STATE OF NEVADA
BOARD OF WILDLIFE COMMISSIONERS
1100 Valley Road, Reno, Nevada 89512

Telephone (775) 688-1500 • Fax (775) 688-1207

Governor Sandoval

December 2, 2011

Nevada Department of Conservation and Natural Resources
Division of Water Resources
901 S. Stewart St., Suite 2002
Carson City, NV 89701

ATTN: Mr. Jason King, State Engineer

Dear Mr. King:

The Nevada Board of Wildlife Commissioners respectfully submits the enclosed Resolution 11-1 signifying the Board's opposition to the withdrawal of 177,000–200,000 acre feet of water by the Southern Nevada Water Authority from 5 valleys in Eastern Nevada.

Our Board appreciates your consideration of this resolution.

Sincerely

Jack Robb, Vice Chairman

RESOLUTION # 11-1 OF THE NEVADA BOARD OF WILDLIFE COMMISSIONERS OPPOSING THE WITHDRAWAL OF 177,000 – 200,000 ACRE FEET OF WATER BY THE SOUTHERN NEVADA WATER AUTHORITY FROM 5 VALLEYS IN EASTERN NEVADA

WHEREAS the Southern Nevada Water Authority (hereafter referred to as SNWA) (aka the Las Vegas Valley Water District) filed for all the unappropriated water in 1989 in many valleys/groundwater basins of Eastern Nevada that include Spring, Snake, Cave, Delamar, and Dry Lake, in addition to Railroad, Three Lakes, Tikaboo, Hamlin, Garnet and other valleys, and

WHEREAS the SNWA main pipeline is proposed to carry water 300 miles in a 96" pipeline through White Pine, Lincoln and Clark Counties, but eventually moving into Nye and potentially Esmeralda and Elko Counties, and

WHEREAS roads, transmission lines, wells and wellfields, fencing, connector pipelines and feeder pipelines will criss-cross these many valleys, resulting in habitat loss and fragmentation, and

WHEREAS SNWA has chosen to move ahead with permitting processes through the State Engineer and the Bureau of Land Management Pipeline DEIS. Written comments are due to the State Engineer on December 2, 2011 after six weeks of hearings on SNWA's applications in Spring, Cave, Delamar, and Dry Lake Valleys in eastern Nevada, and

WHEREAS the BLM's DEIS states that the complete proposed action in the first 5 valleys will have serious adverse effects on many resources within 75 - 200 years, many irreversible;

dry or reduce flows in 44-57 major springs and an indefinite number of other springs and seeps
dry or reduce flows in 80-112 miles of perennial streams with fish habitat
dry 8000 acres of wetlands and meadows
destroy 191,500 acres of shrubs (habitat) for mule deer, pronghorn antelope, Rocky Mountain elk, and bighorn sheep, sage grouse and other upland birds
on 2500 square miles of land surface, cause subsidence greater than 1-foot and on 575 square miles cause subsidence greater than 5-feet, further damaging aquatic and terrestrial habitats, and

WHEREAS the BLM's DEIS inadequately addresses the need and purpose of SNWA's Groundwater Development Project, alternatives to and the cost of the pipeline, impacts to many natural resources and wildlife, and monitoring and mitigation of adverse impacts, and

WHEREAS the BLM touches on but mostly dismisses the cumulative and irreversible impacts of many of SNWA and Lincoln County's many water pipelines and water development projects;

WHEREAS the Nevada Department of Wildlife and the Commission are charged by the State Legislature to preserve, protect, manage and restore wildlife and wildlife habitat as part of the state's aesthetic, recreational, economic and natural resources,

THEREFORE BE IT RESOLVED THAT the Nevada Wildlife Commission contact the State Engineer before COB December 2, 2011 requesting denial of the SNWA applications for unappropriated water in Spring, Cave, Dry Lake and Delamar Valleys based on damages to Nevada's wildlife, habitats, and hunting and fishing, and

FURTHER BE IT RESOLVED THAT the Nevada Board of Wildlife Commissioners opposes the proposed interbasin water transfer project as severely detrimental to Nevada's wildlife and urges the SNWA Board of Directors to thoroughly examine other water supply options for southern Nevada.

ACTION TAKEN: this 2nd day of December, 2011
Ayes: 7 Nays: _____ Abstentions: 2

Jack Robb, Vice Chairman

STATE OF NEVADA

DEPARTMENT OF WILDLIFE

1100 Valley Road
Reno, Nevada 89512
(775) 688-1500 • Fax (775) 688-1595

BRIAN SANDOVAL
Governor

KENNETH E. MAYER
Director

RICHARD L. HASKINS, II
Deputy Director

PATRICK O. CATES
Deputy Director

October 11, 2011

Ms. Kim Dow
Natural Resource Specialist
Bureau of Land Management
Nevada State Office
1340 Financial Blvd.
Reno, NV 89502

Dear Ms. Dow:

RE: Comments on the Clark, Lincoln and White Pine Counties Groundwater Development Project Draft EIS

Thank you for the opportunity to provide comment on the public draft EIS (EIS) for the Clark, Lincoln and White Pine Counties Groundwater Development Project (Project). As a cooperating agency for the development of the EIS, the Department of Wildlife (NDOW) understands the challenging task of organizing and developing the EIS document and other associated NEPA documentation. We appreciate the opportunity to have worked with BLM and other cooperators in developing the EIS and in general we believe that the BLM has done a good job of both assembling the document and addressing the many potential impacts and effects of a project of this scale.

With that said, NDOW still has significant concerns about the Project itself and its potential effects on resident wildlife species for which we have the primary trust responsibility to manage those resources for the people of the State of Nevada, and also with some elements of the EIS document analysis and technical content where our previous comments and inputs may not have been adequately addressed.

Descriptions regarding the modeling of impacts have not provided NDOW with confidence that the model is sufficient to predict or adequately address the full range of impacts anticipated by the project. Assumptions including; groundwater drawdown only affecting valley aquifers and not likely to affect upland waters, that impacts of less than a 10-foot draw down are not anticipated to be significant or included in the analysis and that impacts to intermittent waters are also not anticipated to be significant, seem to greatly under anticipate project impacts. In addition, there are references to; a lack of reliable data for analysis, an inaccuracy in the number of springs and seeps inventoried and analyzed, that site specific impacts are not possible to be accurately predicted and a general downplay of the risk associated with an anticipated increase in annual invasive plants all contributing to our discomfort with the analysis. While the Department of

Wildlife has not performed independent modeling for analysis, it is our opinion that in general, the project's impacts under any Action alternative will be greater than those estimated in the EIS based upon years of observing changing terrestrial and aquatic ecosystem conditions.

Our comments in this letter will focus primarily on those effects to wildlife resources as that is our primary expertise and responsibility.

Proposed Action Alternatives

Given potential effects on surface and groundwater resources, associated wildlife values from project development and long-term implementation, our preferred alternative (based on analysis presented in the EIS) would be the "No Action" alternative. However, we recognize that if all or some portions of requested water rights are granted to the Southern Nevada Water Authority (SNWA) a "No Action" alternative is not a realistic scenario. Given this likelihood, we believe that Alternatives D and E as presented in the EIS offer the best opportunity to minimize effects to water-dependent ecosystems and associated wildlife species occurring within the project development basins and adjacent groundwater basins. Both Alternatives will potentially provide a similar annual yield of groundwater and avoid many potential effects on Snake Valley ecosystems and associated species of concern to NDOW. Dependent on the chosen Right-of-way (ROW) alternatives and their respective effects on project scope and scale, differences between Alternatives D and E are primarily related to the distribution of effects in Spring Valley with Alternative D creating slightly less severe effects to important aquatic resources in the short term (<75 years) but with Alternative E reversing this scenario and providing substantially less total impacts to those aquatic systems during long term Project implementation (<200 years). Alternative E also has a much wider potential short-term effect on the landscape scale. Given that, we find little to choose from as a preference for these alternatives other than they are preferable to other Action Alternatives in terms of project implementation impacts. We would as well recommend incorporation of elements of Alternative C into any implementation of Alternatives D or E, using cycled and variable pumping rates to better address actual annual exportation needs balanced with alternative SNWA water sources. This strategy might to some extent, mitigate the more severe, potential, site specific drawdown effects of the two alternatives.

A further concern is assessment of cumulative impacts combining the proposed SNWA Project with existing and potential future groundwater development actions by other parties in the development and adjacent basins. That assessment, as presented in the EIS, substantially increases the potential effects on priority and sensitive species of concern to NDOW and aquatic dependent ecosystems particularly outside of the immediate Project development basins and those additional cumulative effects likely would not occur, or occur at the projected levels of severity over +75-year and +200-year timeframes, without the Project implementation. Similar to project specific effects, we find Alternatives D and E to be the least objectionable of a rather poor selection of choices with little to recommend one over the other particularly at the +200 year timeframe.

ROW Alternative Alignments

In reviewing main Project ROW alternatives, NDOW believes that the Lincoln County Conservation Recreation and Development Act alternative creates the least potential disturbance to terrestrial resources and associated wildlife resources. This alternative presupposes adaptation of groundwater development Scenario D which as described in the previous section is one of the less objectionable Action Alternatives described and analyzed in the EIS.

We do not have any specific recommendations relative to the four localized ROW alignment alternatives presented in the EIS, all of which address relatively small areas of the overall Project ROW. To the extent practical, we strongly encourage adoption of alignment alternatives that utilize existing transportation and utility corridors and projects, which would potentially minimize new disturbance.

Climate Change

We are concerned about the level to which potential future climate change is addressed in the EIS. Recognizing that predicting future climate change effects is an imprecise science at best (given often conflicting models and variable model outputs dependent on a variety of potential change input scenarios, particularly at a local scale in the Great Basin), enough information is available to develop some level of reasonable effects analysis on terrestrial and aquatic wildlife resources, vegetation, surface waters and future groundwater availability and recharge. Although sections 3.1.1.4 and 3.1.3.2 provide a reasonably detailed assessment of climate change on those resources in a generic sense, there is no evidence that this assessment has been adequately incorporated into the EIS evaluation of cumulative groundwater drawdown impacts or other impacts of project development and implementation. The additional cumulative effect from climate change to any of the described Action Alternatives on aquatic and terrestrial ecosystems, surface and groundwater resources, and associated wildlife species is potentially very significant under even conservative climate change scenarios; how this is evaluated in the draft EIS is woefully inadequate and it must be better addressed in the final EIS document.

Additional General Comments

A description of whether the proposed and alternative actions addressing energy needs for the main pipeline conveyance need future power sources other than what is existing presently would be appropriate; and as well, if a power purchase agreement has been struck or needs to be acquired including disclosure of the provider and named project source. This would be helpful in forming a landscape scale perspective of the total project impacts and an understanding of possible relationships with other large scale projects in the Project area (even to the point of ascertaining any connected actions now or in the foreseeable future (i.e. SNWA Project life)), and the environmental impacts associated with them from a direct, indirect and cumulative sense.

Somewhat related to the above is the question of changed impacts from the designated utility corridor (within which the Project largely will be situated) when considered in combination with other linearly-orientated projects (such as large inter and intra state high voltage electric transmission lines and appurtenances that are likely to occur in the foreseeable future (over the Project life). Will the cumulative impacts associated with *those* projects coupled with the SNWA Project build-out exceed those identified by the analysis provided to establish the corridor?

Descriptions of impeller technology used in the main or feeder pipeline(s) to generate local power needs along with site specific solar panel use other than that described for monitoring well power needs should be included. For example, would the use of buried electric powerlines be practicable in locations as opposed to above-ground construction? This additional information would assist in understanding measures for avoiding or minimizing use of infrastructure and appurtenances that would otherwise lead to greater disturbances to wildlife populations and habitats.

The DEIS relies heavily on construction related disturbance being remedied by project area rehabilitation, restoration, or reclamation type activities but always with a caveat that the effectiveness of these intended habitat rejuvenating measures are largely unknown. Mindful that present native species representations in seed banks and nurseries are limited, especially for the Mojave portion of the project, are BLM and SNWA willing to contemplate how SNWA can increase availability of these native resources for disturbance remediation based on the Project long-term program? This is further important for ensuring that the stated disturbance mitigation becomes a repetitive action based on site-specific needs using 5-year monitoring increments or some other monitoring frequency adequately assessing encroachment by invasive species. In addition, although it is mentioned that the effectiveness of restoration of temporarily disturbed areas is somewhat unknown, it has been our experience that success has been poor except where sufficient soil moisture is available. There should be some level of discussion regarding adaptive or alternative approaches should reclamation of these areas prove difficult or unsuccessful.

While we understand that groundwater movement is still not well understood in some areas and is reliant on modeling to a large part, it is still difficult to ascertain from the EIS that adequate measures will be in place to assess movement of water and potential drawdown incurred from potential production wells in south Cave Valley. This provision is essential to help ascertain possible impacts from pumping to middle and lower White River Valley and southward to Pahranagat Valley where numerous sensitive and State or Federally protected terrestrial and aquatic wildlife species occur. More specifically, we believe that there needs to be identification of adequate monitoring wells in appropriate locales such as the North Pahroc Range, an issue which NDOW has brought up in numerous meetings with cooperators.

Related to the above topic, NDOW continues to have significant concerns about potential groundwater drawdown scenarios affecting middle and lower White River Valley aquatic ecosystems and associated species, including Kirch Wildlife Management

Area, as a result of groundwater development in areas of Cave Valley. Hydrologic model assessments available to NDOW have shown potentially significant impacts to systems such as the Flag Spring system in White River Valley from even relatively short term pumping scenarios dependent on the location and nature of groundwater development in Cave Valley. The continued incorporation of Cave Valley in Action Alternatives for ROW infrastructure and groundwater development continues to be a major concern and we would encourage consideration of additional Action Alternatives that reduce or eliminate development in Cave Valley as the only practical mitigation to avoid eventual significant impacts to Kirch WMA and associated sensitive and game wildlife species.

In general, we found mitigation-related sections of the EIS to be very inadequate in addressing potential impacts. Under many Alternative scenarios the Project could result in potential widespread and wholesale extirpations of populations of fisheries resources (including native and nonnative, game and non-game species), and significant disruptions to or disturbance of terrestrial wildlife species as long-term Project implementation occurs. There seems to be no mitigation offered for these losses. In some cases they are not even addressed. Significant additional explanation of plans to mitigate species and habitat specific effects must be incorporated into the final EIS document.

Wildlife specific general comments

Terrestrial species

For Greater Sage-grouse, we urge incorporation of the measures identified in the "Nevada Energy and Infrastructure Development Standards to Conserve Greater Sage Grouse Populations and their Habitats" (Governor's Sage-Grouse Conservation Team 2010). Additionally, an Instructional Memorandum to provide interim guidance regarding surface disturbance and energy facilities is currently in review and should be identified and incorporated into this project. NDOW strongly recommends that the BLM wait for this document to be finalized and implemented before making any decisions in regards to this project and incorporate its provisions as appropriate into the final EIS document.

We also strongly encourage incorporation of raptor-friendly designs that eliminate electrocution threat and minimize collision impacts into any new power line development as outlined in *Suggested Practice for Raptor Protection on Power Lines* (Avian Power Line Interaction Committee [APLIC] 2006, 1996; APLIC and U.S. Fish & Wildlife Service 2005). Further, any distribution structures should be designed to discourage perching, roosting and nesting by avian predators such as raptors and corvids (Prather & Messmer 2010). Prior to any Project development, it is essential that SNWA consult with NDOW and the USFWS regarding development of an Avian Protection Plan to address Project impacts to bird species and in particular golden eagles and Greater Sage-grouse.

In Chapter 3 (Page 3.6-47), partial mitigation for the Desert Valley kangaroo mouse is described as the proponent's agreement to trap and translocate affected individuals to areas within known habitat. While some may justify that this is better than a "do-

nothing" scenario, assuming that the project proponent can recognize "suitable habitat," the question remains as to whether translocations would be benign to nearby recipient populations. It is interesting that the total amount of habitat for the Desert Valley kangaroo mouse remains an unknown. Unless the proponent or BLM can demonstrate the productive utility of translocation, efforts to characterize habitats of the dark and pale kangaroo mouse species within the project area would be a more meaningful long-term mitigation, especially mindful that the location of the ROW is in a corridor for other utilities and likely other developments or changing land uses will be affecting some distances around the proposed Project's ROW. Habitat characterization for both species of kangaroo mouse has been a mitigation measure for the Crescent Dunes Solar Energy Project and intended to be a part of landscape wide approaches to understanding present and future consequences of emerging land uses and helpful in development of a predictive model of occurrence for both species. Further, it is overly optimistic that reclamation/restoration practices for vegetation will also result in the soil substrate characteristics necessary for these species' viability in project affected areas. NDOW requests additional mitigation discussion with BLM and SNWA to better identify more meaningful conservation measures to be included as part of the mitigation measures in the final EIS. A number of references that might be of use to BLM in correcting this section are included in references at the end of this letter.

Also in Chapter 3 (Page 3.6-48) relative to banded gila monster, the measures described are standard operating procedures, but the impact conclusions likely are not realistic, as much of the areas affected are also under the affects of other landscape level and smaller scale activities that when combined do not result in a better outlook for the Gila monster in Nevada. Disturbances to habitat caused by the present ROW-related project and other cumulative effect land uses being proposed or underway within the subject project area and the relation to the geographic range of the Gila monster is understated. Additional mitigation measures more in line with the approach requested for the Desert Valley kangaroo mouse would seem more appropriate.

Aquatic species

For ROW crossings of streams we strongly recommend the jack and bore method as it would have fewer impacts and result in less disturbance to the natural morphology of the streambeds.

Chapter 3.7 indicates that four of 14 current conservation populations of Bonneville cutthroat trout (BCT) in Nevada would be at risk for reductions in flow, depending on the Action Alternative selected. This represents 29% of all BCT population in the state. This would pose an enormous threat to BCT restoration and conservation activities that have been accomplished in Nevada over the course of the past 20+ years. This possible outcome is unacceptable.

Many streams, springs, ponds, lakes, and other water bodies listed in Appendix 3.7 contain sportfish resources and/or harbor sensitive/special status species. Many (most) of these are shown as having "no data" available for assessing Project impacts and effects.

Examples include Shoshone Ponds (relict dace, Pahrump poolfish), Silver Creek Reservoir (brown trout, rainbow trout), Stateline Springs (five native species), and Stonehouse Springs (relict dace) among others. Substantial data is available on aquatic resources for many of these sites and we find the characterization troublesome and not acceptable. We have concerns about the adequacy of the EIS analysis of potential impacts to aquatic systems and species given this apparent failure to identify and incorporate available data. Inquiries to NDOW should have been able to supply this information, which may be an indication of inadequate coordination with resource agencies.

The loss of significant stream miles in recreational sportfishing streams as described in Appendix 3.7 is very concerning. Substantial stream miles (and resulting sportfish populations and angling opportunity) will be diminished in Lehman, Silver, Bastian, McCoy, Meadow, Negro, Shingle, Willard, and Geyser creeks under certain Project alternatives. These streams are important sites for recreational angling and these losses are unacceptable.

Following are a number of additional, general and specific comments which we have provided in table form to address specific concerns or to identify errors or editing needs in the document, and we have provided some additional references which may be useful in review and revision of the draft EIS.

Again, thank you for the opportunity to comment on the draft EIS document and to participate as a cooperating agency on EIS development. As we have tried to describe above, we have a number of substantive concerns both with the quality of the EIS and with the potential Action Alternatives identified for the subject project, particularly as to how they relate to potentially large-scale and long lasting negative effects on important wildlife species and the aquatic and terrestrial habitats that they depend on. Regardless we look forward to continuing to work with BLM as a cooperating agency in completion of the final EIS and the opportunity to assist in addressing some of these document and analysis deficiencies at that time. If you have any questions regarding our response please feel free to contact Jon Sjoberg at (702) 486-5127 ext 3300 or at sjoberg@ndow.org.

Sincerely,

Richard L. Haskins II
Deputy Director

ss:rlh:jw

Attachment- Comments by Page and Section Reference

Comments by Page and Section Reference (Nevada Department of Wildlife)

Chapter 1.0
1. Revise Water Demand and Conservation numbers to reflect current growth rates and water use through 2011 or at least 2010 (Section 1.6.1 Water Demand and Conservation).
2. Revise section 1.6.2 Colorado River Water Supplies to reflect information through 2011 (I.E. increased Lake Mead water levels are not reflected).
Chapter 2.0
1. NDOW has a general concern for conversion of agricultural rights to municipal uses. Agricultural water and associated fields are beneficial to migratory and resident wildlife and conversion would impact wildlife dependent on those agricultural lands and associated water rights. (Pipeline Conveyance Volumes Section, Page 2-4). SNWA needs to better describe how surface water will be used (beneficial and diversions) in this section.
Chapter 3.0
1. Analysis of groundwater drawdowns and affects to local wildlife populations has been difficult to evaluate throughout the EIS process due to lack of detail. The EIS instead reveals large polygons referencing groundwater development areas and general lack of specific development areas, pumping wells and locations. NDOW request access to information and subsequent NEPA analysis of proposed locations being provided to the BLM (As noted in Section 3.0.3 Incomplete and Unavailable Information, Page 3-4)
2. Along with the 5 native non-game fish species listed throughout the Chapter 3.7 and Appendix F3.7, Lake Creek also has a population of Sacramento perch which is listed as a game fish in the state of Utah. This should be included in many places in the document.

Page	Section	¶	Line	Comment
1-11	Table 1.5-1	Same	Same	In Permit/Approval/Consultations column for NDOW change to: Required authorization from NDOW to handle any fish and wildlife as per guidance Nevada Revised Statute (NRS) 503.597. NAC 503.093 noted refers to a specific permit for specific activity for desert tortoise and Gila monster (movement out of harm's way).
2-11	Table 2.3 -1	Sp. Status Species	2	Note: All poles, powerlines need to discourage perching opportunities for common raven due to predation on desert tortoise, sage grouse and other special status species. Consult applicable FWS Biological Opinion documents for applicable minimization measures (desert tortoise). Also, any guy wires associated with any structures need to be appropriately flagged to minimize collision from migratory wildlife (birds).
2-13	2.3.1	2	3	NDOW appreciates 10 mile main pipeline segment that avoids the Joshua tree habitat in the northeast end of Delamar Valley as this area supports a diverse assemblage of breeding bird habitat and is an active national Breeding Bird Survey route. Also avoidance of construction in this area and other areas is recommended during the migratory bird breeding season of April through June.
2-41	2.5.3 (ACM A5.37 to 39	8		NDOW's gila monster protocol is available at: http://www.ndow.org/wild/conservation/reptile/07Gila_Protocol.pdf

2-41	2.5.3 (ACM A5.57 to 60)	11		NDOW has developed some 'passive' relocation efforts for Pygmy Rabbit (Ruby Pipeline Project NV) which involves some cutting of sagebrush in connection with active pygmy rabbit sites 'encouraging' them to move on their own at sites directly in the path of the pipeline or associated construction/disturbance areas. Please consult with NDOW on applicable protocols in occupied pygmy rabbit habitat along the pipeline (and powerline) corridors prior to construction.
2-41	2.5.3 (ACM A5.62 to 69)	13		Migratory birds section – models are 'not' used to identify 'periods', but are useful in predictors of distributions in conjunction with good habitat use and locality data. Also all models have limitations and are only as good as the input data.
3.3-7	3.3.1.4	7	1	It is stated that there are a total of 316 inventoried springs in the region of the yet on page 3.3-9 the NPS has identified 427 in Great basin National Park. Why is there a disparity in the numbers? Is there a large number of springs and seeps missing from the study?
3.3-24		7	4	Correct this statement to read "...is diverted to the NDOW's Spring Creek Rearing Station, a fish culture facility."
3.3-74	Construction Water Supply			There is mention of supply wells needed for dust abatement every 10 miles during construction. Are these wells planned for use beyond construction? Will they be decommissioned? This large number of new wells seems excessive. Would water hauling a longer distance result in less disturbance and general impact?
3.3-86	3.3			NDOW has a concern with the limitations of the model due to the lack of reliable information regarding the hydraulic properties of faults, which we believe should be a big consideration in the analysis.
	Table 3.3.2.3			This table states that the impacts are unlikely to impact upland waters regardless of the predicted model drawdown. We disagree with this assumption and are convinced that upland water impacts will occur as drawdown occurs.
3.3-87	Spring & Stream Impact Evaluation	last		Impacts were addressed for perennial streams but did not address impacts to intermittent seasonal waters that supply habitat to a multitude of species present for many months while water is available. Why are impacts intermittent waters not addressed?
3.3-90	GBNP	3		If the results of the NPS study shows that a more localized model depicts impacts reaching into the uplands, shouldn't more localized models be run and included in this analysis and not developed at a later date?
3.3-106	Table 3.3.2-6			This table shows potential effects to 212 springs, 80 miles of perennial stream, and a 100% flow reduction at Big Springs at Full Build Out +75 years. It also states that 307 springs, 112 miles of perennial streams and a 100% loss of Big Springs would occur at Build Out + 200 years. This level of impact is extremely troubling. It would result in the loss of 5 native fish species in Big Springs Creek, which is the only water in Nevada where these species reside. In addition, untold loss of sportfishing resources in streams would undoubtedly be realized. The loss of these fisheries resources in unacceptable.

3.3-108	Table 3.3.2-7			This table shows a 58% and 2% reduction in flow at Keegan Spring and Big Springs respectively at the Full Build Out and a 100% reduction in flow at both locations at the Full Build Out +75 year time frame. This level of impact is extremely troubling. It would result in the loss of 5 native fish species inhabiting Big Springs Creek and the loss of a population of relict dace at Keegan Ranch. Big Springs is explained above. Keegan Ranch holds one of only four populations of relict dace in Spring Valley. The loss of these fisheries resources is unacceptable.
NOTE				Although the number of springs and miles of perennial streams impacted is lower in the subsequent pumping scenarios, these impacts are still of concern. Big Springs shows a 100% loss of flow in Alternatives A-D. The above comments regarding Big Springs hold true for the other pumping alternatives.
3.3-186	Table 3.3.2-22			This table is very misleading in that it omits a number of springs that could be impacted. At Full Build out +75 years, it only shows the number of *inventoried* springs that could be impacted (44). When compared to Table 3.3.2-6, there are an additional 168 other springs that could be impacted. The total number of springs potentially impacted at the Full Build Out +75 year time frame is actually 212 (44 inventoried + 168 other). The same holds true for the 200-year time frame as well. Just because springs have not been inventoried, it doesn't mean the loss of the springs should not be a cause of concern. The table also omits significant impacts to Big Springs that were shown on Table 3.3.2-6. The impacts to Big Springs should be included in the table. The above comments for Table 3.3.2-6 concerning the loss of 5 species in Big Springs Creek and loss of sportfishing in streams hold true for this table as well.
3.3-199	Table 3.3.3-1			Same comments as Table 3.3.2-6 and Table 3.3.2-22.
note	3.5			The project should make use of some of the materials developed by the Ruby Pipeline Project for restoration and rehabilitation of disturbed areas. Reviewing agencies found their final products to be acceptable. This project should at a minimum have a plan of similar scope and detail.
3.5-15	Table 3.5-7			How can the analysis identify the 10-foot drawdown as the depth at which long term changes in plant community vigor and composition appear when the table at 3.5-7 states that marshland and meadowland groundwater depths are less than 1 foot and 5 feet, respectively? It is clear that those changes could occur at drawdown depths of much less than 10 feet.
notes	3.5			It would be helpful for the assessment of alternatives in this section to identify what percent of the total inventoried acreages wetland/meadow impacts comprise. The vegetative analysis section seems to downplay the potential impact of increased annual weeds resulting from the project. This threat has potentially significant repercussions related to displacement of native species and contributing to fine fuels which contribute to catastrophic wildfires.
3.6-11		2		Add Pinyon jay to the Pinyon-juniper woodland type.
3.6-11	Special Status Species	4		Add gila monster to the special status species section. State and BLM sensitive species.

3.6-17	Raptors	1		NDOW conducted spring 2011 Golden Eagle surveys throughout different portions of Clark, Lincoln and White Pine Counties. Recommend contacting NDOW for updates to raptor nest site data.
3.6-17	Raptors	3		As noted above NDOW has updates to its existing raptor nest site database (prairie falcon).
3.6-17	Raptors	4		A pair of Bald eagles successfully nested in Black Canyon (eastern Clark County) in 2011 in southern Nevada (Ross Haley, pers. Comm..)
3.6-17	Add. Sp. Status Birds	Last		Consider adding several of the migratory birds listed in habitat types on page 3.6-11 as many of these species are BLM Sensitive and should be incorporated to the habitat/bird list.
3.6-18	Bats	2-3		Need additional information on what types of surveys were conducted for bats (was acoustic information utilized?). Document should recognize large colony of Brazilian free-tailed bat at Rose Cave and foraging use throughout Spring Valley (Jason Williams, pers. Comm..)
3.6-21	GSG	first		The buffer zone for sage grouse should be calculated to be 3-miles and not 2 miles. 2 miles protects an insufficient amount of habitat and is no longer being used in project impact analysis in Nevada.
3.6-22	Wildlife Species of Mgt. Concern	Last		The Nevada Wildlife Action Plan is in revision as of 2011 with an anticipated deadline of winter 2011/2012. NDOW anticipates adjustments to the Species of Conservation Priority list with incorporation of Climate Change factors. Recommend BLM incorporate the revised Action Plan into the final document.
3.6-24	Table 3.6-2	NA		Critical Habitat for the southwestern willow flycatcher is being redesignated by FWS. Comments are due to FWS by October 15th, 2011.
3.6-24	SWFL	3-4		In addition to what is written in the text, please add: Willow species utilized as nesting habitat in Nevada include coyote willow (*Salix exigua*), Gooding's willow (*Salix gooddingii*), ash (*Fraxinus spp.*) and Russian olive (*Eleagnus angustifolia*). Arrowweed should not be recognized as nesting habitat. Update data at sites noted through 2010 as per job NDOW and SWCA. Southwestern willow flycatchers regular occupy and breed at the upper Muddy River on the Warm Springs Natural Area (SWCA, NDOW 2010).
3.6-25	Desert Tortoise	3-4		Desert tortoise occurrences in the southern Hiko range and southern portion of Delamar Valley (NDOW 2011).
3.6-25	Yellow-billed Cuckoo	Last		About half way through the last paragraph should read: At another site at "an area of private land near Ash Springs, two breeding pairs and five single birds were reported in 2000. In 2001, birds were noted as mated or unmated depending on call response and at the site near Ash Springs, 4 mated birds were recorded and 1 unmated bird was recorded. Recommend removing the following: In 1979, the NDOW....just south of Beaver Dam..."The site was actually at the Beaver Dam Wash confluence near Little Field Arizona on the Virgin River and is outside the scope if this EIS and project area.
3.6-26	Raptors	3		Add: NDOW maintains a statewide raptor nest site database (NDOW 2011).

3.6-26	Pygmy Rabbit	6		Recommend providing a more thorough description of pygmy rabbit habitat use (tall sagebrush, meadows) in the project area, and associated predictive models, references, etc. There is considerable past information on pygmy rabbits in Nevada which would be useful information. Some useful references: Himes, J. G. and P. J. Drohan. 2007. Distribution and habitat selection of the pygmy rabbit, *Brachylagus idahoensis*, in Nevada (USA). Journal of Arid Environments 68:371–382. - Larrucea, E.S. and P.F. Brussard. Habitat selection and current distribution of the pygmy rabbit in Nevada and California, (USA). Journal of Mammalogy. 89 (3): 691-699. 2008.
3.6-26	Bats	Last		Reference the large Brazilian free-tailed colony that uses (forages) in Spring Valley and adjacent valleys (J. Williams pers. Comm...).
3.6-40	GSG			It is stated that there are no active leks within .25 miles of the project. This distance is meaningless in regards to the identification of impacts. Construction noise, human activity and habitat disturbance in general has been documented out as far as 4 miles. This analysis needs to be consistent with current standards for assessing impacts to Sage grouse.
3.6-41	Table 3.6-8			The data with regards to sage grouse should be modified to reflect the response to the comment made on page 3.6-40 in regard to buffer distance from active leks.
3.6-42	3.6			Although the powerline falls within the LCCRDA corridor it is still within 1 kilometer of 2 active sage grouse leks. Adequate mitigation should be identified to mitigate this impact such as anti perching and anti nesting devices, anti-collision devices and similar such measures. A detailed mitigation plan should be developed for wildlife which should include a discussion of the mitigation for species such as sage grouse, mule deer, migratory birds and other species of concern. The analysis of groundwater pumping on terrestrial wildlife is insufficient to analyze the alternatives. No acreages of impact have been supplied. The modeling need to include a detailed discussion of the impact of vegetation changes anticipated on associated wildlife species.
3.6-43	Raptors	4-5		The ferruginous hawk nesting information from 2005 is 6 years without an update. There will need to be some up to date surveys 'prior to' any powerline/pipeline construction as ferruginous hawks and other raptors will nest in different areas from year to year. Of note: nesting raptors are particularly sensitive early in the breeding season while establishing the pair bond and selecting a nesting site,
3.7-6	Table 3.7-1			Sacramento perch should be listed for Lake Creek.
3.7-8		1	4	Mottled, sculpin, speckled dace, and redside shiner are also present in the South Fork of Big Wash.
3.7-8		4	2-3	Misleading – All 5 species (including Utah sucker) have been collected here a number of times in the past. Would be more accurate if Utah sucker was included with the other four species listed.
3.7-22		1	3	Should say, "Water would be present in Big Wash during periods of high flow such as the springtime runoff period."
3.7-25	Proposed mitigation measures:	6		Should there not be some sort of mitigation measure in place if a fuel spill occurs in or near a stream / spring? I realize that fueling would take place off site but accidents can and do happen.

3.7-26	Proposed mitigation measures:	8		Why are there no mitigation measures? There should be.
3.7-44		6	1	Typo – "Snake Creek" should be "Snake Valley"
3.7-51	Table 3.7-6			Typo? - The first bullet under the ACMs section has a Candidate Conservation Agreement/Candidate Conservation Agreement. Should the second one be Candidate conservation Agreement with Assurances?
	Appendix E			In general, NDOW does not authorize relocation (preferred terminology is 'movement out of harm's way') except for a very limited number of animals and only in specific instances (i.e. desert tortoise, gila monster). Passive relocation encouraging wildlife to move on their own is preferred in all instances.
A.5.39	Appendix E		Gila Monster	NDOW needs specific gila monster location information with GPS coordinates in UTM using NAD 83, Zone 11, with date, time and habitat description as well as photos if available.
A.5.46	Appendix E		Burrowing Owl	Burrowing owl dens can be very diverse with several tunnels and entrance and exit burrows. This should be a consideration for inspection and determination of nesting status (egg laying, incubation, etc).
A.5.49	Appendix E		Sage Grouse	Recommend incorporation of the Nevada Energy and Infrastructure Development Standards to Conserve Greater Sage Grouse Populations and their Habitats (Governor's Sage-Grouse Conservation Team 2010).
A.5.49	Appendix E		Pygmy Rabbit	NDOW recommends more extensive surveys of Pygmy rabbits (limited information was gathered from the EIS relative to surveys) and where active Pygmy Rabbits are located to implement passive relocation. Please consult NDOW for passive relocation techniques.
A.5.61	Appendix E		DV Kangaroo Mouse	There needs to be more discussion with NDOW on the efficacy of relocating DV kangaroo mice (dark k mice) and consideration for territorial affects to other mice and general avoidance of k mice habitat to preclude need to relocate. Also change terminology from relocate to movement out of harm's way and only as a last resort.
C.2.9	Biological Measures			Restoration measures will also benefit southwestern willow flycatcher and yellow-billed cuckoo.
C.2.10	Biological Measures			Water efficiency and releases can also be managed to benefit native wildlife.
6-4	Appendix F3.6	NA	Mammals	Add California leaf-nosed bat (*Macrotus californicus*) to the Appendix, State and BLM Sensitive Species. Occurs at LV Valley, Muddy River Springs, Lower Moapa Valley (NV Bat Plan., 2006)
6-6	Appendix F3.6	NA	Birds	Noted that the southwestern willow flycatcher is listed for Mojave Desert but also list the species that occurs in the Great Basin types: (willow flycatcher – *Empidonax traillii* which is state protected and species of conservation priority in the Wildlife Action Plan). Could occur in any willow riparian habitat in Great Basin types.
6-6	Appendix F3.6	NA	Birds	Add least bittern, redhead, western sandpiper, greater sandhill crane, black tern and American bittern (could occur in any wetland/marsh, pond, wet meadow or wet playa habitat in the project area. All are State protected and Species of Conservation Priority in the Nevada Wildlife Action Plan).
6-6	Appendix F3.6	NA	Birds	Add Bendire's thrasher (*Toxostoma bendirei*) State Protected and BLM Sensitive Species for the following areas: Delamar Valley, Garnet Valley, Pahroc Valley, Kane Springs Valley.

6-8	Appendix F3.6	NA	Reptiles	Add ringneck snake (*Diadophis punctatus*), sidewinder (*Crotalus cerastes*), spotted leaf-nosed (*Phyllorhynchus decurtatus*), and western blind snake (*Leptotyphlops* humilis). All are newly proposed Species of Conservation Priority in the Nevada Wildlife Action Plan and/or BLM Sensitive Species.
F3.7-2	Table F3.7-1			Utah chub are present in Steptoe Valley at the Steptoe Valley Wildlife Management Area.
F3.7-4	Table F3.7-1			Northern leopard frogs are present in Steptoe Valley in a number of localities (Steptoe Ranch, Lusetti/Grass Springs Ranch, Unnamed spring east of Borchert Spring, etc.)
F3.7-6	TableF3.7-2			White crappie are present in Adams-McGill Reservoir, Cold Springs Reservoir, and Haymeadow Reservoir.
F3.7-7	Table F3.7-2			Lake Creek should be added – it has Sacramento perch.
F3.7-8	Table F3.7-2			"Upper Snake Creek" is synonymous with "Snake Creek, North, Middle, and South Forks." I'm not sure why they are listed separately. One should be removed. It refers to the same portion of stream. It has Bonneville cutthroat trout and brook trout (which is not listed for Upper Snake Creek).
F3.7-10	Table F3.7-4			There are no Utah chub at Stonehouse Springs complex. It has relict dace
F3.7-10	Table F3.7-4			Should Utah sucker be listed for Big Springs?
F3.7-10	Table F3.7-4			There definitely is Utah sucker at Stateline Springs.
F3.7-11	Table F3.7-4			Steptoe Ranch Springs has largemouth bass.
F3.7-26	Table F3.7-7			Utah chub are not a special status species at Steptoe Valley Wildlife Management Area. Should be removed.
F3.7-35	Table F3.7-11			Typo – Under Fish in Pruess Lake – Should by "catfish" not "oatfish"
F3.7-36	Table F3.7-12			Lake Creek also has Sacramento perch.
F3.7-40	Table F3.7-13A			As previously mentioned, Upper Snake Creek and Snake Creek, North, Middle, and South Fork are synonymous. It's the same water. One should be removed
F3.7-39	Table F3.7-13A			Why are Utah chub and Utah sucker separated out by themselves. This is very confusing. The information listed for these species is identical to the information listed on page F3.7-41 for redside shiner, speckled dace, mottled sculpin, and Utah sucker. All five species reside in the same stream system together.
F3.7-41	Table F3.7-13A			Utah chub should be added to Utah sucker, redside shiner, mottled sculpin, and speckled dace.
F3.7-50	Table F3.7-15			Add Sacramento perch to Lake Creek (as well as to tables for all subsequent pumping alternatives)
F3.7-70	Table F3.7-28			The species listed for Big Springs does not match the species listed in previous tables. Should it not include redside shiner, mottled sculpin, speckled dace, Utah chub, and Utah sucker?
F3.7-64	Table F3.7-26			A percent flow change of up to 100% in both Keegan Spring and Big Springs is extremely startling. This would result in the extirpation of five native non-game species residing in Big Springs Creek (the only water in Nevada with these five species) and one native species (relict dace) species at Keegan Ranch (One of only four populations in Spring Valley). These losses are not acceptable.

F3.7-67	Table F3.7-27			At the 200-year post buildout time period, flow (and resulting Bonneville cutthroat trout populations) would be lost in both Big Wash and Ridge Creek. In addition, stream mileage would be decreased by ½ (or more) in Snake Creek (BCT), Pine Creek (BCT), Silver Creek (proposed for chemical treatment and reintroduction of BCT), and Willard Creek (may be BCT – waiting for results from genetic analysis). In addition, 100% of flow in Spring Valley Creek (one of four relict dace populations in Spring Valley) would be eliminated. This is frightening to say the least and not acceptable.

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