't of Labor, 885 F.2d 551, 555 (9th Cir. 1989) (administrative record consists of all documents and materials directly or indirectly considered by agency and includes evidence contrary to agency's position).

The Legal Requirements of the National Environmental Policy Act (NEPA):

"Section 101 of NEPA declares a broad national commitment to protecting and promoting environmental quality." Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 348 (1989), citing 83 Stat. 852, 42 U.S.C. § 4331. "The sweeping policy goals announced in § 101 of NEPA are . . . realized through a set of 'action-forcing' procedures that require that agencies take a 'hard look' at environmental consequences." Id. at 350, citing Kleppe v. Sierra Club, 427 U.S. 390, 410 n.21 (1976). NEPA's main "action-forcing" procedure comes in the form an environmental impact statement ("EIS"), a detailed statement on environmental impacts that must be prepared before an agency undertakes any "major Federal action[] significantly affecting the quality of the human environment." NEPA § 102(2)(C), 42 U.S.C. § 4332(2)(C).

Thus, NEPA "ensures that the agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts." Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 349 (1989). See also Vermont Yankee Nuclear Power Corp. v. NRDC, 435 U.S. 519, 553 (1978) ("NEPA places upon an agency the obligation to consider every significant aspect of the environmental impact of a proposed action"). "These procedural provisions of NEPA 'are designed to see that all federal agencies do in fact exercise the substantive discretion given them. These provisions are not highly flexible. Indeed, they establish a strict standard of compliance.'" Sierra Club v. Watkins, 808 F. Supp. 852, 859 (D.D.C. 1991), quoting Calvert Cliffs' Coordinating Comm., Inc. v. United States Atomic Energy Comm'n, 449 F.2d 1109, 1112 (D.C. Cir. 1971).

The Council on Environmental Quality ("CEQ") has promulgated regulations implementing NEPA that are binding on all federal agencies. 40 C.F.R. § 1500.3; Robertson v. Methow Valley Citizens Council, 490 U.S. at 354.

The DEIS Does Not Adequately Evaluate The Proposed Project, Its Impacts, Or A Proper Range of Alternatives:

As explained in detail below, the Project is premised on unsustainable groundwater mining, and as such poses a serious threat to the groundwater system underlying a substantial portion of the carbonate aquifer province and the dependent environment. Among the harms likely to be caused by the Project is long-term, catastrophic depletion of the aquifer that would take many millennia to remedy. By substantially drawing down the local and regional aquifer systems, the Project also threatens to dry out regional springs that support a host of endemic species, including species listed under the Endangered Species Act. The project also poses a significant risk of creating a substantial area of denuded, dried out sediment with considerable potential to generate harmful dust emissions comparable to those produced by the drying out of the Owens Valley, which ranks as one of the Nation's most conspicuous environmental disasters. These are only some of the disturbing potential environmental impacts from the Project, impacts that in practical terms will be permanent and very expensive to even attempt to mitigate.

The Draft Environmental Impact Statement (DEIS) does not adequately address these and other serious problems with the Project. Indeed the DEIS is woefully inadequate under NEPA.

Among its most glaring deficiencies, the DEIS is based on a patently deficient description of the Project and the physical conditions and environmental resources in its vicinity, a grossly inadequate assessment of the purpose and need for the Project, a failure to examine the Project's feasibility, a failure to properly examine likely adverse environmental impacts, and an inadequate consideration of a range of alternatives. In all these regards, the DEIS fails to comply with NEPA. In light of the specific deficiencies under NEPA described below, we believe that the only appropriate action for the BLM to take is to correct its deficient analysis and issue a new DEIS for public comment.

(1) Evaluation of the Purpose and Need for the Project. As described below, the assessment of purpose and need that underlies the DEIS is inadequate and characterized by omissions and inconsistencies.

(a) Conservation Measures

To begin with, the DEIS does not provide sufficient specificity regarding what conservation measures have been, or reasonably can be expected to be, implemented in Lincoln and Clark Counties. Without this information it is not possible to assess the reasonableness of the assumed future demand on which the Lincoln County Land Act Groundwater Development and Utility Right-of-Way Project Draft EIS is premised.

Throughout the discussion of need and purpose, the DEIS betrays a presumption in favor of mining groundwater for proposed unsustainable growth, rather than examining other, more sustainable, potential water supplies, including increased water conservation and recycling in both Lincoln and Clark Counties.

The bias betrayed in this unbalanced consideration is also evident in the DEIS's failure to acknowledge that increased conservation measures would protect against overdraft of groundwater basins.

Because the BLM passively accepts the Project proponents' assertions concerning future water demand, the DEIS provides the public and the ultimate decision-makers with no basis for assessing the adequacy of the consideration given to reasonably available additional conservation measures.

(b) Water Recycling and Groundwater Recovery Programs

The purpose and needs analysis also fails to adequately describe or address the opportunities to meet anticipated water demand through water recycling and groundwater recovery programs. Because this potential additional water supply is not considered in the purpose and need analysis underlying the DEIS, neither the Agencies nor the public can make an informed decision regarding the actual need for the Project.

(2) Direct Impacts. The DEIS has failed to carefully analyze the direct impacts of the Project. This includes analyzing the impacts of both the construction and long-term operation of the wells, pipelines, electrical supply lines, and ancillary facilities. Of particular concern are the

Responses to these comments are provided on a separate page following this comment letter.

*Comment
No. 11-1*

*Comment
No. 11-2*

Comment
No. 11-2
(Continued)

direct impacts of the proposed action on eastern Nevada's aquifers (valley fill and carbonate), springs, seeps, wetlands, and wet meadows, water dependant vegetation, wildlife populations and habitat (including threatened and endangered species), and existing water rights (including vested rights).

Comment
No. 11-3

(3) Indirect Impacts. The DEIS fails to adequately analyze the indirect effects of the Project. Indirect effects are effects that are caused by the action but occur later in time or are further removed in distance. See 40 C.F.R. § 1508(b). Indirect effects "may include growth inducing effects or other effects related to induced changes in pattern of land use; population density or growth rate; and related effects on air, water, and other natural resources." Id. Here, the indirect effects of the Project include, but are not limited to, the future growth and development in the region – the stated "purpose" of the project – and the indirect effects on the region's human and wildlife communities that will result from the proposed pumping of the aquifer. Unfortunately, the DEIS fails to take a meaningful, let alone the required "hard," look at these impacts.

(4) Cumulative Impacts. The DEIS does not contain the required hard look at the cumulative impacts of the proposed action. Cumulative impacts are "the impacts on the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions." 40 C.F.R. § 1508.7. Cumulative impacts can result from "individually minor but collectively significant actions taking place over a period of time. Id.

Comment
No. 11-4

The DEIS does not properly analyze the cumulative effects of the Project because it does not: (1) identify the significant cumulative effects issues associated with the proposed action; (2) establish the proper geographic scope for the analysis; (3) establish an appropriate time frame for the analysis; or (4) identify other actions affecting the resources, ecosystems, and/or human communities of concern. Thus, the DEIS is deficient in all regards concerning cumulative effects.

In this case, establishing the proper geographic scope or boundary for a cumulative impacts analysis is extremely important because the proposed action will have direct, indirect, and an "additive" affect on resources *beyond the immediate* area. To determine the appropriate geographic boundaries for a cumulative effects analysis, therefore, the BLM's DEIS should first have: (1) determined the area and resources (i.e., the aquifers) that will be affected by their proposed action (the "project impact zone"); (2) made a list of resources within that area or zone that could be affected by the proposed action; and (3) determined the geographic areas occupied by those resources outside the immediate area or project impact zone. The largest of these areas would be the appropriate area for the analysis of cumulative effects. By way of example, for resident or migratory wildlife, the appropriate geographic area for the cumulative impacts analysis will be the "species habitat" or "breeding grounds, migration route, wintering areas, or total range of affected population units." see e.g., NRDC. v. Hodel, 865 F.2d 288, 297 (D.C. Cir. 1988) (agency violated NEPA by failing to consider the synergistic effect of simultaneous development on migratory whales).

Responses to these comments are provided on a separate page following this comment letter.

Comment
No. 11-4
(Continued)

Indeed, because the Project will directly impact a vast aquifer system (valley fill and carbonate), the scope of the cumulative impacts analysis in the DEIS must encompass the entire aquifer system. Some of Nevada's aquifers are connected among basins. As such, the development of water resources in one basin may affect water levels in or discharges to other basins. It therefore is imperative that the scope of the BLM's cumulative impacts analysis extend beyond the immediate ROW Project area, transcend State boundaries, and include the entire aquifer system (this includes the States of Idaho, California, and Utah). Unfortunately, however, the DEIS fails utterly to engage in this analysis.

Another important aspect of a cumulative impacts analysis that the BLM is required to engage in is an assessment of other past, present, and reasonably foreseeable actions affecting the resources, ecosystems, and/or human communities of concern. According to the CEQ, the "most devastating environmental effects may result not from the direct effects of a particular action, but from the combination of individually minor effects of multiple actions over time." The requirement to consider cumulative impacts, therefore, is designed to avoid the "combination of individually minor" effects situation – to avoid the "tyranny of small decisions" or "death by a thousand cuts" scenario. See e.g., Grand Canyon Trust v. FAA, 290 F.3d 339, 346 (D.C. Cir. 2002).

The DEIS therefore should have taken into account and analyzed a number of state, private, and other federal actions as well as natural occurrences or events that have taken place (historic and current pumping), are taking place, or are proposed to take place that will similarly impact the region's aquifers, wildlife populations and habitat, and human communities (i.e., existing rights, domestic wells). Individually, each groundwater pumping activity – though serious – may not rise to the level of posing a significant risk to the aquifer. Collectively, however, the impacts of all of these and other activities – whether conducted by private individuals, state agencies, or other federal agencies – may be significant and must be analyzed. See e.g., Grand Canyon Trust, 290 F.3d at 346 (discussing collective impacts to Zion National Park); NRDC v. Hodel, 865 F.2d 288 (D.C. Cir. 1988) (discussing collective impacts to migratory whales). As the D.C. Circuit Court noted, federal agencies must "give a realistic evaluation of the total impacts [of the action] and cannot isolate the proposed project, viewing it in a vacuum." Grand Canyon Trust, 290 F.3d at 342. Even "a slight increase in adverse conditions . . . may sometimes threaten harm that is significant. One more factory . . . may represent the straw that breaks the back of the environmental camel." 290 F.3d at 343 (quoting Hanly v. Kleindienst, 471 F.2d 823 (2d Cir. 1972)).

Additional potential significant impacts of the Project that the DEIS fails to adequately address are impacts on air quality through the creation of conditions that will increase the likelihood of serious dust emissions in the affected area and impacts to wildlife species in the affected area, including those listed under the ESA and presently protected in wildlife refuges and management areas.

Under NEPA, an agency must honestly address the various uncertainties surrounding the scientific evidence upon which it relies in its environmental evaluations. The agency has a duty to respond to credible opposing points of view, and it may not ignore reputable scientific opinion. See, e.g., Seattle Audubon Soc'y v. Espy, 998 F.2d 699, 704 (9th Cir. 1993); Public

Responses to these comments are provided on a separate page following this comment letter.

*Comment
No. 11-4
(Continued)*

Service Co. v. Andrus, 825 F. Supp. 1483, 1496-99 (D. Idaho 1993); see also Sierra Club v. Watkins, 808 F. Supp. 852, 864-69 (D.D.C. 1991). An agency's NEPA analysis must expose scientific uncertainty regarding the risk of a proposed action and inform decisionmakers of the full range of responsible scientific opinion on the environmental effects of the proposed action. Friends of the Earth v. Hall, 693 F. Supp. 904, 926, 934 (W.D. Wash 1988). Also, federal agencies are responsible for overseeing and ensuring the accuracy of environmental impact statements produced by contractors. 40 C.F.R. § 1506.5(c). In this regard, too, the DEIS is inadequate on its face and must be redone.

*Comment
No. 11-5*

(5) Baseline. The BLM's DEIS should have established the proper baseline upon which to base its impacts analyses and conduct the requisite "trends analysis," i.e., an assessment of the environmental impacts of all activities affecting the various resources over an extended period of time. Only by properly defining the baseline and engaging in a trends analysis can the BLM get a sense of the changes that have occurred overtime. At a minimum, baseline data on water rights and claims (vested, recorded, and applications), historic and current water uses, locations of all springs and seeps (on both private and public land), locations of all wet meadows and wetlands, locations of water-dependant flora and fauna, aquifer recharge rates, and information on the connectivity between the alluvial groundwater and carbonate system throughout the affected region is needed in order to properly analyze the impacts (direct, indirect, and cumulative) of the proposed action. Because the DEIS fails to adequately establish a baseline, it is inadequate under NEPA.

*Comment
No. 11-6*

(6) Alternatives. The BLM's DEIS fails to consider a reasonable range of alternatives. Under NEPA, federal agencies must "study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources." 42 U.S.C. § 4332(2)(E); 40 C.F.R. § 1508.9(b). The discussion of reasonable alternatives section is the "heart" of any environmental analysis under NEPA. 40 C.F.R. § 1502.14. In order to comply with this mandate, the BLM's DEIS should have defined the "purpose and need" of the action. Because the BLM's "purpose and need" discussion is too narrow, the range of alternatives considered is also too narrow in scope. At a minimum, the DEIS should have explored alternative sources of water, piping from different sources, desalinization, different combinations of pumping among valley fill and carbonate wells, various mitigation measures, various levels of development in the affected area, and a water conservation alternative.

*Comment
No. 11-7*

(7) Best Scientific Information. All agencies, including the BLM "shall insure the professional integrity, including scientific integrity, of the discussions and analyses in environmental impact statements." 40 C.F.R. §1502.24. Pursuant to NEPA, information included in a DEIS "must be of high quality." 40 C.F.R. § 1500.1(b). Accurate "scientific analysis [is] essential to implementing NEPA." Id. While a DEIS may not be expected to reference or rely on every study or opinion, the state of scientific knowledge on a particular subject must be fairly represented in a balanced manner. Moreover, a DEIS must contain a reasoned analysis in response to conflicting data or opinions on environmental issues.

The DEIS for the Lincoln County Land Act Groundwater Development and Utility Right of Way Project does not present and is not based upon the required high quality scientific data

Responses to these comments are provided on a separate page following this comment letter.

*Comment
No. 11-7
(Continued)*

and analysis required by NEPA. In order to adequately analyze the direct, indirect, and cumulative impacts of the proposed action, the BLM will need to review and collect more scientific data. At a minimum, the BLM needs to prepare detailed potentiometric surface maps for the valley fill and carbonate aquifers, complete sufficient pump tests (with monitoring) to detail the variability in hydraulic conductivity across the basins, and complete pump tests for transient calibration of a groundwater model. In addition, the BLM needs to prepare a detailed groundwater model that includes all of the basins in the carbonate province and the overlying valley fill aquifers. The BLM should also prepare a detailed and comprehensive monitoring and mitigation plan and carefully review and consult all other available (or soon be available) studies on the aquifer system and the impacts of groundwater pumping on the area's natural resources.

(8) Comprehensive EIS. The deficiencies of the DEIS plainly bear out the need for the BLM to prepare one comprehensive or programmatic EIS for all groundwater development projects in the region. Pursuant to CEQ's NEPA regulations, actions that: (1) are closely related, i.e., are interdependent parts of a larger action and depend on the larger action for their justification; or (2) are cumulative actions, which when viewed with other proposed actions have cumulatively significant impacts; or (3) are similar actions that have similarities that provide a basis for evaluating their environmental consequences together, such as common timing and geography, need to be considered in one EIS. See 40 C.F.R. § 1508.25.

Here, there are a number of individual projects that should be considered in one, single EIS. These projects include, but are not limited to: (1) the Kane Springs Valley project; (2) the Three Lakes Tikaboo project; (3) the Virgin/Muddy River surface water development project; (4) the Lake Mead pipeline EIS; (5) the Coyote Springs development project; and (6) the Southern Nevada Water Authority's Clark, Lincoln, and White Pine Counties groundwater development project.

Without question, all of these projects are closely related as they involve the same impacts to the same resource (the aquifer system) and are part of a larger, programmatic plan to develop interconnected "in-state" water resources. The projects are also actions, which when viewed with other proposed actions have cumulatively significant impacts on the aquifer, human communities, and wildlife populations and habitat in the region. These projects also qualify as "similar actions" that have similarities that provide a basis for evaluating their environmental consequences together, such as common timing and geography. These projects therefore belong in one, programmatic EIS.

In fact, preparing a single EIS is the only way the BLM can explore a reasonable range of alternatives with varying degrees of groundwater pumping, alternate sources of water, conservation measures, various locations for proposed wells, and different combinations of pumping among the valley fill and carbonate wells throughout the region.

In closing, thank you for providing this opportunity to submit comments on the Draft EIS for the Lincoln County Land Act Groundwater Development and Utility Right of Way Project. We sincerely appreciate the opportunity to participate in this and other important decisions affecting public resources in Nevada and Utah. The significance of these interconnected water development projects in terms of the impacts to human communities in rural Nevada and Utah

Responses to these comments are provided on a separate page following this comment letter.

*Comment
No. 11-8*

and the survival of unique ecosystems and endemic species in the Great Basin region cannot be overstated.

We hope you find these comments to be helpful, informative, and useful in your efforts to comply with the NEPA and other substantive statutes. If you have any questions or wish to discuss the issues raised in these comments in greater detail, please do not hesitate to contact me or the GBWN representative listed below.

Sincerely,

///s///

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Responses to Comment No. 11-1 thru 11-8

Response to Comment No. 11-1

The LCWD is developing groundwater resources within Lincoln County to serve its customers in Lincoln County. The BLM's action for this EIS is to either grant or deny the LCWD's application for a right of way across public lands managed by the BLM. The BLM must decide whether, and if so, under what conditions it will grant ROW(s) to enable construction and operation of the proposed groundwater facilities and related infrastructure. The BLM has no authority to make a determination as to the sufficiency of groundwater to support future development in the project area. The BLM is obligated to disclose the potential impacts that could occur based on the Proposed Action. The BLM will recommend monitoring and mitigation that could reduce the impacts, but cannot select monitoring and mitigation outside its jurisdiction. The BLM will have mitigation and monitoring that would help protect surface resources that it is responsible for.

As part of the water appropriation permit application review and authorization, the Nevada State Engineer has the authority to approve and control the amount of groundwater pumped from basins in Nevada. The Nevada State Engineer will determine what measures would be taken should a basin become overextended due to additional growth, drought conditions, or uses by existing or pending water right holders in the basin.

The distribution, use, and potential reuse of water to be developed by the LCWD would be governed by a General Improvement District, or other regulatory agency tasked with overseeing these resources in the place of use.

Response to Comment No. 11-2

The BLM believes that both the Draft and Final EIS are consistent with NEPA requirements and that the level of analysis conducted to determine direct impacts of the Proposed Action is adequate.

Response to Comment No. 11-3

The BLM believes that both the Draft and Final EIS are consistent with NEPA requirements and that the level of analysis conducted to determine indirect impacts of the Proposed Action is adequate.

Response to Comment No. 11-4

The BLM believes that both the Draft and Final EIS are consistent with NEPA requirements and that the level of analysis conducted to determine cumulative impacts of the Proposed Action is adequate. Further, each of the projects mentioned are separate and distinct with their own unique issues and timelines. Each represents a discreet hydrographic basin for which the allocation of water rights is within the purview of the Nevada State Engineer. Thus, it is not possible to combine in a timely manner to address the needs of the Proposed Action.

Response to Comment No. 11-5

See response to Comment 8-1.

Response to Comment No. 11-6

See response to Comment 8-2.

Response to Comment No. 11-7

See response to Comment 8-3. Environmental resource data was collected and analyzed to the level of detail necessary to understand potential impacts and to distinguish project effects (both beneficial and adverse) among the Proposed Action and alternatives. The data analyzed in this EIS are the best available representation of current and predicted conditions at this time. However, there is a level of uncertainty associated with any set of data in terms of predicting impacts, especially where natural systems are involved.

Response to Comment No. 11-8

Each of the projects mentioned are separate and distinct with their own unique issues and timelines. Each represents a discreet hydrographic basin for which the allocation of water rights is with the purview of the Nevada State Engineer. Thus, it is not possible to combine in a timely manner to address the needs of the Lincoln County Land Act EIS.



"Ken Hill"
 <kenfhill84083@gmail.com>
 07/22/2008 08:40 AM

To nvgwprojects@blm.gov
 cc
 bcc
 Subject Draft EIS: Lincoln County Land Act Groundwater
 Development and Utility Right of Way Project

22 July 2008

Penny Woods, Manager
 BLM/Nevada Groundwater Projects Office
 PO Box 12000
 Reno, NV 89520

Re: Draft Environmental Impact Statement: Lincoln County Land Act Groundwater
 Development and Utility Right of Way Project

Dear Ms. Woods,

It is unclear whether data used by BLM in making decisions is peer-reviewed or merely supplied by the project proponent. Non-reviewed, Proponent-supplied data should not be relied on.

I do not see how cumulative impacts from all development projects in rural Nevada -- most notably the SNWA pipeline extending to White Pine County -- are or will be incorporated into this or any of the other associated Environmental Impact Studies. The cumulative impacts from all these projects are not being adequately evaluated. Excluding the other, related projects from evaluation of cumulative impacts analysis is flawed and does not comply with NEPA requirements for cumulative analysis.

How can impacts for a ROW issued "in perpetuity" be limited to 25 years? Cumulative impacts must be studied for the length of the ROW -- "in perpetuity. Impacts of pumping often take many years or decades to manifest, so a 25-year timeframe is inadequate.

I strongly recommend the BLM delay the completion of this draft EIS until sufficient information is available to properly assess environmental impacts, ordering additional studies necessary to obtain sufficient information to comply with NEPA man dates.

Ken Hill
 550 Trout Creek Rd.
 Partoun
 Wendover, UT 84083

435 693 3120
kenfhill84083@gmail.com

*Comment
 No. 12-1*

Response to Comment No. 12-1

Environmental resource data, including data provided by the project proponent, was collected and analyzed to the level of detail necessary to understand potential impacts and to distinguish project effects (both beneficial and adverse) among the Proposed Action and alternatives. The data analyzed in this EIS are the best available representation of current and predicted conditions at this time. There is, however, a level of uncertainty associated with any set of data in terms of predicting impacts, especially where natural systems are involved. Areas of uncertainty associated the Proposed Action are described in the Incomplete and Unavailable Information section located at the beginning of Chapter 4. The methodology for assessing cumulative impacts is described in section 4.20.2 in the Draft and Final EIS.

The BLM believes that the EIS is consistent with NEPA requirements and that the level of analysis conducted is sufficient to render an opinion regarding the LCWD's request for a right of way.



Toiyabe Chapter
P.O. Box 8096
Reno, NV 89507

REC'D - BLM - NSO
9:00 JUL 21 2008
A.M.

July 14, 2008

Penny Woods, Manager
BLM/Nevada Groundwater Projects Office
PO Box 12000
Reno, NV 89520

Re: Draft Environmental Impact Statement: Lincoln County Land Act
Groundwater Development and Utility Right of Way Project

Dear Ms. Woods,

On behalf of the Toiyabe Chapter of the Sierra Club and our 5000+ members in Nevada and the Eastern Sierra, I am submitting comments on the draft EIS on the Lincoln County Land Act Groundwater Development and Utility ROW Project (dEIS). Many of our member live in Lincoln and Clark Counties or recreate on public lands in southeastern Nevada and are very concerned about the potential impacts of this proposed project, both environmental and socioeconomic. Because of these concerns, we submitted to the BLM 24 pages of scoping comments in two letters - dated April 20, 2006 and April 24, 2006.

The Sierra Club is very disappointed in the draft EIS on this proposed project. Many of the issues we raised during the scoping period were not addressed in the draft. Many other issues were dismissed by the BLM, including several proposed alternatives. We made a series of recommendations on how to ensure that the EIS for this complex proposal complies with NEPA requirements, but most were not incorporated.

In our review of this document, we found that at times we were drowning in detailed information, but we found that much of this information did not assist us in evaluating the BLM's assessment of the project's environmental impacts. We found that the BLM handled the issue of limited or no scientific data on hydrology and other areas by acknowledging the problem, but then proceeding to make conclusions about the carbonate flow system and the lack of potential

environmental impacts of groundwater pumping and exportation. In addition, much of the data which BLM did use in this document is of questionable value, as it was produced by the project proponent or consultants who worked for proponents – with no indication in the dEIS of whether the data has been peer-reviewed or published – objections which the Nevada State Engineer raised in his Tule Desert water hearing and ruling on groundwater applications by the proponent of this project. We found an over-reliance on monitoring and mitigation promised by project proponents and the National Park Service which seems to have been used to justify dEIS declarations of “no impacts” on public lands and resources. And despite the lack of available and credible scientific information, the BLM constructed “conceptual” and theoretical approaches to describing the affected environment and, even, the project, and, then, using a theoretical, what-if approach to assessing potential environmental impacts of the conceptual project. The dEIS appears to be built on a house-of-cards, any one of which fails, the entire dEIS would collapse, hardly a responsible approach to water and resource management in the desert West.

We strongly recommend that the BLM either delay the completion of this EIS until sufficient information is available to properly assess environmental impacts, or to reissue the draft EIS after ordering the necessary studies to obtain sufficient information to comply with NEPA mandates. Our specific comments follow:

*Comment
No. 13-1*

1. **NV/UT Water Agreement:** While PL 108-424 is cited in the dEIS many times, the document does not disclose its mandate for an agreement (Section 131(e)(3)) between Nevada and Utah on the division of water resources of the interstate groundwater flow system. Since the project proposes to develop groundwater in the Virgin Valley Flow System, most of which occurs in the state of Utah, and convey that water through the Congressionally-mandated Right of Way across public lands in Nevada, this project is subject to the provisions of PL 108-424. Why was this Congressional mandate omitted from the dEIS?

*Comment
No. 13-2*

2. **NEPA requires a range of alternatives:** a range of alternatives was not studied in this EIS. The Proposed Action, Alternative 1 - a slight (yet more environmentally damaging) variation on the proposed right-of-way (ROW), and No Action alternatives do not meet NEPA requirements. The public suggested many other alternatives, including different water sources for the LCLA parcel, a range of water amounts to be transported (from the 2,100 afy approved by the Nevada State Engineer (NSE) to the full amount requested by the proponent) through the ROW, and a phased in water-transport, corresponding with the phased in LCLA development. The criteria (p.2-21) by which BLM chose to evaluate possible alternatives resulted in alternatives which do not meet NEPA requirements. NEPA does not provide for an agency setting up criteria to select (and eliminate)

Responses to these comments are provided on a separate page following this comment letter.

Comment No. 13-2 (Continued) alternatives acceptable to the proponent but which fail to be responsive to scoping comments and to NEPA requirements for a full range of alternatives.

Comment No. 13-3 3. **Baseline conditions:** although the dEIS mentions the need for setting baseline conditions, it does not disclose what actual baseline conditions are in the study area, nor how or when they were determined, and by whom. This should be clarified in the final EIS.

Comment No. 13-4 4. **Best available information:** although this phrase is repeatedly used in the dEIS, the document does not disclose whether its “best available” data which has apparently been mostly supplied by the proponent, especially in highly technical areas such as hydrology and hydrogeology, has been peer-reviewed or published. Nor does the BLM, although acknowledging that in many areas there is little or no data available at all or what “available” data is used is extremely uncertain, require studies to provide the missing data. Instead, BLM appears to rely on future studies to supply the missing data or reduce the uncertainty of the data, in violation of NEPA requirements for BLM to take a hard look at proposed projects and their impacts.

Comment No. 13-5 5. **Geological information:** Has the geological information used in the dEIS been peer reviewed? If so, when and by whom? How much of the information has been published? Has the public had access to all of the dEIS data? If not, which of the data is “private?” How much dEIS data has been provided by the proponent or proponent's consultants? How reliable or credible is this proponent-supplied information?

Comment No. 13-6 6. **Water resources data:** Has the water resources data in the dEIS been peer reviewed? If so, when and by whom? How much of the information has been published? How much has been provided by the proponent or the proponent's consultants? In addition, please explain how BLM can use little or no data, of great uncertainty to “suggest” conclusions on hydrology (e. g., at p. 3-17 “These data suggest that the spring water source is local and is not hydraulically connected to the deep regional fractioned flow system beneath Clover Valley – Vidler 2007c or at p. 3-17 “...the limited data available suggest that surface water in this part of the Meadow valley Wash is not connected with the deep regional aquifer system”). What is the level of uncertainty associated with these conclusions? 50-50? 90-10?

Comment No. 13-7 7. **Lessons on the carbonate aquifer:** The general discussion of “regional groundwater occurrence” starting on p. 3-23 is very interesting, however theoretical. However, we do not understand why the document provides so much information on the carbonate aquifer, yet does not assess project

Responses to these comments are provided on a separate page following this comment letter.

<p><i>Comment No. 13-7 (Continued)</i></p>	<p>impacts on the carbonate aquifer in the 4 basins “studied” or in other downflow basins nor cumulative impacts of groundwater development in upflow basins. For example, through narrowly defining the region of influence (p.3-12) for assessing cumulative impacts to only 4 basins, the dEIS ignores the many pumping projects in the up-flow basins and their contribution to project-caused environmental impacts. Please clarify.</p>
<p><i>Comment No. 13-8</i></p>	<p>8. Groundwater storage: What is the significance of the references (p.3-25) to huge amounts of groundwater storage in the basins and flow systems?</p>
<p><i>Comment No. 13-9</i></p>	<p>9. Depth to carbonate aquifer: Why was an unpublished study by the proponent (Vidler 2007a) included in the document? What is the significance of the study? What is its reliability?</p>
<p><i>Comment No. 13-10</i></p>	<p>10. Conceptual stratigraphic column: If there is no data to show that the carbonate aquifer underlies Clover Valley (p. 3-27), then why did the dEIS publish Figure 3-6, showing “anticipated depth to groundwater?” Are there “deep observational boreholes under Lower Meadow Valley Wash? Please clarify.</p>
<p><i>Comment No. 13-11</i></p>	<p>11. Pumping tests and “conclusions:” The dEIS states (p.3-29) that pumping tests conducted in 2001 at PW-1 (Ch2MHill 2002b) “indicate that the alluvium is in direct hydraulic communication with the Paleozoic carbonates at this location (Tule Desert).” How long were these pumping tests conducted? With what methodology? What is their reliability? How much of the data in the dEIS is based on proponent's or proponent's consultant's pumping tests? The State Engineer in ruling #5181 questioned proponent pumping tests which were for a very short duration and provided no evidence that pumping was sustainable over time without impacts (p.33).</p>
<p><i>Comment No. 13-12</i></p>	<p>12. Special status plant species surveys: The dEIS (p.3-52) states that special status plant species were surveyed in “a 300-500 foot corridor,” yet the ROW corridor is ½ mile wide. Why wasn't the entire corridor surveyed? Please explain.</p>
<p><i>Comment No. 13-13</i></p>	<p>13. Lack of T&E species protection: The dEIS states (p. 3-56) that the proposed ROW crosses two ACECs and is within the Northeastern Mojave Recovery Unit (for desert tortoises) and 45% of the Proposed Action ROW is within desert tortoise habitat and 40% of Alternative 1 ROW is within desert tortoise habitat, but 14% is also within designated critical habitat for desert tortoises. Please explain how this proposed project can possibly comply with the Endangered Species Act requirements to protect endangered species given the intrusions into critical desert tortoise</p>

Responses to these comments are provided on a separate page following this comment letter.

habitat areas?

*Comment
No. 13-14*

14. **Socioeconomics info:** While the dEIS provides information on personal income and personal current transfer receipts (p. 3-86) for local residents, it provides no information on average income. What percent of Lincoln County residents are at or below the national poverty level?

*Comment
No. 13-15*

15. **Environmental justice:** What is the definition (p.3-91) of "low-income" in environmental justice laws? What percent of Lincoln County residents qualify as "low-income" under this criteria? What percent of Lincoln County residents must be low-income to invoke protection under environmental justice statutes? What is the basis for the dEIS statement "there are no low-income populations in the project area?"

*Comment
No. 13-16*

16. **Assumptions for analysis - NSE's role:** the dEIS states (p. 4-1) that the Nevada State Engineer "has addressed issues pertaining to groundwater withdrawn from the Tule Desert area" - one of the assumptions for analyzing environmental impacts, implying that the BLM has no additional responsibility for impacts analysis. Please detail which "issues pertaining to groundwater withdrawn from the Tule Desert area" were addressed by the NSE and how they were addressed. Which issues were not addressed by the NSE?

*Comment
No. 13-17*

17. **Assumptions for analysis - Theoretical project:** the dEIS states (p. 4-1) that the project features "were designed only to the feasibility level which represents reasonable approximations for assessing potential project impacts." The project proponents have announced recently that it will not be providing water to the Toquop power plant, despite information to the contrary in the dEIS. Did the project proponent supply this change of customer information to the BLM for correction in the dEIS? If so, why was the dEIS released with incorrect information on water being supplied by the project proponent to Toquop power plant? And, more importantly, how substantial do changes in the proposed action have to be to trigger additional or other NEPA compliance?

*Comment
No. 13-18*

18. **Assumptions for analysis - incomplete and unavailable information:** the dEIS states (p. 4-2) that the "CEQ (1502.22) requires agencies to obtain information if it is "relevant to reasonably foreseeable significant adverse impacts," if it is "essential to a reasoned choice between alternatives," and if "the overall costs of obtaining it are not exorbitant." Credible and reliable information on the carbonate aquifer in the 4 identified basins as well as in up-flow basins which supply groundwater to the project area would seem to meet all 3 CEQ criteria for this highly technical EIS. Why did BLM not require additional information in all areas in which the dEIS states that it has little or no scientific

Responses to these comments are provided on a separate page following this comment letter.

Comment
No. 13-18
(Continued)

information or what information it has is highly uncertain? We can understand why additional information was not required for making a reasoned choice among alternatives, since a full range of alternatives is not being considered in this EIS. What are the costs of the additional information needed for credible and reliable information – in all areas in which the dEIS states that there is little or no information or highly uncertain information? Are the costs exorbitant? To whom? Who made this decision? Isn't the project proponent responsible for providing adequate information to the BLM in order for the EIS to meet NEPA requirements?

Comment
No. 13-19

19. **Best available representation of current and predicted conditions at this time?:** does this statement, which is repeatedly made in the dEIS (ex. p.4-2), mean “best available data?” What is the reliability or credibility of “best available representation of current and predicted conditions at this time” whatever this means, for assessing environmental impacts? Please clarify.

Comment
No. 13-20

20. **Conceptual regional groundwater flow model:** the dEIS refers (p. 4-2) to a hydrological model, but we found no model in Section 3.3.2.3 nor in Figure 3-8 or anywhere else in the dEIS. Please explain the differences between a hydrological model and whatever was used in the dEIS. Why wasn't a peer-reviewed, calibrated, transient model used to help estimate the impacts on proposed groundwater pumping and export?

Comment
No. 13-21

21. **Clover Valley disclaimer:** the dEIS states (p. 4-2) that there is very little subsurface information available for Clover Valley and the dEIS “understanding” is based on “analogy” with similar flow-systems and recent data by the applicant (Vidler 2007a). What similar flow systems were compared to Clover Valley? By whom? Over what time period? Has the applicant's data been peer reviewed? or published? How reliable is it?

Comment
No. 13-22

22. **Tule Desert disclaimer:** the dEIS states (p. 4-2) that “...there is still insufficient information for complete agreement among investigators on the details of the flow system (in Tule Desert). Therefore, the analysis in this Draft EIS relies on the synthesis of the best available data at this time.” While we are not aware of complete agreement on the hydrology of any basin in Nevada, what is important is disclosure by the BLM on the level of disagreement among experts on the hydrology of this area. What data is necessary to resolve scientific differences of opinion? Why didn't BLM require this data? Exactly how did BLM construct a “synthesis” on the Tule Desert water resources among the varying data and expert opinions? Did the BLM average the data, throw out the high and low data? Select some data but reject other data? Please explain. On whose

Responses to these comments are provided on a separate page following this comment letter.

Comment
No. 13-22
(Continued)

data and expert opinion did the BLM most rely – the project proponents?
Or others?

Comment
No. 13-23

23. **BLM responsibilities:** the dEIS states (p. 4-6) that while the NSE has authority over groundwater allocation, the BLM "...acknowledges that granting of a ROW for a pipeline to transport water across BLM land might influence the use of the water and hence is including discussion of groundwater impacts in this document." Please explain what is meant by "might influence the use of water" in this statement. Wasn't the top issue for those who submitted scoping statements on this EIS project impacts of groundwater pumping and exporting on the carbonate aquifer and other water resources? Please clarify whether BLM is analyzing the impacts of groundwater based on scoping comments?

Comment
No. 13-24

24. **Impacts on surface water from Clover Valley and Tule Desert pumping:** the dEIS states (starting p. 4-9) that there are no impacts expected on surface water because of "isotope analysis." Yet the NSE, in ruling #5181 (p. 18) finds the (proponent's) geochemical evidence is very sketchy and contradictory and will give little reliance to it. Please explain BLM's reliance on data which is not credible by the NSE.

Comment
No. 13-25

25. **Impacts on groundwater from Clover Valley pumping:** the dEIS states (p.4-9) that there is no connection between regional flows in Clover Valley and Meadow Valley Wash basin based on isotope data by proponent's consultants. Has that data been peer reviewed? Or published? Exactly where does the BLM figure that the carbonate aquifer flows once it leaves Clover Valley? If indeed, the carbonate aquifer does flow beyond Clover Valley, please address the impacts of pumping and exporting groundwater in Clover Valley which would otherwise have flowed to downflow basins if not interrupted by Clover Valley pumping.

Comment
No. 13-26

26. **Virgin River or Lower Virgin River Hydrographic Basin impacts?:** the dEIS states (p.4-9) that "current information on discharge rates and chemical composition indicates that there is no connection between the flows in the Virgin River and the deep groundwater in the Tule Desert." What is this "current information on discharge rates?" Is the information on "chemical composition" the same information deemed unreliable by the NSE? The NSE in ruling #5181 (p. 15) finds that the Tule Desert and lower Virgin River Valley are likely geologically connected. Why did BLM decide to analyze potential project impacts on the Virgin River flows, but not to analyze project impacts on the Lower Virgin River Hydrographic basin, when the NSE believes, based on the evidence presented at the Tule Desert water hearing, that the two basins are connected geologically? This is a major omission of the dEIS.

Responses to these comments are provided on a separate page following this comment letter.

*Comment
No. 13-27*

27. **Lack of data to analyze project impacts on groundwater resources:** the dEIS states (p. 4-10) "...that there is a lack of data in three principal areas associated with the assessment of the environmental consequences to groundwater resources: a. the amount and movement of groundwater in the basin-filled deposits within the ROI; b. the amount and movement of groundwater in the deeper carbonate and fractured-rock aquifer underlying the ROI; and c. the location and amount of groundwater discharge and recharge from/to the carbonate aquifer underlying the ROI." The dEIS goes on to state that, despite the lack of assurance on the degree of potential environmental consequences of implementation of the project, the BLM analysis is based primarily on four reports prepared by project proponents or their consultants. Why would the BLM rely on this type of information when the NSE in ruling #5181 required (p. 11) that additional studies must include recharge analysis that is peer reviewed and accepted by the USGS and the DCNR and studies of the impacts of pumping the amount granted in this ruling"? In addition, the NSE found (p. 21) that the applicant's recharge numbers in the Tule Desert has not been peer-reviewed and contained calculation errors. Does the BLM have a different and lower standard for data reliability in complying with NEPA than the Nevada State Engineer does in appropriating groundwater? Have the proponent's Tule Desert recharge numbers used in the dEIS been peer-reviewed since the 2002 ruling? If so, when and by whom? Have their calculations been checked for accuracy?

*Comment
No. 13-28*

28. **Water impact determinations:** the dEIS states (p.4-13) that "it was determined as part of the EIS for the Toquop Energy Project that pumping water from the carbonate aquifer in the Tule Desert in the amount and rates requested, would not result in a substantial decline of groundwater levels or a significant reduction in groundwater resources." Who made this determination – the NSE or the BLM? What were the amount and rates requested in the 2003 EIS? Were these rates greater or lesser than those in the proposed action? How does BLM define "substantial" decline of groundwater levels? How does BLM define "substantial" reduction in groundwater resources?

*Comment
No. 13-29*

29. **Water quality impacts:** the dEIS states (p. 4-14) that the BLM does not anticipate adverse impacts to groundwater quality from proposed pumping in Clover Valley or the Tule Desert, despite acknowledging that it has no information on water quality from wells in Clover Valley basin and limited information (but with reports of poor quality water in 4 wells) in the Tule Desert basin. On the other hand, the NSE in ruling #5181 finds (p. 35) that "if the appropriation of large quantities of groundwater in the Tule Desert affects the recharge of the Lower Virgin River Valley, there may be a potential for impacts to the water quality in the protestant's existing wells, thereby threatening to prove detrimental to

Responses to these comments are provided on a separate page following this comment letter.

the public interest." Please explain.

*Comment
No. 13-30*

30. **Effective coordination:** the dEIS states (p. 4-18) that the BLM will use these (proponent's monitoring) data to effectively coordinate with the proponent, the NSE, and the NPS to ensure that the Proposed Action would not adversely impact the local water resources as well as regional springs and flows in the Virgin River." Please explain how BLM will "effectively coordinate" with these agencies.

*Comment
No. 13-31*

31. **Mitigation:** the dEIS labels a discussion on p. 4-18 as "mitigation." Please define the term "mitigation." Does the BLM consider mitigation to include water? The NSE in ruling #5181 finds (p. 37) that "the Applicant's expression of a willingness to limit impacts is somewhat lacking when they hold nothing with which to mitigate." Please explain the BLM's reliance on mitigation to deal with adverse impacts of this project. In this section, the dEIS also states that "BLM will utilize these monitoring data to work collaboratively with other state and federal agencies to ensure that any unanticipated adverse impacts associated with the Proposed Action or Alternative 1 are identified and appropriately mitigated." Please explain "working collaboratively" with other agencies and the authority BLM has to ensure any mitigation for adverse impacts of this proposed project are "appropriate" or actually take place.

*Comment
No. 13-32*

32. **Radioactive dust:** the dEIS states (p. 4-41) that concerns were received by the public during the scoping period about the potential for mobilizing radioactive dust by project construction and operation. The document states "The presence or absence of radioactive particulates in the soil substrate within the project area is unknown." In the absence of information, why didn't the BLM order studies on the presence or absence of radioactive dust in the project area in order to address public concerns?

*Comment
No. 13-33*

33. **Growth impacts:** the dEIS states (p. 4-48) regarding the impacts of an additional 60,000 people (and 24,000 houses) in the LCLA development over 30 years "Providing that the Master Plan is a living document with updates considered every 2 years as required in the plan, the impacts to population growth and housing in Lincoln County should be orderly and manageable." Please include in the analysis the impacts of the additional population if Lincoln County is unable or unwilling to comply with Master Plan requirements such as 2 year updates.

*Comment
No. 13-34*

34. **Unavoidable adverse environmental impacts:** the dEIS states (p. 4-54) that "if all Applicant proposed environmental protection measures and additional mitigation measures are implemented, the Proposed Action is anticipated to have no unavoidable adverse impacts on the human and

Responses to these comments are provided on a separate page following this comment letter.

Comment
No. 13-34
(Continued)

natural environment." What is meant by "additional mitigation measures?" If the Applicant does not implement all proposed environmental protection measures or additional mitigation measures (which seems just as likely as the pollyanna scenario adopted in the dEIS), please include a discussion of the amount and level of adverse impacts of this proposed project.

Comment
No. 13-35

35. **Irreversible and irretrievable commitments of resources:** the dEIS does not disclose that the consequences of overpumping groundwater can often not be reversed, either geologically, hydrologically, or on biological resources such as endangered species dependent on groundwater flows, such as endangered fish. Please expand this discussion to include these other possible resource commitments.

Comment
No. 13-36

36. **Cumulative impacts methodology:** the dEIS states (p.4-56) that the BLM limited the area studied to four basins, not considering cumulative impacts from other water development projects "up-basin." Yet the dEIS discusses the carbonate FLOW system which brings groundwater from up-flow basins, such as Clover Valley and Tule Desert, and delivers groundwater to downflow basins. There are many water development projects now proposed by other developers and water agencies in these up-flow basins, which cumulatively will impact groundwater levels in the four basins as well as add to the cumulative impacts of the proposed project on the human and natural environment. The methodology of excluding the up-flow basins and other down-flow basins from cumulative impacts analysis is incorrect and does not comply with NEPA requirements for cumulative analysis.

Comment
No. 13-37

37. **Length of time for cumulative impacts analysis:** the dEIS states (p. 4-47) that the timeframe for this analysis is 25 years, the standard length of a BLM ROW grant. Yet on p. 2 of the Abstract in the dEIS, the BLM states that the ROW within the LCCDA corridor "...would be issued in perpetuity." Cumulative impacts, therefore, must be studied "in perpetuity. Since pumping impacts often take many years or decades to manifest, the 25 year timeframe is inadequate.

Comment
No. 13-38

38. **Vegetation impacts:** the dEIS states (p. 4-69) that "future projects would remove large areas of vegetation." Please clarify. Which future projects? How large are these areas in which vegetation would be removed?

Comment
No. 13-39

39. **Social and Economic Resources - costs?:** the dEIS states (p.4-74) that a population increase from multiple planned developments in the LCLA and Mesquite areas would exceed 500,000 during the 30 year period, a "remarkable" cumulative effect of these projects and provides information

Responses to these comments are provided on a separate page following this comment letter.

Comment
No. 13-39
(Continued)

on how this would generate large increases in taxable income. Please describe the impacts of this development (and related population increases) on future increases in infrastructure demands and costs and how increased revenues would be generated. Would local taxes be increased? On whom? How much?

Comment
No. 13-40

40. **Appendix A:** The State Engineer's ruling #5181 in this appendix is not accurate. An error on page 39 was corrected and the corrected ruling is on the State Engineer's website.

Comment
No. 13-41

41. **Scoping Comments:** The Sierra Club submitted extensive scoping comments for this EIS. However, most of our scoping issues were either not addressed at all or inadequately addressed in the dEIS. Rather than repeating the scoping comments from our letters here, we will highlight some of the issues scoped, yet not addressed:

April 20, 2006: piecemealing NEPA (I.A.1), inadequate project area (I.A.5), technical data/model use (I.C.1), alternatives (I.D), open and public process (I.F), and the NV/UT water agreement requirement (II.M).

April 24, 2008: additional information needed (I.A.1), Utah water resources (II.A.1), environmental justice issues (II.E.1)

In conclusion, the Sierra Club questions BLM's apparent decision not to require the proponent to furnish sufficient and credible information and studies before proceeding with this EIS in the face of the acknowledged severely limited and unreliable information on the hydrology of the Tule Desert and Clover Valley and the carbonate aquifer. We also question the assessment of environmental impacts in this document, since the assessment is also limited by the inadequate scientific information. This dEIS is premature and should be rewritten and reissued once adequate information is furnished by the project proponent.

Sincerely,



Rose Strickland
Toiyabe Chapter of the Sierra Club

Responses to these comments are provided on a separate page following this comment letter.

Responses to Comment No. 13-1 thru 13-41

Response to Comment No. 13-1

PL 108-424 only applies to shared basins between the states. The source basins; Clover Valley and Tule Desert Hydrographic areas are wholly within Lincoln County, which is entirely within Nevada.

Response to Comment No. 13-2

The LCWD is requesting a right of way across federal lands managed by the BLM. The Proposed Action is the construction and operation of the Lincoln County Land Act Groundwater Development and Utility Right of Way Project, within a designated utility corridor. Alternatives considered included alternative infrastructure locations, and the no action alternative (denying the right of way application). Desert tortoise and rare plant surveys were conducted within the area of direct effects (construction right of way). Applicant proposed environmental protection measures to minimize construction related impacts are incorporated in the project design and outlined in Appendix C (Standard Construction and Operation Procedures). The BLM would monitor the effectiveness of approved mitigation measures (i.e. desert tortoise fencing, installation of perch inhibitors, and revegetation). In addition, the Applicant would be required to comply with stipulations mandated by the Nevada State Engineer for allocation of water supplies.

Response to Comment No. 13-3

Chapter 3 in both the Draft and Final EIS describe baseline conditions in the project area.

Response to Comment No. 13-4

See response to Comment 8.3. Also, as part of its continuing effort to secure new water rights within the Tule Desert Basin, the Proponent has continued to acquire new hydrogeologic information which was recently presented to the NSE and peer reviewed by the USGS (Berger 2008). The USGS, in cooperation with the Nevada Division of Water Resources and the National Park Service, provided a thorough technical peer review that primarily focused on the scientific merit of the methodologies and interpretations presented in the following five reports prepared for LCWD and Vidler.

1. Tule Desert Groundwater Resources Study, Additional Data Submitted, prepared by Vidler Water Company, January 16, 2008.
2. Technical Memorandum Supplement to Groundwater Chemistry of the Tule Desert and Surrounding Hydrographic Areas in Southeastern Nevada and Potential Groundwater Interflow Between Basins, prepared by CH2M Hill, December 24, 2007.
3. Mean Annual Recharge for the Tule Desert Hydrographic Basin, Lincoln County, Nevada, prepared by Daniel B. Stephens and Associates,

January 8, 2008.

4. Addendum to Mean Annual Recharge for the Tule Desert Hydrographic Basin, Lincoln County, Nevada, prepared by Daniel B. Stephens and Associates, April 14, 2008.
5. Tule Desert and Surrounding Areas Numerical Groundwater Flow Model Report, prepared by Peter Mock Groundwater Consulting, Inc., June 24, 2008.

The USGS found that the scientific conclusions presented in the five reports were generally well document and for the most part, appropriate measures were used. The three major criticisms of the studies are the use of precipitation data, inappropriate application of the Maxey-Eakin method for estimating groundwater recharge, and the lack of calibration of the ground water flow model (Berger et al. 2008). All documents are available for public review.

Response to Comment No. 13-5

See response to comment 13-4

Response to Comment No. 13-6

See response to comment 13-4. Uncertainty is unavoidable in cases such as discussed in this EIS. The BLM has made every effort to disclose all possible effects of the proposed action.

Response to Comment No. 13-7

This project is within the Meadow Valley Flow System and the Virgin Valley which have been determined to be separate and distinct from the Salt Lake and White River Flow System where the Kane Springs and SNWA project would be located. Effects on the carbonate aquifer, and water resources in the surrounding basins, from the proposed action are evaluated by the NSE as part of the groundwater allocation process.

Response to Comment No. 13-8

The purpose is to explain that the amount of water requested by the proponent is only a small portion of the total water available.

Response to Comment No. 13-9

The majority of the data on groundwater occurrence that exists in these basins was collected by the Proponent (See Response to Comment #13-4).

Response to Comment No. 13-10

There are no deep boreholes in the area. Consequently the existence of a deep aquifer is inferred based on standard geologic mapping procedure.

Response to Comment No. 13-11

The results of the aquifer tests performed in 2001, as well as a more recent test, are discussed in Section 3.3.2.4.2.2 in both the Draft and Final EIS. Timings for the tests are presented in Table 3-8 in both the Draft and Final EIS. The methodology and field results for the tests are in documents presented to the NSE. While questioning the results from the preliminary short term tests, the NSE allocated 2,100 AFY of water to the proponent while holding additional allocations in abeyance pending further testing. One such test has recently been performed and submitted to the NSE (Vidler 2008).

Response to Comment No. 13-12

See response to Comment 8-6.

Response to Comment No. 13-13

See response to comment #8-4. A Biological Assessment was submitted to the U.S. Fish and Wildlife Service as required under Section 7 of the Endangered Species Act. They are currently preparing a Biological Opinion for this project.

Response to Comment No. 13-14

Average income and poverty level at the county level has been added to Section 3.12.2 in the Final EIS (Social Characteristics).

Response to Comment No. 13-15

A definition of “low-income” per environmental justice laws has been added to the glossary. The project area encompasses the proposed ROW and associated project components, as well as the area immediately adjacent to the proposed facilities. There are no residents in the project analysis area.

Response to Comment No. 13-16

The NSE issued Ruling 5181 which describes issues pertaining to groundwater withdrawn from the Tule Desert hydrographic basin. The BLM has accepted the NSE’s ruling as our assumptions for the analysis. The BLM’s action for this EIS is to either grant or deny the LCWD’s application for a right of way across public lands managed by the BLM. The BLM must decide whether, and if so, under what conditions it will grant ROW(s) to enable construction and operation of the proposed groundwater facilities and related infrastructure.

Response to Comment No. 13-17

The LCWD is developing groundwater supplies in Lincoln County to serve customers within their service territory. The LCLA Groundwater Development project would serve customers in southeastern Lincoln County.

Response to Comment No. 13-18

See response to Comment 8-3. The BLM believes that sufficient information has been collected to make a reasoned choice. The analyses reported here are for the maximum amount of groundwater that may be allocated by the NSE for development in the basins of interest. Therefore, any impacts would be less than discussed herein.

Recent research on the Basin and Range Carbonate-Rock Aquifer System Study (BARCASS; Welch and Bright 2007) was initiated in December 2004 through federal legislation (Section 131 of the LCCRDA) directing the Secretary of the Interior to complete a water resources study through the USGS, Desert Research Institute, and State of Utah. The methods applied and developed will eventually apply to the areas discussed in this EIS; however, such an application is at least several years away.

Response to Comment No. 13-19

See response to Comments 8-3 and 11-7. The conclusions drawn in both the Draft and Final EIS are based on available data plus the BLM's best evaluation of the uncertainty of that data.

Response to Comment No. 13-20

Section 3.3.2.4 in the Final EIS has been updated to describe additional groundwater studies and reports that have been presented to the Nevada State Engineer, and peer reviewed by the USGS, in cooperation with the Nevada Division of Water Resources and the National Park Service. See response to Comments 8-3 and 13-4.

Response to Comment No. 13-21

See response to Comments 8-3 and 13-4.

Response to Comment No. 13-22

See response to Comments 8-3 and 13-4.

Response to Comment No. 13-23

All scoping comments were considered in the preparation of the Draft and Final EIS. The BLM's action for this EIS is to either grant or deny the LCWD's application for a right of way across public lands managed by the BLM. The BLM must decide whether, and if so, under what conditions it will grant ROW(s) to enable construction and operation of the proposed groundwater facilities and related infrastructure. The LCWD requested a specific right of way corridor.

Response to Comment No. 13-24

See Response to Comments 8-5 and 13-4.

Response to Comment No. 13-25

See response to Comment 13-4. Recent studies estimate the flow from the north at 582,693 AFY. Groundwater pumping associated with the proposed action would utilize 14,480 AFY from beneath Clover Valley or ~2.5% of the deep aquifer water.

Response to Comment No. 13-26

See response to Comment 13-4. Since the 2002 hearing, additional data has been acquired (LCLA/Vidler, 2008). This new data has been incorporated into the EIS, as appropriate. This new data demonstrates that chemically, the groundwater in Virgin Valley is not the same as that in Tule Desert.

Response to Comment No. 13-27

See response to Comments 13-4 and 13-6

Response to Comment No. 13-28

The referenced statement was made by the BLM in reference to the proposed Toquop Energy Project EIS (BLM 2002). The amount requested for Toquop was slightly less than the current request. Section 4.3.1.3.2 of the Final EIS has been expanded to discuss previous and current groundwater studies that have been conducted in the Tule Desert.

Response to Comment No. 13-29

The text has been amended in Section 4.3.1.3.3 in the Final EIS to clarify that since no connection is anticipated between the deep aquifer targeted for pumping and shallow wells, there would not be any degradation to water quality.

Response to Comment No. 13-30

See response to Comment 13-31

Response to Comment No. 13-31

A Technical Review Panel (TRP) will be established to oversee the monitoring and mitigation activities. Membership will be created from representatives from cooperating agencies and may include, but would not be limited to, the BLM, LCWD, USFWS, USGS, and the NSE. The ultimate authority to enforce the monitoring and mitigation agreements rests with the NSE, but the BLM intends to remain active to mitigate any adverse effects to resources conducted on BLM lands.

Response to Comment No. 13-32

As stated in the EIS, the presence or absence of radioactive dust in the project area is unknown. As part of the environmental studies conducted for the SNWA groundwater projects, soil tests were conducted which indicated radioactive soils are not present in the general area. During construction, contractors will be required to implement dust suppression measures to minimize fugitive dust.

Response to Comment No. 13-33

Title 13 of the Lincoln County Development Code states: “The provisions of this code are intended to regulate the use of land and the division of same into separate interests for the purpose of protecting the public health, safety, convenience and general welfare of the residents of the county. The code is adopted in accordance with and in order to further the implementation of the county master plan and such other plans, policies, and studies designed to promote the orderly growth of the county and its communities.”

Response to Comment No. 13-34

If additional mitigation requirements are identified through the USFWS Section 7 process; the U.S. Corps of Engineer's Section 404 process; or the Nevada State Engineer's water right permitting processes, the Applicant would develop appropriate measures in consultation with the requesting agency (e.g., USFWS, Army Corps of Engineers, NSE) and include these in their project design. The USFWS may identify additional measures ("terms and conditions") to minimize the incidental take of listed species during the Section 7 consultation process; the Applicant would be required to implement these to be in compliance with the incidental take permit. Once issued, the Biological Opinion will become a part of the Record of Decision and a condition of the right-of-way grant, if offered.

Response to Comment No. 13-35

The Nevada State Engineer is responsible for ensuring that groundwater withdrawals do not exceed the perennial yield for each basin within Nevada. The Nevada State Engineer is bounded by law to protect all existing water rights in Nevada.

Response to Comment No. 13-36

The two other groundwater development projects in eastern Nevada include the Clark, Lincoln, and White Pine Counties Groundwater Development Project and the Kane Springs Valley Groundwater Development Project. Groundwater withdrawal associated with these projects would occur in hydrologic basins located in separate groundwater flow systems (White River Flow System and Great Salt Lake Desert Flow System).

Response to Comment No. 13-37

See response to Comment 12-1. In addition, the BLM administers public lands within a framework of numerous laws and regulations, including guidelines for protecting resources within their jurisdiction. The BLM Ely District will continue to monitor all activities associated with the Proposed Action and site specific mitigation measures will be incorporated, as appropriate, for the duration of the project.

Response to Comment No. 13-38

Reasonably foreseeable future projects, BLM activities, or environmental conditions are described in Section 4.20.3 in both the Draft and Final EIS. These include utility development projects, other water projects, residential development and environmental conditions that may affect the region such as fire and drought. It is speculative to calculate the total acreage to be disturbed by these projects; however, any development on federally managed lands or private lands containing sensitive or critical habitat would be subject to compliance with the Endangered Species Act as appropriate.

Response to Comment No. 13-39

The LCLA development area, referred to as the Toquop Planned Unit Development Area, is subject to Title 14 of the Lincoln County Code (approved March 5, 2007). Infrastructure development and taxes are a function of county planning requirements, which are outside the jurisdiction of the BLM and this EIS.

Response to Comment No. 13-40

Comment noted and the corrected version of the State Engineer's ruling has been included in the Final EIS (see Appendix A1).

Response to Comment No. 13-41

The BLM considered all scoping comments when developing the scope, content, and alternatives to be analyzed in the EIS. Please see section 1.6 of the Final EIS.

BLT Lincoln County Land LLC

July 21, 2008

Bureau of Land Management
Attn: Penny Woods/Project Manager
Nevada State Office (NV-910-2)
Groundwater Projects Office
1340 Financial Blvd.
PO Box 12000
Reno, NV 89520

Re: LCLA Groundwater Development and Utility Right of Way Project/Draft EIS Comment

Comment Submitted by:

Mark Teepen
Owners Representative Parcels I & J (LCLA)
BLT Lincoln County Land LLC
9900 Covington Cross Dr., Suite 210
Las Vegas, NV 89144
E-mail: Mark@BLTNV.com

Pursuant to the NEPA process by attending the Public Meeting and reviewing the referenced Lincoln County Land Act Groundwater and Utility right of way Draft Environmental Impact Study (DEIS), BLT Lincoln County Land LLC, Owners of Parcels I, J, C & F within the land disposal that resulted from the Lincoln County Conservation, Recreation, and Development Act of 2004, herein referred to as "the Act", hereby submit the following comments on the DEIS:

The Act was enacted to sell and ultimately provide for the orderly and efficient development of lands disposed of pursuant to the Act in Southern Lincoln County, Nevada. Pursuant to Title III of the Act was a Congressionally designated Utility Corridor to aid purchasers of the properties together with Lincoln County in future development. Specifically, subsection 301 (b)(1) stipulates "... the Secretary shall grant to the Southern Nevada Water Authority and the Lincoln County Water District nonexclusive rights-of-way to Federal land in Lincoln County and Clark County, Nevada for any roads, wells, well fields, pipes, pipelines, pump stations, storage facilities, or other facilities and systems that are necessary for the construction and operation of a water conveyance system, as depicted on the map." The Act implies that the congressionally designated Utility Corridors would be used unless there were significant environmental concerns discovered during engineering, layout and analysis. This Utility Corridor is identified as Alternative 1 in the DEIS. Absent these impacts, Alternative #1 would be the Utility Corridor permitted by the BLM through the NEPA process in full compliance with the Act.

Through the NEPA process the DEIS identified the Utility Corridor specified in the Act as a viable Alternative and performed a detailed analysis accordingly. Upon review of the DEIS, the congressionally designated route (Alternative #1) is shorter in length than the proposed action, therefore disturbing less ground. In close review, there appears to be little

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*Comment
No. 14-1*

Response to Comment No. 14-1

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.

BLT Lincoln County Land LLC

difference in the environmental impacts between the Proposed Action and Alternative 1, and nothing to promote a change from the congressionally designated route.

BLT Lincoln County Land LLC, as owners of lands disposed of pursuant to the Act, and in reliance on the Act, used the designated Utility Corridor (Alternative 1) as part of its due diligence to develop and submit a successful bid. In the event Alternative 1 is not selected, it would place undo hardships on BLT Lincoln County Land LLC and the Lincoln County Water district to successfully develop these properties.

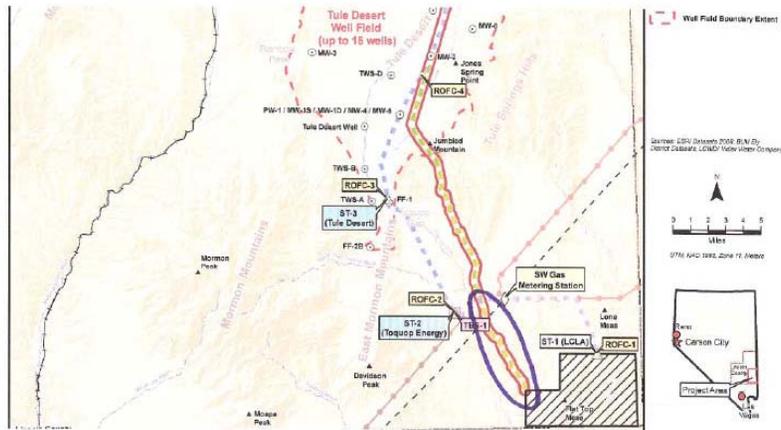
In summary, pursuant to the Act and as discussed in the DEIS Executive Summary, under Public Law 108-424 enacted on November 30, 2004, the LCCDRA designated utility corridors to be granted as Rights-of-ways on Federal lands to be used for roads, wells, pipelines, and other infrastructure needed for construction and operation of a water conveyance system in Lincoln County. The Act implied and gave reliance to the fact that the utility corridor designated by Congress in the Lincoln County Lands Act (Alternative #1) would be used barring any unforeseen environmental impacts. The DEIS has analyzed both routes and neither route has significant environmental impacts. Because there are no environmental reasons to change the route and there will be significant financial impacts to future development if the Utility Corridor pursuant to the Act is not granted as Right-of-way, BLT Lincoln County Land LLC is requesting that to the extent possible maximum use of the Congressionally designated Utility Corridor, identified as Alternative 1 in the DEIS be achieved by selecting all or portions of Alternative 1 as the Right-of-Way by the BLM for permitting.

Alternatively, BLT Lincoln County Land LLC, is seeking maximum use of the Utility Corridor so designated in the Act, for delivery of water infrastructure as stipulated in Title III of the Act and to the extent the designated Utility Corridor is not utilized, all or portions thereof, as would be the case if the Proposed Action outlined in the DEIS were permitted, BLT Lincoln County Land LLC requests, that any portions of the designated Utility Corridor be preserved for permitting as Right-of-Way over Federal lands for the same. The map below depicts that segment of the Utility Corridor, identified as Alternate 1 and designated in the Act, (circled) being requested by BLT Lincoln County Land LLC to be included in the Right-of-Way permit issued in conjunction with the Proposed Action being requested by others.

If you have any questions, please call me directly at (702) 232-579.
Thank you for your consideration.

Mark D. Teepen,
BLT Lincoln County Land LLC

BLT Lincoln County Land LLC



nvgwprojects@blm.gov
Sent by: Kim Dow

07/24/2008 10:49 AM

To "timv@embarqmail.com" <timv@embarqmail.com>
cc nvgwprojects@blm.gov, Penny_Woods@blm.gov
bcc
Subject Re: Comments on LCLA Groundwater Development and
Utility ROW Project DEIS 

Dear Tim,

This e-mail is to confirm receipt of the comments you submitted for the LCLA Groundwater Development and Utility Right-of-Way Project DEIS. We appreciate your interest in the project, as well as the time you've dedicated to reviewing the document and preparing comments.

Thank you,
Kim Dow
Natural Resource Specialist
Bureau of Land Management
Groundwater Projects Office
1340 Financial Blvd/PO Box 12000
Reno NV 89520-0006
Phone: 775-861-6681
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"timv@embarqmail.com" <timv@embarqmail.com>



"timv@embarqmail.com"
<timv@embarqmail.com>
07/22/2008 10:35 AM

To nvgwprojects@blm.gov
cc Penny_Woods@blm.gov
Subject Comments on LCLA Groundwater Development and Utility
ROW Project DEIS

Attached are my comments on the Lincoln County Land Act Groundwater Development and Utility Right-of-Way Project Draft Environmental Impact Statement

I would be happy to address questions if it is appropriate.

If possible could you acknowledge receipt of these comments?

Thank you for your consideration of these comments.

Tim



comments.doc

#	section	page	paragraph	sentence	comment
<i>Comment No. 15-1</i>	1	1.1 and ES	1-1 and ES-1	2, below table	Need clarification on "within or immediately adjacent to the 2,040-foot wide utility corridor established by LCCRDA". Some proposed well locations are in excess of five miles from the LCCRDA corridor. For these proposed well locations that are not immediately adjacent to the corridor what additional actions will be needed prior to drilling those distant wells. Will there be another EIS or equivalent required for those actions that are not 'immediately adjacent'? It is unclear whether the proposed action is considered to be within or immediately adjacent to the LCCRDA corridor. Will this EIS suffice for portions of the LCCRDA corridor that are not specifically part of the proposed action? Can this EIS be used if the purpose of the Clover Valley water was changed and diverted down hill to Caliente and beyond as in Map 3-5? Also the map referenced in Public Law 108-424: "the map entitled "Lincoln County Conservation, Recreation, and Development Act Map" and dated October 1, 2004" seems to be unavailable and the available map dated 12/6/2004 shows a slightly different corridor than is shown on Map ES 1-1.
<i>Comment No. 15-2</i>	2	1.5.2.2	1-7	second bullet	This reference does not correspond to the References in Chapter 6.0.
<i>Comment No. 15-3</i>	3	1.9 and 4.20.3	1-16 and 4-58		Several Wilderness Management Plans / Environmental Assessments are currently in review or planned for this area and should be included. Mormon Mountains etc and Clover Mountains etc.
<i>Comment No. 15-4</i>	4	3.1.2	3-2	last paragraph of the page and following	The statement "In the northern reach of the ROI, erosion ... to the south." is unclear at best and potentially misleading or in error. There are no references given for this statement. Common usage would suggest that "thick sedimentary fill" is relatively unconsolidated sedimentary fill and not a bedrock unit. The most recent mapping (Page et al NBMG Map 150) depicts no surficial units thicker than 20 m in the vicinity of the proposed ROW. The next sentence (paragraph) must be qualified so as to not include the Clover Valley Hydrographic area. The Clover Valley does not represent a valley as formed by regular basin and range faulting thus there is no mountain base in the normal sense, particularly in the area of proposed well placement. The presence of this statement is misleading and seems to imply that in the Clover Valley area there could be several thousand feet of alluvial deposits. In fact none of the cited references support this type of deposit in the Clover Valley area. The genesis of the Tule Desert area and the Clover Mountain area are completely different and should not be lumped together even in introductory statements.
<i>Comment No. 15-5</i>	5	3.1.2	3-2	last of the page and following	The topographic setting of the Clover Valley area relative to the surrounding region must be accurately described for an understanding of the geologic setting and eventually water implications. The southwestern/south/southeastern rim of the Clover Mountains which divides the Clover Valley Hydrographic Area from adjacent areas essentially separates a highland area, the Clover Mountains, from a lowland area to the south. Topographically the divide and relationship between the Clover Valley Hydrographic Area is very different from the usual divide between other adjacent Basin and Range basins.

Responses to these comments are provided on a separate page following this comment letter.

<i>Comment No. 15-6</i>	6	3.1.3	3-3	1		Section 3.1.3 is apparently supposed to be an introductory statement about the stratigraphy and geologic history of both the Tule Desert and Clover Valley areas. In reality almost none of the information is applicable to the Clover Valley area except in the most general sense. Even the most general description of the Basin and Range in this area should include a few words about the volcanics. It appears misleading to make broad statements that could be interpreted to apply to both areas. Table 3-1 is more complete than the paragraph.
<i>Comment No. 15-7</i>	7	3.1.3	3-4	first on page		The list of geomorphic units in the vicinity of the ROI is not accurate for the Clover Valley area. The Clover Valley area in the ROI is more difficult to categorize but geomorphically represents a highland area with caldera or intracaldera genetic elements.
<i>Comment No. 15-8</i>	8	3.1.3.1	3-4	1 of section		The description of Clover Valley - not Clover Valley Hydrographic Area - seems out of place in a section on stratigraphy and geologic history particularly when the ROI and Clover Valley do not coincide. The elevations presented here are also at first difficult to reconcile with the elevations in the previous paragraph.
<i>Comment No. 15-9</i>	9	3.1.3.1	3-4	2 of section	near top of paragraph	The references for Page et al 2005 and 2006 that would be appropriate here are not in the reference section. The reference for Page et al 2005 that is included in Section 6 is likely not appropriate anywhere in this EIS. (To facilitate comments we will assume that the Page et al 2005 and 2006 references are as presented in the Vidler 2007a report.)
<i>Comment No. 15-10</i>	10	3.1.3.1	3-4	2 of section	middle of paragraph	The map presented in Maps 3-2a and 3-2b is attributed in the text to Ekren et al (1977) and Page et al (2005 and 2006). The notes on Map 3-2a attribute geology data to Stewart and Carlson (1978) and Ekren et al (1977) with fault data from Turner and Bawiec (1996). The notes on Map 3-2b give the source as Ekrem (sic) et al (1977). The map units in Maps 3-2a and 3-2b appear to be a combination of Stewart and Carlson (1978) and Ekren et al (1977) and possibly Page et al (2005 and 2006). The descriptions for map units on Map 3-2b are not complete enough to determine if Ekren or Page or Stewart and Carlson should be consulted for details. Correct citations on maps, figures, and in the text are required, also a cross reference or correlation table demonstrating the relationships between the stratigraphic units from all sources. An explanation of why some units and relationships were carried forward while others were not may provide credibility and confidence.
<i>Comment No. 15-11</i>	11	3.1.3.1	3-4	2 of section	below middle of paragraph	A sentence says "The stratigraphic reconstruction of the geologic map units in Clover Valley was analyzed by conceptual reconstruction of the Caliente Caldera Complex (described further in Section 3.1.4.1)." There is no stratigraphic reconstruction described in Section 3.1.4.1 or any other section, and no conceptualization that determines potential geologic formations that may have been emplaced during orogeny.

Responses to these comments are provided on a separate page following this comment letter.

<i>Comment No. 15-12</i>	12	3.1.3.1	3 4	2 of section	last sentence	Somewhere in the description of stratigraphy it would be good to inform the reader what resources were available to construct the maps and in particular to constrain the cross sections. Specifically the number, depth, and nature of drill holes that may exist in the Clover Valley area; geophysics available from the Clover Valley area, etc. If there was essentially no information available to constrain these interpretations it would be good to state that as well.
<i>Comment No. 15-13</i>	13	3.1.3.1	3-4	2 of section	last sentence and following	The location of the three cross sections are shown on Map 3-2a but the stratigraphic units and structural features (faults) used in the cross sections do not correspond to that map nor are they otherwise attributed to a source. The stratigraphic order in Figure 3-2 does not match the stratigraphy in the cross sections. Without additional information it is impossible to determine if the maps and cross sections are internally consistent etc. In particular there are lots of faults on the cross sections that do not have a clear origin in an illustrated map. Well bores are apparently not shown at the same vertical scale placing the apparent bottom of the well in the wrong place (unless this is somehow an artifact of projecting the boreholes from some distance to the line of the cross section). In general much of what is in these cross sections are highly speculative. Identifying constraining information could lend credibility to the cross sections. There is no explanation as to how the presence of the intrusives are determined and justified on the sw part of the cross sections a-a' and b-b' but not elsewhere.
<i>Comment No. 15-14</i>	14	3.1.3.1	3-5	last of section		This paragraph talks about maximum thicknesses from known outcrops etc. However units, for example Ts4 in Figure 3-3 are shown in the cross section to be many times the thickness described in Figure 3-2.
<i>Comment No. 15-15</i>	15	3.1.4.1	3-6 and 3-7	first through third of section.		These paragraphs describe the lateral extent of the Caliente Caldera etc., citing two distinct sources. A map or figure should be included which illustrates these important relationships in plan view. The locations of at least the named faults referred to in the next paragraph should also be illustrated in plan view on a map or figure.
<i>Comment No. 15-16</i>	16	3.1.5	3-9	last of section		This reference should probably be Nevada Bureau of Mines 2006
<i>Comment No. 15-17</i>	17	3.3	3-12	only		The ROI for all water resources must consider the contribution that water in the Clover Valley Hydrographic Area, a topographically relatively higher area, makes to the surrounding topographically relatively lower Hydrographic Areas particularly to the southwest/south/southeast. Specifically, the large number of springs and wet areas that are present 'just below the rim' of the Clover Mountains most likely get their water or are influenced at least in part from precipitation and groundwater (shallow or deep) from within the Clover Valley Hydrographic Area. This is a case where the normally reasonable method of defining Hydrographic Areas based on surface watersheds does not adequately define water systems due to the specifics of these areas. There are some appropriate words in the last paragraph of Section 3.3.2.1 that could be modified and added to section 3.3. "For the description of groundwater resources, the area of delineation is defined in terms of 1) groundwater in the underlying rocks or 2) the area of groundwater flow from source areas located either in the bounding mountain ranges or upstream basins toward discharge areas in the down-gradient basins."

Responses to these comments are provided on a separate page following this comment letter.

<i>Comment No. 15-18</i>	18	3.3.1.1	3-12	1	last	The area of delineation for the collection of surface water data must include the areas influenced by the subject Hydrographic Areas not necessarily defined by topographic divides. See previous comment (17).
<i>Comment No. 15-19</i>	19	3.3.1.5	3-19	2 of section		Local springs that are influenced by conditions within the Clover Valley Hydrographic Area but may not be physically located within that groundwater basin must also be included in this discussion. Also the wet areas / riparian areas resulting from those local springs must be included. A good example of this is Bunker Springs, which lies just outside the boundary of the Clover Valley Hydrographic Area, and Bunker Peak Wash which supports an extensive stretch of open water, cottonwoods, etc.
<i>Comment No. 15-20</i>	20	3.3.1.5	3-19	2 of section		There are many more than 'several' springs, seeps, open water, and areas where water is immediately below the surface supporting water-loving vegetation etc. than are suggested by reading this section. The Sheep Flat and Barclay grazing allotments cover much of the same area as the Clover Valley Hydrographic area and areas which most likely derive water from the Clover Mountain highlands. Several perennial streams and 75 springs were reported in the Environmental Assessment for these allotments. The Special Hydrographic Abstract from the Nevada Division of Water Resources Water Rights Database yields 58 records when queried for springs in basin 204 (Appendix D) (89 in Basin 222). There are other standard sources for spring information. A complete and comprehensive inventory must be completed for the regions of interest and affected areas. This inventory must include riparian areas that derive their water from the Clover Mountain highlands. This does not seem that the 'best available data' was used.
<i>Comment No. 15-21</i>	21	3.4.1 and 3.4.2.5	3-42 and 3-45	4 of section and only		Vegetation resources, particularly the riparian vegetation that occurs outside of the Clover Valley hydrographic area but is dependant on water from the Clover Valley hydrographic area must be included in this discussion. This is acknowledged in the statement in section 3.4.2 where it indicates that "permanent water sources consist of small springs found in the canyons of the Clover Mountains." Many of these permanent water sources are in canyons running southerly from the Clover Mountains.
<i>No. 15-22</i>	22	3.6	3-63	only		The map reference should be Map 3-10
<i>No. 15-23</i>	23	3.6	3-63	only		Mineral Survey 1905 (private land) is shown in the wrong location on Map 3-10. (The current Master Title Plat and GCDB indicate the correct location).
<i>No. 15-24</i>	24	3.6.2	3-64	last on page		Land described as a single patented mining claim near East Pass and three mining claims in the Tule Desert actually consist of more than one patented claim per location.
<i>No. 15-25</i>	25	3.11	3-76			Light pollution should be specifically addressed. Although some consideration is expressed in the POD it should be part of the EIS. This is a very dark area and the darkness remains a valuable resource.

Responses to these comments are provided on a separate page following this comment letter.

<i>Comment No. 15-26</i>	26	4.3.1.2.2	4-8, 4-9			There is no actual evidence presented that indicates whether there is or is not a connection between surface water and ground water. A conceptual stratigraphic column implies a highly extensive confining unit more than 3000 feet thick. Such a unit would completely preclude recharge and have significant implications with regard to sustainable yield if recharge is not counted. On the other hand even a limited connection through faults and fractures would mean that the 'local' water tables, springs and surface waters could be affected by pumping from the deep fractured underground aquifer. The placement of wells preferentially along presumably faulted zones (Section 3.3.2.4.1) suggests that enhanced transmissivity is anticipated. Therefore it is only appropriate to anticipate an adverse impact on shallow or surface waters due to pumping from the deep regional aquifer. The uncertainty is too high to conclude there will be no impact.
<i>Comment No. 15-27</i>	27	4.3.1.2.2	4-9	last in section		Given the fact that "To date, no studies have been conducted to identify the recharge and discharge from the deep fractured aquifer and its interconnection with the surface water in the Clover Valley" the uncertainty is too high to conclude with the statement that impacts are not anticipated.
<i>Comment No. 15-28</i>	28	4.3.1.3.1	4-10	first in section	3	For completeness it would be appropriate to indicate that none of the existing monitoring wells are in the Clover Valley area.
<i>Comment No. 15-29</i>	29	4.3.1.3.2	4-11 and 4-12	5 bullets		The wording preceding these five bullets would lead the casual reader to believe that the five bullets present some known information. In fact the words preceding the five bullets appear to have been quoted out of context. The cited source indicates these as information needed to determine impacts. Furthermore the five bullets have been changed significantly from the cited source. What is conceptual must be clearly, honestly, and accurately differentiated from what is known!
<i>Comment No. 15-30</i>	30	4.3.1.3.2	4-12	last three paragraphs in section		This section says: (in part) "insufficient information to confirm the presence of the regional flow system below Clover Valley", "until test wells are installed it is not possible to quantify predicted drawdown", "however based on the conceptual model it can be hypothesized that any drawdown would occur at considerable depth and would be independent of surface hydrological conditions." Given hypotheses based on conceptual models there is too much uncertainty to conclude there will be no (anticipated) impacts.
<i>No. 15-31</i>	31	4.4.2.2	4-21	first in section	1	Vegetation resources should include that vegetation outside the subject basins which may be affected by conditions in the subject basin. There is no basis to conclude no impact. See 4.3.1.2.2 above
<i>No. 15-32</i>	32	4.5.1.1	4-25	first in section		There is no basis to conclude no impact. See 4.3.1.2.2 above
<i>No. 15-33</i>	33	4.11	4-42			Impacts of light pollution during both construction and operations should be identified.
<i>No. 15-34</i>	34	4.18	5-54			Water must / should at least be identified as a committed resource. Many others including the State Engineer will help to assign an irreversible or irretrievable status to water but it should at least be acknowledged as a resource. Irretrievable is misspelled in the heading.

Responses to these comments are provided on a separate page following this comment letter.

<i>Comment No. 15-35</i>	35	ES-1.2.2	ES-5	4		Even though the applicant has prepared a (non-binding) Proposed Water Resources Monitoring and Management Plan for the Clover Valley area it is unclear what that Plan actually means to this EIS.
<i>No. 15-36</i>	36	ES-1.2.2	ES-5	6	last	USGWS must be a typo
<i>No. 15-37</i>	37	ES-1.2.2	ES-5	6		Private stakeholders should also be included in this TRP.
<i>Comment No. 15-38</i>	38	Table ES-3 and Table 2-3	ES-13 - ES-14 and 2-23 to 2-24	Water Resources second paragraph		It is unclear what the words "within the well head" actually means in this context. This is a summary table and should summarize impacts discussed elsewhere in the document. Drawdown within a well head is not elsewhere discussed. It seems like the words "within the well head" should be removed.
<i>Comment No. 15-39</i>	39	Table ES-3 and Table 2-3	ES-13 - ES-14 and 2-23 to 2-24	Water Resources		There is not a statement here of no anticipated impact for the Clover Valley area. No action is required. Thanks
<i>Comment No. 15-40</i>	40	Table ES-3 and Table 2-3	ES-15 - ES-16 and 2-25 to 2-26	Wildlife Resources		A summary statement such as "Impacts to surface water and / or spring discharges ... resulting from groundwater pumping are not expected" is not supported by the evidence presented and should not be included without also summarizing the associated uncertainty. Another similar phrase is "Because groundwater removal is not expected to affect surface water ..." is also not supported.
<i>Comment No. 15-41</i>	41	Appendix B	1	Monitoring Requirements	first paragraph	The EIS does not currently include comprehensive information about springs and wetland/riparian conditions in the Clover Valley and surrounding areas. Prior to or in concert with monitoring, a comprehensive inventory of these and other indicators should be completed.
<i>Comment No. 15-42</i>	42	Appendix B	3	Monitoring springs and Riparian Areas		In addition to the springs indicated in Attachment A, additional springs and riparian areas influenced by the Clover Valley highland areas should be monitored. Specifically many of those below the rim on the southerly side of the Clover Mountains. All currently selected springs are located on a single linear feature. It is necessary to understand processes away from that linear feature so additional springs should be selected.
<i>Comment No. 15-43</i>	43	Appendix B	4	TRP		Private stakeholders should also be included in this TRP. (Based on list of protestants)

Responses to these comments are provided on a separate page following this comment letter.

Responses to Comment No. 15-1 thru 15-43

Response to Comment No. 15-1

Text has been added to the Executive Summary and Section 1.1 (General Overview) in the Final EIS to clarify the BLM requirements for NEPA analysis for the current project proposal, and how future NEPA actions would cover potential impacts once site specific engineering design is complete. Specific locations for future production wells, collector pipelines, and associated power facilities would be defined after decisions on the water rights are received from the State Engineer, and further exploratory well drilling is completed. The BLM would conduct subsequent site-specific NEPA analysis after ROW applications are filed for the production wells and collector pipelines, and these NEPA documents would be tiered to the analysis contained in this EIS. Additional monitoring wells could be developed based on the current monitoring and mitigation program. During the site specific development of production wells and collection lines, additional environmental analysis and modeling will occur and as a result, additional mitigation and monitoring could be established.

With regards to the question about diverting water to Caliente, the LCWD is developing groundwater resources to serve planned development in the LCLA development area. This EIS analyzes the issuance of a specific right of way described in the Applicants Plan of Development.

Response to Comment No. 15-2

Citation has been corrected in Section 1.5.2.2 in the Final EIS. Reference should be Board of Lincoln County Commissioners 2006.

Response to Comment No. 15-3

The referenced Wilderness Plans are currently being reviewed by the BLM. General reference to future Wilderness Plans for the Ely District has been referenced in Section 1.9 and 4.20.3.

Response to Comment No. 15-4

The text has been modified in Section 3.1.2 in the Final EIS to add clarity to the geological setting of the Clover Mountains.

Response to Comment No. 15-5

See response to Comment 15-4.

Response to Comment No. 15-6

Comment noted. See response to Comment 15-4.

Response to Comment No. 15-7

Comment noted. See response to Comment 15-5.

Response to Comment No. 15-8

Due to inconsistent usage of measurement data (meters versus feet), the text in Section 3.4 of the Final EIS has been revised for consistency.

Response to Comment No. 15-9

Page et al. (2005) was included in the reference section, however Page et al (2006) was not and has been added. Both Page references are germane to the issue of structural geology which is extremely relevant to the regional hard-rock aquifer system.

Response to Comment No. 15-10

Map 3-2a and Map 3-2b are for illustrative purposes only. They were derived from multiple sources. Source data has been updated to cite proper authors.

Response to Comment No. 15-11

Comment noted. Text in Section 3.1.3.1 in the Final EIS has been revised.

Response to Comment No. 15-12

All information used to analyze the baseline conditions have been disclosed in the Draft and Final EIS. Section 4.0 in both the Draft and Final EIS describes how the BLM addressed Incomplete and Unavailable Information.

Response to Comment No. 15-13

See responses to Comment 15-10.

Response to Comment No. 15-14

Ts4, Bedded Tuff and Tuffaceous sandstone (Miocene) is reported to range in thickness from 0 to 500 meters based on Ekren (1977) and Page et al. (2005).

Response to Comment No. 15-15

See Map 3-3, Geologic Map of Tule Desert Lincoln County, Nevada. Map 3-3 shows the caldera's spatial relationship to the Tule Desert.

Response to Comment No. 15-16

Data was obtained from the U.S. Geological Survey, Earthquake Hazards Program website.

Response to Comment No. 15-17

Comment noted. Text in Section 3.3 in the Final EIS has been modified.

Response to Comment No. 15-18

Comment noted.

Response to Comment No. 15-19

Comment noted.

Response to Comment No. 15-20

Available environmental resource data were collected and analyzed to the level of detail necessary to understand potential impacts and to distinguish project effects (both beneficial and adverse) among Proposed Action and alternatives.

Response to Comment No. 15-21

Comment noted. Both the Draft and Final EIS discuss riparian vegetation along the Clover Creek and Meadow Valley Wash drainage systems.

Response to Comment No. 15-22

The reference has been corrected.

Response to Comment No. 15-23

Comment noted.

Response to Comment No. 15-24

Comment noted.

Response to Comment No. 15-25

Applicant would apply the Standard Construction and Operation procedures as stated in Appendix C items V-4 through V-5 in both the Draft and Final EIS. Applicant will implement lighting mitigation measures that follow “dark sky” lighting practices.

Response to Comment No. 15-26

Comment noted. The BLM acknowledges there are uncertainties related to future groundwater pumping by the LCWD in the Clover Valley Hydrographic Basin. The LCWD must conduct additional investigations to fully understand groundwater development opportunities and constraints in the Clover Valley Hydrographic Area. This information will be provided to the Nevada State Engineer to support their water rights applications. The BLM has no authority to make a determination as to the sufficiency of groundwater to support future development in the project area. However, the BLM has developed monitoring and mitigation that will reduce the uncertainty of the impacts to surface resources through the development of the

monitoring plans and future use of groundwater models. Any right of way grant issued by the BLM will contain terms and conditions that address any unmitigated impacts to the environment.

Response to Comment No. 15-27

See reply to Comment 15-26.

Response to Comment No. 15-28

Text in Section 4.3.1.3.1 has been appropriately modified.

Response to Comment No. 15-29

Text has been revised in Section 4.3.1.3.2 to clarify.

Response to Comment No. 15-30

Test well are planned to gather the required information.

Response to Comment No. 15-31

The BLM does not expect direct impacts to subject basins.

Response to Comment No. 15-32

The BLM does not expect direct impacts to subject basins.

Response to Comment No. 15-33

Applicant would apply the Standard Construction and Operation procedures as stated in Appendix C items V-4 through V-5 in both the Draft and Final EIS. Applicant will implement lighting mitigation measures that follow “dark sky” lighting practices.

Response to Comment No. 15-34

Comment noted. The spelling error in the section header has been corrected.

Response to Comment No. 15-35

The Clover Valley Monitoring and Management Plan was prepared by the Applicant through consultation with the BLM and USFWS. The Plan is one of several environmental protection measures proposed by the Applicant to reduce any adverse affects from future groundwater pumping by the LCWD in the Clover Valley Hydrographic Area.

Response to Comment No. 15-36

Text has been corrected in Section ES1.2.2 in the Final EIS.

Response to Comment No. 15-37

Comment noted.

Response to Comment No. 15-38

Comment noted.

Response to Comment No. 15-39

Comment noted.

Response to Comment No. 15-40

These tables are summaries of the findings described in each resource section in Chapter 4.

Response to Comment No. 15-41

See response to Comment 15-35.

Response to Comment No. 15-42

See response to Comment 15-35.

Response to Comment No. 15-43

Comment noted.

**Lincoln County Land Act Groundwater Development and
Utility Right-of-Way Project
Draft Environmental Impact Statement
Comment Form**

Public participation is critical to helping ensure BLM has considered the views of the public in the decision on this groundwater development project. BLM encourages you to get involved. Please take a few minutes to complete this form and provide any comments or questions you would like addressed. **The comment period ends on Tuesday, July 22, 2008.** Written comments can be sent via mail, fax, or e-mail to the BLM Nevada Groundwater Projects Office or submitted in person at the public meetings (see details below). Please contact the Groundwater Projects Office if you wish to receive a paper copy or CD of the Draft EIS.

Groundwater Projects Office Contact Info:

Phone: 775-861-6681 Fax: 775-861-6689 E-mail: nvgwprojects@blm.gov

Mailing Address:
P.O. Box 12000
Reno, NV 89520

Fed-Ex/Physical Address:
1340 Financial Blvd
Reno, NV 89502

Public Meeting Info:

Las Vegas, NV: Monday, June 23, 2008, 6-8pm, Embassy Suites Hotel
Caliente, NV: Tuesday, June 24, 2008, 6-8pm, Caliente City Hall
Mesquite, NV: Wednesday, June 25, 2008, 6-8pm, Mesquite City Hall
Carson City, NV: Thursday, June 26, 2008, 4-6pm, Plaza Hotel

Name: David Ward E-mail: dfc@desertfishes.org

Organization: Desert Fishes Council Title: Executive Committee Member

Mailing Address: P.O. Box 337

City: Bishop State: CA Zip: 935150-0337

Add my name to the mailing list Withhold my name and address from public review**

***Before including your address or other personal identifying information, you should be aware that this information may be made publicly available at any time. While you can ask us to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.*

COMMENT (continue on separate sheet if necessary)

Comments attached below on Separate Sheet

Desert Fishes Council

Consejo de los Peces del Desierto

Dedicated to the Conservation of North America's Arid Land Ecosystems



The Desert Fishes Council (DFC) is a multinational organization of scientists and resource managers, whose mission includes preserving the biological integrity of desert aquatic ecosystems. Towards this end, the Council appreciates the opportunity to comment on the **Draft Environmental Impact Statement for the Lincoln County Land Act Groundwater Development and Utility Right of Way Project**. After careful review we find that the Draft EIS is lacking in several areas which are described in detail below.

The Draft EIS does not present viable alternatives

The heart of the NEPA process is the evaluation, comparison, and consideration of alternative actions designed to meet a specific need. The Lincoln County Draft EIS claims that the purpose/need for the EIS is “to provide public lands for the transport and conveyance of groundwater” but this very limited purpose severely constrains development of a reasonable range of potential alternatives to meet the need for the proposed action. We consider the true purpose/need for this EIS is to evaluate options to meet future water demand within southern Lincoln County for future economic development. If other alternatives can adequately fill this proposed need with less impact to the environment, such alternatives should be evaluated.

The preferred action and alternative 1 are essentially the same with only minor changes to the path of the pipeline and no other substantive alternatives are presented in the EIS. Furthermore, the EIS fails to consider an adequate range of alternatives to achieve the purpose/need. There are likely other options or compromises that would supply the needed water to southern Lincoln County other than groundwater pumping and water conveyance long distances over public lands. These options could include conservation measures, tertiary wastewater treatment, or other accessing other nearby water sources. These options need to be presented and evaluated within the EIS.

The draft EIS also does not adequately address the consequences of not meeting the need or not supplying additional water to southern Lincoln County for future development. No information or evidence is given that would indicate that the need for this action is really necessary. Without this information being presented it is difficult to assess between action and no-action alternatives.

Insufficient and non- peer reviewed data is used to make the argument that impacts to aquatic communities near the project area will be minimal

The authors of the Draft EIS indicate that there will be no future adverse impacts on aquatic communities near the project area. The Desert Fishes Council takes the position that Lincoln County has not presented compelling data to suggest that there will be no future adverse impacts on springs in the area. The interpretations of flow patterns within the hydrographic basins may be inaccurate based on other peer-reviewed and published literature. Deacon et al.

*Comment
No. 16-1*

*Comment
No. 16-2*

Response to Comment No. 16-1

See response to Comment 8-2.

Comment
No. 16-2
(Continued)

2007 concluded that, “deep carbonate and shallow basin-fill aquifers (in the area) are interconnected across various basins and are likely to be affected by groundwater withdrawal and groundwater pumping.” Existing groundwater modeling efforts for other Nevada water basins all demonstrate groundwater level declines as a result of pumping (Durban 2006, Elliot et al. 2006, Myers 2006, Schaefer and Harrill 1995). These models are not consistent with the modeling data presented by Vidler Water Company within the Draft EIS.

The Desert Fishes Council shares concerns expressed by the Nevada State engineer in Appendix 1 (page 21) where he states, “the state engineer notes that scientists have been studying these aquifers for decades and have not come to resolution on questions about the carbonate-rock aquifer(s) or their ability to sustain the production of large quantities of water over time without devastating effects or depleting the water in storage. Therefore the state Engineer is not extremely confident in the applicant’s witness’s predictions as to water availability or impacts, particularly as noted when based on a model that does not appear to be calibrated or validated and for which there is little real work data input...”

These concerns caused the State engineer to substantially reduce the amount of water that was permitted. Additionally the National Park Service expressed concerns over impacts to springs that flow into Lake Mead, some distance from the project area, which prompted mitigation measures and monitoring plans to be developed.

The Draft EIS states (page 4-11) that the analysis of potential effects for the proposed action is based primarily on 4 reports that have not been peer reviewed. Three of these reports were produced by Vidler Water Company, who has a vested interest in the outcome of the EIS and is a co-applicant with Lincoln County for the water rights. There is an obvious conflict of interest in this regard. The data presented in these reports has not been reviewed by other experts for accuracy and should therefore be substantiated or deemed otherwise questionable less a decision be made that is based on inaccurate information.

Impacts to listed aquatic species are based on the assumption that groundwater removal is not expected to affect surface waters

The Desert Fishes Council challenges the assumption that groundwater removal will not affect surface water based on examples from other southwestern arid regions where groundwater pumping has resulted in the extirpation and extinction of aquatic species. Groundwater pumping has led directly to the failure of other major valley springs in Nevada resulting in species extinctions (summarized in Deacon et al. 2007).

If the assumption that groundwater pumping will not affect spring flow and surface water is not correct there may be large impacts to two listed fish species, the Virgin river chub (*Gila seminuda*), and woundfin (*Plagopterus argentissimus*) as well as the threatened Big Spring spinedace (*Lepidomeda mollispinis pratensis*). Surveys conducted by the Arizona Game and Fish Department and The Nevada Division of Wildlife in 2008 indicate that a large population of Virgin River chub inhabit the Virgin River Gorge about 15 miles upstream from Mesquite, NV. Base flow in this section of the river is supported by several large springs. If groundwater pumping was to reduce spring flow it would have very detrimental impacts on the endangered fish species that live in the Virgin River. The large number of endemic species occurring at regional springs in the carbonate rock province is due in no small part to the reliability, consistency and predictability of the wetland and aquatic habitats over millions of years (Deacon et al. 2007). If spring flow to these environments is reduced by groundwater pumping, it is very likely to have detrimental impacts to these species. Bureau of Land Management policy requires

Comment
No. 16-3

Response to Comment No. 16-2

See response to Comments 8-5, 11-7, 13-4 and 14-7.

*Comment
No. 16-3
(Continued)*

that actions authorized, funded, or carried out by the agency do not jeopardize the continued existence of any threatened or endangered species or contribute to the listing of any candidate species. It is therefore critical that the assumption that groundwater pumping will not affect surface waters be verified by the BLM.

Lack of data makes the Draft EIS incomplete

The Draft EIS acknowledges that there is a lack of data concerning the amount and movement of groundwater within the project area and the amount of water movement between the deeper carbonate and fractured-rock aquifers. The Draft EIS states that the lack of data “leads to a lack of assurance on the degree of potential environmental consequences as a result of implementation of any of the alternatives”. How can the Draft EIS issue statements about the potential impacts of the proposed actions and alternatives if by its own admission there is insufficient data to make these claims?

It is the opinion of the Desert Fishes Council that the Draft EIS is incomplete without reliable data and it is irresponsible to allow the proposed action to proceed without first obtaining additional data/information so that impacts of proposed actions can be adequately assessed. In addition, groundwater to be removed from these aquifers by Vidler Water Company and Lincoln County does not represent the total anticipated new demand on those aquifers and additional studies are also needed to evaluate cumulative effects of groundwater pumping. It is evident that quantifying the extent of detrimental impacts that may occur as a result of groundwater pumping is difficult, but that does not mean that efforts should not be taken to better understand these effects prior to decision making. Additional data from outside the region also needs to be included. Although the hydrogeology in southern Nevada is unique, concerns regarding the ecological impacts of groundwater withdrawal exist across the western United States (Deacon et al. 2007). Data from a broader range of areas, and examples of how groundwater pumping in other areas has led to extinctions of spring-dependent species should be presented in order to adequately understand the potential adverse impacts of the proposed action.

Conclusions

The intent of the National Environmental Policy Act is to inform the public about projects that have ties to federal government and to consider and evaluate project alternatives in order to minimize harm to the environment. The Lincoln County Groundwater Development Draft EIS does not achieve this objective, as it does not thoroughly evaluate alternatives and does not present sufficient or reliable data on the potential impacts of each alternative.

As is stated in the Draft EIS 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.” It is important that the EIS contain accurate and complete data so that informed decisions can be made. We appreciate the opportunity to comment on the Draft EIS and hope that our comments will aid the BLM to make sound decisions regarding our public lands.

Sincerely,

Desert Fishes Council Executive Committee

Response to Comment No. 16-3

See response to Comment 8-5.

Response to Comment No. 16-4

See response to Comments 8-3 and 11-7.

*Comment
No. 16-4*

Citations:

Elliot P. E. D. A. Beck, and D.E. Prudic. 2006. Characterization of surface-water resources of the Grant Basin National Park Area and their susceptibility to groundwater withdrawals in adjacent valleys. White Pine County, Nevada, Reston(VA): US Geological Survey . USGS Scientific Investigations Report 2006-5099.

Deacon J. E., A.E. Williams, C. Deacon Williams, and J.E. Williams. 2007. Fueling Population Growth in Las Vegas: How Large-scale groundwater withdrawal could burn regional biodiversity. *BioScience* 57(8) 688-698.

Durban T. J. 2006. Development and use of a groundwater model for the Spring Valley area. (11 June 2007

<http://water.nv.gov/hearings/spring%20valley%20hearings/SWNA/508pdf>

Meyers T. 2006. Hydrogeology of Spring Valley and effects on groundwater development proposed by the Southern Nevada Water Authority, White Pine and Lincoln County, NV. (11 June 2007;

<http://water.nv.gov/hearings.spring%20valley%20hearings/WELC/Exhibit5203001.pdf>

Schaefer D. H., J. R. Harrill. 1995. Simulated effects of proposed Groundwater pumping in 17 basins of East-central and Southern Nevada. Carson City NV: US Department of the Interior. US Geological Survey Water Resources Investigations Report 95-4173.

July 22, 2008

Penny Woods, Project Manager
Bureau of Land Management
Nevada State Office (NV-910-2)
Groundwater Projects Office
1340 Financial Blvd.
PO Box 12000
Reno, Nevada 89520

Dear Ms. Woods:

SUBJECT: LINCOLN COUNTY LAND ACT GROUNDWATER DEVELOPMENT AND
UTILITY RIGHT-OF-WAY PROJECT DRAFT ENVIRONMENTAL IMPACT
STATEMENT PUBLIC COMMENTS

The Southern Nevada Water Authority (Authority) appreciates the opportunity to provide comments on the draft Environmental Impact Statement (EIS) for the Lincoln County Land Act Groundwater Development and Utility Right-of-Way Project (Proposed Project) in Nevada. As stated in the draft EIS, the Proposed Project would construct groundwater and ancillary facilities in order to pump and convey groundwater that has been permitted or may be permitted for use by Lincoln County Water District customers.

*Comment
No. 17-1*

In chapter 3.3.1.4.1 Clover Valley and Meadow Valley Wash, page 3.16, two statements point out that Elliot et al. (2006) does not apply to the Proposed Project. It is recommended that either the reference to Elliot et al. be removed or that an additional statement be added explaining how the conclusions reached by Elliot et al. would not apply in the Proposed Project's situation.

Response to Comment No. 17-1
Paragraph in Section 3.3.1.4.1 in the Final EIS has been reworded for clarity.

*Comment
No. 17-2*

Chapter 3.3.2.2 Regional Setting, page 3-23, states that the Basin and Range Carbonate Aquifer System Study (BARCASS) methods will eventually apply to the Proposed Project area, but that such an application is at least several years away. These statements should be clarified, as there is currently no definitive proposal to extend or expand upon BARCASS. If there will be a requirement for the future collection of additional data as part of the Bureau of Land Management's approval of the Proposed Project, then that should be clearly stated.

Response to Comment No. 17-2
Text in Section 3.3.2.2 in the Final EIS has been modified as requested.

*Comment
No. 17-3*

In chapter 3.3.2.3 Regional Groundwater Occurrence, page 3-24, and in Map 3-5 Hydrographic Basins and Flow Systems, Spring Valley (HA184) should not be included as part of the Meadow Valley Wash Flow System (Harrill et al., 1988). Spring Valley is actually part of the Great Salt Lake Desert Flow System. Water in the Great Salt Lake Desert Flow System flows south to north instead of north to south.

Response to Comment No. 17-3
Map 3-5 has been modified in the Final EIS.

Penny Woods, Project Manager
July 22, 2008
Page 2

Comment
No. 17-4

Chapter 3.3.2.3 Regional Groundwater Occurrence, page 3-25, states that "Groundwater in storage for the Colorado Flow system has been estimated by Harrill et al. (1988) at 440,000 AFY." The assumptions used in the Harrill et al. report (Table 4) should be listed since this amount seems an underestimate of actual storage for the entire flow system.

Response to Comment No. 17-4

Text in Section 3.3.2.3 in the Final EIS has been modified.

Comment
No. 17-5

Chapter 4.20.4.2 Water Resources, page 4-67, lists the Authority's proposed Virgin and Muddy Rivers Surface Water Development Project as an interrelated project with potential indirect impacts on groundwater resources. The Authority is withdrawing this right-of-way application, and thus the Virgin and Muddy Rivers Surface Water Development Project would not need to be included in the cumulative analysis.

Response to Comment No. 17-5

The BLM appreciates the updated information. The project has been removed from the Cumulative Impacts analysis in the Final EIS.

If you have any questions regarding these comments, please contact Lisa Luptowitz, Senior Environmental Planner at (702) 862-3789.

Sincerely,



Kenneth A. Albright, P.E.
Director, SNWA Resources

KAA:LL:df

c: Lisa Luptowitz, Senior Environmental Planner

REC'D - BLM - NSO

9:00 AM JUL 28 2008

Thursday, July 20, 2008



This is a series of concerns connected with the movement of water (through the purchase of water rights) to the Las Vegas area. We want to be assured that as many of the mistakes made or maybe made by the Los Angeles Department of Power and Water (in Owens Valley--Lone Pine area)will not reoccur in our valleys in Nevada. Furthermore that any new mistakes that are made should be corrected by the agency or company that is in charge. In other words that THEY can not sign off and be free and clear of any further mistakes.

The LA DPW had to put in irrigated pastures for the Tule Elk Herd. Do you have plans for the donkeys, wild horses and deer and Elk ? How many acres of pasture ? How many miles apart? Are you having pastures planned at 10 mile intervals? Will there be a number of sites to water as well as feed the animals? This will cause the animals to form new habits in the area.

Besides the animals you must consider the birds. There must be bubblers (drinking fountains) for the birds. There is a major fly-way through this area. These birds have used these migratory routes for eons. How can you manage to keep these bubblers operational if you don't have trained personnel checking on these bird drinking fountains on a regular basis? Which means more year round personnel. You

Comment
No. 18-1

Response to Comment No. 18-1

The BLM appreciates the writers interest in the proposed project and participation in the NEPA process. However, for clarity, the scope of this EIS is to analyze the impacts of granting a right of way to the LCWD to develop groundwater resources to serve southeastern Lincoln County, Nevada. The amount of water and points of diversion will be determined through the Nevada State Engineer water rights process. Construction and operation of the proposed groundwater development project would be subject to all applicable Federal, state, and local laws and regulations governing protection of the human and natural environment.



have to have people in charge of these pastures as well as the bird drinking fountains. The employees will have to have a place to live, a community to support the parks and other recreational facilities. The employees will have to have gardens as well as livestock; and the water they are provided must be reasonable. For these communities should be allowed to grow into viable homes to retire and have a community life. Won't there have to be schools built? LADPW had to create Lake Crowley to support the personnel that continue to monitor the Owens Lake and the miles of pipeline and canals that furnish water to the San Fernando Valley.

I understand that you are planning to bury the pipeline to Las Vegas. Are you planning to make it undulating in order that small canyons will not become blocked by the pipe line? Are you planning to cross rivers and small streams with suspension bridges to carry the water over these? You have the responsibility to not destroy all the streams and rivulets.

There will have to be roads to be able to monitor the pipeline and various pumps. Will these be restricted or will they be part of the recreational plans for the area? If they are heavily used, are you planning to black top them to reduce the dust that they will generate? We all know what a thunderstorm can do?

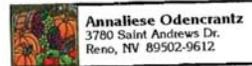
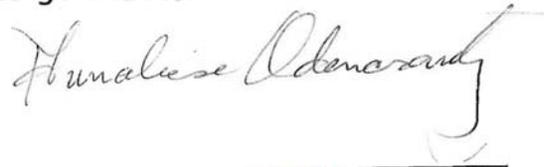
As you drop the water level below 40 feet all

*Comment
No. 18-1
(Continued)*

vegetation will die. The bushes, the trees and any flowers. Then you will create a sand blowing desert. How will you mitigate the soil erosion and the blowing dust? The dust from Owens Lake has been called Keeler Fog, it is filled with so many minerals. Now the LADPW is adding water to the area to try to stop the dust from blowing. This is after 70 or more years of the dust blowing in the area. The question that arises is-- Will it slow the erosion?

The cost of maintaining the pumps and patrolling the pipeline will be additional drain to the costs of the water. What allowances have you made to have the streams continue to flow with wildlife and fishes? Are you planning to save some of the wildlife and not others?

Are you planning to extend this pipeline to Canada? Or are you only going to the upper end of Nevada? How far are you going to go with it?



*Comment
No. 18-1
(Continued)*



JIM GIBBONS
Governor

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August 6, 2008

NDOW-SR# 08-330

Ms. Penny Woods
Nevada Groundwater Projects Office
BLM – Nevada State Office (NV-910-2)
P.O. Box 12000
Reno, NV 89520-0006

Re: Draft Environmental Impact Statement: Lincoln County Land Act Groundwater
Groundwater Development and Utility Right of Way Project, DES 08-23 (DEIS)

Dear Ms. Woods:

The Nevada Department of Wildlife (NDOW) is remiss in responding by the public comment deadline of July 22, 2008. Sincere apology is extended for this advent attributable to unavoidable and extenuating circumstances. Having said this, please find below observations and suggestions made with the intent to outline areas NDOW perceives problematic concerning environmental analyses. This input is summary in nature and hopefully provocative for timely and productive dialogue. A roundtable discussion would seem best for going over particulars. Generally, a review for improving presentation of biological resources, regulatory and policy aspects of species and habitat management, and impact analyses thereof within the DEIS would strengthen the integrity of the next draft.

- Pages 3-53 to 3-63, Section 3.5 WILDLIFE RESOURCES; and, Appendixes C, E-2, and E-3.
 - Ability to cross-reference to Appendixes C, E-2, & E-3, especially the latter two are in need of purpose clarification and accuracy. Relevancy to impact analyses is not readily apparent as no mitigation is identified specifically benefiting the many species listed.
 - There is outstanding concern about the interpretation and use of State regulatory classifications (NRS & NAC) juxtaposed with “species of conservation priority” from the Department’s Wildlife Action Plan.
 - Overall, mitigation as stated in Chapter 4 would seem a good start. However, mention elsewhere of the large number of “special status species” like the Desert Valley kangaroo mouse (*Microdipodops megacephalus albiventer*) is difficult to interpret, especially in analysis of cumulative effects or impacts. The Desert Kangaroo Mouse is probably the best example. NDOW has seen this BLM Sensitive Species and NDOW Protected species mentioned in several NEPA documents generally proposed in the ROI. In every NEPA document, the kangaroo mouse is purported to occur near Jones Point in the Tule Desert. Generally, population distributions of the dark kangaroo mouse, of which the Desert Kangaroo Mouse is one, often reflect isolated populations. However, the DEIS does not

Response to Comment No. 19-1 and 19-2

Appendices C, E-2, and E-3 in the Final EIS have been updated to accurately represent the different levels of regulatory protection under federal and state wildlife regulation.

Comment
No. 19-1

Woods. P.

2

August 6, 2008

directly address the species regarding adequate mitigation, but only provides speculation as to its occurrence by associating it with a local landscape feature. Unfortunately, there is inadequate information in the DEIS to determine presence or absence of a kangaroo mouse in the project area. It could be there, or it may not. Reasonable resolve would seem to be performance of small mammal surveys using appropriate methods including time of year considerations, to verify or refute the likelihood of its occurrence in the project area or region of influence. Without such information, the NEPA process is unquestionably vulnerable to public scrutiny on this facet of analytical completeness, and perhaps weakening confidence in other sections of the DEIS.

- o Wild horses and burros are not recognized as wildlife either by the State of Nevada or the U.S. Fish & Wildlife Service. The sub-section is better placed in Section 3.6, Land Uses.

- Chapter 4, Environmental Consequences.

- o Emphasis on a quantifiable acreage of habitat impacted by the proposed project does not completely describe net effects to biological resources. Changes in the environmental dynamics and interactions influencing how biological resources will respond to the proposed action are not sufficiently addressed. And, mention or inferred reliance of future HCP's as providing mitigation for these cumulative impacts seems premature. The effectiveness of the HCP's to provide discernable mitigation benefiting affected species and ecosystems is unknown.
- o Validity of the Recreation section statement that no OHV routes are affected by the proposed action or alternative 1 is in question. NDOW is presently reviewing NEPA from BLM's Ely District for a proposed OHV competitive event to take place in the project area. Discussion adequacy of the various tiers of effects or impacts would seem incomplete.
- o Interestingly, proposed project effects identified to having impacts on other existing land uses also seem to have relevance to biological resources.

I look forward to furthering discussion on DEIS sections having bearing on the consequences of the proposed project to biological resources. Please contact me at your earliest convenience at (702) 486-5127 x3600 or by e-mail at bhrdnbrk@ndow.org.

Sincerely,


 D. Bradford Hardenbrook
 Supervisory Habitat Biologist

DBH: dbh

cc: NDOW, Files

Comment No. 19-4

Comment No. 19-5

Comment No. 19-6

Comment No. 19-7

Response to Comment No. 19-4

Comment noted.

Response to Comment No. 19-5

Comment noted. See Response to Comment No. 15-1.

Response to Comment No. 19-6

Impacts of the Proposed Action on recreational resources are described in Section 3.8 and 4.8 in both the Draft and Final EIS.

Response to Comment No. 19-7

Comment noted.