

BLM_NV_NVSO_GWProjects

From: Kimberly.Reinhart@snwa.com
Sent: Tuesday, October 11, 2011 2:18 PM
To: BLM_NV_NVSO_GWProjects
Cc: lisa.luptowitz@snwa.com; zane.marshall@snwa.com; john.entsminger@lvvwd.com
Subject: SNWA's GWD Project DEIS Comments
Attachments: SNWA_GWD Project DEIS Comment Letter_with_Errata_10-11-11.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Dear Ms. Woods,

Attached is the Southern Nevada Water Authority's (SNWA) formal public comments on the Clark, Lincoln, and White Pine Counties Groundwater Development Project Draft Environmental Impact Statement and Draft Section 106 Programmatic Agreement. In addition to the electronic letter, a hard copy will be mailed to your office. SNWA will coordinate with the Bureau of Land Management (BLM) to ensure that the documents cited in the letter are available to the BLM.

If difficulties arise downloading the letter, please contact me and I will upload the pdf to a ftp site.

Sincerely,
Kimberly Reinhart

Kimberly Reinhart
Senior Environmental Planner
Southern Nevada Water Authority
Environmental Resources Department

Physical Address:
100 City Parkway, Suite 700, Las Vegas, NV 89106
Mailing Address:
P.O. Box 99956, Las Vegas, NV 89193-9956
Phone: 702.862.3457
Fax: 702: 691.5227



SOUTHERN NEVADA WATER AUTHORITY

100 City Parkway, Suite 700 • Las Vegas, NV 89106
MAILING ADDRESS: P.O. Box 99956 • Las Vegas, NV 89193-9956
(702) 862-3400 • snwa.com

October 11, 2011

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
Email: nvgwprojects@blm.gov

Dear Ms. Woods:

SUBJECT: CLARK, LINCOLN, AND WHITE PINE COUNTIES GROUNDWATER DEVELOPMENT PROJECT DRAFT ENVIRONMENTAL IMPACT STATEMENT COMMENTS

This letter provides the Southern Nevada Water Authority's (SNWA) formal public comments on the Clark, Lincoln, and White Pine Counties Groundwater Development Project (GWD Project) Draft Environmental Impact Statement (DEIS) and Draft Section 106 Programmatic Agreement. As the right-of-way (ROW) applicant, SNWA conducted a comprehensive review of the DEIS. SNWA provides comments on the following issues to provide additional information and perspective: (1) SNWA's continuing need for the GWD Project; (2) development of the groundwater model; (3) purpose of the programmatic National Environmental Policy Act (NEPA) analysis; and (4) the monitoring, mitigation, and management plan for Snake Valley. SNWA requests that this comment letter, attached errata comments, and referenced materials be included as part of the administrative record in this matter.

I. SNWA's Continuing Need for the GWD Project

In 1991, seven southern Nevada water and wastewater agencies formed SNWA for the specific purposes of acquiring and managing water resources for southern Nevada, constructing and managing regional water facilities, and promoting responsible water use. SNWA's formation was driven by a water resource crisis in the making as experts predicted that decades of unprecedented population growth and associated water demand would outstrip finite Colorado River water supplies, which provide 90% of southern Nevada's supply, by the mid-1990s. Through a series of aggressive conservation efforts lead by SNWA and its member agencies, southern Nevada was able to decrease its water demand by nearly a third, from approximately 350 gallons per capita per day (GPCD) in 1990 to 250 GPCD in 2008. These important conservation efforts were effective in reducing water demand, but could not ultimately satisfy future water demand as southern Nevada's population continued to burgeon. The need to develop other sources of supply was brought into sharp focus in the last decade as persistent

SNWA MEMBER AGENCIES

Big Bend Water District • Boulder City • Clark County Water Reclamation District • City of Henderson • City of Las Vegas • City of North Las Vegas • Las Vegas Valley Water District

drought on the Colorado River lowered Lake Mead to levels that threatened to leave one of SNWA's two existing water intake structures inoperable.

A. SNWA's Water Resource Portfolio

In 1996, in an effort to identify and begin development of potential water resources, SNWA adopted its first Water Resource Plan. Since 1996, the Water Resource Plan has been revised eight times. The 2009 Water Resource Plan identifies a portfolio of potential water supplies. The portfolio approach gives SNWA a number of water resource options and the flexibility to bring those resources online as needed. SNWA's water resource portfolio includes options for maximizing the use of Nevada's Colorado River allocation, including water banking and intentionally created surplus (ICS).

In fact, SNWA has already banked water under agreements with both Arizona and California, and has pursued ICS projects such as funding a portion of the Brock Reservoir Project, which will capture Colorado River flows that would otherwise flow unused into Mexico and will allow SNWA to exchange that water for water in Lake Mead. Other water resource options in SNWA's portfolio that rely on the Colorado River include water exchanges of desalinated ocean water or conservation of agricultural water downstream in California.

The development of in-state water resources is a necessary component of the Water Resource Plan. In 1989, the Las Vegas Valley Water District filed 148 water rights applications for unappropriated water in Clark, Lincoln, Nye, and White Pine counties. A portion of those applications were for groundwater in the five groundwater basins proposed for development as part of the GWD Project. The primary advantage of developing an in-state source of supply is that it will be independent of the Colorado River, enhancing the reliability and security of southern Nevada's water resources.

B. Water Conservation Is Not Enough to Meet Projected Demand

In addition to maximizing efficient use of Nevada's Colorado River supply and pursuing in-state water resources, SNWA continues its commitment to water conservation. In 2009, SNWA and its member agencies established a new conservation goal of reducing water use from 250 GPCD to 199 GPCD by 2035. Meeting this ambitious goal will ultimately reduce southern Nevada's projected water use by 276,000 acre-feet per year (afy) by 2035 (SNWA, 2009: Water Resource Plan 09, page 39). However, because southern Nevada has already reduced its demand by one-third over the last 20 years, additional water savings are increasingly challenging. This process, known as demand hardening, results when water use has already been diminished and users near the limits of either their ability or their willingness to further reduce water use (SNWA, 2011: *SNWA's Conservation Program*, Presentation to the Office of the Nevada State Engineer, Exhibit SNWA_004). Despite the challenges, SNWA anticipates meeting the 199 GPCD goal through a combination of initiatives, including water pricing, incentives, regulation, and education (SNWA, 2009: *SNWA's 2009-2013 Conservation Plan*).

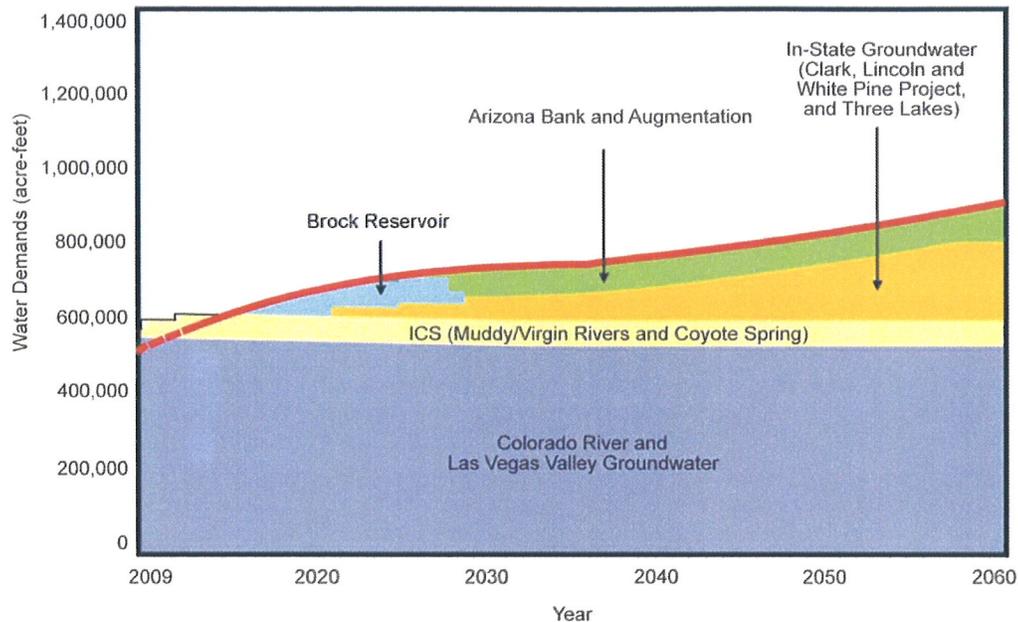
Groups like the Pacific Institute and Water Resource Advocates suggest that SNWA can do even more to reduce demand and that it is possible to meet all of southern Nevada's water

needs through conservation. These opinions, however, are based on erroneous assumptions that disregard pertinent data. For example, in their 2007 report “Hidden Oasis: Water Conservation and Efficiency in Las Vegas,” the Pacific Institute and Water Resource Advocates maintain that southern Nevada could save 12,000 afy by equipping homes with 1.6 gallon per flush toilets, rather than the standard 3.5 gallon per flush toilets. This water savings, however, is inflated because it assumes that every home in Las Vegas currently uses 3.5 gallon per flush toilets, when in fact, since 1994, all new homes in Las Vegas (which accounts for 61% of homes) were equipped with 1.6 gallon per flush, or lower, toilets (SNWA, 2011: *Rebuttal Report of Water Conservation and Efficiency in Southern Nevada, Presentation to the Office of the Nevada State Engineer*, Exhibit SNWA_395, page 3-4).

In fact, while conservation remains a critical component of SNWA’s strategy for ensuring a sufficient source of supply for southern Nevada, it is not enough. The population growth projections contained in the DEIS from the University of Las Vegas—Center for Business and Economic Research (UNLV-CBER) and the Nevada State Demographer show a short-term slowing of growth due to the weakened economy, but estimate population growth between 77,000 and 1.16 million by 2030 (DEIS, page 3.18-9).

More recent demographic data reach the same conclusion. Notably, this year Robert Lang, an urban expert at the University of Nevada-Las Vegas, told USA TODAY that “[d]espite all the pronouncements of Las Vegas’ demise, it has retained most of its population growth from the decade and ensured that the state of Nevada will gain a congressional seat.” Haya El Nasser, “Hard Times Don’t Stop Las Vegas Influx,” USA TODAY (Mar. 1, 2011). Growth in southern Nevada now makes Henderson (with a population of 257,729) the second largest city in Nevada, overtaking Reno in population. Updated forecasts based on the 2011 UNLV-CBER data show that Clark County’s population is predicted to grow at a rate of 2.4 % in both 2012 and 2013. By 2030, population in Clark County should grow from approximately two million in 2011 to 2.79 million, adding approximately 800,000 people (UNLV-CBER, 2011: *Population Forecasts: Long-Term Projections for Clark County, Nevada 2011-2050*, page 3).

As a responsible planning agency, SNWA must prepare for this range of population projections based on the best available demographic forecasts and data. SNWA assumes a conservative approach when considering population projections for water-demand forecasting, planning for the upper range of projected growth (SNWA, 2011: *Water Development and Diversification: Southern Nevada’s Past, Present, and Future Water Needs*, Exhibit SNWA_189, page 5-3). Even if SNWA is able to achieve water conservation goals of 199 GPCD and beyond, the gap in supply exceeds the current and future contribution of conservation alone, as the figure below illustrates (SNWA, 2009: *Water Resource Plan 09*, Figure 28). SNWA must acquire and develop additional resources to meet project demands, including in-state groundwater.



SNWA Water Demand and Future Resources 2009 – 2060

*Demand curve represents 199 GPCD

SNWA cannot take chances with southern Nevada's future by relying on unproven and unprecedented conservation or merely hoping water demand will not surpass supply. Without the development of in-state groundwater resources, SNWA will be unable to meet projected demands in 2028, and possibly earlier if drought conditions reduce supplies on the Colorado River (SNWA, 2011: *Water Development and Diversification: Southern Nevada's Past, Present, and Future Water Needs*, Exhibit SNWA_189, page 6-5).

C. SNWA's Needs and Goals for the GWD Project

To meet southern Nevada's long-term needs, SNWA must develop additional water supplies. To that end, SNWA proposes to develop 8,000 afy of its existing groundwater rights and 174,655 afy pursuant to 1989 groundwater rights applications that may be permitted by the Nevada State Engineer in the five project basins. SNWA's need for the GWD Project arises from two inescapable facts: (1) the Colorado River, which provides 90% of southern Nevada's water supply, is a finite, over-committed resource, susceptible to drought; and (2) southern Nevada's population and associated water demand is predicted to grow beyond SNWA's water supply over the next 30 years (*see figure above*). Thus, SNWA's two equally important needs and goals for the GWD Project are:

- (1) To diversify its water resources against potential threats by developing an additional source of supply other than the Colorado River; and

- (2) To meet current and future projected water demands of its member water agencies.

The importance of securing a sufficient and reliable source of water supply for southern Nevada cannot be understated. In a recent report, Applied Analysis found that “[a]n imminent water resource shortage or water rights crisis in southern Nevada – whether perceived or in fact – would severely undermine the region’s ability to attract new industries, organization, and residents or garner additional investment by existing businesses.” (Applied Analysis, 2011: *Potential Impacts of Water Resource Uncertainty in Southern Nevada*, Exhibit SNWA_022, page 1). Economic concerns in southern Nevada weigh heavily on the entire state, which relies on the Las Vegas economy for 76% of state tax revenues (Applied Analysis, 2011: *Analysis of Nevada General Fund Revenue and Expenditure Distribution*, Exhibit SNWA_032, page 2). Southern Nevada’s economy, like so many other places across the country, has already been weakened. “[A] credible and substantial perceived or actual threat of water uncertainty may very well result in irreparable economic and fiscal consequences for the region.” *Id.* As part of securing sufficient and reliable sources of water supply, SNWA must also consider that some of its resources, such as the Brock Reservoir and Arizona Bank (see Figure above) are temporary and finite water supplies, which need to be replaced with permanent supplies.

Even if growth projections from experts at the UNLV and the Nevada State Demographer’s office overestimate southern Nevada’s future growth, SNWA’s need to reduce its reliance on the Colorado River remains a critical objective, given the unpredictable, variable, and long-term declining flow trends. It is now widely accepted that apportionments made in the early twentieth century under the Colorado River Compact overestimated the long-term available water supply (National Research Council, 2007: *Colorado River Basin Water Management: Evaluating and Adjusting to Hydroclimatic Variability*, page 95). Thus, the Colorado River is already over-subscribed even in periods of normal precipitation. Recent droughts and climate change are predicted to exacerbate shortage conditions on the Colorado River over the long-term (Bureau of Reclamation, 2011: *Managing Water in the West, Colorado River Basin Water Supply and Demand Study, Interim Report No. 1*, page ES-3; Bureau of Reclamation, 2011: *Managing Water in the West, SECURE Water Act Section 9503(c) - Reclamation Climate Change and Water 2011*).

A number of the water supply alternatives considered by BLM in the DEIS, some of which are already included in SNWA’s water resource portfolio, rely on Colorado River supplies and, thus, cannot meet SNWA’s need to diversify its water supply (SNWA, 2011: *Water Development and Diversification: Southern Nevada’s Past, Present, and Future Water Needs*, Exhibit SNWA_189, page 3-3). Though SNWA may pursue these resources, including desalination, over the long-term (if technical, political, and legal obstacles can be overcome), the development of in-state water resources through the GWD Project plays a critical role in SNWA’s ability to secure a reliable source of water for its member water agencies in the near-term.

II. Development of the Groundwater Model

The DEIS's impact analysis for a number of resources, including but not limited to water, vegetation, wildlife, and air, is supported by the Central Carbonate-Rock Province (CCRP) Model developed by SNWA for the DEIS under BLM's guidance. The model simulates predictions of the geographic extent and magnitude of drawdowns from the development of SNWA water rights and applications in the five GWD Project basins. Groundwater model development for the EIS process began in early 2005. The first iteration of the groundwater model was based on the FEMFLOW3D Version 2.0 platform, which simulates three-dimensional groundwater flow using the finite-element method. At the time, SNWA had recent experience with FEMFLOW3D Version 1.0 as it had been used in Nevada State Engineer water right hearings related to SNWA groundwater applications for Coyote Spring Valley. FEMFLOW3D Version 2.0 had been modified to improve the capability of the program to represent geologic framework complexities.

In 2005, BLM retained Poeter Engineering to independently evaluate FEMFLOW3D Version 2.0 as a tool to evaluate potential impacts for the GWD Project EIS analysis. Poeter Engineering concluded that while some changes from FEMFLOW3D Version 1.0 performed as intended, others were a work-in-progress based on limited documentation, missing outputs, and the difficulty encountered by the model in simulating geologic flow barriers other than vertical faults. In October 2006, based on the Poeter Engineering evaluation and recommendations made by BLM and other federal agencies to use a more publically available and understood modeling platform, SNWA switched from the FEMFLOW3D Version 2.0 model platform to the MODFLOW-2000 platform for the GWD Project. MODFLOW was originally developed by the U.S. Geological Survey in 1984 and compared to FEMFLOW3D, was more well-known, well-documented, and readily accessible to users. A key difference between MODFLOW and FEMFLOW is the representation of framework units as cubes, rather than pyramids.

Shortly after shifting to MODFLOW-2000, BLM convened its Hydrology Technical Team, which met for the first time in November 2006. The technical team consisted of experts from BLM, U.S. Geological Survey, EIS contractor and subconsultants, and also included an observer from the Nevada State Engineer's office. Under the guidance of BLM's technical team, model development underwent several iterations resulting in the "Transient Numerical Model of Groundwater Flow for the Central Carbonate Rock Province" in November 2009 (DEIS, Groundwater Model Documentation disc). BLM consulted its technical team and coordinated with SNWA at numerous decision points, including baseline data compilation, conceptual model development, numerical model development, and the simulations for groundwater development scenarios. Coordination and consultation between SNWA and BLM's Hydrology Technical Team consisted of at least 36 formal meetings or conference calls between late 2006 and early 2010. Dozens of subgroup meetings were also held to assist in developing and calibrating the model. During this period, five iterations of the model were developed, including:

- April 2008 – the successful translation of the FEMFLOW3D Version 2.0 to MODFLOW-2000.

- August 2008 – an uncalibrated, working groundwater flow model without the stream flow routing module.
- January 2009 – a calibrated, working model that included forward, sensitivity, and parameter estimation runs.
- August 2009 – a steady-state and transient calibration of the CCRP groundwater flow model.
- November 2009 – the final CCRP calibrated steady-state and transient forward model, final optimization run, and final sensitivity run.

In addition to the Hydrology Technical Team, BLM sought input from the cooperating agencies throughout the model development process. Six meetings or workshops were convened from 2005 to 2009 to provide cooperating agencies opportunity to review and provide feedback on the model development process and draft reports. Cooperating agencies were active in providing input on the adequacy of data collection activities and preliminary reports. After discussion with and as directed by BLM's Hydrology Technical Team, SNWA revised the model and model reports to incorporate this feedback. The review process also involved more traditional formal peer reviews of draft or preliminary reports and interim model work products, including review and testing of model inputs and outputs. A more detailed discussion of the development of the groundwater model is provided in F.A. D'Agnese, 2011 (*A Summary of the Development of the Central Carbonate-Rock Province Groundwater Flow Model: Presentation to the Office of the Nevada State Engineer*, Exhibit SNWA_087).

The CCRP model currently provides the best available representation of the regional groundwater flow systems in and around the five GWD Project basins. It is a useful tool for estimating the potential regional-scale impacts of SNWA's proposed groundwater development. As additional data are developed subsequent to the Record of Decision for the mainline facilities, the model will be refined in an adaptive process with BLM and other federal agencies to continue to improve its predictive capabilities. Future tiered NEPA may include these updates to the regional groundwater model, additional modeling, or site-specific hydrologic analysis, depending upon the availability of geologic and hydrologic information and areas or issues of concern.

III. Purpose of the Programmatic NEPA Analysis

The DEIS describes two levels of NEPA analysis for the GWD Project (*see* DEIS, Section 1.3.3). First, the DEIS analyzes the site-specific impacts of granting SNWA's currently pending ROWs request for the main GWD Project pipeline, associated power conveyance, and other facilities. Second, future groundwater development facilities (groundwater production wells, collector pipelines, distribution power, and other facilities) are analyzed at a programmatic level. This dual approach to impact analysis was necessary because SNWA cannot currently identify the site-specific location and exact number of future facilities required to develop its groundwater resources.

The specific number and location of future wells and collector pipelines will be based on a number of factors, the most important of which is the quantity and location of water rights the Nevada State Engineer will permit to SNWA. The number and location of groundwater production wells will be dictated by where water rights are permitted and how much water is permitted for development. Other variables that will affect the final well locations include geology, hydrology, well interference studies, environmental issues, existing senior water rights, and the proximity to the main and lateral pipelines (SNWA, 2011: *Conceptual Plan of Development*, page 1-3). SNWA will propose well locations that are most likely to yield sufficient water production at the least cost to SNWA while minimizing impacts to environmental resources, land use, and senior water users. Such future groundwater production locations must be approved by the Nevada State Engineer and the BLM.

SNWA's decision to request a ROW for the main and lateral pipelines before the Nevada State Engineer permits water rights is based on necessity and practicality. First, when SNWA decided to pursue development of its in-state water rights applications in 2004, it was facing an imminent water shortage as demand continued to increase in the face of the most severe drought on the Colorado River in recorded history (SNWA, 2011: *Water Development and Diversification: Southern Nevada's Past, Present, and Future Water Needs*, Exhibit SNWA_189, page 2-2). Given the lengthy Nevada State Engineer water right and BLM ROW permitting processes, it was necessary to pursue both processes simultaneously. In this way, SNWA could obtain ROW access for the main pipeline and other facilities, and begin facility design immediately upon receipt of water right permits, allowing for efficient and timely project completion. Further, information collected and developed for the programmatic NEPA review of future facilities may be helpful to determine where SNWA ultimately proposes groundwater production wells.

The same concern about project timing holds true today. If SNWA waited to request rights-of-way (ROWs) for the main and later pipelines until the Nevada State Engineer permitted water rights in all the Project basins, exploratory drilling was conducted, and all production well locations are identified would add many years to the GWD Project, resulting in the GWD Project not being available when it is needed. Thus, a multi-staged approach to approval of the GWD Project is both essential, practical, and comports with NEPA (40 C.F.R. § 1508.28; BLM, National Environmental Policy Handbook H-1790-1 § 5.2 [2008]).

Though the exact number and location of future facilities cannot currently be identified, the programmatic NEPA analysis relies on best-professional judgment-based assumptions, reflected in the proposed action and alternatives, which disclose the full range of potential effects associated with construction and operation of future facilities as well as groundwater withdrawals. NEPA regulations encourage this type of programmatic, tiered analyses where an initial decision must be made before all the site-specific details of subsequent project phases can be known (40 C.F.R. § 1502.20). As water rights are permitted and SNWA identifies production locations, SNWA will consult with the BLM and apply for site-specific ROWs for the groundwater development facilities, which will require their own NEPA review. These NEPA documents are expected to tier to the programmatic analysis in this EIS, allowing BLM to focus on those issues and impacts relevant to and ripe for review at each stage of the GWD Project.

SNWA supports as the selected alternative in the Final EIS and Record of Decision, the “proposed action” to grant approval of ROW for “the main pipeline and associated operational facilities (power transmission lines, pump stations, etc.)” (see DEIS page 2-5 and 2-19, Figure 2.5-1). These facilities are needed for the future development of water rights that may be permitted by the Nevada State Engineer in the five groundwater development basins. Approval of the Proposed Action would not include ROW grants for “future facilities for groundwater development including the number and locations of wells, and the specific lengths and routes of collector pipeline and distribution powerlines [which] are presently unknown” (DEIS page 2-5). SNWA notes that the DEIS provides that “when plans for future ROWs and associated facilities are finalized and submitted to BLM by SNWA,” BLM will “conduct NEPA reviews of the specific ROWs and facilities required to implement groundwater development (wells, collector pipelines, electrical powerlines, access roads)” (DEIS page 2-5). SNWA understands that in these subsequent tiered NEPA reviews, BLM will require SNWA to submit updated monitoring, modeling, baseline information, and other data relevant to BLM’s review of the future facilities. SNWA further understands that BLM’s subsequent NEPA review of such additional detailed information could result in reasonable limitations and restrictions to minimize damage and adverse effects to federal resources. These limitations and restrictions would arise during the NEPA process and from the processes in the stipulation agreements for Spring, Cave, Dry Lake, and Delamar Valley to which BLM is a party (see DEIS page 2-5) and the processes contemplated in the 3M Framework Plan for Snake Valley (discussed below). “Through these same authorities and agreements, the BLM may request and enforce changes in groundwater pumping regimes to protect water dependent natural resources on the BLM-administered public lands.” (Id.) Such limitations and restrictions could arise on a geographic or individual well basis, and could include measures such as geographic redistribution of groundwater withdrawals; reduction or cessation of groundwater withdrawals; provision of consumptive water supply requirements, augmentation of water supply for federal rights and resources, and other measures.

IV. Monitoring, Mitigation and Management Plan for Snake Valley

DEIS Appendix B describes the monitoring, mitigation, and management plan for Snake Valley (Snake Valley 3M Plan). While the future 3M Plan may include many, if not all, of the components and details included in that discussion, SNWA recommends that Appendix B be recast as a 3M “Framework” Plan to describe the perspective of current BLM decisionmakers regarding the purpose and likely components of the 3M Plan to be developed prior to the development of the Snake Valley water rights, which many not occur for a decade or more. SNWA also notes that prior to any withdrawal and transbasin diversion of water resources from Snake Valley, the Lincoln County Conservation, Recreation, and Development Act (LCCRDA) of 2004 (Public Law 108-424) requires the completion of an agreement between the State of Nevada and the State of Utah to govern the division of water resources of interstate groundwater flow systems that will allow for the maximum sustainable beneficial use of the water resources and protect existing water rights (LCCRDA § 301(e)(3)). Once that bi-state agreement has been finalized, it likely will provide additional details for inclusion into the Snake Valley 3M Plan. Moreover, as a practical matter, without a concrete proposal for development of groundwater rights in Snake Valley (which also requires approval by the Nevada State Engineer), the details of the Snake Valley 3M Plan cannot be ascertained. Accordingly, SNWA recommends that

Ms. Penny Woods
October 11, 2011
Page 10 of 10

Appendix B be recast as a "Framework" Plan, which describes concepts and components of the future Snake Valley 3M Plan, but does not purport to constitute the Snake Valley 3M Plan itself, which will be established in the future based on concrete proposals and additional information.

Thank you for considering SNWA's comments on the GWD Project DEIS. If you have any questions about these comments, please contact Lisa Luptowitz at (702) 862-3789.

Sincerely,



Zane Marshall
Director, Environmental Resources

ZLM:LML:df

Attachment

c: John Entsminger, Senior Deputy General Manager
Rick Holmes, Deputy General Manager, Engineering/Operations

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

General comments on the EIS, individual chapters, and other materials.	
1.	<p>The acreage numbers for the project right-of-way that are described in the DEIS are slightly incorrect due to differing GIS calculations (31 acres were included in the DEIS for an access road that is actually the existing South and North Poleline Roads in north Delamar, and thus should be deleted). SNWA has confirmed with the BLM the following acreage totals:</p> <p style="padding-left: 40px;"><u>Proposed Action and Alts A-C</u> total acreage is 12,272 acres. <u>Alt D</u> total acreage is 8,812 acres. <u>Alt E</u> total acreage is 10,665 acres.</p>
2.	<p>The acreage numbers described in the DEIS for the groundwater development areas are slightly incorrect. SNWA has confirmed with the BLM the following acreage totals:</p> <p style="padding-left: 40px;"><u>Proposed Action</u> acreage for groundwater development areas ranges from 3,589-8,410 acres. <u>Alts A and C</u> acreage for groundwater development areas ranges from 2,068-4,814 acres. <u>Alt B</u> acreage for groundwater development areas is 4,664 acres. <u>Alt D</u> acreage for groundwater development areas ranges from 2,512-4,005 acres. <u>Alt E</u> acreage for groundwater development areas ranges from 1,753-4,079 acres.</p>
3.	<p>The DEIS describes estimates for each alternative that approximately 67% of the estimated ROWs for future facilities would be permanent disturbance, with 33% temporary disturbance. The assumptions used for this estimate should be explained. Permanent disturbance, as described in the DEIS, would be areas with above-ground facilities that would not be revegetated (see e.g., page 2-35). Thus, permanent disturbance is not the same as the permanent ROW. For the future facilities, only well sites, pumping stations, access roads, power pole sites, and electrical substations would be permanent above-ground facilities. Pipelines, staging areas, and other temporary ROW would be revegetated. Based upon the facilities and acreages described in SNWA's Conceptual Plan of Development, a more reasonable estimate of permanent disturbance for future facilities would be less than 15%.</p>
4.	<p>Please correct the miles of unpaved access road identified for the Proposed Action and Alternatives A through C. The DEIS identifies 97 miles (existing) and 267 (new), which should be 85 and 200, respectively. Update throughout document.</p>
5.	<p>The DEIS states in several areas that the groundwater development areas overlap into non-pumping basins, USFS land, Utah, private agricultural land, and BLM VRM Class I area. SNWA has provided shapefiles to BLM which confirm that the groundwater development areas do not overlap into these areas.</p>
6.	<p>The DEIS states that the main pipeline overlaps into Department of Defense land at the southern end of the project. This is a pinch point that SNWA had surveyed to ensure that the right-of-way for the main pipeline did not overlap into Department of Defense land. The results of the survey (conducted by PBS&J August 25, 2008) shows that the right-of-way for the main pipeline will be within State lands. This information was provided to the BLM.</p>
7.	<p>Please check rounding throughout the document, and provide formulas used to develop the calculations where possible.</p>
8.	<p>In Sections 3.5, 3.6 and 3.7, in sections pertaining to Applicant-Committed Measures, please reference all four monitoring plans related to the Spring Valley and DDC Stipulations: Biological Monitoring Plan for the Spring Valley Stipulation (BWG 2009); Spring Valley Hydrologic Monitoring and Mitigation Plan (Hydrographic Area 184) (SNWA 2009b); Biological Monitoring Plan for the DDC</p>

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

	Stipulation (BRT 2011); and Hydrologic Monitoring and Mitigation Plan for Delamar, Dry Lake, and Cave Valleys (SNWA 2009c); and add SNWA (2009b and 2009c) to the reference list. [Note: The DDC monitoring plans are no longer in preparation – they are final documents.]
9.	In Section 3.6, in sections pertaining to Applicant-Committed Measures (esp. re: A.5.55 and A.5.56), please add that SNWA will continue to support the Greater Sage-Grouse Conservation Plan for the Bi-State Plan Area of NV and Eastern CA (2004); Greater Sage-Grouse Conservation Plan for Nevada and Eastern California (2004); BLM National Sage-Grouse Habitat Conservation Strategy (2004); NDOW Nevada Sage-Grouse Conservation Project (2007); Lincoln County Sage Grouse Conservation Plan (2004); and the White Pine County Portion (Lincoln/White Pine Planning Area) Sage Grouse Conservation Plan (2004).
10.	Please include lists of Appendices, Appendix tables, and Appendix figures in the Table of Contents.

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
Executive Summary			
ES-6			In Section 2.3, the final paragraph describes BLM’s approval process for site-specific construction plans after the ROD is approved. Clarify that these site-specific plans are for construction within the ROW analyzed under this Tier I NEPA analysis and no additional NEPA review will be required prior to authorizing notices to proceed.
ES-7	3	1-3	Suggest replacing first sentence in Section 2.5 describing the concept to of “tiering” with the regulatory definition at 40 C.F.R. § 1508.28—“Tiering refers to the coverage of general matters in broader environmental impact statements with subsequent narrower statement or environmental analyses incorporating by reference the general discussion and concentrating solely on the issues specific to the statement subsequently prepared.” Further, “[t]iering . . . is appropriate when it helps the lead agency to focus on the issues which are ripe for decision and exclude from consideration issues already decided or not yet ripe.”
ES-11	2	1	The number of “tribally sensitive sites” (77 sites) in the Executive Summary, Page ES-11, Section 2.12, paragraph 2, line 1, conflicts with the number of potential Traditional Cultural properties, (i.e., 76 sites) identified on page 3-17.12, paragraph 2, line 1. Suggest revising in ES to read “Seventy-six potential traditional cultural properties were identified . . .”
ES-12	Last line of Section 2.12		Make clear whether the PA defines procedures for discoveries of eligible historic properties, i.e., eligible for listing on the NRHP, or just historic properties.
ES-14	Table ES-3	row 9, col.1	Change power requirements “74” MW to “97” per table 2.6-2 page 2-46
ES-17	2	1	Second paragraph, first sentence needs a period between “areas” and “Plant” for “avoidance areas. Plant and topsoil”
ES-18	Figure ES-7	1 1	Change “67-kV” power pole to “69-kV”
ES-22			Add a summary of the impacts resulting from the construction and operation of the main pipeline alignments on “Geologic Resources.” Such summary is currently missing from the DEIS Executive Summary.
ES-22			Add a “See Section _.” heading to all summaries. Several headings are missing.
ES-25			First bullet in Cultural Resources: “effects to National Register of Historic Places-sites” should be “effects to sites eligible for the National Register of Historic Places.” The requirements of the NHPA apply to eligible sites, not merely listed sites.

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
ES-25	5	1 - 2	Illegal collection and vandalism is an on-going issue on most public lands. Suggest rephrasing the sentence to, “Potential illegal collection of artifacts or vandalism to resources <u>may increase</u> as a result of improved access and the presence of construction crews.”
ES-25	6	1-2	Language is not accurate per Section 106 and NRHP. Suggest rewriting to: “Potential short- and long-term effects to historic properties of cultural and religious importance, and sacred sites, could occur during the construction period.”
ES-33	2	1	In the second paragraph of Section 3.12, the characterization of projects considered in the cumulative impact analysis as “interrelated” is incorrect. The criteria for consideration of actions in the cumulative impact analysis is that they have impacts overlapping in time and space with impacts of the proposed action or alternatives. The actions need not be “interrelated.” Suggest replacing “interrelated projects” with “projects with overlapping impacts considered in the cumulative impact analysis.”
Chapter 1 Purpose and Need for this Federal Action			
1-3			Section 1.3 should be titled “Regulatory Framework,” not “NEPA Framework,” as it encompasses requirements under FLPMA, LCCRA, and SNPLMA.
1-7	2	3	The statutory citation in the first sentence of section 1.4 should be to NRS § 533.370.
1-10	Table 5-1		In Table 1.5-1, the USFWS required “agency action” is incomplete. Consider including a sentence describing USFWS responsibility in the BiOp to determine whether the proposed action will jeopardize a listed species or destroy or adversely modify its designated critical habitat, the requirement that USFWS provide reasonable and prudent measures in the event of a no jeopardy determination, and the requirement that USFWS provide reasonable and prudent alternatives (if any exist) in the event of a jeopardy determination.
1-10	Table 1.5-1		Remove reference to Section 10 in the USFWS row. Add “Bald and” to “Golden Eagle Protection Act.”
1-10	Table 1.5-1		In the USFS row, change “Issue Notices to Proceed” to “Consider issuance of Notices to Proceed”.
1-12	3	1	The citation to NRS § 704 in Section 1.6.1 is incomplete.
1-12	1	8	Replace with the correct abbreviation which is "LVVWD"
1-12	Figure		The figure titled: Water Conservation vs. Population Growth is confusing: the figure is not numbered, is not referenced in the text, it does not show population figures prior to late 2000s, the dots are confusing. Recommending fixing the figure or deleting it.
1-13	1	5-7	The sentence indicates that adjustments to long-term population growth forecast used in the SNWA Resource Plan are discussed in Section 3.18, Socioeconomics and Environmental Justice. In reviewing section 3.18, there is no discussion about the long-term population forecast. Recommending referencing Appendix A (which is SNWA Water Resource) Plan). Specifically, the discussion about the adjustments is found on Water Demand Forecast section of the SNWA Water Resource Plan on page 38-39.

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
1-13	4	2	The year 2009 should be replaced with 2008 as indicated in the SNWA Resource Plan.
1-14	3	1-4	Incorrect reference to the year 2020. The 2002 SNWA Water Resource Plan was developed prior to the onset of the drought and demonstrated the SNWA anticipated meeting demands using interim surplus Colorado River water through 2016. Recommending changing the year 2020 to 2016 and deleting the reference to Appendix A and adding reference to 2002 SNWA Water Resource Plan.
1-14	5	1-4	The first sentence in this paragraph is incorrect, and this statement about attempting to modify the Colorado River Compact is an inaccurate representation. Suggest the following text: The other Colorado River Basin states have expressed the view that Nevada must develop in-state resources before attempting to further pursue Colorado River resources above Nevada's basic apportionment. The SNWA Water Resource Plan states current and possible future conditions in the Colorado River necessitate development of in-State groundwater resources to protect the community from drought and shortage impacts to preserve essential municipal water supplies, and meet future demands. [see: Page 43 and 49 SNWA 2009 Water Resource Plan]
Chapter 2 Description of the Proposed Action and Alternatives			
2-17	Table 2.5-1		See above general comment that none of the project will overlap Department of Defense land.
2-23	Figure 2.5-4		67-kV power pole should be 69-kV
2-24	Table 2.5-4	7	"Reduction site", should be "Reducing Station site"
2-26	4	2	Delete "sodium chlorine". As identified in SNWA's Conceptual Plan of Development "sodium chloride (salt)" will be used on site.
2-29	7		Suggest that a construction milestone table be provided, similar to the ones provided for Alternatives D and E (Tables 2.6-13 and 2.6-19). This schedule is included in SNWA's Conceptual Plan of Development.
2-33	3	start	Suggest describing the tiered NEPA approach once again at the start of Section 2.5.2 Future Facilities for clarity.
2-35 and 2-36	Last paragraph and first paragraph		See above general comment regarding estimates of permanent and temporary disturbance for future facilities in the groundwater development areas.
2-48	1		Combine paragraphs 1 and 2 (delete space)
2-48	12-14	2	Correct the table number references.

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
2-51, 2-53, 2-56, 2-67, 2-76	Tables 2.6-6, 2.6-7, 2.6-9, 2.6-15, 2.6-20		See above general comment regarding estimates of permanent and temporary disturbance for future facilities in the groundwater development areas.
2-51	2	4	Table 2.6-1 should be 2.6-7.
2-53	1	2	Sections 2.5.1.5 should be 2.5.1.2
2-54	2	3	Sections 2.5.1.3 should be 2.5.1.2 2.5.1.6 should be 2.5.1.8
2-54	3	1	Table 2.6-2 should be 2.6-3
2-54	3	2	Table 2.6-3 should be 2.6-4
2-55	Figure 2.6-4		This figure is incorrect. The maximum amount of pumping under Alternative C is 114,755 afy, but the figure shows maximum pumping around 155,00 afy.
2-59	4	2	Section 2.5.1.4 should be 2.5.1.3
2-61	3	3	Revise “Regulating tanks and pumping stations could be downsized <u>to</u> approximately 20 percent of their capacity” to read “Regulating tanks and pumping stations could be downsized <u>by</u> approximately 20 percent of their capacity”. (underline added only for emphasis in comment)
2-63 2-64	Table 2.6-13	4th column	The finish dates in this column are one year too early. See SNWA’s Conceptual Plan of Development Table 4-1.
2-73	Table 2.6-19		Some facilities for Alternative E are missing from this table. Add: Spring Valley South Lateral, Q2/2017, Q3/2019 Spring Valley North Lateral, Q3/2019, Q1/2020 Spring Valley North Pumping Station, Q4/2018, Q1/2020
2-90	4	7	Section 2.1.1 should be 2.9.1
2-92	Figure 2.9-1		Change map label “Alt. I” to “Opt. 4”.
2-93	Section 2.9.1.2		Clarify that the consideration of RFFAs for cumulative impact review varies by resource based the geographic extent of the potential direct and indirect impacts of the proposed action and alternatives on the resource.
Chapter 3 Affected Environment and Environmental Consequences			
3-7	Table 3.0-3		See above general comment regarding estimates of permanent and temporary disturbance for future facilities in the groundwater development areas.
Chapter 3.1 Air and Atmospheric Values			
3.1-2	5	2	The definition of PM ₁₀ and PM _{2.5} is incorrect. Suggest using same language as in Appendix F3.1 Table F3.1-1. “There are three common size classifications of PM: the largest size classification is total suspended

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
			particulates (TSP), the second largest classification is particulated matter with an aerodynamic diameter of 10 microns or less (PM ₁₀) and the smallest classification is particulate matter with an aerodynamic diameter of 2.5 microns or less (PM _{2.5}).”
3.1-4	4	1	The first sentence states “Monitoring results in Las Vegas have exceeded the 8-hour ozone standard for nonattainment.” This is not correct; there is no standard for nonattainment. Correct sentence by deleting the words “for nonattainment” from the sentence.
3.1-4	4	1 -3	Paragraph needs to be revised to reflect recent ozone attainment for Las Vegas Valley (HB 212) in Clark County. Suggest adding the following text to correct the paragraph: “Recently published in the Federal Register on March 31, 2011, USEPA determined that the Clark County 8-hr ozone nonattainment area has attained the 1997 8-hr ozone NAAQS. Although it may be years before USEPA formally re-designates Clark County as “attainment”, the area is now considered to be following a maintenance strategy and continues to meet the 8-hour ozone NAAQS.”
3.1-5	5	1	Two different climate regions are identified, however the Southwest and Great Basin Desert are not formal climate regions, but are geographic regions that have characteristic climate patterns. Rephrase to indicate geographic regional climate or use formal climate divisions. If use climate divisions, be consistent with the state climate divisions defined by the National Climate Data Center and used in Figure 3.1-5.
3.1-6 3.1-7 3.1-8, 3.1-9	Table 3.1-6 Table 3.1-7 Fig. 3.1-1, Fig 3.1-2, Fig 3.1-3, Fig 3.1-4		Provide data source information, including period of average for the two tables.
3.1-10	5	Heading	Change “Historic” to “Historical”
3.1-10	4	1	Replace “Regional Predicted Trends section” with “Historical Regional Climate and Predicted Future Trends sections”
3.1-11	2	3 and 4	Replace the sentence “The largest summertime changes ...” with “Seasonally, warming is likely to be the largest in the summer for the American Southwest”. The two sentences do not have the same meaning. The suggested revision represents the conclusions of Christensen et al. 2007.
3.1-12	1	2	Replace, “However, the predicted changes...” with “Seasonally, the largest warming occurred during the winter months at the three monitoring stations and not during the summer, which is when Christensen et al. 2007 predicted the most warming to occur. The winter warming is indicated in the 1 to 10 degree F increase in the annual average minimum temperatures for all three monitoring stations over the last 65 years (see Figure

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
			3.1-4).” The suggested revised text attempts to emphasize winter warming is observed in contrast to the summer warming that was predicted in Christensen et al. 2007.
3.1-12	3	4	Replace, “The Redmond Report (2009) suggests that ..” with “Using the Spring Valley data as a proxy, the Redmond Report (2009) concludes that ..” The suggested text indicates that Redmond considers the Spring Valley data as representative of expected conditions in the Great Basin, and is in line with regional trends from Christensen et al. 2007.
3.1-13	11	3 and 4	The sentence that site-specific information is required to “develop accurate emissions factors.” is not correct as emission factors are not “developed” for the DEIS. Suggest revising the sentence by replacing the words “develop accurate” with “select the appropriate”.
3.1-13	19		It might be helpful to revise the first sentence to state “One mile of pipeline and 1 mile of power line are under active construction per day.” This would be similar to descriptions elsewhere in the chapter, and may avoid confusion that one mile of pipeline can be completed per day.
3.1-14	6	5 and 6	The sentence, “The hours of operation were calculated based on assumptions regarding typical construction activities.” should refer to the assumptions stated on Page 3.1-13 which state, “At any given time, roughly a third of the equipment will be operating; thus, it is assumed that each piece of equipment operates 4 hours out of a 12-hour construction day.”
3.1-15	2	2	<p>The sentence “Portions of Clark County are either designated as nonattainment or maintenance for carbon monoxide (CO), PM10 and ozone.” is incorrect and needs to be updated with recent information as follows:</p> <p>On September 27, 2010, Clark County (Hydrographic area 212) was re-designated as attainment for carbon monoxide (CO) by EPA.</p> <p>March 31, 2011, EPA published a final rule determining that the Clark County, Nevada nonattainment area has attained the 1997 8-hour ozone NAAQS and that Clark County is currently attaining the ozone 8-hour standard.</p> <p>On August 3, 2010, EPA published a final rule determining that the Las Vegas Valley nonattainment area has attained the NAAQS for PM₁₀ by the applicable attainment date (December 31, 2006), and that the Las Vegas Valley nonattainment area is currently attaining the standard.</p> <p>Effectively, Clark County is maintenance for PM₁₀ and ozone and must continue to meet the standards until it is formally re-designated as attainment by EPA.</p>

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
3.1-15	2	7-9	Based on the updated information presented in the preceding comment, Clark County has no “nonattainment areas”, rather it has attainment and maintenance areas. Utah has nonattainment areas. Revise the sentence to read, “To conduct the conformity review, the impact of the project ROW construction and facility maintenance activities was assessed in the nonattainment and maintenance areas.” The nonattainment and maintenance areas are a small subset of the whole project area. Emissions in these nonattainment and management areas were calculated using the methodology described above for tailpipe emission and fugitive dust emissions, except calculations were limited to the nonattainment and maintenance areas.”
3.1-15	3		Please correct the section number reference for Geologic Resources to 3.2.1.2.
3.1-17	Table 3.1-8		In the table 3.1-8, the Total Tailpipe emissions for the CO2 equivalent (tons per year), the values in the column do not add up to totals.
3.1-20	3	4-6	Emission calculations for long term windblown dust from facility maintenance assumes a 50 percent control efficiency. However, once construction is complete, there would not be ongoing watering of access roads to control dust. Therefore construction control efficiencies should not be used to estimate long term maintenance emissions. Roads in Clark County will have to be stabilized in accordance with Clark County air quality requirements, and could include graveling, paving, and/or use of dust suppressants to minimize the loss of road fine materials.
3.1-20	8 (last)	1-4	Revise the text on conformity analysis to match the updated ozone and PM ₁₀ status (maintenance) for Clark County as per the above comment.
3.1-21	7		The estimate that 28.1 miles of pipeline can be constructed in less than 150 days is too aggressive. Suggest using approximately 320 days, which would be a construction progress similar to the assumption in the previous paragraph regarding construction progress in Las Vegas Valley. These would be active construction work days, for the purposes of air quality analysis, and are not the same as the entire construction contract duration. Please revise timeframe and air calculations accordingly.
3.1-21	8	5-9	Revise the Las Vegas Valley analysis by reflecting the current maintenance status.
3.1-23	Table 3.1-9		Table 3.1-9 presents only the “Long-term” particulate emission. Consider expanding the table to also include the short-term emissions. Similar change suggested for the same tables under the other alternatives (Tables 3.1-10 and 3.1-11).
3.1-26, 3.1-27	3, 5		As per the above comment, once construction is complete, there would not be ongoing watering of access roads to control dust. Therefore construction control efficiencies should not be used to estimate long term maintenance emissions. The emission factors should consider that the roads will be required to have long term

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
			stabilization such as graveling, paving, and/or use of dust suppressants, as required by Clark County air quality management.
3.1-26, 3.1-27	3, 5		Residual Impacts paragraph is missing for Alternatives D and E.
3.1-26, 3.1-29	4, 1		Revise the conformity analysis to match the updated ozone and PM10 status (maintenance) for Clark County as per the comments above.
3.1-36	2	1 to 3	Since a specific power source (Silverhawk Substation in Apex) was not identified in the text, please add this to the description. Also, please describe if this calculation utilized the emissions specifically related to that facility which is a natural gas power plant.
Chapter 3.2 Geologic Resources			
3.2-3	5	2	Suggest adding "Selection 6301" before Paleontological Resources Preservation Act.
3.2-6	4	3	"One of the depressions is located north of McCarran Airport" This statement is not true, the author may be mistaking the North Las Vegas Airport with McCarran Airport. In addition, the statement has no relevance to the paragraph and either needs to be deleted or fixed. See Bell, 2008.
3.2-6	5	1	"The Las Vegas Valley faults are preferred sites for fissuring to occur when the ground subsides." Statement taken out of context, not all Las Vegas Valley faults are preferred sites for fissuring. Suggest stating-Faults within fine grained sediments of the Las Vegas Valley are preferred sites for fissuring to occur when the ground subsides. (Bell 1983, 2003).
3.2-9	3	1-2	The Guimette and Simonson Dolomite formations are found within the surrounding mountain ranges and do not occur along the pipeline alignment. These areas would be High Potential occurrence localities if they were not within the alignment. Clarify that this formations are not with the APE for direct effects.
3.2-9	Paleo Reference	11	In the Paleontology Reference Box. Quaternary Period was traditionally assigned to 1.8 million to 10,000 years ago. Recent (after 2009), the Quaternary Period has been reassigned to the initial start of continental glaciations 2.6 million to 10,000 years ago. The Cultural Resource section uses 1.8 million years ago for the beginning of the Pleistocene/Quaternary for consistency, suggest using 1.8 mya.
3.2-9	4	2	Under Lacustrine Deposits. This statement is inaccurate. Abundant invertebrate fossils have never been documented in any of the valleys mentioned. Coyote Spring may have some outcrops of the Muddy Creek Formation (contains mostly vertebrate fossils), but this formation does not cross over the pipeline alignment.
		4	The basins mentioned may have significant paleontological resources, but so far they have not been identified in the Project area. For clarification, the statement, these lakes are known to have Pliocene and Pleistocene deposits (Scott 2008), is referring specifically to sediments, not fossils. Within the Project area there is potential

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
			for buried paleo resources based on the occasional find in other valleys in Nevada. Suggest referencing (see the Sunshine Locality in Long Valley, White Pine County) other known paleontological localities to infer that ancient lakes found in basins in the Project area have the potential for buried paleontological resources.
3.2-9	5	1	This statement is inaccurate based on the location of known paleontological sites in eastern Nevada. The sedimentary basins in Eastern Nevada provide a variety of paleontological resources including large and small. Suggest deleting it.
		2	The Muddy Creek Formation is east of the pipeline alignment and it does not cross the pipeline. Read the description in the next paragraph in this section below under the Muddy Creek Formation. “It extends northward from the Henderson area to Mesquite, with scattered exposures around Moapa.” The pipeline or the exploratory areas are not in this area.
		1	Delete the Panaca Formation from this discussion, as this Formation is not within the Exploratory Area or near the pipeline alignment. This Formation is east and north of Pioche and close to Panaca, NV (see Cathedral Gorge State Park: http://ww.sangres.com/nevada/stateparks/cathedralgorge.htm). Suggest reviewing a geological formation map of eastern Nevada to see where the Panaca Formation is located.
3.2-24	6	3	“Other hazards in karst terrain would include lost circulation of drilling fluids and potential groundwater contamination.” This statement misleads the reader. There are many instances that may cause lost circulation during the drilling operations other than karst terrain and this is why all drilling fluids and additives used by SNWA meet requirements outlined in Nevada NAC445A, NRS 534 and American Water Works Association Standard A100. These products will not cause the groundwater to be contaminated.
3.2-26	1	1	Suggest revising the language in measure GW-G-2 from void to cave. Voids are synonymous with interstices or pores whereas a cave is a natural cavity, recess, chamber or series of chambers and galleries beneath the surface of the earth, large enough for a person to enter. Definitions of these terms can be found in the Dictionary of Geological Terms, Prepared by the American Geological Institute.
3.2-32	2nd bullet	2	“Subsidence of the ground surface is likely to be permanent.” Studies by Bell in the Las Vegas Valley have shown subsidence to not be permanent. Land subsidence due to groundwater pumping is caused by over-pumping and consequent overdraft within a hydrographic basin. Las Vegas Valley experienced these conditions for decades due to unregulated pumping of the basin; however, an artificial recharge program was instituted in 1989 and the effects of land subsidence at first diminished, and have since reversed, as reported by Bell et al., 2008: “the North Las Vegas bowl exhibits a reversal of aquifer-system compaction since 2003, and comparable uplift

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
			rates are present in the Eglington fault area beginning in the 1992-1996 period. The elastic values estimated from PS data for these areas are in the range of 2.0-3.7 _{10_3} . These results are in agreement with those of Hoffman et al.”
3.2-41, 3.2-48	Table 3.2-13, Table 3.2-18		Table 3.2-13 indicates that for Alternative C, 1 square mile would be impacted by subsidence greater than 5 feet after full build out plus 200 years. Table 3.2-18 indicates that such impact is significantly less than that for other alternatives. Is the estimate of subsidence for Alternative C accurate? If so, please explain why subsidence for Alternative C is estimated to be so much less than subsidence for other alternatives.
Chapter 3.3 Water Resources			
3.3-1	2	5-6	Description of basin dimensions and elevations is not consistent with Section 3.2 (See page 3.2-1). Suggest revising overview statements to be consistent.
3.3-5	3	1	Figure 3.3.1-3 is described as showing perennial stream reaches and major regional springs that have been identified near the ROWs and groundwater development areas for the Proposed Action and alternatives. However, this figure includes more than just perennial streams and major regional springs. The figure also displays regional, intermediate, and local spring sites as well as what is termed “Additional Spring Locations” which are of unknown existence. Recommend clarifying this sentence to specifically state all of the hydrologic features shown on the map.
3.3-54	2		The statement as written is incorrect. Mass-balance mixing models are used to help validate flows, but they do not estimate flows. For example, where isotopic signatures are similar in two basins, such as southern Spring Valley and southern Snake Valley, the model would allow anything from 1 afy to 1,000,000 afy to flow from one valley to the other.

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
3.3-65			While the description of the Arizona Supreme Court’s “homeland” purpose ruling in the Gila River adjudication may be correct, it is not appropriate to include this discussion in this Nevada/Utah-based EIS. Arizona court decisions are not controlling in Nevada, Utah or Federal courts. This means that while tribes may have reserved rights to groundwater in Arizona, they may NOT have reserved rights to groundwater in Nevada or Utah. In fact, a recent Nevada Supreme Court decision suggests that tribes whose surface water rights have been adjudicated may NOT have reserved rights to groundwater (<i>Pyramid Lake Paiute Tribe of Indians v. Ricci</i> , 245 P.3d 1145, 1148-9, 126 Nev. Adv. Op. 48 (Nev. 2010). For accuracy and clarity, please add after the first paragraph under the “Federally Reserved Water Rights” heading, “Arizona Supreme Court decisions are not applicable to water rights in Nevada, Utah or Federal courts. Therefore, it is not clear whether tribes in Nevada or Utah have reserved rights to groundwater. However, a recent Nevada Supreme Court decision (<i>Pyramid Lake Paiute Tribe of Indians v. Ricci</i>) suggests that tribes in Nevada with adjudicated surface water rights do not have reserved rights to groundwater. Until Nevada and Utah courts undertake adjudications pursuant to the McCarran Act, the existence, location, and quantity of these water rights is unknown.”
3.3-91	Figure 3.3.2-1		On page 3.3-90 (bullets at bottom of page), Pine and Ridge Creeks are mentioned but are not shown in Figure 3.3.2-1.
3.3-115	Figure 3.3.2-10		SNWA currently does not have Permitted Points of Diversion in Cave, Dry Lake, and Delamar valleys as shown on this figure. Recommend changing legend to SNWA Application Point of Diversion.
Chapter 3.4 Soils			
3.4-5	Table 3.4-1		Indicate what the numbers in the table represent. Are they percentages, miles, acres, etc.? Please specify the units in the table.
3.4-6	1, 2	Last and first	The 2nd bullet point should be combined with the 1st bullet point.
3.4-6	4	1-3	The 1st sentence in the 4th bullet point should be revised to read “Low Reclamation (Revegetation) Potential includes soils that are saline, sodic or strongly alkaline/acid and have low potential for successful stabilization if disturbed.”
3.4-7	1	7-10	Change last sentence in 1st bullet point to read “...the soils in Groups 1 and 2 were characterized in this analysis as having severe wind erosion potential and representing the acreage most likely to erode.”
3.4-9	5	1	Suggest also including under Assumption that improved access roads and ancillary facility sites (pump stations, regulating tanks, reservoirs, water treatment facility etc.) will have gravel or pavement cover for soil stability, dust control, and weed control.
3.4-10	6	2-3	Please provide the acreage of prime farmland that will be permanently altered.

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
3.4-10	4	5-6	Hydric soils and droughty soils are identified in the table, but are not described in the following discussions. Please describe in discussions.
3.4-11 through 3.4-16	Tables 3.4.-2 through 3.4-4		The overall percentages of soils projected to be disturbed, that exhibit Low Revegetation Potential (LRP) characteristics are extremely high (83%, 86%, and 81%). However, according to the figure on page 3.4-7, significantly less than 80% of soils within the ROWs and construction areas are considered to be “LRP”. Please correct the apparent miscalculation. Furthermore, Table 3.4-3 in the ADEIS indicated that only 36% of the soils projected to be disturbed exhibit LRP characteristics. The percentage for each valley was significantly lower as well. The value 36% appears to be more representative of the true value according to the figure on page 3.4-7. Any changes to the percentages in the tables should also be reflected in the text.
3.4-13	10	5-6	Hydric soils and droughty soils are identified in the table, but are not discussed in the bullet items as the text indicates.
3.4-19	4	1	It would be helpful to list the contaminants of concern. This issue also does not appear to be further discussed in the analysis sections.
3.4-19	12	1-2	Change Dry Valley to Dry Lake Valley
3.4-19	12	3-4	Since hydric soils in these basins (Dry Lake and Delamar) are not likely to be greatly affected by the projected groundwater drawdown, it is assumed they were not used in the measurement of drawdown impacts to soils. Please confirm that is correct and provide a statement that clearly indicates that.
3.4-22	9	4	20% of 4,700 acres is 940 acres, not 960. Revise accordingly.
3.4-23	4	4	20% of 4,600 acres is 920 acres, not 930. Revise accordingly.
3.4-23	1	1	Insert “as under the Proposed Action” after “same ACMs”. Repeat for all of the Alternatives.
3.4-27	1	4	20% of 4,000 acres is 800 acres, not 820. Revise accordingly.
3.4-30	4	1	It would be helpful to list the contaminants of concern. This issue also does not appear to be further discussed in the analysis sections.
3.4-30	14	1,4	The cumulative surface disturbance effects should reference hydric soils, not vegetation communities. Change “vegetation communities” to “hydric soils”.
Chapter 3.5 Vegetation Resources			
3.5-1	4	5	In the 4th paragraph, change to “...for many of the vegetation types. Most of the vegetation types...”
3.5-4	1	4-5	Please reference “prior permit application” mentioned in 1st paragraph.
3.5-5	5	1-5	This paragraph is somewhat contradictory. Executive Order 13112 from February 3, 1999 defines invasive species as “an alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health, which is cited as the National Invasive Species Council 2001.” But the BLM considers plants invasive if they simply are introduced. Suggest providing a citation of the BLM’s consideration of what

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
			defines an invasive species, or eliminating the first sentence altogether. Additionally, the Executive Order would be a stronger citation than the National Invasive Species Council 2001.
3.5-5	2	4	Add “Animal and Plant Health Inspection Service 2000” cite to the References list (under 3.5 Vegetation Resources page 1).
3.5-5	6	4	Change from “...infestations of the following species are known to occur within 1,000 feet...” to “...infestations of the following noxious weed species are known to occur within 1,000 feet...”
3.5-6	7	1	States “Nine land cover types are mapped within the groundwater development areas (Table 3.5-3).” However, there are eleven land cover types listed in Table 3.5-3.
3.5-7	Table 3.5-2		Neither Meadow Valley sandwort (<i>Arenaria stenomeres</i>) or Nachlinger catchfly (<i>Silene nachlingerae</i>) are listed in Appendix F3.5, Table F3.5-4, starting on page F3.5-35. Since both species have suitable habitat within the project construction ROW they should also be listed in Table F3.5-4, Special Status Plant Species Potentially Occurring Within the Project Area.
3.5-7	Table 3.5-2		The “Status” for the following species does not match between Table 3.5-2 and Appendix F3.5, Table F3.5-4: Eastwood milkweed (<i>Asclepias eastwoodiana</i>), threecorner milkvetch (<i>Astragalus geyeri</i> var. <i>triquetrus</i>), Las Vegas buckwheat (<i>Eriogonum corymbosum</i> var. <i>nilesii</i>), rosy twotone beardtongue (<i>Penstemon bicolor</i> var. <i>roseus</i>), and white bearpoppy (<i>Arctomecon merriamii</i>).
3.5-7	Table 3.5-2		Neither Meadow Valley sandwort (<i>Arenaria stenomeres</i>) nor Nachlinger catchfly (<i>Silene nachlingerae</i>) are listed in Appendix F3.5, Table F3.5-4, starting on page F3.5-35. Since both species have suitable habitat within the project construction ROW they should also be listed in Table F3.5-4, Special Status Plant Species Potentially Occurring Within the Project Area.
3.5-7	Table 3.5-2		The status for the following species does not match between Table 3.5-2 and Appendix F3.5, Table F3.5-4: Eastwood milkweed (<i>Asclepias eastwoodiana</i>), threecorner milkvetch (<i>Astragalus geyeri</i> var. <i>triquetrus</i>), Las Vegas buckwheat (<i>Eriogonum corymbosum</i> var. <i>nilesii</i>), rosy twotone beardtongue (<i>Penstemon bicolor</i> var. <i>roseus</i>), and white bearpoppy (<i>Arctomecon merriamii</i>).
3.5-8	Table 3.5-4	8th row down	The species nomenclature is not consistent with NRCS Plants Database. Change “Blaine pincushion” to “Blaine fishhook cactus”. Revise throughout document.
3.5-9	Figure 3.5-2		Change “Source: Elmore et al. 2003” to “Source: Elmore et al. 2006”, as it is listed in the References section for Vegetation Resources.
3.5-10	Figure 3.5-3		Within the map change “Alt. H” to “Opt. 3”.
3.5-10 and 11	Figure 3.5-3 and 3.5-4		In the figure legends please either change “Basin Shrublands” to “Basin Shrubland ET Areas” (as in Figure 3.5-5), or add a layer name titled “ET Areas” above ag/basin shrub/playa/wetlandmeadow. [There are large acreages of shrublands outside of ET areas that are not shown on the map.]

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
3.5-13	5	5	Change "...(Moreo et al. 2007; Devitt 2008)..." to "...(Moreo et al. 2007; Devitt et al. 2011)...", as it is listed in the References section for Vegetation Resources.
3.5-14	1	4-6	The Rocky Mountain junipers at Shoshone Ponds are not "another small population", they are part of the southern population. Also, the northern population is part of the BLM-NV Swamp Cedar ACEC, and the southern population is part of the BLM-NV Shoshone Ponds ACEC.
3.5-15	Table 3.5-7	4th column	In the column heading "SNWA ET", the correct citation is SNWA 2007, not BIO-WEST 2007a. Please replace BIO-WEST 2007a with SNWA 2007 and update the Reference accordingly. Also, please add the citation to 3.5 Lit Cited: Southern Nevada Water Authority (SNWA). 2007. Characterization of Current Evapotranspiration. Current Conditions. File Geodatabase Feature Class.
3.5-15	Table 3.5-7		In the column "Combination of units for EIS display and analysis", the two rows for playa are listed as "No category". It appears that these should be "Playa", as shown in Figures 3.5-3 and 3.5-4.
3.5-15	Table 3.5-7		Please add a footnote for column "SNWA ET": Phreatophyte/Medium Vegetation encompasses shrublands with >20% cover within ET areas, and Bare Soil/Low Vegetation encompasses shrublands with <20% cover within ET areas.
3.5-15	3	1	Explain how playa was mapped and whether the USGS moist bare soil and playa categories were combined.
3.5-15	3	2	States "The SNWA ET areas were divided into six categories;...". However, there are ten rows in Table 3.5-7 or five different categories. Please change "six categories" to "five categories".
3.5-22	Table 3.5-8	Note at bottom **	States " * Species identified as facultative wetland (FACW) or facultative wetland (occur in wetlands 67 to 99 percent of the time) and obligate species occur in wetlands 99 percent of the time per the Region 8 National Wetlands Inventory Plant List (USFWS 1988)." However, according to the cited 1988 USFWS report suggest revising sentence to "Species identified as facultative wetland (FACW, occur in wetlands 67 to 99 percent of the time) or obligate wetland species (OBL, occur in wetlands >99 percent of the time) per the Region 8 National Wetlands Inventory Plant List (USFWS 1988)."
3.5-25	3	2	States "...would require 20 to more than 200 years for recovery..." However, Table 3.5-9 on page 3.5-24 lists a max of 200 years for recovery. Suggest changing text to "...would require 20 to 200 years for recovery..."
3.5-25	3	3	States "Approximately 64 acres of annual and perennial grassland and marshland..." Suggest changing to "Approximately 64 acres of annual invasive and perennial grassland and marshland..." since this is the information listed in Table 3.5-9 on page 3.5-24.
3.5-25	3	8	Change "...the Proposed Action." to "...the Proposed Action and Alternatives A through C."
3.5-26	1	18-21	The text states that the increase in Bromus sp. could alter the fire frequency which would have detrimental impacts on native vegetation; however page 3.5-1, paragraph 2 states that fire has not been an important ecological component of the Mojave Desert as the native perennial vegetation is relatively resistant to fire.

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
			Since it's unclear what future impacts may be, suggest changing the sentence "This would have detrimental impacts on native vegetation" to "This may impact native vegetation".
3.5-26	1	7-12	The assessment indicates that facilities would be located in several currently weed-free areas. The Risk Assessment for Noxious & Invasive Weeds (Appendix F3.5 Vegetation) includes "the pipeline spur route to Cave Valley" so suggest changing statement to "The assessment indicates that facilities...Fortification Range; the pipeline spur route to Cave Valley; and the main...."
3.5-26 Side bar	4	1-5	States "A.1.85 Organic products used during construction, restoration, operations, maintenance, or for stabilization will be certified weed free." However in Appendix E, page A-15, ACM A.1.85 states "Any hay, straw, or other organic products used during construction, restoration, operations, maintenance, or for stabilization will be certified free of plant species listed on the Nevada noxious weed list or specifically identified in the BLM approved Integrated Weed Management Plan for the project." Therefore suggest revising the former statement to A.1.85 Organic products used during construction, restoration, operations, maintenance, or for stabilization will be " certified free of plant species listed on the Nevada noxious weed list or specifically identified in the BLM approved Integrated Weed Management Plan for the project."
3.5-28	5	8	The text references research that indicates "Saguaros and ocotillos" can be transplanted with success. Both of these species are Sonoran and/or Chihuahuan species and not located within the project area. Suggest eliminating reference to them to avoid confusion.
3.5-28	2	2-3	States "...would remove individuals of six BLM, USFS and USFWS special status plant species within ROW construction areas and would remove suitable habitat for five additional species." However, based on Table 3.5-2, page 3.5-7 the six special status species are either BLM Sensitive and/or USFS Sensitive only. Therefore suggest changing text to "...would remove individuals of six BLM and/or USFS special status plant species within ROW construction areas and would remove suitable habitat for five BLM and/or USFWS (Candidate) additional species (Table 3.5-2)."
3.5-28	3	4-8	The species listed do not match with the species listed in Table 3.5-2 (p3.5-7), Table 3.5-4 (p3.5-8) or Appendix E, ACM A.5.9.
3.5-28	4	7	Revise "...special plant species..." to "...special status plant species..." This text needs to be changed throughout the vegetation resources section.
3.5-30	5	1-2	The cultural significant plants residual impacts section for Alternatives A-C does not specifically list how many acres would be disturbed. The same section for Alternative D list the exact number of acres disturbed (8,843). The same section for Alternative E lists an approximate number of acres disturbed (10,700). Revise for consistency.
3.5-33	3	2	
3.5-36	1	2	

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
3.5-33	5	3	The text lists 55 acres of annual and perennial grasslands and marshlands disturbed during construction. The conclusion sections for the previous alternatives did not reference grasslands and marshlands acreage. Furthermore, the sum of grasslands and marshlands disturbance in Table 3.5-11 equals 58 acres. Suggest correcting the acreage and including similar references in previous sections or omitting the sentence.
3.5-34	5	2	Text seems to be missing. Suggest insert text: "...non-native weed species. SNWA would implement a variety of measures to be included in an integrated weed management plan. These measures include..."
3.5-34	5	2	States "...high risk for invasion by noxious and non-native weed species. These measures include management of weed..." There seems to be missing text. Suggest revising to "high risk for invasion by noxious and non-native weed species. SNWA would implement a variety of measures to be included in an integrated weed management plan. These measures include management of weed..."
3.5-35	2	1	States "There would be lower populations of yucca, cacti, and six special status species within the construction ROWs..." However on page 3.5-34, last paragraph, line 5 it states five special status plant species populations have been identified within the proposed construction ROWs. Note that Alternative D also states 5 special status plant species - see page 3.5-32, paragraphs 1 and 3.
3.5-36	Table 3.5-12		Alignment Option 3 states "This option would eliminate all vegetation clearing associated with construction of a 230-kV line from Gonder Substation near Ely to Spring Valley, for a reduction of 410 acres relative to the Proposed Action." However, Tale 2.10-5 in Chapter 2 (page 2-121) states that a reduction of 365 acres relative to the Proposed Action would occur.
3.5-36	Table 3.5-12		Delete third row "Alignment Options" and "Analysis".
3.5-36	Table 3.5-12	Last row/second column, first bullet	States "The option would be located adjacent to an existing transmission line and would be shorter by 2 miles (representing 24 fewer acres of surface disturbance) as compared to the Proposed Action." However, Table 2.10-5 in Chapter 2 (page 2-121) states that the ROW for Option 4 would be approximately 3 miles shorter than the Proposed Action and result in 51 acres of less net disturbance. Further, the statement in Table 3.5-12 in this same paragraph "However, a 10-acre pump station (5-acre permanent, 5-acre temporary) would be constructed adjacent to U.S. 93. As a consequence, implementation of the option would result in a net of 14 fewer acres of Mojave mixed desert shrubland that would be disturbed and revegetated. " should be added to Table 2.10-5 in Chapter 2 (page 2-121) for Option 4, Vegetation Key Differences in Impacts.
3.5-37	Table 3.5-13		The table's title should be changed from "Table 3.5-13 Summary of Vegetation Community Surface Disturbance Alternatives A through E" to "Table 3.5-13 Summary of Vegetation Community Surface Disturbance Proposed Action and Alternatives A through E"

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
3.5-38	10	2-4	Insert “future” before the second “ROW construction” in this sentence.
3.5-39	Table 3.5-1	2	Please add a footnote for column “SNWA ET”: Phreatophyte/Medium Vegetation encompasses shrublands with >20% cover within ET areas, and Bare Soil/Low Vegetation encompasses shrublands with >20% cover within ET areas.
3.5-39	5	10	Change reference from “Steinwald et al.” to “Steinwand et al.”
3.5-39	7	6	The reference to “Cooper et al. 2003” is listed within the References section under “3.5 Vegetation Resources” but is missing the “2003” in the References section.
3.5-40	6	5	This line references “Section 3.1.3.2, Climate Change Effects to All Other Resources”. Section 3.1.3.2 is actually titled “Alternative A” in Section 3.1 Air Quality. Please correct.
3.5-42	10	4	Change “Implementation of GWD-VEG-2...” to “Implementation of GW-VEG-2...”
3.5-43	7	4	Suggest adding sentence: “Swamp cedar communities could be similarly affected. These areas . . .”
3.5-45	3	9	Suggest adding sentence: “Rocky Mountain swamp cedar communities could also be affected by reduced availability of soil moisture in basin shrubland communities.”
3.5-45	3	3	California bulrush (<i>Schoenoplectus californicus</i>) is not listed in Table 3.5-5, page 3.5-12. However it is listed in Table 3.5-8, page 3.5-20 and in Appendix F3.5 Vegetation, Culturally Significant Plants and Animals Lists.
3.5-45	4	1	Reference the completed biological monitoring plan for Spring Valley and for Dry Lake, Delamar, and Cave valleys. Add the Dry Lake, Delamar, and Cave valleys plan to the Reference section.
3.5-47	Table 3.5-14		Change “a” in the statement in the 1st bullet point to “in,” so it reads “would likely result in long-term changes.”
3.5-48	Table 3.5-14		Under “Mitigation Recommendations” Table 3.5-14 is missing mitigation recommendations GW-VEG-1 and GW-VEG-2. Please include these in the table.
3.5-48	Table 3.5-14		Under “Potential Vegetation Effects in GBNP and adjacent Utah” line 2 change “...Section 3.3.29...” to “...Section 3.3.2.9...” Also, under “Mitigation Recommendations” change from “GW-VEG-3, and 3M Plan for Snake Valley” to “GW-VEG-1, GW-VEG-2, GW-VEG-3, and 3M Plan for Snake Valley” since all of these measures apply.
3.5-48, 3.5-51, 3.5-54, 3.5-57, 3.5-60, and 3.5-63	Tables 3.5-14, 3.5-15, 3.5-16, 3.5-17, 3.5-18, and 3.5-19		Reference Appendix C in the “Stipulation Agreements” or “Stipulated Agreements” row (disregard for Table 3.5-18 since Appendix C is now referenced) and reference the completed biological monitoring plans for Spring and DDC.

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
3.5-48, 3.5-51, 3.5-54, 3.5-57, 3.5-60, and 3.5-63	Tables 3.5-14, 3.5-15, 3.5-16, 3.5-17, 3.5-18, and 3.5-19		<p>Under Monitoring Recommendations, it should be acknowledged that some of these areas are being monitored, in accordance with the Spring Valley Biological Monitoring Plan. Please modify to read:</p> <ul style="list-style-type: none"> - Minerva Spring Complex, Swallow Spring, Shoshone Ponds, and the springbrook from Shoshone Ponds Well #2 in southern and central Spring Valley. Of this group Minerva Spring Complex, Swallow Spring, and Shoshone Ponds, as well as the wetlands and meadows surrounding Minerva Springs and Shoshone Ponds (including in the Shoshone Ponds ACEC), are being monitored under the Biological Monitoring Plan for the Spring Valley Stipulation (Biological Work Group 2009). - Springs and associated wetlands and meadows along the west side of Spring Valley north of Cleve Creek. West Spring Valley Spring Complex and Keegan Spring Complex, including associated wetlands and meadows, are being monitored under the Biological Monitoring Plan for the Spring Valley Stipulation (Biological Work Group 2009). - The Big Spring drainage in Snake Valley in Nevada and Utah. Big Springs, Big Spring Creek, Lake Creek, Stateline Springs and Clay Spring (North) are being monitored under the Biological Monitoring Plan for the Spring Valley Stipulation (Biological Work Group 2009)." - Swamp Cedar and Baking Powder Flat Blue ACECs. The swamp cedar population in the vicinity of the Swamp Cedar ACEC is being monitored under the Biological Monitoring Plan for the Spring Valley Stipulation (Biological Work Group 2009)." <p>The text "Lehman and Snake Creek in GBNP and adjacent Utah." Should be removed from Tables 3.5-14 through 3.5-17.</p>
3.5-59	Table 3.5-18		<p>Under "Primary Affected Valleys", Lake Valley is not included but DDC is included. However, in the Groundwater Pumping Section immediately before the table, The Full Build Out Plus 200 years lists Lake Valley as one of the valleys with potentially affected springs. Dry Lake, Delamar, and Cave valleys are not mentioned. Revise the Table to reflect the language in the applicable section of the document body. Also, separate Dry, Delamar, and Cave valleys in instances where impacts are not the same for all 3. Check Tables 3.5-14 – 3.5-19 for the similar errors.</p>
3.5-67	10	2	<p>Section 2.8.1 is not "Past and Present Actions". Suggest changing to "Section 2.9.1" for Past and Present Actions.</p>
3.5-67	11	1	<p>States "The reasonably foreseeable actions and activities are discussed Section 2.8, Agency Preferred Alternative." However reasonably foreseeable actions and activities are discussed in Section 2.9. Suggest changing.</p>
3.5-67	12	1	<p>The reference to Figure 3.0-2 does not seem correct. Is Figure 3.0-3 the correct reference that should be used?</p>

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
3.5-69	3	1	The reference to “Figure F3.5-1” should be “Figure F3.5-2” (see Appendix F3.5 – Vegetation Resources, page F3.5-52).
3.5-69	Table 3.5-21		Table title states “No Action – Summary of Potential Cumulative Vegetation Effects Over Three Time Periods” but only two time periods are listed in the table. Either change the title of the table or include “Full Build Out” column. Also please add “ET areas” behind Wetland/Meadow and Basin Shrubland.
3.5-70	1	1	“The GWD Project surface disturbance (20,570 acres) would.....” should be revised to “The maximum GWD Project surface disturbance of 20,568 acres would....”since 20,568 is the high end of the range of potential disturbance. Alternatively, the sentence can be written, “The GWD Project surface disturbance (15,833-20,568 acres) would.....” Note that “approximately” was not included in reference to the acreage, so the exact number of 20,568 derived from Table 2.6-2 should be used.
3.5-70	3	4	States “...vegetation communities until they recover (5 to 200 years, depending on the vegetation community). It is not expected...” Change to “...vegetation communities until they recover (2 to 200 years, depending on the vegetation community). It is not expected...” based on Table 3.5-9, page 3.5-24.
3.5-70	2	1-2	States “The GWD Project would occupy the LCCRDA utility corridor from Lake Valley on the north to Garnet Valley on the south. The GWD Project would share the LCCRDA corridor with other projects as follows:...” However the GWD Project would occur within the LCCRDA utility corridor from the Las Vegas Valley in the south to southern portions of Cave, Lake, and Spring (HB184) valleys in the north. Further, the table following this statement should have Hidden Valley added to it and the corresponding boxes checked. Also, the ON Line Transmission Line Project does not occur within Lake Valley according to FEIS 2010 project alignment shapefiles provided to SNWA. Suggest revising table. Also, please verify that the proposed Wilson Creek Wind Project will occur in Dry Lake Valley as noted in the table (according to the BLM-published project Newsletter #1, June 2011 map, it doesn’t).
3.5-71	2	2	States “Past and Present Actions include the construction and maintenance of utility and highway ROWs that cross cacti and yucca habitats in Las Vegas, Garnet, Coyote Springs, Delamar, and southern Dry Lake valleys in Clark and Lincoln counties. The GWD Project facilities would be located in an existing utility corridor (LCCRDA) from the vicinity of Apex in Clark County to southern Dry Lake Valley in Lincoln County, with groundwater development facilities in Delamar Valley.” Hidden and Pahrnagat valleys should be included in this list of valleys in the former sentence. Further, in the latter sentence the GWD Project facilities would be located within the LCCRDA utility corridor from the vicinity of Apex in Clark County to the southern portions of Cave, Lake, and Spring (HB184) valleys in Lincoln County.

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
3.5-71	3	1-7	States “Populations of special status plants including Parish’s phacelia and Blaine pincushion cactus were identified in Dry Lake Valley; Eastwood milkvetch was identified in Dry Lake Valley; and Long calyx milkvetch was identified in Spring Valley. These species were identified during ROW surveys conducted by SNWA and additional populations of these species may be found over a larger area as the result of future surveys.” The plants listed and their locations do not match the lists in Table 3.5-2, page 3.5-7 and Table 3.5-4, page 3.5-8. These lists should match. Further, based on this revision, line 5 in paragraph 4 on page 3.5-71 would need to be revised.
3.5-71	4	1,4, and 5	Please clarify what is meant by “additive reduction”.
3.5-71	4	3	With regard to reductions in cacti and yucca populations in certain valleys, this sentence states “...GWD Project facilities in Garnet, Coyote Springs, and Delamar valleys. It is anticipated that recovery of yucca and...” Suggest changing to “...GWD Project facilities in Las Vegas, Garnet, Hidden, Coyote Springs, Pahrnagat, Delamar, and Dry Lake valleys. It is anticipated that recovery of yucca and...” since these additional valleys may be impacted.
3.5-71	7	1-2	States “Past and Present Actions are represented by the No Action pumping operations described in Section 3.3, Water. The cumulative past and present groundwater uses are presented on Table 2.9-2. The RFFAs are described in Table 2.9-3.” Change to “Past and Present Actions are represented by the No Action pumping operations described in Section 3.3, Water. The cumulative past and present groundwater uses are presented on Table 2.9-3. The RFFAs are described in Table 2.9-4.
3.5-71	7	2	States “...cumulative past and present groundwater uses are presented on Table 2.9-2. The RFFAs are described in Table 2.9-3.” Suggest changing to “...cumulative past and present groundwater uses and RFFAs are presented on Table 2.9-1.” based on what is presented in Section 2, page 2-98.
3.5-72	2	6	Change “...and Lower Meadow.” to “...and Lower Meadow Valley Wash.”
3.5-72	1	1-2	States “have been included in the analysis, and include (north to south): Steptoe, Hamlin, Spring, Snake, Lake valleys, and Lower Meadow ValleyWash.” Based on Figure 3.5-13, page 3.5-72 suggest changing sentence to ” have been included in the analysis, and include (north to south): White River, Steptoe, Spring, Snake, Lake valleys, and Lower Meadow ValleyWash.”
3.5-75	5	2-4	California bulrush (<i>Schoenoplectus californicus</i>) is not listed in Table 3.5-5, page 3.5-12. However it is listed in Table 3.5-8, page 3.5-20 and in Appendix F3.5 Vegetation, Culturally Significant Plants and Animals Lists. Please revise the sentence.
3.5-75	6	3	The “Rights-of-way and Groundwater Field Development Construction and Operational Maintenance” description for the Proposed Action (page 3.5-69) and Alternatives A (page 3.5-75), B (page 3.5-78), and C

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
			(page 3.5-82) should match. Also, please verify a proposed wind energy project that will occur in Dry Lake Valley (listed for Alternatives A and C). Should this be Lake Valley instead?
3.5-76	6	7-8	States “may have a potential impact have been included in the analysis, and include (north to south): Steptoe, Hamlin, Spring, Snake, Lake, and Lower Meadow Valley Wash.” Based on Figure 3.5-17, page 3.5-76 suggests changing sentence to ” may have a potential impact have been included in the analysis, and include (north to south): White River, Steptoe, Spring, Snake, Lake valleys, and Lower Meadow Valley Wash.”
3.5-77	1	6	Suggest changing “...and Lower Meadow.” to “...and Lower Meadow Valley Wash.”
3.5-77	1	9-10	Why is White River Valley not mentioned (see Figures 3.5-17 and 3.5-18)?
3.5-78, 3.5-82, 3.5-85, and 3.5-88	Last paragraph, 1,1, and 1	1, 1, 1, and 1	<p>Consider if an acreage number should be provided as per the previous alternatives. Therefore for the DEIS suggest changing text from “3.5.3.7 Alternative B Rights-of-way Groundwater Field Development Construction and Operational Maintenance The GWD Project surface disturbance would intersect with existing road and highway crossings in...” to “3.5.3.7 Alternative B Rights-of-way Groundwater Field Development Construction and Operational Maintenance The Alternative B surface disturbance (up to 16,888 acres) would intersect with existing road and highway crossings in...”</p> <p>Suggest changing text from “3.5.3.8 Alternative C Rights-of-way Groundwater Field Development Construction and Operational Maintenance The GWD Project surface disturbance would intersect with existing road and highway crossings in...” to “3.5.3.8 Alternative C Rights-of-way Groundwater Field Development Construction and Operational Maintenance The Alternative C surface disturbance (up to 17,035 acres) would intersect with existing road and highway crossings in...”</p> <p>Suggest changing text from ”3.5.3.9 Alternative D Rights-of-way Groundwater Field Development Construction and Operation Maintenance The GWD Project surface disturbance would intersect with existing road and highway crossings in...” to “3.5.3.9 Alternative D Rights-of-way Groundwater Field Development Construction and Operation Maintenance The Alternative D surface disturbance (up to 12,779 acres) would intersect with existing road and highway crossings in...”</p> <p>Suggest changing text from “3.5.3.10 Alternative E Rights-of-way Groundwater Field Development Construction and Operation Maintenance The GWD Project surface disturbance would intersect with existing road and highway crossings in...” to</p>

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
			“3.5.3.10 Alternative E Rights-of-way Groundwater Field Development Construction and Operation Maintenance The Alternative E surface disturbance (up to 14,673 acres would intersect with existing road and highway crossings in...”
Chapter 3.6 Terrestrial Wildlife			
3.6-1	5	2	“It should be noted that the BLM sensitive species list is under review and updates are not yet available. If available, updates to the list will be reflected in the Final EIS.” – Please update if the updated list is available.
3.6-2	2	1	Change “On lands with federally listed species, their management is under the jurisdiction of the USFWS” to “On lands with federally listed species, such species are under the jurisdiction of the USFWS.” The USFWS does not manage lands with federally listed species unless they are refuge lands.
3.6-2	4	12-13	“Please note that at the time of this document drafting, the Nevada Wildlife Action Plan was under revision and updates are not yet available. If available, updates to the Plan will be reflected in the Final EIS.” – Please update if the updated list is available.
3.6-11	5 and 6		Tortoise densities in ¶ 5 are reported in tortoises per square kilometer. In ¶ 6, they are reported in tortoises per square mile. These units should be made consistent for comparison purposes.
3.6-17	7		The EIS should explain why the western burrowing owl (which is a raptor) is analyzed separately from other raptors.
3.6-18	9	4	There are no records of kangaroo mice in Delamar Valley. See also 3.6-27 at paragraph 3, line 3.
3.6-21	6	1	Please add a citation for the winter record for peregrine falcon in Spring Valley.
3.6-31	3	2	Change “(e.g., raptors and eagles)” to “(e.g., eagles and other raptors)”.
3.6-31	–		There is a “conclusion” paragraph for the Construction Water Use section but it appears that the conclusion paragraph for the previous Construction and Facility Maintenance section is missing.
3.6-35	Third bullet		Change “at excavation areas, left open overnight” to “at excavation areas that are left open overnight” (for clarity). This also applies to the other references to this ACM on pages 3.6-39 and 3.6-42.
3.6-35	Last		To be consistent with other headings (such as the “Big Game” heading that precedes it), “Other Terrestrial Wildlife Management Species of Concern” should not be underlined, but should be bolded and put on the same line as the paragraph that follows.
3.6-35	9	3	Change “134” to “133” to be consistent with Table 3.6-3 and “260” to “259” to be consistent with Table 3.6-4.
3.6-36	1	5-6	Please state which various types of raptors are culturally significant to regional Tribes.

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
3.6-36	6	11-13	The text states that “noise levels from stationary sources (pumping stations and pressure reducing stations), would not exceed 52 decibels on the A-weighted scale at 500 feet from these facilities.” The noise analysis in Chapter 3.19, pg 3.19-8, paragraph 3, lines 10-11 states, “After incorporating these design features, it is anticipated that operational noise levels would not exceed 70 dbA at 500 feet.” That chapter should have the same information as presented in this chapter.
3.6-37	11	4	Change “20” years to “15” years to be consistent with Chapter 3.5, pg 3.5-25, para. 3, lines 3-4.
3.6-37	11	5	Change “1,006” acres to “1,004” acres to be consistent with Chapter 3.5, pg 3.5-25, para. 3, lines 4-5.
3.6-39	Last		Change “The applicant would consult with USFWS on this species” to “The applicant would coordinate with USFWS on this species.” This is to clarify that BLM is the consulting party for formal ESA Section 7 consultation, not SNWA. This also applies to the same statement made on pages 3.6-51 and 3.6-54.
3.6-40	Table 3.6-7		Change “with” to “within”.
3.6-42	First bullet		Clarify that the commitment to avoid siting aboveground facilities within 2 miles of active sage-grouse leks does not apply to power lines.
3.6-42	3	1	Capitalize “assurances”. Same goes for the reference on page 3.6-45 (last line).
3.6-45	Last	2-3	The text states “Mitigation ratios are 2 acres of comparable habitat for every 1 acre of lost habitat as determined on a project-by-project basis.” Please clarify that the ratio is consistent and the only thing determined on a project-by-project basis is the number of acres lost that need mitigation.
3.6-46	Bats	5	Change “To demonstrate impacts to bats,” to “To demonstrate the range of impacts to bat habitat acreage,” (for clarity).
3.6-46	Bats	12-14	Clarify whether the statement that “No winter hibernacula, nursery colonies, or maternity roosts have been identified” applies to all the bat species or the two species (western pipistrelle and long-eared myotis) used to show the range of bat impacts.
3.6-49	6	6	Change “822” to “823” to be consistent with Table 2.6-2.
3.6-49	4		The measures <i>ROW-VEG-1 Reducing Spread of Noxious Weeds</i> and <i>ROW-VEG-2 Reducing Risk of Accidental Wildfire</i> are not titled correctly. Section 3.20 titles them as <i>ROW-VEG-1 Green Stripping</i> , and <i>ROW-VEG-2 Fire Prevention Plan</i> .
3.6-50	2	3-4	Change “8,840” to “8,843” and “820” to “823” to be consistent with Table 2.6-2.
3.6-52	2	2-5	There are no records of kangaroo mice in Delamar Valley, so the acreage calculation should not include Delamar.
3.6-52	7	1	Change “10,697” to “10,696” to be consistent with Table 2.6-2.
3.6-53	4	3	Change “10,700” to “10,696” to be consistent with Table 2.6-2.

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
3.6-54	Last	1-2	Fix the following statement as indicated: “Direct impacts would reduce <u>include</u> the incremental, long-term reduction of approximately 3,320 acres of suitable habitat (shrub-scrub) would result from this alternative and facility maintenance would result in the permanent conversion of 235 acres of habitat to industrial uses.”
3.5-55	3	1-2	Fix the following statement as indicated: “Direct impacts would include the incremental, long-term reduction of approximately 3,129 acres of dark kangaroo mouse habitat would result from this alternative and facility maintenance would result in the permanent conversion of 245 acres of habitat to industrial uses in Dry Lake and Delamar valleys.”
3.6-55	3	1-2	There are no records of kangaroo mice in Delamar Valley, so the acreage calculation should not include Delamar.
3.6-56 to -58	Tables 3.6-9 and 3.6-10		Table 3.6-9 describes the differences in impacts between the various alignment options in terms of reduced or increased acreage impacts. Table 3.6-10 describes the differences in impacts between the various alternative in terms of percentage decrease instead of acreage decrease. These comparisons should be made consistent or a table note should be provided to explain why a different approach was taken.
3.6-58	Table 3.6-10	DVK mouse and note 2	The acreage should be for Dry Lake Valley only as the desert valley kangaroo mouse is not known to occur in Delamar Valley.
3.6-61	2	6	The text states: “No specific development plans are available”. Please clarify that specific development plans cannot be prepared at this time. This statement is also made on pages 3.6-78, 3.6-79, 3.6-81, 3.6-82, and 3.6-84 and should be clarified there as well.
3.6-62	Table 3.6-11		Explain the difference between “None Identified” and “0”.
3.6-62	2	4	Change “5,061” to “5,069” to be consistent with Table 3.6-12.
3.6-65	2	1, 2	Add parenthetical descriptions of what GW-AB-1 and GW-AB-2 require.
3.6-66	Table 3.6-15		It would be useful to add a column identifying the total acreage of each groundwater development area by valley for comparison purposes.
3.6-68	Text box		GW-WL-1 should be GW-WL-3
3.6-70	4	5	Since the desert valley kangaroo mouse is not known to occur in Delamar Valley, the acreage in that valley should not be considered.
3.6-71	1		The measure <i>GW-WL-6 Pre-construction Surveys and Avoidance of Baking Powder Flat Blue Butterfly Occurrences and Habitat</i> is not listed in Section 3.20 Monitoring and Mitigation Summary.
3.6-74	5	3	According to Appendix Figure F3.6-12, gila monsters do not occur in Pahrangat Valley.

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
3.6-76	1st and 5th bullets		Add “ACM” before the ACM number in the parentheses.
3.6-76	9th bullet		Add “with Assurances” after “Candidate Conservation Agreement”.
3.6-76	2		Under Existing Agreements, please revise bullet 1 to read: “Implement biological and hydrologic monitoring, management and mitigation as required by the Spring Valley Stipulation (ACM C.1.1), the Biological Monitoring Plan for the Spring Valley Stipulation (BWG 2011), and the Spring Valley Hydrologic Monitoring and Mitigation Plan (Hydrographic Area 184) (SNWA 2009b).” [Note: SNWA 2009 reference for 2008 Wildlife Surveys will need to change to SNWA 2009a, and SNWA 2009b needs to be added to the reference list.]
3.6-76	8-9		Under Existing Agreements, please replace bullet 7 (Monitor sage grouse...) and bullet 8 (Monitor select sites) with “Implement biological monitoring, management and mitigation as required by the DDC Stipulation (ACM C.1.42) and the Biological Monitoring Plan for the DDC Stipulation (BRT 2011).” [Note: BRT 2011 needs to be added to the references.]
3.6-76	10		This bullet should be in reference to a Candidate Conservation Agreement with Assurances (not a Candidate Conservation Agreement). Also, a Candidate Conservation Agreement with Assurances on SNWA private properties regarding greater sage grouse and pygmy rabbit are currently not existing agreements, but one may be completed prior to the ROD. Suggest rewording this bullet to match the paragraph about the development of a CCAA in Appendix E page A-38.
3.6-76	11th bullet	1	Identify the source of the first adaptive management measure.
3.6-76	11		Under Existing Agreements, please replace the last bullet with “Implement hydrologic monitoring, management and mitigation as required by the DDC Stipulation and the Hydrologic Monitoring and Mitigation Plan for Delamar, Dry Lake, and Cave Valleys (SNWA 2009c).” [Note: SNWA 2009c needs to be added to the reference list.]
3.6-80	1st bullet	3	Change “P points of diversion ODs” to “points of diversion”.
3.6-81	1st bullet	2	Change “are in areas may be impacted” to “are in areas that may be impacted”.
3.6-82	1	3	Strike “now”.
3.6-90	3	2	Add “effects” after “Proposed Action cumulative” and “No Action cumulative”. This also applies to “Alternative A cumulative” and “No Action cumulative” on page 3.6-94, “Alternative B cumulative”, “Alternative C cumulative”, and “No Action cumulative” on page 3.6-95, “Alternative D cumulative”, “Alternative E cumulative” and “No Action cumulative” on page 3.6-96.

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
Chapter 3.7 Aquatic Biological Resources			
			Maps of federally listed aquatic species are included in the terrestrial wildlife appendix (Figures F3.6-1 and F3.6-2), but there is no reference to these maps in Section 3.7. Please add a reference to these figures in Section 3.7.
3.7-1	Quick Reference		GBNP – GBNP should be GBNP – Great Basin National Park
3.7-1	1	14-16	It is stated that four basins (Long, Jakes, Garden, and Coal) were excluded from the natural resources region of study. Figure 3.7-1, however, shows that Butte Valley, Tippett Valley, and Pleasant Valley are also excluded.
3.7-1	1	14-16	The text states that the four excluded basins were on the “eastern” boundary, but they are on the western boundary of the natural resources region of study.
3.7-2	Figure 3.7-1		Rename Alts F – I to Options 1 – 4 to be consistent with the rest of the DEIS.
3.7-3	3	1	Change “(NDOW and the UDWR)” to “(NDOW and the UDWR, respectively)”.
3.7-3	3	6-7	Change “On lands with federally listed species, their management is under the jurisdiction of the USFWS” to “On lands with federally listed species, such species are under the jurisdiction of the USFWS.” The USFWS does not manage lands with federally listed species unless they are refuge lands.
3.7-3	3	last	Add the missing parenthesis to the last line of the paragraph.
3.7-4	Figure 3.7-2		Legend includes project components that are not found in the map area; i.e., buried storage reservoir and water treatment facility, construction support area, pressure reducing stations, primary electrical substation, pumping station and primary electrical substation, regulating tank site. Snake Creek is not identified.
3.7-8	6		The text states that “No fish were collected in either of these springs.” Clarify whether attempts were made to collect fish but none were found or whether no attempts were made to collect fish.
3.7-11	Table 3.7-2		Add “Results of” to the beginning of the title of the table.
3.7-11	Table 3.7-2		North Little Spring and Unnamed spring #2 in Snake Valley are adjacent to, but not within, the Groundwater Development Areas.
3.7-20	2	3	Change “Wild Earth” to “WildEarth”.
3.7-21	Bullets 11 and 13		Bullet 11 indicates temporary waterbodies were considered in the ROW construction analysis because they are used by amphibians. Bullet 13 indicates that the ROWs were mapped in relation to only perennial streams, ponds, lakes, and springs. Clarify how effects to temporary water bodies were determined.
3.7-22	5	4	Change “20-foot ROW” to “20-foot-wide ROW”.
3.7-22	7	1-10	This paragraph assumes that open-cut trenching would be used to cross Snake Creek. This paragraph needs to be weaved in with the following paragraph where the two construction techniques are described and it is acknowledged that the use of the jack-and-bore technique would eliminate instream disturbance.

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
3.7-23	5 and text box	3-4	Paragraph 4 references disturbance to a “relatively small area (up to 100-foot wide) on each bank.” The text box states that “The perennial stream bank disturbance is relatively small (less than 200 foot width)”. Likewise, the discussion of residual impacts on p. 3.7-24 references a 100-foot section. Please fix or explain the inconsistency.
3.7-23	Bullet 3		Correct the bullet point as indicated: “At a minimum, a 10-foot- wide vegetation buffer strip or other erosion control measure such as straw bales will be maintained between the cleared ROW and the high-water mark of adjacent jurisdictional drainages if the time between clearing/grading is expected to exceed 10 days or a precipitation event is forecast.”
3.7-24			The full description of ROW-AB-1 is provided twice on this page. The second description is unnecessary.
3.7-24	Bullet 2		Remove the stray “C”.
3.7-24	1	1	Mitigation measure ROW-AB-1: Habitat Restoration, should start off with “If the open-cut trenching method is used, the SNWA...” This measure presumes that open-cut trenching would be used instead of jack-and-boring.
3.7-24	8	1	Preface ROW-AB-3 with “If the open-cut trenching method is used, timing restrictions...”
3.7-31	Table 3.74		Wambolt Springs are not in the pipeline ROW. The ROW is on the west side of Hwy 93 and Wambolt Springs are on the east side of the highway.
3.7-35	2	1	Change “Since the location of well development facilities are not known at this stage” to “Since the location of well development facilities cannot be known at this stage”.
3.7-35	7	4	Where the text indicates there are “17 perennial streams” in the groundwater development area, it references Table 3.7-1. But where it states that there are “40 springs” within the groundwater development areas, there is no reference. Add a reference to Figures 3.7-4 and 3.7-5.
3.7-36	5	2-3	Change “The location of facility maintenance activities has not been defined at this time” to “The location of facility maintenance activities cannot be defined at this time.”
3.7-40			For each alternative, there are tables that summarize the effects of groundwater development, ACMs, and mitigation options (see, e.g., Table 3.7-7) and the effects of groundwater pumping, ACMs, and mitigation options (see, e.g., Table 3.7-8. But for the proposed action, there is only a table for groundwater pumping. The EIS should include a table, comparable to Table 3.7-7, that describes the effects of groundwater development for the proposed action.
3.7-44	9	2	There are no special status species in Minerva Springs. Utah chub is introduced and not a special status species in Nevada.
3.7-44	9	2	There are no special status fish species in Minerva Springs. Utah chub is introduced and not a special status species in Nevada.

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
3.7-46	3	7-8	The text states “Of the 1.8-mile-section of Snake Creek in the GBNP and model analysis area, the entire 1.8 miles could have reduced flows at the full build out plus 75 years time frame and 1.9 miles at the full build out plus 200 years time frame.” Please clarify that the other 0.1-mile section is not in the GBNP.
3.7-47	4	2-4	The text states: “The biological monitoring plans that have been developed to date are strictly monitoring plans (i.e., they lack the mitigation and management component).” It would be more accurate to state that some possible mitigation and management options have been identified and the appropriate ones will be implemented based on the results of the monitoring.
3.7-47	5	3	North Little Spring is in Snake Valley, not Spring Valley.
3.7-47	5-10		In the bullets under Stipulated Agreements, please reference the following additional monitoring plans: Spring Valley Hydrologic Monitoring and Mitigation Plan (Hydrographic Area 184) (SNWA 2009b); Hydrologic Monitoring and Mitigation Plan for Delamar, Dry Lake, and Cave Valleys (SNWA 2009c); and Biological Monitoring Plan for the DDC Stipulation (BRT 2011); and add SNWA (2009b and 2009c) to the reference list. The DDC monitoring plans are no longer in preparation. [Please retain the reference to the Biological Monitoring Plan for the Spring Valley Stipulation (BWG 2009).]
3.7-47	11	1	In the first bullet under Other Agreements, please add that SNWA is a signatory to the Conservation Agreements for least chub and Columbia spotted frog in Utah.
3.7-48	Bullet 1		Is there an ACM that can be referenced for this measure?
3.7-49	4	1	Change GWD-WR-4 to GW-WR-5.
3.7-51	Table 3.7-6		Please repeat the header row (i.e., impact indicators, full build out, etc.) at the top of the page. The same is true for Tables 3.7-8, 3.7-10, and 3.7-12.
3.7-51	Table 3.7-6		In the discussion of the ACMs, change “Candidate Conservation Agreement/Candidate Conservation Agreement” to “Candidate Conservation Agreement/Candidate Conservation Agreement with Assurances”. The same is true for Tables 3.7-8, 3.7-10, 3.7-12, 3.7-14, and 3.7-16.
3.7-53	10	1-2	Delete “and Minerva” as there are no special status fish in Minerva Spring.
3.7-59	10	2	Delete “Minerva Spring and” as there are no special status fish in Minerva Spring.
3.7-65	10	1	Delete “and Minerva”.
3.7-86	Table 3.7-18		To be consistent with the text, in the second to last row for Alt. B, change “3” to “2.” In the last row for Alt B., change “12” to “11” twice. In the fifth row for Alt. C, change “4” to “5”. In the last rows for Alts. D and E, change the last “0” to “11”.
3.7-89	Last		It would be useful to indication that the No Action Alternative includes the past and present groundwater pumping and the No Action with Cumulative adds RFFA pumping.
3.7-91	2	10	Add the missing parenthesis after [Option 2 alignment]).

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
3.7-103	4	7-8	Change “number of spring and stream habitat” to “number of spring and stream habitats” (two instances) or add “acres” after “number of” (which ever is more appropriate).
Section 3.8 Land Use			
3.8-5	1	6-7	At the end of the 1st paragraph, the DEIS provides that “[t]he data pertains only to agricultural areas on privately-owned lands.” Please clarify whether or not there are any non-privately-owned agricultural lands.
3.8-7	2	2	The 8.5 acres of private agriculture land referenced in Caliente is APN 003-21-001. This lot is currently graded and empty. It is zoned for agriculture, but it is not being used for agriculture. Section 3.8 should be written to reflect this difference. Agriculture will not be <i>removed</i> . This wording change should be reflected in the Environmental Consequences sections (Section 3.8-2, page 3.8-10) and the associated tables (Table 3.8-11, on page 3.8-21). All of the alternatives have the same paragraphs and need updating.
3.8-7	9	1-3	As mentioned in the general comments section concerning groundwater development land and agricultural land: The statement that there are 27 acres of agriculture land in the groundwater development areas appears to be a GPS error. For Spring Valley, it is unclear from Figure 3.8-4 where the 5 acres of SNWA land overlaps with the Groundwater Development Area. This appears to be a GIS error. As mentioned on page 3.8-5 agriculture lands would only be on private land and the exploratory areas would only be on BLM land. For Snake Valley, the land parcels in question appear to be in the area near Big Springs. According to BLM land layers and White Pine County parcel data, the pivots in the area extend beyond the private property lines. The Groundwater Development Area around these parcels was specifically drawn to exclude private land. As mentioned on page 3.8-5 agriculture lands would only be on private land and the exploratory areas would only be on BLM land.
3.8-11, 3.8-14, 3.8-17	Tables 3.8-1, 3.8-4, 3.8-7		Correct acreages affected by construction consistent with general comments above.
3.8-22	5	5	Remove “it” from the last sentence on the page.
3.8-23	1	4	The estimated total of 1,459 to 3,338 acres is only for Alts A and C. The estimated total for the Proposed Action is 2,365 to 5,538 and for Alt B is 3,072 (see Table 2.6-2 (pg 2-47)). These acreages need to be recalculated based on the correct acreage totals, see General Comments above.

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
3.8-25, 3.8-16	Tables 3.8-14, 3.8-16		These tables are indicative of the previous comment concerning acres for private agriculture land not matching throughout the DEIS. The numbers given in the Table 3.18-40 (Socioeconomics) do not match what is presented here. Furthermore, calculations, based on the agricultural database used for the groundwater model, show that the total agricultural area in Spring and Snake Valleys is 10,787 acres; for the 75-year cumulative scenario, and there are 10,313 acres within the 10-foot drawdown. These numbers do not correlate.
3.8-26	Table 3.8-15	3	The data under Construction and Facility Maintenance should include the total permanent number of acres disturbed so the alternatives can be compared to the Proposed Action (see information given on page 3.8-23, Section 3.8.2.9, paragraph 1).
Section 3.9 Recreation			
3.9-3	2	5	References Figure F3.9-1 (Appendix F) Please add this figure to the Appendix.
3.9-8	1	9	In the last sentence of the 1st paragraph, change “include” to “including.”
3.9-11	3	2-3.	Add a clause: “dispersed recreation resources, including cultural sites, historic properties, and rock art locations, in the immediate vicinity of construction activities.”
3.9-12	9	6	Add a clause: “would detract from the natural character of the area, including the character and setting of cultural sites, historic properties, and rock art locations, and diminish the recreation in the short term.”
3.9-14	8	2-4	In the 2nd sentence of the last paragraph, change “western-most edge the Chief” to “western-most edge of the Chief.”
3.9-14	3	2	ACM 1.2.1 is incorrectly cited. There is no 1.2.1. This is most likely referring to ACM A 2.1. This is cited incorrectly in multiple areas throughout this section; suggest doing a global search for this.
3.9-27	6		For consistency with the “Impacts on Hunting or Other Wildlife-Based Uses” paragraphs earlier in the Chapter, this paragraph should include the maximum number of streams with game fish that would be crossed by future facilities (see page 3.19-13, paragraph 4; page 3.19-17, paragraph 5; and page 3.9-21, paragraph 8).
Section 3.10 Transportation Resources			
3.10-7	Table 3.10-3		Change years “2011 to 2022” to “2012 to 2023” (see SNWA’s Conceptual Plan of Development Table 4-2).
3.10-11	Table 3.10-6		Change years “2011 to 2018” to “2012 to 2019”
3.10-15	Table 3.10-9		Change years “2011 to 2019” to “2012 to 2020”
Section 3.11 Mineral Resources			
3.11-3	Heading		Both the terms “saleable” and “salable” are used. Please correct the DEIS, so use of the term is consistent throughout the DEIS.
3.11-6	4	1-2	States “The BLM could approve development...according to 43 CFR, § 2805.14 (43 CFR 2009a).” There is also reference to 43 CFR 2009b. Only 43 CFR 2009 is referenced in the reference section under Mineral Resources. Please change all references to 43 CFR “2009” only, deleting the “a” and “b”.

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
3.11-7	3	1	Instead of stating that the “ROWs for the proposed facilities may be in place indefinitely”, please use the duration for the ROW.
3.11-10	11	3	The total amount of active water rights for the basins proposed for pumping, based on Table 3.11-1 on page 3.11-11 is 4,963afy. Therefore replace 5,800 afy with this value.
3.11-13	Table 3.11-3		Alternative C should state “Same as Alternative A” since this alternative like Alternative A would be pumping at reduced quantities. Alternative D should state “Same as Alternative A except that there would be no impact risk to mineral resource development in the White Pine portion of Spring Valley or in Snake Valley.”
Section 3.12 Rangelands and Grazing			
	Entire Section		It is assumed that when ephemeral streams are discussed, it is only in reference to the those ephemeral streams that carry flows directly from springs when groundwater levels are relatively high, and not in reference to the many ephemeral streams/washes that carry surface water flow in response to large precipitation events. Please clarify what type of ephemeral streams are included in the calculations and why.
3.12-1	2	1	Much of the forage in the ET units is not considered high quality forage. Revise “Areas of high quality forage, referred to ET units, are very important.....” to “Areas of forage within the ET units are very important.....”
3.12-1	2	7-8	Suggest eliminating the reference to shrub species being high in protein. Revise sentence to read “In general, shrub species provide good forage for livestock throughout the winter when other sources of forage are dormant.” Some shrub species may be relatively higher in protein than other shrub species or vegetation types, others are not. Specifically greasewood, which is mentioned in the previous sentence and to which this statement apparently applies, contains sodium and potassium oxalates and are toxic to livestock in moderate/large quantities. If the statement is not revised, a reference/citation to the high protein content in applicable shrubs should be included.
3.12-1	2	10	The text states that “The allotments shown in Table 3.12-1 contain high-quality forage consisting of.....” Since much of the forage in the ET units is not considered high-quality forage, revise to read “The allotments shown in Table 3.12-1 contain forage consisting of either.....” Please revise similarly on pages 3-12.5 and 3.12-41, by deleting reference to the forage being high-quality.
3.12-1	Quick Reference		Include “APE” in Quick Reference box – see page 3.12-39. Include “AUM” in Quick Reference box
3.12-2	Figure 3.12-1		Clarify what the Grazing Allotment numbers are on the figure. They don’t match the numbers on Table 3.12-2.

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
3.12-4	Quick Reference		The region of study for this section is defined by the water resources region of study, not the boundary analyzed for natural resources. Revise accordingly.
3.12-4	1	5-6	The text states that approximately 2,373 to 5,537 acres would be permanently displaced and 1,214 to 2,875 acres would be temporarily displaced. These acreages need to be recalculated based on the correct acreage totals, see General Comments.
3.12-6	2	6	Insert end parentheses after Table 3.12-6.
3.12-7	2	2-3	The evaluation of selected springs conducted by BIO-WEST showed signs of animal use; however the use cannot be solely attributed to livestock. Please revise sentence “The following named springs show evidence of extensive use by livestock” to “The following named springs show evidence of use by livestock and/or wildlife and wild horses.
3.12-7	Table 3.12-6		The text introducing the table references 1,197 miles of perennial and ephemeral streams. The table only lists perennial streams and the sum of the column is 1,076 miles. If the 119 miles of streams missing from the table is in reference to the ephemeral streams, either include them in the table or as a footnote.
3.12-9	After 5th bullet		In the list of issues associated with the “rights-of-way,” include “Reduction in grazing allotment carrying capacity resulting from surface disturbance,” similar to issue included for wild horses and burros. See 3.13.2.1
3.12-9	3.12.2.1		Ensure that assumptions for “rights-of-way” match the assumptions for “groundwater field development” in Section 3.12.2.8. For example, the following assumption, which appear on page 3.12-9, should also apply to future ROWs: “Current grazing allotment carrying capacities are appropriate and reflect the desired level for the present and foreseeable future of the affected allotments,” on 3.12-38. The following assumption for future ROWs, which appears on 3.12-38, should also apply to the current ROW request: “In situations where the Las Vegas RMP does not specify management actions related to range management and livestock grazing, the actions described in the Ely RMP will be used,” on 3.12-9.
3.12-9	3.12.2.1		In the list of issues associated with the “rights-of-way,” include “Reduction in grazing allotment carrying capacity resulting from surface disturbance,” similar to issue included for wild horses and burros. See 3.13.2.1
3.12-9	3.12.2.1		Ensure that assumptions for “rights-of-way” match the assumptions for “groundwater field development” in Section 3.12.2.8. For example, the following assumption should also apply to future ROWs: “Current grazing allotment carrying capacities are appropriate and reflect the desired level for the present and foreseeable future of the affected allotments.” The following assumption for future ROWs should also apply to the current ROW request: “In situations where the Las Vegas RMP does not specify management actions related to range management and livestock grazing, the actions described in the Ely RMP will be used.”
3.12-9	3-4		The “methodology for analysis” of impacts of ROW construction includes the following, which more appropriately falls under the methodology for impacts analysis of groundwater pumping. Suggest moving it to

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
			<p>Section 3.12.2.8, on 3.12-39.</p> <p>“For the impact analysis study, impact parameters were used as both an indication of impacts and as a means of quantifying impacts. The water resources region of study boundary is used for analysis of these impacts as water is the limiting factor for livestock health. These parameters also allowed for comparison between alternatives or groups of alternatives.</p> <p>To quantify impacts to grazing allotments, reductions in vegetation communities were evaluated, SSURGO data was used to identify NRCS ecological site descriptions (ESD). The dominant plant species associated with the soil map units for each ESD were used to represent the vegetation community type.”</p>
3.12-9	10	1	Insert “potential” after allotments and before reductions so the first sentence reads, “To quantify impacts to grazing allotments, potential reductions to vegetation communities were evaluated.
3.12-9	13	7	Delete “stock tanks” and “corrals”, as these areas will not be re-vegetated.
3.12-10	1	1-2	Please revise sentence from “In the final POD.....the SNWA would conduct pre-construction surveys to determine livestock high-use locations in and adjacent to the” to “In the final POD....the SNWA would conduct pre-construction surveys to determine sensitive areas of high livestock use in and adjacent to the....” since the focus of the surveys will be on sensitive areas.
3.12-17	1	1	Suggest inserting “soil type” as the first factor affecting dust deposition. The sentence would read “.....livestock grazing can vary depending on factors such as soil type, wind, frequency,”
3.12-18	2	7,10	For consistency with other sections, underline “Effectiveness” and “Effects on other resources”.
3.12-20	4	6	Delete “corrals”, as these areas will not be fenced.
3.12-25	5	8-10	To properly describe the factors that would determine the survival of reseeded plants, please revise the following sentence from “In the long-term, annual precipitation from year to year, and the seasonal distribution of livestock within the allotment would determine the survival of reseeded plants” to “In the long-term, annual precipitation and the seasonal use by livestock and wildlife within the allotment would determine the survival of reseeded plants.”
3.12-25	5	7, 10	For consistency with other sections, underline “Effectiveness” and “Effects on other resources”.
3.12-39	2nd bullet	2	Delete “and drawdown effects” from second bullet under “Groundwater Field Development,” as drawdown effects are not evaluated in the analysis of surface disturbing effects of future construction.
3.12-41	5		The measure <i>GW-WL-1 Wildlife Resources</i> is not titled correctly. Section 3.20 titles the measure <i>GW-WL-1 Avoid siting facilities in key big game habitats</i> .
3.12-43	Table 3.12-16		The table breaks across the page and has the incorrect title on page 3.12-44. Revise to match the title on page 3-12.43.

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
3.12-44	2	3	The referenced Tables F3.12.2 and F3.12.4 should be F3.12-2 and F3.12-4.
3.12-46	2nd bullet		Delete “And drawdown effects” from second bullet under impacts of future ROW construction. This impact is not associated with surface disturbance from construction.
3.12-46	3rd bullet		Third bullet under “Right-of-way and groundwater development area construction” should be revised to refer to Section 2.9. It is not clear whether the RFFAs included in this bullet are the same as those identified in Section 2.9.
3.12-47	5	3	Change “2.8” to “2.9” here, and throughout section.
3.12-47 through 3.12-55	Tables 3.12-17 through 3.12-23		Tables 3.12-18 and 3.12-20 include ephemeral streams as part of the “stream” parameter in Row 2. The other tables do not. Please revise the applicable tables for consistency. Additionally, include a footnote with each table that describes the calculation of miles of ephemeral streams only includes those that occasionally carry flow directly from a spring, and not those that carry flow during/after large precipitation events.
3.12-49	Figure 3.12-3		The title of the figure only includes Perennial streams, however the Y-axis label includes perennial and ephemeral streams. Revise accordingly.
Section 3.13 Wild Horse and Burro Herd Management Areas			
			Throughout Section 3.13 the “region of study” is mentioned. This should be clarified as either the Natural Resources Region of Study or the Water Resources Region of Study, as this could be confusing.
3.13-4	Table 3.13-4		This table does not agree with the text above it that explains the table. The text states, “In Utah, Choke Cherry, Confusion, Conger, Kingtop, and Sulphur HMAs are completely within the region of study.” However, only Choke Cherry is listed in the table’s far right column with 100% of the HMA Area as being within the region of study.
3.13-5	3	2-3	The methodology for analysis of impact of ROW construction states, “The water resources region of study is used for analysis of these impacts as water is the limiting factor for herd health.” Suggest moving to methodology for analysis of pumping impacts as irrelevant to surface disturbance impacts of ROW construction.
3.13-18	12th bullet		The last bullet under assumptions for “groundwater field development” states that “Vegetation that is not dependent on groundwater could transition to other states or types over time; however, the density and overall composition is not anticipated to substantially change.” Delete “not.”
3.13-22	1		GW-WH-1 states that SNWA shall identify key water sources and monitor them. If impacts to these sources are observed, SNWA could provide artificial water sources. However, this requirement is not limited to those instances in which observed impacts are caused by SNWA groundwater development. Include qualification in mitigation measure.
3.13-25	1st bullet		Delete “and drawdown effects” from second bullet under impacts of future ROW construction. This impact is not associated with surface disturbance from construction.

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
3.13-26	4		Spring Valley Wind Project should be added to cumulative impact analysis for rights-of-way and groundwater development, similar to analysis in 3.12 for grazing impacts. Or, there should be a discussion of the limitation on RFFAs included, i.e., only those within HMAs.
Section 3.14 Special Designations and Lands with Wilderness Characteristics			
3.14-1	2	5-6	The description of Instant Study Areas (ISAs) in the DEIS is inconsistent with the BLM's past descriptions of these areas. The BLM has previously stated that an ISA is "a natural area formally identified by BLM for accelerated wilderness review by public notice published before October 21, 1975," among other descriptions. Please provide a description of ISAs in the DEIS that is consistent with BLM's past descriptions of ISAs.
3.14-11	17	2-4	Figure 3.8-5 does not show the water treatment facility or the storage reservoir being outside of the utility corridor.
3.14-13	6	5	The DEIS mentions the existence of a landing strip on the north end of Roadless Unit 0316-1-2011. Please indicate in the DEIS that this landing strip would not be impacted by the proposed project.
3.14-13	4		The measure ROW-SD-1 should include its title to be consistent with previous descriptions of measures. Its title is <i>ROW-SD-1 Construction Area Siting</i> . (see Table 3.20-1)
3.14-13	10		The measure <i>ROW-SD-1: Avoid Temporary Surface Disturbance in Special Designation Areas</i> appears to be an incorrect title. The title should be <i>ROW-SD-1 Construction area siting</i> . (see Table 3.20-1)
3.14-22	2	1-4	This mitigation is not in Chapter 3.20.
Section 3.15 Visual Resources			
3.15-9	2	2-5	States "The ON Line Transmission project consisting of an approximately 235-mile long 500 kV transmission line from the new Robinson Summit Substation in White Pine County to the existing Harry Allen Substation in Clark County (BLM 2010) is currently under construction and considered as a foreseeable project in the draft EIS." Move discussion to the cumulative section, 3.15.3.
3.15-9	6	3-4	Text states "Foreground-middle-ground zones (the area that can be seen from an observation point for a distance of 3 to 5 miles)..." and should be revised to "Foreground-middle-ground zones (the area that can be seen from an observation point for a distance equal to or less than 4 miles)..." for consistency with definitions in following paragraph.
3.15-9	8	5	There is no "NPS 2009" reference listed in the Reference Section of the EIS.
3.15-10	3	3-4	States "Existing local light sources in the study area include the towns of Ely, Pioche, Panaca, Caliente, Hiko, Alamo, and Baker, Nevada." Suggest adding in Lund, Nevada.
3.15-10	5	5-6	States "Several segments of the Pony Express Trail in Cave Valley, Muleshoe Valley, and Dry Lake Valley traverse the project." However, this Trail does not cross the GWD Project area. The trail runs through the most northern part of Spring Valley. Please delete text.

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
3.15-13	2	1	States “Photographic simulations were prepared for 11 KOPs where views of the alternatives...”, however in Table F3.15-2 in Appendix F3.15, 12 photo-simulations were prepared.
3.15-14 and 3.15-15	Last and first		The current Applicant-Committed Measures do not appear to be correctly referenced in this text, please update and revise.
3.15-15	3	1-2	States “Long-term visual impacts of new power lines and ROWs would create new lines, forms, colors, and structures on the landscape.” Suggest replacing the term “structures” with “textures” since this is the standard term used in visual resource contrast rating.
3.15-15	3	12-14	States “The proposed Caliente construction support area would be located within an existing largely undeveloped industrial area, near the existing railroad tracks. The proposed pipe storage uses of this site would be similar in appearance to existing railroad support uses, such as those used for storing steel track and ties.” To better describe the support area suggest revising to “The proposed Caliente construction support area would be located entirely within a private parcel within an existing largely undeveloped industrial area, near the existing railroad tracks and a shooting range. The area is disturbed with primarily rabbitbrush and bare ground throughout. The proposed pipe storage uses of this site would be temporary and similar in appearance to existing railroad support uses, such as those used for storing steel track and ties.”
3.15-18	5	5-6	States “...BLM Standard Environmental Colors Chart CC-001 (Appendix F3.15, Figure F3.15-1).” There is no Figure F3.15-1 in Appendix F3.15 or BLM Color Chart.
3.15-20	6	1-3	States “Of the 36 KOPs analyzed for the Proposed Action (the remaining 4 KOPs were analyzed for options), 15 would experience moderate to strong visual contrasts as a result of the Proposed Action and Alternatives A through C, as shown in Appendix F3.15, Visual Resources.” However, according to Table F3.15-2 in Appendix F3.15 on page F3.15-8 there are 37 KOPs analyzed for the Proposed Action and 24 would experience moderate to strong visual contrasts. Further, the title for Table F3.15-2 should be changed from “Compliance with Visual Resource Objectives by KOP for Proposed Action ROW Facilities” to “Compliance with Visual Resource Objectives by KOP for Proposed Action and Alternatives A, B, and C ROW Facilities”
3.15-21	3	6-7	Suggest adding a clause “. . . a portion of Wheeler Peak Scenic Drive, recorded or unrecorded cultural resource sites, rock art locations, and other roads, trails and dispersed . . .”
3.15-21	3	1	Suggest adding a clause “. . . would be seen from dispersed recreation areas and any recorded or unrecorded cultural resource sites on west aspects . . .”
3.15-22	2	6-7	States “Moderate to strong contrasts would occur at 16 of the 41 KOPs.” However, according to Table F3.15-2 in Appendix F3.15 on page F3.15-8 there are 37 KOPs analyzed for the Proposed Action (the remaining 4 KOPs were analyzed for options) and 24 would experience moderate to strong visual contrasts.

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
3.15-22	last	2-5	ON Line Transmission project is a cumulative project and should be discussed in the cumulative section, 3.15.3.
3.15-23	Table 3.15-3		The units need to be stated in the table's title. Suggest "Table 3.15-3 Proposed Action, Alternatives A through C, Construction Surface Disturbance by Basin by VRM Class (acres)."
3.15-25	3	2-3	Change "170" acres to "166" acres and "2,800" acres to "2,833" acres as shown in Table 3.15-3.
3.15-25	8	3-4	Change "8,700" to "8,605", "225" to "120", "208" to "120" to be consistent with Tables 3.15-6 through 3.15-8. Change "12,000" to "12,060", "306" to "301", and "323" to "321" to be consistent with Tables 3.15-3 through 3.15-5. Also reference these tables within the text to clarify the source of these values.
3.15-25	9	4	Change "8,700" to "8,605" and "200" to "120" to be consistent with Tables 3.15-6 through 3.15-8 and reference these tables within the text to clarify the source of these values.
3.15-26	7	2	Suggest adding a clause "... within the foreground of scenic byways and recreation and wilderness areas, including from cultural resource sites or rock art locations, along those portions of ..."
3.15-27	6	1	States "Residual impacts would be similar to the Proposed Action and Alternatives A through C." Suggest revising to "Residual impacts (across 225 miles) would be similar to the Proposed Action and Alternatives A through C." (...based on Table 2.6-2, Chapter 2, page 2-46) Same comment for Alternative E on page 3.15-30, paragraph 7 which states "Residual impacts would be similar to the Proposed Action and Alternatives A through C." Suggest changing this statement to "Residual impacts (across 280 miles) would be similar to the Proposed Action and Alternatives A through C." (...also based on Table 2.6-2, Chapter 2, page 2-46.)
3.15-29	1	1	Mitigation measures ROW-VR-6 and 7 do not exist. Change text to "...ROW-VR-1 through ROW-VR-5..."
3.15-29	3	2	Change to impacts would not occur in "Hamlin or Snake valleys."
3.15-29	3	3-5	States "Under Alternative E, approximately 10,450 acres would be affected by 258 miles of pipeline and 278 miles of power lines (compared to 301 miles of pipeline, and 321 miles of power lines under the Proposed Action)." Add tables for Alt E similar to Table 3.15-6 for Alternative D and tables for other Alternatives showing affected miles and acreage.
3.15-29	10	6	Delete "not" in "Construction lighting would not briefly alter the nighttime viewshed."
3.15-30	3	2	Suggest adding a clause "... within the foreground of scenic byways and recreation and wilderness areas, including from cultural resource sites or rock art locations, along those portions of ..."
3.15-30	4	5-6	States "...same as the Proposed Action except that the project would not be visible from KOPs 28, 30, 33, 34, 35, 37, 38, 50, 52, and 82." The KOP #s need to be updated according to Figure 3.15-1 on page 3.15-2.
3.15-30	8	3	No facilities would be constructed in Hamlin Valley either. Please add in Hamlin Valley.
3.15-31	Table 3.15-9		First row second column states "Facilities would be detectable, with perceptible effects of disturbance from three KOPs (44, 45, and 46). USFS and BLM visual objectives would be met." These KOPs do not match KOPs in Appendix F.3.15. Please update. Based on Table 2.10-5 on page 2-121 of Chapter 2, the following

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
			text should be added to Table 3.15-9 last row, second column since this is a key difference in impacts for Option 4: "Overall visual effects would be increased due to construction of a new pumping station near Highway 93." Further, according to Table 2.10-5 the distance would be approximately 3 miles shorter vs. 2 miles. Suggest revising one table or the other.
3.15-32	Table 3.15-10		Double check values with Tables 3.15-2, 3.15-4, 3.15-7, and 3.15-8 and correct inconsistencies.
3.15-33	5		The subheading "Groundwater pumping" should be added between the 2nd and 3rd bullets under "Assumptions."
3.15-36	Table 3.15-11 and text		Please see General Comment above. SNWA has provided shapefiles to BLM which confirm that the groundwater development areas do not overlap into VRM Class I areas.
3.15-36	4	2-4	Revise to "Unless sited and screened from view, activities <u>may</u> not be consistent with those portions of Spring (13,539 acres), Snake (474 acres), Cave (5,912 acres), and Dry Lake (3,486 acres) valleys classified as VRM Class II." A detailed evaluation cannot be made in this programmatic analysis.
3.15-38	3	1-3	Correct references to "Section 3.5.4 and Figure 3.5-4, Vegetation Resources" to "Section 3.5.2.9 and Figure 3.5-6, Vegetation Resources."
3.15-38	7	7	Correct acreages consistent with general comments.
3.15-40	8	7	Correct acreages consistent with general comments.
3.15-41	1	1	Change Alternative "B" to Alternative "C" and change "...similar to..." to "...less than...". Alt C would have similar effects to Alt A which are less than the Proposed Action.
3.15-42	3	2	Change text from "...that impacts would be limited to Cave, Delamar, Dry Lake, and Spring valleys." to "...that impacts would not occur in the portion of Spring Valley in White Pine County."
3.15-43	Table 3.15-12		Include reference for acreage cited for Alt B and D Groundwater Development in VRM Class II areas. Correct disturbance totals consistent with general comments.
3.15-44	7	1	Full build out is currently scheduled for 2050 not 2022.
3.15-44	3rd bullet		The 3rd bullet under "issues" for "right-of-way and facilities maintenance" should be a subheading for "Groundwater Pumping Effects," not a bullet point.
3.15-44	10th bullet	2	Change "FFAs" to "RFFAs."
3.15-45	6	6	Update the status of the Spring Valley Wind Project litigation. Preliminary injunction was denied and construction may have begun.

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
3.15-48	5	4-5	States "...foreseeable projects within the immediate view sheds of Delamar Valley, Dry Lake Valley, Lake Valley, Spring Valley, and Steptoe Valleys as follows:...(bulleted list follows)" Add Delamar Valley to the bulleted list.
F3.15-8	Table F3.15-2		Although Table F3.15-2 lists KOP 40 as having a photo-simulation, there is no photo-simulation for this KOP in Appendix F3.15 (photo-simulations begin on page F3.15-9).
F3.15	KOP 15		The road should not be constructed as shown going through the wash with a bridge. Access can be provided using existing roadways.
F3.15	KOP 35		Lake Valley Pumping station should be depicted on the west side of US 93 as opposed to the east side as shown.
F3.15	KOP 41		Beginning on page F3.15-9 photo-simulations, for photo-simulation KOP 41 under "Simulation Shows;" change Alignment Options F, G, H, and I to Alignment Options 1 through 4.
F3.15	F3.15-22		Beginning on page F3.15-22 Visual Contrast Rating Worksheet for KOP 13 recommended mitigation measure states "Leave the road with the current natural surface. Paved road contrasts with the existing network of natural-surfaced roads – appears blacker." However, the photo-simulation for KOP 13 (photo-simulations begin on page F3.15-9) shows KOP 13 with mitigation measures applied and the road is paved. The KOP 13 photo-simulation needs to be revised. The same issue applies to KOP 41.
Section 3.16 Cultural Resources			
3.16-1	4	5	Suggest rephrasing sentence to state what are written in Section 106 regulations. Remove the term "cultural resources" and insert "historic properties."
3.16-1	Quick Reference		Add RFFA to the Quick Reference box.
3.16-2	1 3 4 5	1	Regulations in 36 CFR 800" should be "Regulations in 36 CFR Part 800" and the subsequent reference to 36 CFR 800 should also be "36 CFR Part 800" The citation for 36 CFR 800.2[c][6] should be 36 CFR 800.2(c)(5). The citation to 36 CFR 800.2[c][3] is incorrect and should read "36 CFR 800.2(c)(2)(B)(ii). The last sentence on this page states that the next step in the PA is public review. Consider adding a sentence that makes clear that this DEIS is the public's opportunity to comment on the draft PA.
3.16-2	5	2 - 3	Rather than write "...consultation with every federally-recognized Indian tribe with religious and cultural ties to the analysis area that..." Suggest rephrasing to, consultation with every federally-recognized tribe with ancestral ties to the analysis area that attaches religious and cultural significance..."

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
3.16-2	5	2	Please insert government-to-government consultation (Executive Order 13175) after “seek” in the sentence “good faith effort to identify and seek consultation with every federally-recognized Indian tribe...”
3.16-3	8	4	Suggest adding “diagnostic tools” to the glossary. This is a common term used by archaeologists; however, its meaning may not be clear to the general reader.
3.16-3	2		A site eligible for the NRHP is not necessarily entitled to “protection” as clearly as this sentence suggests. An eligible site is merely subject to additional consideration; while the intent of the NHPA is to preserve national heritage, it is only a procedural statute. It is possible that adverse effects on eligible properties may not be avoided, minimized or mitigated. Suggested change: replace “protection” with “special consideration”
3.16-6	3	4	The project alignment does not go through the Osceola Mining District; however, the project does go through the Cooper Mining District, west of Osceola.
3.16-8	2	1	Delete “cultural resources” after 657 and insert “sites and isolates” per the language in the Class I.
		2	Delete resources after 657 and insert “sites and isolates” per the language in the Class I
3.16-8	3	1	Delete “cultural resources” after 657 and insert “sites and isolates” per the language in the Class I.
		2	Suggest rephrase sentence, “Twenty-two of the sites are historic properties eligible for listing on the NRHP.”
3.16-8	4	8	Suggest rephrasing to “establish the locations and importance of historic properties of cultural and religious importance, e.g., TCPs.
3.16-8	4	5	Clarify whether the “documentary research” means a Class I files search.
	1		It is not clear here whether a files search be conducted for future facilities. For clarity, consider adding a sentence to this section that a files search, subsequent to the initial Class I review, will be conducted for future facilities per the terms of the PA.
3.16-9	4	1-2	The definition of historic property, under the heading methodology for analysis, should include a citation. 36 C.F.R. § 800.16(<i>I</i>)(1). And, the quotation should end after NRHP, because the clause “maintained by the NPS” is not in the regulation.
	9th bullet		Clarify whether the assumptions, particularly those in the second bullet point rely on the PA. For example, “. . . a Historic Properties treatment Plan will be prepared by SNWA’s archaeological subcontractor and reviewed and approved by BLM and SHPO, in accordance with the terms of the PA.”

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
3.16-9; 3.16-15; 3.16-19	4; 4; 5	1	Suggest rephrasing to: Potential indirect effects, such as artifact collection and vandalism, could potentially increase in frequency. [Vandalism and illegal collection is an on-going issue whether the project is constructed or not.]
3.16-9	12 (2 nd bullet)	1 - 2	Under <i>Methodology of Analysis</i> : Please explain how the potential effects are quantified and explain what the quantitative data is. Also, clarify for the general reader what would represent unavailable quantitative data.
3.16-10	5	3	“These types of activities also could affect areas of interest to Native Americans,” This sentence could be strengthened. Suggest, “These types of activities could affect historic properties of cultural and religious significance, such as TCPs, and sacred sites or areas used for . . .”
3.16-10	9	3	Replace “5) address inadvertent discoveries” with “address unanticipated discoveries.” In the PA, inadvertent discoveries are not discussed in the details given to unanticipated discoveries.
3.16-10	10	1	Suggest rephrasing interested tribes to “interested federally recognized tribes.” Under the rules of Section 106 the BLM does not consult with non-federally recognized tribes.
3.16-11	4 (3rd bullet)	1	The sentence would be more accurate if “site’s setting” was rephrased to “...or eliminate visual effects on a historic property’s setting.”
3.16-12; 3.16-13;	3 and 9; 2		For each of the alternatives, the conclusion in the Rights-of-Way section has a sentence that reads “Approximately x acres would be disturbed as a result of construction activities. Direct impacts to historic properties would be proportional to the amount of ground disturbance associated with project construction.” Thus “would” and “proportional” are not quite as precise as they could be. Since historic properties are not equally distributed over the landscape, suggest revising to “Direct impacts to historic properties could increase in relation to the amount of ground disturbance associated with project construction.”
3.16-13	Table 3.16-1	1st – 4th rows	See comment above about conclusions reached in the Right-of-Way sections. Direct impacts to historic properties are not proportional to ground disturbance, as historic properties are not equally distributed over the landscape. Suggest: replacing “would” with “could” in each analysis section of the table.
3.16-13	5	1	Under the No Action: This statement is true; however, impacts to cultural resources and historic properties would continue at their current rate regardless if the project is constructed. Suggest adding a third sentence: “Impacts to cultural resources and historic properties would continue to occur at this current rate.”
3.16-14	6	2	Suggest “Site-specific data on the number and types of historic properties or cultural resources that could be affected by groundwater pumping is unavailable.”

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
3.16-14	10	2 - 3	Under Conclusion, since historic properties are not equally distributed over the landscape, suggest “Direct impacts to historic properties could increase in relation to the amount of ground disturbance associated with permanent and . . .”
3.16-15; 3.16-16	6, 10 5; 9		The majority of the EIS uses exact numbers. All of the cultural section does, except for the few references on these pages. Suggest updating these references with actual numbers. “(i.e. approximately 177,000 afy)” “(approximately 115,000 afy)”
3.16-19	17 (3rd bullet)	1 - 3	Rephrase this bullet so that it is clear that this is the guidance used for determining an adverse effects. As it is written now it is just quoting a regulation, so it is not clear why it is presented in the Methodology for Analysis subheading.
Section 3.17 Native American Traditional Values			
3.17-1	Quick Reference		Add RFFA to Quick Reference Box
3.17-3	8 Last	5 1-2	Change “These are sometimes further interpreted” to “These sources of trust responsibility are sometimes further interpreted” The correct citation for the April 29, 1994 presidential memorandum should be provided. Remove “Federal Register, Vol. 59, No. 85” and replace with “59 Fed. Reg. 22951 (May 4, 1994).”
3.17-3	1	10 - 12	Since this is specifically discussing TCPs it would be more appropriate to reference Bulletin 38, which discusses the criteria for TCPs in detail, instead of Bulletin 15. Suggest: “. . . criteria as outlined in for cultural resources in National Register Bulletin 38 (Parker and King 1998).”
3.17-5	1	1 -2	Suggest rephrasing so that the reader understandings where the two Goshute reservations are located. One Band is located in eastern Nevada, at the base of the Deep Creek Mountains, east of Antelope Valley; and the other band is located in Skull Valley, just south of the Great Salt Lake, Utah.
3.17-7	6	Heading	Suggest renaming the heading Government-to-Government Tribal Consultation.
3.17-8	Table 3.17-1		On page 3.17-7, the DEIS alleges that the tribes listed in Table 3.17-1 are all federally recognized, although the Pahrump Paiute is not federally recognized. Suggest indicating in parentheses in the table that the Pahrump Paiute Tribe is a (“non-federally recognized tribe”).
3.17-8	1	1-2	The sentence that begins “In addition to” is logically awkward because the next clause is a July 2006 resolution, which occurred before the February 2007 initiation of consultation. Is the July 2006 date correct, or should it be July 26, 2007? If 2006 is correct, please explain the chronology of events as there must have been informal contact with the Tribes prior to the initiation of tribal consultation. Please describe.

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
3.17-11	Last	1-2	The transmittal of the final ethnographic study in January 2011 is not reflected in Appx F3.17, although the November 2010 event does appear in the chart. Consider adding the January 2011 event to the chart.
3.17-12	Last		The discussion of the determination of TCPs does not indicate that the tribes may contest BLM's eligibility determination. Consider adding a sentence reflecting this ability of tribes to contest the determination, such as: "If a tribe that attaches religious and cultural significance to a property off of tribal land does not agree with BLM's eligibility determination, the tribe may ask the ACHP to request BLM obtain a determination of eligibility in accordance with ACHP's Section 106 regulations. 36 C.F.R. § 800.4(c)(2)."
3.17-12	2	8	Because plants important to Native Americans, naturally-occurring water, and trails are not necessarily considered by themselves to be a TCP, suggest replacing the clause "the following site types" with "the following site features".
3.17-12	5	1 - 4	This paragraph appears to conflict with the protocol set forth in the programmatic agreement regarding the eligibility determination of historic properties, including TCPs (see page 14 of the draft PA). Suggest removing this paragraph and replacing with "The BLM will consult with tribes regarding the NRHP-eligibility of TCPs in accordance with the protocol set forth in the PA."
3.17-13	1	2	Suggest "human remains" be replaced with "Native American remains and funerary objects," as non-native burials are handled under different rules and procedures.
3.17-13	2	1	Under Assumptions, suggest replacing "Native American consultation" with "government-to-government tribal consultation" to be more consistent with other references to tribal consultation in the DEIS.
3.17-13	2	2	Under Assumptions: The sentence should read, "Protection of any historic properties, including TCPs, sacred sites, and historic properties of cultural and religious importance identified by the tribes..." This is important to clarify that only historic properties are covered by the PA.
3.17-14; 3.17-19; 3.17-20; 3.17-21; 3.17-22;	5; 3; 3, 9; 6; 2,8	1	The majority of the EIS uses exact numbers. However the Native American Traditional Values chapter uses several rounded and general numbers. Suggest updating these references with actual numbers. (i.e. 12,300 instead of 12,303 on Table 2.6-2; 177,000" to 176,655 per Table 2.6-2)
3.17-16			In table 3.17-3, in the first alternative, remove the track changes indicator on the colon following "Option Description:"
3.17-18	7	1 - 3	Suggest clarifying that the data obtained from tribes regarding the effects of groundwater pumping is specific to Native American cultural values, as done in the preceding bullet regarding groundwater development. "The analysis of groundwater pumping effects on Native American traditional values is based on information . . . "

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
3.17.18	8	7 (on to next page)	The provisions of the PA only apply to historic properties. Suggest changing the last sentence of the paragraph to “If a historic property of tribal importance would be affected...”
3.17-18	7		3.17.2.9 – This section notes that subsurface cultural material may be unearthed during construction activities. Consider adding a sentence that explains that upon discovery of human remains, all construction activities within 325 feet will stop, BLM will be notified, and further measures regarding the discovery will proceed in accordance with the PA.
3.17.19	5	1	To be consistent with the description on 3.17-12 and the nature of the sites identified, suggest “A total of 76 possible places of cultural and religious importance to Native Americans were identified...”
3.17-19; 3.17-20; 3.17-21; 3.17-22	5; 3, 7; 5; 2, 7;	5 – 7; 3-5, 3-6; 3-4; 5-6, 5-6	“based on a 10-foot drawdown: Swamp Cedars at full build out, full build out plus 75 years, and full build out plus 200 years; Turnley Spring and Spring Creek Spring full build out plus 75 years and full build out plus 200 years” This statement is confusing. It seems as if this statement is referring to three separate scenarios. Please rephrase to clarify for the general reader what the drawdown is predicted to be over time. The same comment applies for similar statements throughout this section.
3.17-24	9	1 - 2	Suggest emphasizing that the effects considered in this section are specific to Native American cultural values “The project-specific issues for the effects on Native American traditional values analysis were identified based on information.”
3.17-24	11	1 - 2	Suggest emphasizing that the effects considered in this section are specific to Native American cultural values “The analysis of groundwater pumping effects on Native American traditional values is based on information...”
3.17-26	End		Add the no action alternative.
Section 3.18 Socioeconomics and Environmental Justice			
3.18.1	FN 1		The footnote states that the CEQ standard for NEPA information is the “best available information.” This is not the standard in the regulations. CEQ regulations require “high quality” information and “accurate scientific analysis, expert agency comments, and public scrutiny.” 40 C.F.R. § 1502.24.
3.18-3	1	5	The sentence reads: “Clark County was home to 1.95 million...” This figure is from the U.S. 2010 Census, since there are at least three different sources of population figures for Clark County, we suggest citing specific sources.
3.18-4	5	2	Please verify the Clark County population figure for 1970 and cite source.
3.18-5	1	2	This figure should be 702,291. Source: US Census Bureau: http://quickfacts.census.gov/qfd/states/32/32003.html

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
3.18-5	1	7	Both population estimates and U.S. Census count suggest that population decline was evident, however, the text also points out that “other statistics suggest that a substantial outmigration did occur.” Recommending providing the source if available.
3.18-5	2	7	Recommending using the year 2010 figure of 891,000 from the same source. (http://www.clarkcountynv.gov/depts/comprehensive_planning/demographics/Pages/default.aspx).
3.18-5	3	1	The recession began in late 2007 and not 2008. Source: http://www.nber.org/cycles/dec2008.html
3.18-7	4	3-4	The data used in this paragraph is for 2009, the 2010 figures from the 2010 U.S. Census are available. It is important to be consistent as the 2010 U.S. Census figures have been used elsewhere in this document.
3.18-9	Table 3.18-6		Update UNLV-CBER population projections in table and accompanying text with 2011 report.
3.18-9	2	1-2	The sentence indicates that the UNLV-CBER 2008 projections are the basis of the SNWA’s 2009 Water Resource Plan, however, it is not indicated that the projections were adjusted. Please include similar language as used on Chapter 1, Page 1-13, first paragraph.
3.18-9	2	4	Recommending adding the word "approximately" before 10.
3.18-10	Figure 3.18-4		The figures on the vertical axis are truncated, please fix.
3.18-10	1	2	The 13.5 figure does not match with 13.7 shown on Table 3.18-8
3.18-33	7		Consider updating section subsection titled: “Minority, American Indian, and Low Income Populations” and Table 3.18-19 and Table 3.18-20 with the information in the 2010 U.S. Census.
3.18-41	3	1	The 390 figure is incorrect. According to Table 3.18-23, the correct figure should be 329.
3.18-48	6	2	There is mismatch between the information in the text and what is shown on Table 3.18-26. According to the table, a temporary population gain of 360 additional residents is projected at year 5 (2016) and not year 4 (2015). Please correct.
3.18-53	4	4	There is mismatch between the information in the text and what is shown on Table 3.18-30. According to the table, a temporary population gain of 360 additional residents is projected at year 5 (2016) and not year 4 (2015). Please correct.
3.18-71	6	9-11	The sentence reads: “The CBER population forecasts were endorsed by the Southern Nevada Regional Planning Coalition (SNRPC), which is comprised of elected officials from Las Vegas, North Las Vegas, Henderson, Boulder City, and Clark County (SNRPC 2001).” This is true, but it is a separate process that SNRPC uses as procedure as part of the agreement as one of the funding agencies of the UNLV-CBER projections. This process does not directly influence SNWA’s 2009 Water Resource Plan.

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
3.18-97	Table 3.18-49	Row 1, col.2 row1, col.3 row1, col.4 row1, col.5	Change for proposed action “144 to 176” wells to “144 to 174” per table 2.6-2 page 2-46 Change for Alt. A “108 to 131” wells to “97 to 117” per table 2.6-2 page 2-46 Change for Alt. B “116” wells to “136” per table 2.6-2 page 2-46 Change for Alt. C “108 to 131” wells to “97 to 117” per table 2.6-2 page 2-46
Section 3.19 Public Safety and Health			
			There appears to be some organizational confusion in this section in that construction is addressed only under Right-of-Ways and Ancillary Facilities, and operation is addressed under Groundwater Development Areas. Construction and operation should be addressed under both sections.
3.19-1	8	3	There is no Table 3.19-1 in this appendix. Suggest that this reference be just “Appendix F3.19”.
3.19-2	7	End	Need to include text regarding the operations of the ancillary facilities in this section.
3.19-5	1	6-7	Remove last sentence. The standards referred to are not listed in Appendix F3.19 and there is no Table F3.19-2.
3.19-5	3	1-5	Move this text to Section 3.19.1.2 following the last paragraph on pg 3.19-2 under “Hazardous Materials and Waste” since it is discussing operations of ancillary facilities. Hazardous Materials and Waste under 3.19.1.3 should describe construction and operation of well sites, pipelines and power lines.
3.19-5	4	1-3	Copy this paragraph and insert on pg 3.19-2 following the text moved in the comment above.
3.19-5	10-11		Copy both of these paragraphs and insert under Section 3.19.1.2. Revise paragraph 11 to just refer to the right-of-way. Revise paragraph 11 by removing “...and pipeline and power line ROWs...” This should only refer to the groundwater development areas.
3.19-6	2	1	Change “gathering” pipelines to “collector” pipelines to be consistent with Chapter 2
3.19-7	1	1	Add “and Ancillary Facilities” to the title for 3.19.2.1
3.19-8, 3.19-11, 3.19-13	7, 11, entire page		The discussion on potential impacts from pipeline rupture should be discussed under Rights-of-Way, not Groundwater Development.
3.19-12	7		Operation of water treatment facilities should be discussed under Rights-of-Way, not Groundwater Development.
3.19-14	2	3rd Bul.	Change “main and lateral” pipelines to “collector” pipelines.

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
Chapter 3.20 Monitoring and Mitigation Summary			
			This section is missing some of the measures identified in the resource chapters, and some descriptions of the measures are inconsistent.
3.20-5	GW-VR-4		(Site Groundwater Development Structures and Facilities in BLM VRM Class III or IV Areas) This measure is duplicative and should be omitted from this page. It is correctly listed on page 3.20-13.
3.20-7	GW-AQ-3		Under GW-AQ-3 Monitoring, Mitigation, and Management Plan for Air Quality, misspelled the word “bare”. Correct by deleting “Bar Soil”/sparse vegetation and replacing with “Bare Soil”/sparse vegetation.
Chapter 4 Irreversible and Irretrievable Commitments of Resources			
4-4	2	1	Under Native American Traditional Values. To be consistent with the Native American Traditional Values Chapter, suggest rephrasing to “Construction disturbance to sites associated with Native Indian traditional values would be irretrievable . . .”
References			
3.5 Veg. Resource pg 4	1	1	Change spelling of “Naumberg” to “Naumburg”.
Appendixes			
E			“Appendix A” is listed as a subheading on each page.
F3.5-11	2	1	Change text from “Water hemlock (<i>Cicuta maculate</i>)” to “Water hemlock (<i>Cicuta maculata</i>)”.
F3.5-14	Table F3.5-2		The source of the data in the table only includes TCWCP 2007. The Ely District noxious weed inventory data should also be included in the table if it is not already and should be referenced at the bottom of the table.
F3.5-15, Pg1	1	6-7	The reference to the BLM National List of Invasive Weed Species of Concern should be added to the Reference section of Appendix F3.5.
F3.5-15, Pg1	1	12	The link “ http://www.nv.blm.gov/Resources/noxious_weeds.htm ” does not work. The following link however does: “ http://www.blm.gov/nv/st/en/prog/more_programs/invasive_species.html ”.
F3.5-15, Pg2	3	6-8	States “...in the SNWA Plan of Development (POD), and in Section 2.3, Facility Components and Design Common to All Alternatives; and Section 2.4, Proposed Action and Action Alternatives.” The references to Section 2.3 and 2.4 are not current with the DEIS and therefore should be revised to avoid confusion (possibly just reference Chapter 2 instead). Note: The Table 2.1-2 Comparison Groundwater Pumping Alternatives on page 3 is not current with the DEIS either but since the risk assessment was based on the data in this table, the table should remain as is.

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
F3.5-15, Pg5	2	5	States "...include the two power line routes through the Schell Range (see Map 1);..." However the two power line routes on Map 1 are not clearly denoted. Please revise the legend for Map 1 to include the power lines (the "ROW Main Pipeline" is already denoted on the map).
F3.5-15, Pg8	1	4-5	The statement "Also for green stripping to prevent weed spread and fire." is not a complete sentence. Suggest revising.
F3.5-15, Pgs10-15	Maps 1 though 6		The legend states "Ely Dist. Noxious Weed Inventory". Change to "Ely Dist. Noxious and Non-Native Invasive Weed Inventory" since some of the species listed are not Nevada noxious weeds.
F3.5-9			Please add and provide descriptions for the noxious weed poison hemlock (<i>Conium maculatum</i>), invasive weed tree of heaven (<i>Ailanthus altissima</i>), invasive weed bur buttercup (<i>Ceratocephala testiculata</i>), invasive weed tumble mustard (<i>Sisymbrium altissimum</i>), invasive weed horehound (<i>Marrubium vulgare</i>), and invasive weed Russian thistle (<i>Salsola kali</i>) to the list since these are mentioned in various areas of Section 3.5 Vegetation Resources and Appendix F3.5, but not currently in the description list. Unless for the invasive weeds, as stated in Chapter 3, Section 3.5 Vegetation Resources, page 3.5-6, paragraph 1, this description list only includes "Information on invasive species that are widely distributed within the ROW area..." Nevertheless poison hemlock should be described.
F3.5-66			The following cites from the text are not listed in the reference list of this appendix and need to be added: BLM 2005; Lovich and Bainbridge 1999; IUCN-WCN 2007; and Parker 2007.
F3.6-4	Table F3.6-1	Desert Kangaroo rat	Not in Delamar Valley
F3.6-4	Table F3.6-1	Desert pocket mouse	Not in Pahrangat, Delamar, or Dry Lake Valley
F3.6-4	Table F3.6-1	Desert Valley kangaroo mouse	Not in Delamar, Pahroc, or White River Valley
F3.6-5	Table F3.6-1	Pale kangaroo mouse	Not in Pahrangat Valley

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
F3.6-7, F3.6-21	Table F3.6-1, Table F3.6-2	Red- headed woodpec ker	This is an Eastern U.S. species that does not occur in Nevada or Utah. It not listed in the Nevada Wildlife Action Plan or the Utah Comprehensive Wildlife Conservation Strategy. It should be removed from the document.
F3.6-43	Table F3.6-4	Dark kangaroo mouse	Delamar acreage calculations should be removed as the species is not known to occur in Delamar Valley.
F3.6-45	Table F-3.6-5	Dark kangaroo mouse	Delamar acreage calculations should be removed as the species is not known to occur in Delamar Valley.
F3.6-47	Table F-3.6-6	Dark kangaroo mouse	Delamar acreage calculations should be removed as the species is not known to occur in Delamar Valley.
F3.6-49	Table F-3.6-7	Dark kangaroo mouse	Delamar acreage calculations should be removed as the species is not known to occur in Delamar Valley.
F3.6-51	Table F-3.6-8	Dark kangaroo mouse	Delamar acreage calculations should be removed as the species is not known to occur in Delamar Valley.
F3.6- 91	Appendix Figure F3.6-2		In the legend, please add “desert tortoise habitat” after “USGS Modeled potential” (assuming this is correct). If not, identify what this layer refers to.
F3.6-93	Appendix Figure F3.6-3		The pronghorn habitat in Utah is year-long use area, not year-long crucial habitat.
F3.6-110	Figure 3.6-12	Gila Monster CISA	The CISA should extend as far north as Hiko in Pahrangat Valley as NDOW has a Hiko occurrence record.
F3.7-4	Appendix Table F3.7-1		Please add Toquerville pyrg (<i>P. kolobensis</i>) to the table.
F3.7-10	Table 3.7-4	Big Springs	Add Utah sucker to Big Springs fish listed

**SNWA Comments on Clark, Lincoln, and White Pine Counties Groundwater Development Project
Draft EIS 2011**

Page	Paragraph Table or Figure	Line	Specific Comments
F3.7-20	Appendix Table F3.7-6		Please remove Toquerville pyrg from table – it is not a special status species.
F3.16	Glossary of terms		The page numbering is incorrect for the Appendix A of the Programmatic Agreement. The pages should be numbered “A-“ rather than “B-.”
F3.16			Add the definition of “consulting party”.
F3.16	3		In the third full paragraph, consider revising to read “and the State Protocol Agreement dated October 26, 2009 (the “Nevada State Protocol”), between the BLM Nevada and the Nevada State Historic Preservation Officer (“SHPO”), both of which . . . “in order to avoid the double parenthetical and multiple commas in the current draft.