

Comments and Responses - Local Government

ID	Comment	Response
Baker Water and Sewer General Improvement District		
35549-1	Among the faults are a failure to disclose and independently analyze the full economic cost of the project, a failure to disclose and analyze the cost of proposed mitigation and monitoring	Thank you for your comment. Information project cost are included in the FEIS. See also Standard Resource Responses SocEcon-1, SocEcon-3 and SocEcon-6. Additional information regarding SNWA's cost estimates and potential financing can also be found on the Nevada State Engineer's website: www.water.nv.gov/hearings/past/springetal/documents.cfm?DIR=exhibits.SNWAExhibits.
35549-2	and a failure to include real alternatives to the pumping project – alternatives that the public demanded during scoping – such as efficiency and conservation of existing water resources in S. Nevada, outright purchase of water rights currently used for agriculture in S. Nevada and elsewhere on the Colorado River, and desalination options.	The action before the BLM relates to granting a right-of-way for groundwater conveyance. Section 2.7 in the EIS contains a discussion of the alternatives considered but not carried forward for further analysis.
35549-3	DEIS fails to identify the real “purpose and need” which is clearly to increase water availability for S. Nevada saying instead that it's the BLM's “need” to issue a right-of-way.	Based on this comment, text has been added to Chapter 1.
35549-4	Big Springs has flow eliminated in most of the alternatives and other springs are greatly affected, which is against NRS. How can the BLM have the authority to approve a project that will break state statutes?	Chapter 1 contains a thorough explanation of BLM's legal mandates and responsibilities. The Nevada State Engineer has statutory authority to enforce and render decisions consistent with Nevada state law.
35549-5	The pipeline stops south of the town of Baker. We are concerned about where it will go around and what size will the pipeline be? What perennial creeks will be crossed and what cultural areas will be affected?	The pipeline will not go around Baker. It terminates to the south at a pumping station and electrical substation. The diameter of the pipeline would likely be 54 inches.
35549-6	Dust is a major health hazard and we are concerned about how the area residents will be protected. The model shows a drawdown of ten feet or more. Local springs, wetlands and even some wells will go dry with a smaller drawdown. A much more detailed model is needed.	Please see common responses Air-4, Air-6, and WR-1.
35549-7	Information in Chapter 2 needs to be more specific so that the DEIS analysis can be better. It should specify where the wells go, the number of wells, the size of the pipelines, timelines involved, etc. The information being presented to the Nevada State Engineer at this time is different than that presented in the DEIS and is severely lacking in information. The timeline varies in the DEIS in different sections and sometimes even within the same sections. What is the real timeline?	Specific information regarding well numbers and locations are not known at this time. Further NEPA analysis will be conducted in the future to analyze these impacts. The Nevada State Engineer process is separate from the BLM NEPA process and therefore this comment is not within the scope of the Final EIS. Inconsistencies regarding construction schedules and timelines have been corrected where found and a table has been added to Section 2.5.1.6 that further clarifies the construction milestones for the Proposed Action. See the Final EIS for text changes that provide additional information on this topic.
35549-8	Why is a Snake Valley right of way being pursued before a Snake Valley hearing?	The NEPA process is separate from decisions made by the Nevada State Engineer.
35549-9	How long will this EIS be good for - Five, ten, twenty years?	The EIS does not have a set timeframe; however, it is the intention of BLM to keep it current with updated information. Subsequent NEPA as described in Chapter 1 should also keep the document current.
35549-10	We would like to see a 90 day extension on the DEIS comment period.	Thank you for your comment. The BLM extended the comment period on the Draft EIS by 30 days in response to requests such as yours.
35549-11	We would also like to see a Supplemental EIS that address impacts from specific well locations.	Appropriate subsequent NEPA analyses will be completed prior to construction of future facilities.
Central Nevada Regional Water Authority		
34862-1	The DEIS must consider the environmental consequences/impacts of the SNWA Groundwater Development Project, including the foot print of right-of-way routes. In correcting this fundamental flaw, BLM will assess viable alternatives to the Groundwater Development Project.	The impacts of constructing the ROWs and the footprint of disturbance were analyzed for all resources.
34862-2	It appears BLM did not want to look at the range of alternatives for the SNWA Groundwater Development Project, nor conduct a comprehensive environmental assessment of the SNWA Groundwater Development Project, in the water-losing and water-gaining areas. This deficiency is not only a significant and fundamental flaw, it is most likely a fatal flaw in the DEIS	Please see standard resource response Gen-3 for information relevant to this comment. Chapter 2 provides a detailed discussion of the alternatives considered in the EIS.
34862-3	If it were not for the SNW A Groundwater Development Project the pipeline would not be needed. Once again, the DEIS must assess the environmental effects of the Groundwater Development Project, including assessing viable alternatives to the Groundwater Development Project.	Please see standard resource response Gen-3 for information relevant to this comment. Chapter 2 provides a detailed discussion of the alternatives considered in the EIS.
34862-4	CEQ and the courts have determined an EIS under NEPA can analyze an alternative or alternatives beyond what Congress has authorized because the EIS may serve as the basis for modifying the Congressional action in light of NEPA's goals and policies. The DEIS should inform the reader of this fact, and of course do it.	BLM used the referenced CEQ guidance to prepare the EIS. Please review Standard Resource Response Gen-5 for information relevant to this comment. Chapter 2 contains a thorough discussion of the alternatives considered when developing this EIS.

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34862-5	The first "tier" should address the various methods/ways SNW A can obtain the minimum amount of water needed. The second "tier" would narrow the scope of the EIS to a particular action to obtain the minimum amount of water needed. For example, the particular action could be the Groundwater Development Project, water conservation, desalination, smart growth planning, etc. The third "tier" would narrow the scope of the EIS to specific locations and design elements associated with the proposed action. The DEIS skipped the first two tiers.	The Draft and Final EIS include the SNWA Water Plan (2009) which discusses their current actions and future plans regarding the topics brought forth in your comment. Chapter 2 contains a thorough discussion of the alternatives considered when developing this EIS.
34862-6	The point is the CBER population projections are at best questionable, and should not be used to justify the SNW A Groundwater Development Project.	Thank you for your comment. Please see Standard Comment Response SocEcon-2 regarding the role of projected long-term population and economic growth in Clark County in regards to BLM's NEPA assessment of the proposed GWDP project.
34862-7	Combining reductions in both projected population (see #3) and per capita water demand will completely eliminate the need for new water supplies to accommodate the CBER projected population of 3.13 million people in 2035.	The draft and final EIS include the 2009 SNWA Water Resource Plan (Appendix A) which discusses their current actions and future plans regarding the topics brought forth in your comment. The BLM has considered your comment and the information in the Water Plan in its choice of the agency preferred alternative presented in this final EIS. Please see standard responses Gen-3 and SocEcon-2 for additional information.
34862-8	SNWA could receive significant additional water if power plants in its service area were to change from wet to dry cooling. It is estimated ten's of thousands of acre-feet of water could be saved by this action.	The action before the BLM relates to granting a right-of-way for groundwater conveyance. Determining options for other water sources is beyond the scope of this Final EIS.
34862-9	Are there viable alternatives to the SNW A Groundwater Development Project?	Please review Standard Resource Responses Gen-3 and Gen-5 for information relevant to this comment. Chapter 2 contains a thorough discussion of the alternatives considered when developing this EIS.
34862-10	To allow the public to make a fair assessment of the Project, the DEIS, not the FEIS, should include Project cost information, including capital cost, financing cost, operation and maintenance cost, contingency for project cost overruns, ability of growth to pay for the Project, estimated cost to rate payers who will pay for the Project, and impact of Project cost on per capita water demand.	Thank you for your comment. Information on project costs are included in the FEIS. See also Standard Comment Responses SocEcon-1, SocEcon-3 and SocEcon-6. Additional information regarding SNWA's cost estimates and potential financing can also be found on the Nevada State Engineer's website: www.water.nv.gov/hearings/past/springetal/documents.cfm?DIR=exhibits.SNWAExhibits
34862-11	Other issues that the DEIS should address in the DEIS include 1) the fact that if climate change reduces the amount of water in the Colorado River it will surely reduce the amount of groundwater in the Great Basin, 2) the minimum amount of water SNWA needs to make the Project economically feasible, 3) the amount of water DOI agencies need to carry out or implement their responsibilities in the targets water basins (e.g., grazing programs, wildlife habitat programs, etc.)	Please refer to updated section 3.1 (air) for a discussion of climate change. Standard resource responses MM-1, MM-2 and MM-3 and information in Appendix A also provide information regarding this comment.
34862-12	The fact that the Project's long term timeframe exceeds the period of an effective environmental assessment.	Please refer to standard resource response Gen-1 and Gen-2 and updated chapter 1 for information relevant to this comment.

City of Boulder City

35896-1	We were disappointed to see that the Draft EIS does not include a more in depth analysis on the impacts on Southern Nevada should the project not be built.	Thank you for your comment. Please see SocEcon-4 regarding the issue of social and economic implications for Clark County/LVV if the proposed GWP does not move forward.
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City of Henderson

34264-1	a sustained drought on the Colorado River suggests that Henderson and Southern Nevada may need to look into other resource options to meet our water demands.	This information will be provided to SNWA for their use in future water resource planning.
34264-2	I encourage you to fully explore the Southern Nevada Water Authority's proposal to transport water from Lincoln and White Pine counties to Clark County and to preserve it as an option for our community.	Thank you for your comment.

City of Las Vegas

34263-1	For most of the last decade, Southern Nevada has worked to reach balance between growing water demands and depleting water supplies. Drought conditions have severely impacted the region's available water resources, and forced the area's managers to reconsider water management approaches.	Information regarding this comment can be found in Appendix A.
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Clark County

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ID	Comment	Response
38036-1	The DEIS fails to adequately address tire impacts of the impacts of the no action alternative for Southern Nevada. The most apparent inadequacy is the failure of the document to discuss in sufficient detail the catastrophic impacts of a water shortage for Southern Nevada. The analysis presented in the DEIS is incomplete at best and presupposes that most of the impacts of the proposed project will be negative and limited to rural counties. The reality is that Southern Nevada is almost entirely dependent upon a single water source and the effects of the drought on the Colorado River over the past decade have greatly amplified Southern Nevada's need to diversify its water resource supply. Unfortunately, the DEIS gives short shrift to this reality and fails to adequately discuss the real impacts that will result from even a short-term water shortage. These potential and quantifiable impacts range from the economic costs associated with skyrocketing short-term borrowing costs, to long-term impacts associated with broad economic decline, not unlike what Nevada is currently enduring.	See Standard Comment Response SocEcon-4 which notes that issuance of a ROW grant does not assure the project would go forward, or that the anticipated economic benefits would be realized. Furthermore, SNWA could pursue other sources of additional water should the project not proceed. Section 3.18 (socioeconomics and environmental justice) has been updated to include additional information brought up by this comment.
38036-2	The DEIS fails to adequately describe the economic impacts of the no action alternative for rural communities. A related inadequacy is the extent to which the economies in Lincoln and White Pine counties are largely dependent upon tax revenue generated in Clark County, not to mention the remainder of the state. This dynamic should be reflected and quantified in the analysis, including a comparison of the amount of tax revenue generated by the major industries in each county in comparison to the relative tax receipts. The analysis must also address the projected financial impacts to these rural counties if the project does not move forward.	The subject of the relative fiscal costs and benefits of growth in Las Vegas and the rural counties is noted in Section 3.18 as it is part of the ongoing public discourse and debate regarding the GWP project. However, quantitative analysis of the trade-offs and dynamics of the project, or project alternatives potential fiscal implications for the rural counties should the GWDP not proceed, is a matter of state and local legal and public policy issues in Nevada that is outside the scope of the EIS which addresses an application for a ROW.
38036-3	The potential loss in revenue resulting from the development and construction and operation of the proposed project is dwarfed by the loss in potential revenues if a major economic downturn were to occur in Clark County if Southern Nevada were unable to meet existing demands as a result of potential shortages on the Colorado River.	Updated section 3.18 (socioeconomics and environmental justice) contains information relevant to this comment.
38036-4	The analysis also fails to address the financial assurances in place within the Nevada Utah agreement, the stipulated agreements or the proceeds that are required to be paid to the counties where the diversion originates. Given these assurances, it is unclear why additional compensation is necessary.	Thank you for the comment. It is assumed that the reference to additional compensation relates to proposed socioeconomic mitigation measure SE-7. The basis for this measure is that the draft provisions within the bi-state agreement and stipulated agreements apply to property owners with recognized water rights. As noted in other comments, other businesses in the community rely on the agriculture sector for support, and are thus may be subject to business risks beyond those normally associated with such endeavors. Furthermore, it is unclear whether the proceeds generated by interbasin transfer could be used for business assistance purposes.
38036-5	Tire impacts analysis goes beyond the scope of what is required under NEPA and the recommended mitigation measures exceed tire authority of tire BLM. A substantial portion of the discussion of the potential impacts concerns impacts for which BLM's issuance of the ROW is not the legal cause. The BLM's reference to the BLM NEPA Handbook (3.18-46) notwithstanding, recent case law regarding the appropriate scope of agency review makes it clear that in completing NEPA review, agencies are not required to analyze effects for which the agency action is not the legal cause (see Department of Transportation v. Public Citizen, 541 U.S. 752). In the case of the ROW, BLM has no ability to countermand or otherwise refuse to grant the ROW provided that the conditions of the LCCRDA are satisfied. Despite the Supreme Court's guidance, the draft EIS strays far from an analysis of effects that are caused by BLM's action.	Comment noted.
38036-6	Similarly, NEPA does not expand the authority a federal agency has under its enabling act. As a result, any mitigation measures mandated by BLM must be within BLM's authority under FLPMA and P.L. 108-424. In many instances, the proposed mitigation in the DEIS would appear to go beyond the scope and authority of the BLM to consider and recommend. Overall, the additional "recommended" mitigation measures outlined DEIS should be re-evaluated and removed if BLM does not have the authority to require them. As a result, the public may be left with the false impression that these are measures that the BLM can in fact require. In addition, it serves to undermine the longstanding primacy of state regulation of water in Nevada.	CEQ directs federal agencies to recommend mitigation measures outside its authority to enforce. The FEIS identifies those measures.
38036-7	The emissions factor used to estimate potential emissions resulting from potential drawdown is not representative of likely future conditions. The estimation of additional windblown dust emissions resulting from groundwater drawdown outside of Clark County is not representative of likely future conditions. While we generally concur with the technical approach used to estimate these emissions, we do not believe that the emission factor selected to represent plant communities affected by groundwater drawdown, which was developed from western surface coal mining emissions, is representative. As a result, the analysis significantly overestimates potential emissions. We believe that the emission factor developed for native desert areas of Clark County, based on a series of wind tunnel studies conducted by UNL V, would better represent the bare soil/sparse vegetation and phreatophyte/medium vegetation areas affected by groundwater drawdown and produce more accurate emission estimates	Please see standard resource response Air-21.

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38036-8	The Clark County wind tunnel study documents are available at the following URL: http://www.clarkcountynv.gov/Depts/daqem/Pages/ResearchProjects.aspx To obtain a tons/acre/year emissions factor from the above wind tunnel data, Clark County staff used Las Vegas Valley (McCarran Airport) meteorological data for the year 2008. The Clark County native desert annual PM10 emissions factor is 0.015 tons/acre/year. We believe that this emission factor is appropriate for bare soil/space vegetation areas affected by groundwater drawdown. This is a conservative emission factor for phreatophyte/medium vegetation areas. We note that this emission factor could be further refined by using local meteorological data in place of the Las Vegas Valley data.	Please see standard resource response Air-21 and the revised description of the methodology used to calculate the project emissions in Section 3.1.2.
38036-9	Table 3.1-1 should be updated to reflect current National Ambient Air Quality Standards. Tables 3.1-2, 3.1-3, and 3.1-4 are not applicable to Clark County. The accompanying narrative to these tables should be modified appropriately. Within Clark County the proposed Project crosses Hydrographic Areas 210, 217, 218 and 212. Please refer to the map on the County web site: http://www.clarkcountynv.gov/Depts/dagern/Pages/StateimplementationPlans.aspx	Based on your comment the FEIS has been edited to clarify. Thank you.
38036-10	Tire DEIS does not adequately discuss the uncertainty with potential impacts and the subsequent NEPA analysis that will be conducted prior to any conveyance of groundwater to Southern Nevada. The DEIS does not sufficiently explain to the reader the level of uncertainty and limitations of the impacts analysis. As a result, the reader is left with the impression that the impacts described in Chapter 3 are a foregone conclusion. While the various modeling and analyses incorporated into the document reflect the best available information, the project will inevitably be subject to substantial additional data collection and refinement in the future. This additional data will be used to further refine the project and minimize potential impacts. There is little to any discussion in the DEIS as to either the limitations of the analysis or the process for incorporating additional data in the future.	Section 1.1 states: "This EIS includes a programmatic analysis of environmental effects associated with the SNWA's prospective future groundwater development, which as noted above, is contingent upon future appropriation by the NSE. Such future development, much of which likely would occur on public lands and entail additional federal ROWs for specific groundwater production wells and collector pipeline locations, will require additional NEPA analysis (see Section 1.3.2, National Environmental Policy Act Tiering). Site-specific NEPA analysis, as provided in 40 CFR Part 1500 and the BLM NEPA Handbook, will be conducted for future proposed GWD Project facilities involving public lands in conjunction with water to be conveyed by the pipeline." Please also see the first bulleted statement under Section 3.0.3, Incomplete and Unavailable Information, regarding the requirements for additional NEPA due to the unknowns related to future project definition..
38036-11	The analysis also fails to describe how the proposed mitigation measures will offset the projected impacts in a clear and concise manner. The reader is left to "hunt and peck" for information on the individual measures without being provided a comprehensive assessment of the effectiveness of the mitigation strategy writ large.	Mitigation measures are recommended in situations where impact levels were considered to be of high intensity or magnitude after implementing BMPs and applicant-committed measures. An effectiveness statement is made for each mitigation measure in terms of the relative reduction of impacts for the particular impact issue. This organization is consistently used in each of the resource impact discussions. Section 3.20 also provides a complete listing of mitigation measures recommended for the project and a discussion of the COM Plan.
Elko County		
34241-1	One of the most obvious negative impacts as I observe is the potential for interbasin reactions causing flows from one aquifer to another due to the excessive over pumping of billions of gallons of water from the Spring Valley sources.	Please review section 3.3 (water resources) which discusses the potential impacts from future water withdrawals.
34241-2	I believe that the BLM has not fulfilled your obligation to NEPA in that these impacts have not been monitored, researched or identified in the DEIS.	Please review chapter 1 for a full discussion of BLM's legal mandates regarding NEPA.
Eureka County		
35326-1	Because the POD for the project includes development of as much as 21,700 af/yr of groundwater resources from as-yet unidentified sources, we remain extremely concerned about the precedent that this project and EIS create and where the remaining 21,700 af/yr of water will be proposed to come from.	Thank you for your comment. Additional rights-of-way for conveyance of as-yet unidentified water sources would be subject to additional NEPA.
35326-2	Since there will be "land use decisions" and "planning and management activities" that go into development and implementation of any 3M plan, there must be specific and explicit inclusion of local governments in the 3M plans.	There will not be any land use plan amendments or decision required for the approval of this project which include development of the 3M Plan. The project is in compliance with the Ely District and Las Vegas Resource Management Plans.
35326-3	BLM should not move forward with issuance of a ROD on this EIS but should wait until some of the uncertainties and unknowns are better understood (e.g., receipt of water rights, actual need for water export, desalination options) and some of the incomplete and unavailable information gaps are filled (Section 3.0.3). Given such uncertainty, the supplemental NEPA analysis that will be required in addition to this programmatic EIS will likely include so much additional analysis that BLM's current efforts will prove to be nothing more than a waste in time and resources.	The topics mentioned in this comment were discussed in the EIS, based on the best available information.
35326-4	The same reasoning that omits Coyote Springs Valley from the DEIS and GWD Project should preclude many of the valleys because of lack of sufficient aquifer property data.	Section 3.3 (water resources) discusses potential impacts from this project proposal.
35326-5	It is disingenuous for the BLM to predict impacts and propose mitigation in the DEIS yet not require some type of financial assurance that mitigation will be carried out.	See Standard Resource Response MM-1 regarding mitigation.
35326-6	Since SNWA already commits to the stipulated agreement on page 2-43, BLM should focus on only additional measures that would be required in addition to what the applicant has committed. BLM should delete reference in the DEIS to the stipulated agreement except in places where there is discussion on what the applicant is already committing to.	The stipulated agreements are an important part of the protection measures for environmental resources. These applicant-committed measures in combination with BMPs and additional mitigation must be included in impact discussions for relevant environmental resources.

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35326-7	Vested water claims should be included in the analysis of impacts as well regardless of being filed at the NSE office. Virtually every spring in the HSA has a vested water right on it for stockwatering (and possibly irrigation). The deeds to the base properties would back this up.	See chapter 1, section 1.3.6 of the FEIS on the NEPA process for this project and section 1.4 on the Nevada State Engineer's process. Section 3.3 (water resources) discusses potential impacts from this project proposal.
35326-8	Also, 40 CFR 1502.14(e) directs that the EIS "...identify the agency's preferred alternative or alternatives, if one or more exists, in the draft statement..." (emphasis added).	40 CFR 1502.14(e) includes the language "if one or more [alternatives] exist" . In this case, a preferred alternative did not exist at the time the draft was issued.
35326-9	The "acceptable" level of impact intensity is never defined. The residual effects are vague, uncharacterized, and create questions in themselves. These questions outlined on page 3-1 must, in reality, be answered for the EIS to ever be determined adequate.	The purpose of developing an EIS under NEPA is to provide an assessment of the impacts of the proposed project. Impact intensity is subjective and therefore is not presented as an element of the analysis.
35326-10	The DEIS has failed to determine if the increase in PM10 emissions of, for some alternatives, many thousands of tons per year, will create a potential violation of this NAAQS.	Section 3.1 (Air) was updated to address this issue. Please refer to standard resource responses Air-8 and Air-14.
35326-11	We believe that an air quality modeling analysis should be conducted and the results summarized in the DEIS. The main purpose of an EIS is to disclose the air quality consequences of a proposed action. At a minimum, a screening-level analysis needs to be conducted to allow the BLM to disclose the environmental consequences of the proposed project.	Changes have been made in the FEIS text. Please see standard resource response Air-9.
35326-12	What level of NEPA will need to take place to implement this large scale seeding? What type of seeds would be used? Given the usual saline and alkaline condition of soils in phreatophyte areas, there will be a limit on the success of seeding. What is the threshold for implementation of mitigation measure C.2.5?	Thank you for your comment. Large scale seeding has been recommended as a general mitigation measure to offset potential impacts of the proposed project. Additional analyses will be performed during subsequent NEPA to address specific areas with specialized plant communities and specific soil conditions. Specific mitigation measures and metrics for implementation and success will be stipulated in future NEPA actions. Please see Standard Resource Response MM-1.
35326-13	There is no mention or separation of decreed water rights in the DEIS, but no reduction of flow arising from groundwater extractions is permissible. CEQ regulations and FLPMA require that inconsistencies between the proposed action and state, local or tribal land use plans and policies be documented in the EIS.	See chapter 1, section 1.3.6 of the FEIS on the NEPA process for this project and section 1.4 on the Nevada State Engineer's process. Section 3.3 (water resources) discusses potential impacts from this project proposal. Chapter 1 also contains a complete discussion of BLM's responsibilities under NEPA and FLPMA regarding this project.
35326-14	The problems we see with the adaptive management measures applied to a project of this magnitude are: 1. It may take some time for these impacts to show up at distant sensitive areas, particularly those in far-off hydrographic basins. 2. Years may be spent arguing over the cause of the impact, before a decision is made to act. 3. Some of these mitigation measures themselves may require lengthy environmental analysis, during which time the impact continues to get worse. 4. It may take several years to evaluate the effectiveness of the adaptive management (i.e., mitigation) measure, during which the impact may be further exacerbated, perhaps to the point of no return. 5. Finally, if the measure fails, the impact might be written off as an "unavoidable adverse impact."	See Standard Resource Response MM-1 regarding mitigation.
35326-15	Additionally how would the new water source be used to reestablish not only existing stream flow but cottonwood trees, willows, other riparian vegetation and macro-invertebrate habitat? What is the flow regime and how would it mimic upstream/historic conditions?	See response MM-1 regarding monitoring; and Section 3.20 regarding BLM's proposed monitoring, management and mitigation plan for the GWD project.
35326-16	if the flow in a stream decreases, one proposed mitigation measure entails installing a well to provide a source of water to augment the flow of the stream. No analysis of the feasibility of this strategy was provided, the source of the water rights, or an assessment of whether this strategy will produce some unintended consequences.	Thank you for your comment. Please see Standard Resource Response MM-1.
35326-17	Further, it is misleading to show only a single drawdown outcome rather than a range of possible outcomes based on model accuracy and a variety of possible drawdown results. Other possible drawdown extent outcomes may have greater or lesser impacts in the region, but were not evaluated.	A sensitivity analyses that included varying aquifer properties and simulating drawdown was provided in the model simulation report (SNWA 2010b).
35326-18	Spring Valley is pumping predicted to capture the vast majority of discharge. As a result, the drawdown effects should be expected to increase beyond that time and should be stated so in the DEIS.	The EIS does state (Section 3.3.2) that drawdown effects will continue to propagate after the 200 year timeframe.
35326-19	the socioeconomic section should analyze or reference other sections of the EIS where the analysis can be found concerning impacts to well owners and the additional costs associated with water drawdown; ranches which operate in the drawdown area and how water drawdown will affect the viability and value of their operations; potential impacts to land values and output from declines in water levels and possible stigma effects; and economic activity associated with water based recreational activity.	Thank you for your comment. Additional text and analysis has been included in Section 3.18.2.8 to address the potential cost implications on agricultural operations associated with drawdown. As noted in Section 3.18.2.8, potential long-term effects on property values in the drawdown area could be either negative or positive. Also see Section 3.20 regarding the COM Plan, and proposed mitigation measures SE-6 and GW-6.
35326-20	There is reliance on and citation of the 2007 Census of Agriculture, but the Census of Agriculture does not provide the indirect and induced socioeconomic benefits related to agriculture. This information is readily available through the University of Nevada, Reno.	Thank you for your comment. Examples of the indirect and induced linkages between agriculture and other sectors of the local economy were presented in the text following Table 3.18-9. New text has been added in response to this comment.

Great Basin Business and Tourism Council

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37994-1	DEIS fails to disclose project costs and sources and cost of funding.	The purpose of the NEPA (EIS) process is to disclose potential project impacts. The BLM appreciates that you have identified your specific concerns regarding the impacts disclosed in the DEIS. Summary information regarding SNWA's estimated project costs are included in the FEIS. See also Standard Comment Responses SocEcon-1, SocEcon-3 and SocEcon-6. Additional information regarding SNWA's cost estimates and potential financing can also be found on the Nevada State Engineer's website: www.water.nv.gov/hearings/past/springetal/documents.cfm?DIR=exhibits.SNWAExhibits
37994-2	DEIS fails to adequately assess the purpose and need for project.	Based on your comments, text has been added to Chapter 1.
37994-3	DEIS fails to analyze potential environmental effects due to climate change	Please see common response Air-15 and Air-17.
37994-4	DEIS fails to analyze environmental impacts of actual well locations for "distributed pumping"	Additional assessment of the impacts associated with specific well locations and pumping defined quantities of water from specific basins will be analyzed in subsequent NEPA. A conceptual analysis of distributed pumping and other alternatives is contained in the FEIS. Please review standard resource responses WR-1, Gen-1 and Gen-2.
37994-5	Predicted massive land subsidence are of 5 ft. + is an unacceptable irreversible impact of unlawful groundwater mining.	Thank you for expressing your concerns. While statements of opinions do not require specific responses or text revisions under the NEPA regulations, they will be considered by the BLM and documented in the administrative record associated with this EIS.
37994-6	DEIS does not consider a sufficient range of alternatives.	The action before the BLM relates to granting a right-of-way for groundwater conveyance. The BLM carefully considered the input from the public and other agencies while making a decision on alternatives to consider in the Draft EIS. Those alternatives cover a wide range of location and pumping options. An additional alternative has been added to the analysis for this Final EIS to expand the range of alternatives. Determining options for other water sources is beyond the scope of this Final EIS.
37994-7	DEIS provides inadequate analysis of socioeconomic impacts but still shows that impacts will put ranchers out of business and depopulate rural areas.	Thank you for your comment. The purpose of the NEPA (EIS) process is to disclose potential project impacts. Please review section 3.18 of the FEIS which has been updated concerning these issues. Please also review standard resource response SocEcon-5 and SocEcon-6 for further information. The potential adverse economic effects to the agriculture industry and individual ranchers are addressed in Section 3.18.2.8. The text has been revised to describe additional potential economic effects to agriculture that may arise in conjunction with drawdown.
37994-8	DEIS inadequately analyzes impacts to sacred site, cultural resources of American Indian Tribes.	Impacts to sacred sites and cultural resources of American Indian Tribes are discussed in Section 3.17.2 in the EIS.
37994-9	DEIS fails to take a hard look at indirect & cumulative impacts, including future local development.	The EIS has evaluated cumulative impacts for past, present, and foreseeable projects in accordance with BLM NEPA guidance. Local development has been considered wherever such developments overlap with the resource study areas. It should be noted that the majority of the cumulative study areas are located on public lands, which limits the opportunities for private development.
37994-10	DEIS provide insufficient information on impacts to Fish Springs NWR and Deep Creek Valley.	Although these valleys were not included in the model analysis area, other lines of evidence were used to discuss potential impacts to resources in these valleys.
37994-11	DEIS provides insufficient information on impacts to Steptoe Valley.	Steptoe Valley was included in the model analysis area. Impacts in this valley are discussed if effects were predicted from the analysis.
37994-12	DEIS fails to adequately analyze adverse impacts on and mitigation for: ranching, wildlife habitat, local businesses, and wild horses.	Information impacting businesses associated with drawdown are noted in 3.18.2.8. Additional text regarding such risks, as well as the long-term uncertainties associated with these risks, has been added and further assessments would occur as part of subsequent NEPA (see Standard Resource Responses Gen-1 and Gen-2). See also Section 3.20 of the FEIS for more information on the COM Plan.
37994-13	DEIS provides insufficient justification for failing to study drawdowns of less than 10 feet and impacts only to 200 years after build-out when the SNW A Pipeline Project is intended to operate indefinitely.	See Standard Resource Response WR-1.
37994-14	In addition to the aforementioned, we request a 90 day extension on DEIS Comment Period (it took the BLM six years to prepare this document. The public deserves an adequate response time). Further, we demand a SUPPLEMENTAL EIS that addresses impacts from specific well locations, and request the BLM to delay decisions because of "unknowns" and "uncertainties".	The request for an extension of the comment period is noted.
Lincoln County Planning Department		
34482-1	Page 1-12 The Department will require a full development agreement upon the granting of a Right-of-Way and prior to construction between the applicant and Lincoln County; specifically prior to construction commencing within Lincoln County.	The Development Agreement was added to the table.

Comments and Responses - Local Government

ID	Comment	Response
34482-2	Page 2-9 The Department fully supports the incorporation of Best Management Practices listed in Table 2.3 .1. In addition, the Department will require site-specific county-related BMP's relative to specific development activities and conditionally incorporated within the Development Agreement with Lincoln County. Subsequent NEPA tiering documents should also address site specific impacts to resources.	Subsequent NEPA will analyze site specific impacts to resources in Lincoln County and applicable site-specific county-related BMP's relative to specific development activities.
34482-3	Page 3.20-1 In addition, certain resource-specific measures, unique to Lincoln County and impacting Lincoln County, will be identified relative to the Development Agreement and conditionally incorporated within. Additional tiering-related mitigation/monitoring measures will be addressed in similar fashion.	Please see Standard Resource Response Gen-7
34482-4	Page A-46 The Department formally requests that a representative from the Lincoln County Water District have a formal position regarding implementation of the Adaptive Management Plan up to and including the time of the Groundwater Withdrawal Period.	Please see Standard Resource Response MM-1. Based on the COM Plan, public participation would be completed through several processes. These processes range from working with assistance to the COM Plan or through public meetings.
34482-5	The potential for the irretreivable loss of the vast variety of resources as a result of the project is of major concern for the Department. The all-encompassing potential loss of the very resources that provide current economical, social, and environmental stability to Lincoln County as well as other affected areas is tremendous considering the ripple-effect of both direct and indirect impacts. The Department will consider all resources listed in Table 4.0-1 in addressing issues relevant to Lincoln County and the applicant during the development agreement process.	Thank you for your comment. The purpose of the NEPA (EIS) process is to disclose potential project impacts. Please review section 3.18 of the FEIS which has been updated concerning these issues. Please also review standard resource response SocEcon-5 and SocEcon-6 for further information. The potential adverse economic effects to the agriculture industry and individual ranchers are addressed in Section 3.18.2.8. The text has been revised to describe additional potential economic effects to agriculture that may arise in conjunction with drawdown.
34482-6	The Department formally requests that a representative from the Lincoln County Water District have a formal position regarding implementation of the Adaptive Management Plan up to and including the time of the Groundwater Withdrawal Period. This position should have 1 full input in the elements described within the adaptive management framework, including: Environmental Goals and Objectives, baseline Data Collection and Monitoring, Identification of Environmental Indicators and Adaptive Management Thresholds, Monitoring Commitments, Reporting Commitments, Plan Implementation, and Adaptive Management Measures.	See Standard Resource Response MM-1.

Lincoln County Water District

34858-1	Chapter 2, page 2-4 third bullet point. LCWD does not own these water rights. Currently the water rights are owned by Tuffy Ranch Properties LLC. The 11,300 afy has been identified in the Tuffy Ranch Properties LLC ruling # 5918 by the NSE, to be used at the Coyote Springs development in Lincoln County.	The text in the Final EIS has been modified to respond to your comment.
34858-2	Chapter 2, page 2-4 fourth bullet , second sentence. "Water District" needs to be added behind Lincoln County. The Lincoln County Water District has a conveyance agreement with SNWA if the pipeline is built.	The recommended change to the text has been made.
34858-3	Chapter 2, page 2-6 section 2.2. second to last sentence needs to be changed to read "and 11,300 afy for which permits are held by Tuffy Ranch Properties LLC."	The text in the Final EIS has been modified to respond to your comment.
34858-4	Chapter 2, page 2-6 section 2.2.2 second to last sentence needs to be changed to read "and include the 11,300 afy of Tuffy Ranch Properties LLC. existing agricultural water rights in Lake Valley"	The text in the Final EIS has been modified to respond to your comment.
34858-5	Chapter 2, page 2-101 Table 2.9-4. "Lincoln County Water District" is the proper identification. Not Lincoln County, for Dry Lake, Kane Springs Valley, Clover Valley.	The recommended change has been made to the text.

Millard, Juab and Tooele Counties

38054-1	The Counties incorporate herein by reference all the prior comments they submitted concerning the hydrology baseline report	Thank you for your comments on the hydrology baseline report.
38054-2	The Counties incorporate herein by reference all the prior comments they submitted concerning draft Chapters 1-3 of the EIS.	Thank you for your comments concerning the draft Chapters 1-3 of the EIS.

Comments and Responses - Local Government

ID	Comment	Response
38054-3	<p>The dynamics of the discussion at the May 6, 2008 technical review meeting at the SNWA offices in Las Vegas, reinforced the growing concern of many cooperators that NEPA sufficient independent objectivity is lacking in the preparation of the groundwater model study. SNWA, Earth Knowledge and ENSR agents seemed to be consciously triangulating in a vigorous defense of the preliminary water model against all criticisms. ENSR holds itself out as an independent third party contractor of BLM. Earth Knowledge is for all purposes a hired extension of SNWA – a paid agent of SNWA. Given that BLM’s obligation under NEPA is to objectively and critically study the impacts of the SNWA proposed groundwater project – and there for critically objectively study the water model, and given that ENSR is an extension of BLM for this purpose, it follows that ENSR should have applied a more critical eye and critical objective review of Earth Knowledge’s preliminary work than was demonstrated by ENSR at the May 6th meeting. The water model is the heart of the BLM’s required "study" of environmental impacts from the proposed pumping and transport of water southward from the project valleys. It is therefore not appropriate for ENSR hydrologists and other operatives to act as Earth Knowledge’s apologist in the face of critical questions addressed to Earth Knowledge during the May 6th meeting. To the contrary, ENSR operatives if anything should be matching the level of critical scrutiny and review that was exhibited by other cooperators.</p>	<p>The comment does not pertain to the specific information provided in the DEIS. The technical review team established by the BLM to review the groundwater flow model included hydrology specialists with the BLM, USGS and AECOM. The model team provided for objective and critical input that resulted in improvements of the model. Additional discussion of the Technical Review Team is provided in Section 3.3.2.8 of the EIS.</p>
38054-4	<p>In essence, SNWA (through Earth Knowledge) is really the one doing the water model study here, not BLM (or ENSR). The Counties want to see evidence of more independent scrutiny by ENSR. Or, perhaps ENSR should sub-contract with another independent reviewer of Earth Knowledge’s preliminary work.</p>	<p>The comment does not pertain to the specific information provided in the DEIS. The technical review team established by the BLM to review the groundwater flow model included hydrology specialists with the BLM, USGS and AECOM. The model team provided for objective and critical input that resulted in improvements of the model. Additional discussion of the Technical Review Team is provided in Section 3.3.2.8 of the EIS.</p>
38054-5	<p>This is all in keeping with the spirit with which Congress itself approached this entire project. In virtually the very same breath in which Congress authorized the groundwater development rights of way in Clark and Lincoln County (though such rights of way were conspicuously absent in White Pine County), Congress commissioned an independent groundwater model study by USGS, known as BARCASS. See LCCRDA Section 301(b), (e). There are serious questions whether the report issued by USGS (BARCASS I) has fully returned all the information Congress commissioned it to return. Whatever the case, we know that Congress certainly expected, anticipated and outright required that USGS perform the following: - determine how much water is stored in the relevant aquifers - determine discharge and recharge characteristics of each aquifer - determine hydrogeologic and other controls that govern discharge and recharge of each aquifer system - determine water quantity, quality and flow characteristics in deep carbonate and alluvial aquifers of White Pine County, and any groundwater basins that are located in White Pine County, or Lincoln County or adjacent areas in Utah. BLM and DOI believe those adjacent areas include the Area of Interest identified in Figure 1 of the Spring Valley Stipulated Agreement. In other words, Congress commissioned USGS to come up with a water model. Notice, Congress was not content to let SNWA come up with the water model, nor a paid agent of SNWA. In the same spirit, BLM should reconfigure this EIS to inject USGS into a meaningfully active role in preparing this water model.</p>	<p>See Section 3.3.1 of the EIS discussing the BARCASS report. The role of USGS is further discussed in section 1.5.2 of the FEIS. During the preparation on the EIS, USGS participated as a technical advisor to BLM.</p>
38054-6	<p>USGS, to comply with the spirit and letter of the Congressional requirement, ought to have a much larger role in developing the water model that SNWA now attempts to do through paid surrogate Earth Knowledge. At any rate, the whole spirit of the LCCRDA mandated USGS water model study underscores the notion that is not for SNWA (nor for a paid operative of SNWA) to be the sole performer of the groundwater model study while ENSR sits by and functions as apologist for that work. For this EIS process to pass NEPA muster, there must be a better showing in the record of a healthy, skeptical independent review of SNWA’s (through alter-ego Earth Knowledge) preliminary ground water model work. The BLM’s partial response to the foregoing critique is something along the lines of "Not to worry; USGS is right there to steer the water model project and ensure that it is done right." That contention did not bear out at the May 6th hearing. The impression at the May 6th meeting is that the USGS was rather marginalized (to put it generously) as far as any meaningful role in the preparation of the water model. USGS should have a more integral role in preparing the water model effort in order to achieve the independence and objectivity required in a NEPA compliant process. USGS should direct the effort, or at least direct a vigorous peer review of Earth Knowledge’s effort. That active role by USGS was not on display at the May 6th meetings.</p>	<p>The methodology used to develop the CCRP groundwater flow model used in the water resources impact evaluation is described in Section 3.3.2.8 of the EIS. As explained in this section, the model was constructed and calibrated with critical input from the BLM established technical review team that included specialists from the USGS, BLM and other consultants.</p>
38054-7	<p>In short, USGS should be the dog that wags the Earth Knowledge tail in this water model effort, not vis-versa, especially if ENSR declines to perform that function. USGS involvement is obviously what Congress wanted, as manifested by its insistence that USGS perform a relevant groundwater model study.</p>	<p>USGS prepared and made available the 2007 Basin and Range Aquifer System Study as required by Congress in section 301 of the Lincoln County Conservation Recreation and Development Act. This study did receive public review. The groundwater model used in this EIS, was validated by BLM’s technical review team which included USGS members.</p>

Comments and Responses - Local Government

ID	Comment	Response
38054-8	The study area should at least be co-extensive with the geographic area known as the "Area of Interest" identified in Figure 1 to the Spring Valley Stipulated Agreement signed by SNWA and various federal agencies including BLM's parent agency DOI. There is no acceptable rationale to explain why the "Area of Interest" sought to be protected by BLM/DOI in the Spring Valley Stipulated Agreement, is not co-extensively the subject of the subject water model study. That "Area of Interest" map includes the Fish Springs National Wildlife Refuge in Juab and Tooele Counties. Figure 1-1 of the Conceptual Water Model Report does not. The Area of Interest Map includes Deep Creek Valley which embraces the Federated Tribe of the Goshutes Indian Reservation. Figure 1-1 does not. The Area of Interest Map includes Pine Valley, All of Hamlin Valley, Wah Wah Valley, Tule Valley, Fish Springs Flat and Dugway-Govt Creek Valley. Figure 1-1 does not.	Please see Standard Resource Response WR-6 for a discussion of the groundwater flow model area.
38054-9	The water model should more comprehensively study, analyze and predict the anticipated drops in groundwater tables, in order to provide a foundation to assess the resultant impact on groundwater dependent vegetation, and in turn the resultant impacts on soil, wind erosion and air quality through loss of groundwater dependent vegetation.	The water model has been used to predict drawdown, and effects on water dependent resources at a level that accounts for the uncertainties inherent in a regional model. It is anticipated that future NEPA analyses will provide more detailed predictions, based on additional groundwater and surface resource information. In addition, please see standard resource response WR-10.
38054-10	It was apparent at the May 6th meeting at SNWA in Las Vegas that the water model efforts continue to be hampered by SNWA's inability to pin down exactly what the proposed action is. It keeps shifting, so the water model analysis has to shift, and then re-calibrations problems ensue.	Your comments on the Draft EIS have been considered. Please refer to standard resource responses Gen-1 and Gen-2 for information on this topic.
38054-11	The Counties continue to be dismayed at the premature nature of key aspects of this EIS is following, as now manifested in the difficult water model study. It is still not known how much water, if any, the Nevada Engineer will appropriate to SNWA., nor the myriad conditions, points of diversion, etc. Moreover Utah and Nevada have yet to agree on how to divide up the water resources. Moreover, SNWA has still not come to rest on a definitive proposed action in terms of points of diversion, quantity of water diverted, size of pipeline, etc. In face of this substantial two and three-layered uncertainty, BLM seemingly yields to SNWA pressure to have its paid agent Earth Knowledge plow forward with an infinitely complex water model based on unknown and unverified water rights. This is all compounded further with the apparent recalcitrance of SNWA and Earth Knowledge operatives to expand the model boundaries to match that of the Area of Interest charted by BLM and DOI in the Spring Valley Agreement, and we have the makings of a seriously flawed NEPA process. For all the lip service over the past year that was paid to the importance of the Fish Springs National Wildlife Refuge, to cite and example, Figure 1-1 in the Conceptual Report still maddeningly omits that important areas.	Additional text has been added to chapter 1 on the recent NSE ruling on SNWA's Spring, Delamar, Dry Lake and Cave Valley applications. In addition, commenter may review Standard Resource Responses GEN-2 and WR-1 regarding the NEPA tiering process employed for this project and the model process that was used in the EIS.
38054-12	It is an arbitrary and capricious NEPA-violating posture that Nevada State BLM now finds itself in, hastening along an EIS for a groundwater project that still rests on no approved and legally recognized ground water rights.	This comment has been addressed by additional information placed in section 1.4 and 2.8.
38054-13	It is arbitrary and capricious to require Millard and Juab Counties to try to analyze the purpose and need of the pipeline when nobody yet knows how many acre feet, if any, of SNWA=s water applications the Nevada Water Engineer will end up approving, and in which valley.	The purpose of this EIS is to analyze impacts related to the right-of-way, access roads and ancillary facilities. Impacts related to well locations, pumping, and groundwater drawdown are analyzed on a programmatic level and will be analyzed in greater detail in future NEPA. In addition, please refer to standard resource response Gen-2.
38054-14	The nagging fact which turns the legitimacy of this whole EIS process on its head, is the fact that the Nevada State Engineer has yet to adjudicate a single acre foot of SNWA applications in Spring Valley, and the Water Engineer hearings on Snake Valley are still off in the indefinite future. This project rests on a veritable house of cards, yet we=re supposed to engage in purpose and need analysis??	The purpose of this EIS is to analyze impacts related to the right-of-way, access roads and ancillary facilities. Impacts related to well locations, pumping, and groundwater drawdown are analyzed on a programmatic level and will be analyzed in greater detail in future NEPA. In addition, please refer to standard resource response Gen-2.
38054-15	It is also arbitrary and capricious to require Millard and Juab Counties to try to analyze the purpose and need of the pipeline when they do not know the location of the proposed well sites, i.e., the number and location in each valley, and the planned afy production of each well. SNWA admitted in the last meeting in Henderson that even it does not yet know these answers. One cannot begin to opine on the purpose and need of a project until the project is defined.	The purpose of this EIS is to analyze impacts related to the right-of-way, access roads and ancillary facilities. Impacts related to well locations, pumping, and groundwater drawdown are analyzed on a programmatic level and will be analyzed in greater detail in future NEPA. In addition, please refer to standard resource response Gen-2.
38054-16	The purpose and need of a project has meaning only when analyzed against the likely ecological and hydrological harm the project may cause. Of course, the proposed purpose and need statement cannot begin to comment on incremental needs in this valley or that valley, because, again, the State Engineer has yet to adjudicate SNWA=s groundwater applications in Spring or Snake Valleys. But again, that just underscores the arbitrariness of going ahead at present with the EIS and the present purpose and need analysis.	Please see Standard Resource Responses Gen-1 and Gen-2 for a discussion of the programmatic analysis and subsequent tiering process.
38054-17	In other words, the force of the population explosion argument eventually undermines the cogency of the proposed purpose and need statement. Why? Because the proposed purpose and need statement fails to address the one and only solution left to Las Vegas beyond 2035 after its burgeoning population races well past 3.5 million to the point where not even all of Utah=s rightful west desert water could possibly satisfy the demand. What then? There is only one answer. Go to the ocean for desalination. If going to the ocean is the inevitable solution that awaits the current generation of children presently playing on the lawns and swimming in the public pools of Las Vegas, then the purpose and need statement inexcusably fails to state why Las Vegas cannot just start going to the ocean sooner rather than later.	See Standard Resource Response Gen-3 regarding alternative water sources.

Comments and Responses - Local Government

ID	Comment	Response
38054-18	For these and other reasons, Millard and Juab Counties submit that the EIS must be put on hold until the purpose and need statement is revamped to address these deficiencies. The EIS must be put on hold further until we know how many afy=s, if any, Nevada Engineer will approve in Spring and Snake valleys.	Thank you for expressing your concerns regarding the submittal of the Draft EIS. Your suggestions have been carefully considered by the BLM, but have not resulted in changing the BLM's decision to proceed with the NEPA process. Further, the purpose of this EIS is to analyze impacts related to the right-of-way, access roads and ancillary facilities. Impacts related to well locations, pumping, and groundwater drawdown are analyzed on a programmatic level and will be analyzed in greater detail in future NEPA.
North Las Vegas Chamber of Commerce		
34232-1	Southern Nevada depends on the Colorado River as its main water supply for more than 30 years. Shared between seven western states, the river is fully allocated, with Nevada receiving the least amount of any state. This small apportionment, combined with severe and sustained drought conditions in the Colorado River Basin, means that Southern Nevada can no longer rely up the river as its primary water source.	This information will be provided to SNWA for their use in future water resource planning.
Nye County Water District		
37971-1	This project is likely to impact two groundwater basins primarily located in Nye County- 207- White River Valley & 208- Pahroc Valley. It is felt that the scale of this initial project and its likely expansion once established, would eventually impact the future growth and well-being of Nye County by threatening the sustain ability of our groundwater resources in these two basins- the only water source available.	Thank you for your comment. BLM has received no information indicating there would be an expansion of the currently proposed project.
Salt Lake County		
34554-1	Impacts to air quality can be assessed through qualitative or quantitative analysis. A qualitative description without a quantitative analysis is inadequate.3	Changes have been made in the FEIS text to address the central concern that underlies this comment. Please see standard resource responses Air-7, Air-8, and Air-9.
34554-2	Impacts to air quality can be assessed through qualitative or quantitative analysis. A qualitative description without a quantitative analysis is inadequate.3	Changes have been made in the FEIS text to address the central concern that underlies this comment. Please see standard resource responses Air-7, Air-8, and Air-9.
34554-3	The EIS states there is a risk that there may be a long-term increase in fugitive dust from pumping basins where pumping drawdown may result in a decrease in vegetation cover and density. These potential air quality changes will limit future options for resource and economic development in Utah.	The Air Quality analysis has redone for the FEIS. Please see standard resources responses Air-7, Air-8, Air-9 and Air-10.
34554-4	The Utah Department of Environmental Quality's ("DEQ") Division of Air Quality ("DAQ") has determined that the project will result in unacceptable and permanent harm to the environment and human health from excessive PM10 and PM2.s fugitive emissions. 10	Please see common response Air-14.
34554-5	Significant reductions from permitted point sources along the Wasatch Front will likely be overwhelmed by the impacts of dust storms originating in Snake Valley. 17 The BLM has failed to take a "hard look" at these impacts as required by NEP A.	Please see standard resources responses Air-8 and Air-14.
34554-6	Significant reductions from permitted point sources along the Wasatch Front will likely be overwhelmed by the impacts of dust storms originating in Snake Valley. 17 The BLM has failed to take a "hard look" at these impacts as required by NEP A.	Please see standard resources responses Air-8 and Air-14.
34554-7	EPA is also proposing to establish a distinct cumulative, seasonal secondary standard, designed to protect sensitive vegetation and ecosystems. The BLM has failed to take a "hard look" at these impacts as required by NEP A.	The FEIS has been revised to include a modeling analysis that compares predicted project impacts to USEPA air quality standards (Please see common response Air-9). Currently, all secondary standards are higher than the NAAQS and project impacts are below NAAQS for all alternatives and locations analyzed. Therefore, the project impacts are also below applicable secondary standards.
34554-8	the draft EIS fails to consider recent actions by EPA, including: (1) issuing an endangerment finding for greenhouse gas emissions; (2) disapproving proposed revisions to the Utah SIP; and (3) proposing more restrictive health based NAAQS for ozone.	Please see common response Air-14 and Air-17 to address the concerns raised regarding Utah's SIP and the greenhouse gas endangerment finding, respectively. Thank you for expressing your concerns regarding the potential change to the National Ambient Air Quality Standards (NAAQS) for ozone. Since publication of the Draft EIS, the USEPA issued a statement that consideration of the 8-hour ozone NAAQS will occur in 2013.
34554-9	EIS fails, however, to acknowledge the additional burden the anthropogenic air quality impacts of the proposed groundwater development project will impose on pre-existing regional activities,	Please see standard resources responses Air-8 and Air-14.
34554-10	The BLM's Salt Lake Office has identified five resource management priorities in the region effected by the project, including: Blue Springs Wildlife Habitat Area, Bonneville Salt Flats, Central Pacific Railroad, Donner/Bettridge Creek, Horseshoe Springs, Lake Town Canyon, and Salt Wells Wildlife Area. The summary of irreversible and irretrievable commitments contained in the EIS acknowledges that groundwater drawdown could adversely affect surface water and vegetation on public lands, including these BLM resource management priorities.34 The BLM has failed to take a "hard look" at these impacts as required by NEP A.	The NEPA process requires full disclosure; although the EIS has identified that irreversible and irretrievable resource commitments will occur, the BLM has satisfied the hard look requirement.

Comments and Responses - Local Government

ID	Comment	Response
34554-11	per year comparable to the electricity use of nearly 65,000 homes for one year. 37 The 2011 draft EIS does not explain the reason for the reduction in numbers from the 2009 preliminary EIS.	Thank you for expressing your concerns. The EIS text is a stand-alone document that describes the analyses, methods, and findings. An EIS is not an appropriate forum for discussing previous analyses that were developed for the preliminary or draft documents. In response to your comment, the number of homes estimated to generate the same amount of Carbon Dioxide Equivalents as the project was changed. A commenter suggested that this analysis use natural gas generated power as a basis for comparison, instead of coal-fired power, since the project will be powered by the Silverhawk Substation natural gas plant. This suggestion was determined to be appropriate, and as a result, the project's estimate CDE was compared to the number of homes that would emit a similar amount of CDE from consumption of natural gas power.
34554-12	The EIS acknowledges that the following resources among others are anticipated to be affected by climate change: air quality, vegetative communities, water resources and wild-land fire ecology and management.39 Climate change will, therefore, add to the cumulative impacts to air quality from other sources. The BLM has failed to take a "hard look" at these impacts as required by NEPA.	Please see common response Air-15.
34554-13	There is no legal commitment to monitor, however, until the agreement is final. 40 The Utah/Nevada agreement is "on hold".....Furthermore, a 2010 ruling by the Nevada Supreme Court found the Nevada State Engineer failed to adequately address environmental issues further jeopardizing the agreement.42 For these reasons, any references to the agreement in the EIS should be deleted.	Based on this comment and others, Chapter 1 has been revised.
34554-14	Appendix B Supplement 2 states that BLM cannot enforce mitigation measures on lands owned by other parties and cannot ensure that the funding and land access necessary to implement these measures will be made available.45 The conclusion that SNW A will be required to take action necessary to mitigate impacts to air quality is, therefore, inaccurate.	In response to your comment, the monitoring and mitigation discussion was revised/expanded in the Final EIS. Detailed monitoring and mitigation plans will be developed. Please refer to standard resource responses MM-1 and MM-2. BLM only manages public lands that are under its jurisdiction. Under normal circumstances, this would not provide restoration or mitigation of private or other agency lands.
34554-15	The Division of Air Quality recommends a minimum of two monitoring stations in Utah to accurately quantify the impact of the project on the Wasatch front. The Division also recommends that the data from all monitoring stations associated with the project be available in real time and include meteorological data.	Please see common response Air-13.
34554-16	neither the draft Utah/Nevada agreement nor the proposed SNW A adaptive management plan are in effect.....it is arbitrary and capricious for the BLM to conclude that the proposed agreements can or will mitigate the foreseeable adverse impacts to air quality in Salt Lake County.	See Standard Resource Response MM-1 and MM-2 for information responsive to this comment.
34554-17	Any additional concentrations of particulates and ozone associated with the project will exceed the health based NAAQs standards and adversely affect public health in Salt Lake County. The BLM has failed to take a "hard look" at these impacts as required by NEP A.	Please see common response Air-14.

Southern Nevada Water Authority

37138-1	SNW A 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).	The comment regarding the proposed action is noted.
37138-2	While the future 3M Plan may include many, if not all, of the components and details included in that discussion, SNW A 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.	The word "Framework" was added to the title of Appendix B. Please see Section 3.20 and Standard Resource Response MM-1.
37138-3	SNW A 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 1 08-424) 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)).	This comment should not have been bracketed separately from comment #2. Please note the comment response to comment #2.
37138-4	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:Proposed Action and Alts A-C total acreage is 12,272 acres. Alt D total acreage is 8,812 acres.Alt E total acreage is 10,665 acres.	The correct acreages, after discussions with Jay Officer of SNWA, are: PA, Alts A-C: 12,257 acres Alt D: 8,797 acres Alts E and F: 10,650 acres.

Comments and Responses - Local Government

ID	Comment	Response
37138-5	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: Proposed Action acreage for groundwater development areas ranges from 3,589-8,410 acres. Alts A and C acreage for groundwater development areas ranges from 2,068-4,814 acres. Alt B acreage for groundwater development areas is 4,664 acres. Alt D acreage for groundwater development areas ranges from 2,512-4,005 acres. Alt E acreage for groundwater development areas ranges from 1,753-4,079 acres.	All tables will clarify that these numbers are estimates. See revised text.
37138-6	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%.	The BLM used numbers provided by SNWA for the temporary and permanent construction disturbance areas for future facilities. Permanent disturbance is defined in the EIS as "land converted to industrial use for the project life." The numbers provided for permanent disturbance for all alternatives equaled 67% of the total disturbance area for future facility construction.
37138-7	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.	Miles of new and existing access roads have been corrected to correspond with the most recent GIS data analysis.
37138-8	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.	The revised shapefiles reflecting the comment are being used.
37138-9	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.	Modifications to the FEIS will be made.
37138-10	Please check rounding throughout the document, and provide formulas used to develop the calculations where possible.	Documentation for calculations is provided in footnotes to tables, resource text, or appendix information. Rounding was checked in the document.
37138-11	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 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.]	Reference to the monitoring plans was added to these sections.
37138-12	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).	As support of these plans is not specifically mentioned in the applicant committed measures in the POD, they have not been added to the FEIS. Your suggestion has been carefully considered by the BLM and BLM notes the applicant's commitment to greater sage-grouse management.
37138-13	Please include lists of Appendices, Appendix tables, and Appendix figures in the Table of Contents.	The change has been made.
37138-14	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.	Text has been added to clarify that submission of the construction-based plans would not trigger additional NEPA. However, please keep in mind that the NEPA documentation may need to be updated based on the elapsed time between the ROD, the issuance of the ROW and the issuance of NTPs.
37138-15	ES-731-3 Suggest replacing first sentence in Section 2.5 describing the concept 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."	Thank you for your comment. The language in the Executive Summary document was intentionally simplified to facilitate understanding of the material by a diverse audience. A reference to 40 C.F.R. § 1508.28 has been added to the document for those needing additional information on tiering.
37138-16	ES-1121 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 . . ."	The text in the FEIS has been modified as requested.

Comments and Responses - Local Government

ID	Comment	Response
37138-17	ES-12Last line ofSection 2.12Make clear whether the PA defines procedures for discoveries of eligible historic properties, i.e., eligible for listing on the NRHP, or just historic properties.	Text has been added in response to this comment.
37138-18	ES-14Table ES-3row 9, col.1Change power requirements “74” MW to“97” per table 2.6-2 page 2-46	Change made.
37138-19	ES-1721Second paragraph, first sentence needs a period between “areas” and “Plant” for “avoidance areas. Plant and topsoil”	Sorry. Missing period not found.
37138-20	ES-18Figure ES-711Change “67-kV” power pole to “69-kV”	Change made.
37138-21	ES-22Add 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.	Summary added.
37138-22	ES-22Add a “See Section __” heading to all summaries. Several headings are missing.	Added.
37138-23	ES-25First 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.	Change made.
37138-24	ES-2551 - 2Illegal 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 may increase as a result of improved access and the presence of construction crews.”	Change made.
37138-25	ES-2561-2Language 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.”	The FEIS text has been revised to address the comment.
37138-26	ES-3321In 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.”	The FEIS text has been revised as suggested.
37138-27	1-3Section 1.3 should be titled “Regulatory Framework,” not “NEPA Framework,” as it encompasses requirements under FLPMA, LCCRA, and SNPLMA.	Text has been revised.
37138-28	1-723The statutory citation in the first sentence of section 1.4 should be to NRS § 533.370.	Text has been revised.
37138-29	1-10Table 5-1In 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.	The FEIS table was revised as suggested.
37138-30	1-10Table 1.5-1Remove reference to Section 10 in the USFWS row. Add “Bald and” to “Golden Eagle Protection Act.”	Text has been revised.
37138-31	1-10Table 1.5-1In the USFS row, change “Issue Notices to Proceed” to “Consider issuance of Notices to Proceed”.	Your comment has been reviewed for inclusion in the FEIS.
37138-32	1-1231The citation to NRS § 704 in Section 1.6.1 is incomplete.	Text has been revised.
37138-33	1-1218Replace with the correct abbreviation which is "LVVWD"	Text has been revised.
37138-34	1-12FigureThe 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.	The figure has been removed from the document.
37138-35	1-1315-7The 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.	Text has been revised.
37138-36	1-1342The year 2009 should be replaced with 2008 as indicated in the SNWA Resource Plan.	Change made.

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ID	Comment	Response
37138-37	1-1431-4Incorrect 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.	The changes were made as suggested
37138-38	1-1451-4The 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 necessitated 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 2009Water Resource Plan]	The text was modified as suggested.
37138-39	2-17Table 2.5-1See above general comment that none of the project will overlap Department of Defense land.	Modifications were made to correlate the PBS&J survey data with the GCDB data which indicates that DOD land is crossed.
37138-40	2-23Figure 2.5-467-kV power pole should be 69-kV	Change made.
37138-41	2-24Table 2.5-47"Reduction site", should be "Reducing Station site"	The text was modified as suggested.
37138-42	2-2642Delete "sodium chlorine". As identified in SNWA's Conceptual Plan of Development "sodium chloride (salt)" will be used on site.	The text was modified as suggested.
37138-43	2-297Suggest 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.	Added a construction milestone table to section 2.5.1.6.
37138-44	2-333startSuggest describing the tiered NEPA approach once again at the start of Section 2.5.2 Future Facilities for clarity.	Added text describing the tiered NEPA approach at the beginning of section 2.5.2.
37138-45	2-35 and2-36Lastparagraph and first paragraphSee above general comment regarding estimates of permanent and temporary disturbance for future facilities in the groundwater development areas.	Corrections have been made to the acreages.
37138-46	2-481Combine paragraphs 1 and 2 (delete space)	Text has been revised.
37138-47	2-4812-142Correct the table number references.	The text was modified as suggested.
37138-48	2-51, 2-53, 2-56, 2-67, 2-76Tables 2.6-6, 2.6-7, 2.6-9, 2.6-15, 2.6-20See above general comment regarding estimates of permanent and temporary disturbance for future facilities in the groundwater development areas.	Corrections have been made to the acreages.
37138-49	2-5124Table 2.6-1 should be 2.6-7.	Your comment has been reviewed for inclusion in the FEIS.
37138-50	2-5312Sections 2.5.1.5 should be 2.5.1.2	Your comment has been reviewed for inclusion in the FEIS.
37138-51	2-5423Sections 2.5.1.3 should be 2.5.1.22.5.1.6 should be 2.5.1.8	Your comment has been reviewed for inclusion in the FEIS.
37138-52	2-5431Table 2.6-2 should be 2.6-3	Your comment has been reviewed for inclusion in the FEIS.
37138-53	2-5432Table 2.6-3 should be 2.6-4	Your comment has been reviewed for inclusion in the FEIS.
37138-54	2-55Figure 2.6-4This 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.	The graph in Figure 2.6-4 has been corrected to show a maximum pumping rate of 144,755 afy.
37138-55	2-5942Section 2.5.1.4 should be 2.5.1.3	Your comment has been reviewed for inclusion in the FEIS.
37138-56	2-6133Revise "Regulating tanks and pumping stations could be downsized to approximately 20 percent of their capacity" to read "Regulating tanks and pumping stations could be downsized by approximately 20 percent of their capacity". (underline added only for emphasis in comment)	The text was modified as suggested.
37138-57	2-632-64Table 2.6-134th columnThe finish dates in this column are one year too early. See SNWA's Conceptual Plan of Development Table 4-1.	Text has been revised.
37138-58	2-73Table 2.6-19Some facilities for Alternative E are missing from this table. Add:Spring Valley South Lateral, Q2/2017, Q3/2019Spring Valley North Lateral, Q3/2019, Q1/2020Spring Valley North Pumping Station, Q4/2018, Q1/2020	Added facilities to Table 2.6-19.

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ID	Comment	Response
37138-59	2-9047Section 2.1.1 should be 2.9.1	Your comment has been reviewed for inclusion in the FEIS.
37138-60	2-92Figure 2.9-1Change map label "Alt. I" to "Opt. 4".	The map has been revised as requested.
37138-61	2-93Section 2.9.1.2Clarify 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.	Your suggested text has been incorporated into Section 2.9.1.2.
37138-62	3-7Table 3.0-3See above general comment regarding estimates of permanent and temporary disturbance for future facilities in the groundwater development areas.	AECOM has ensured that all tables clarify that these numbers are estimates. Due to the programmatic nature of this analysis and the relatively minor discrepancy in acreages, this change will be deferred to future NEPA analysis.
37138-63	3.1-252The definition of PM10 and PM2.5 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 particulates (TSP), the second largest classification is particulated matter with an aerodynamic diameter of 10 microns or less (PM10) and the smallest classification is particulate matter with an aerodynamic diameter of 2.5 microns or less (PM2.5)."	Based on your comment the FEIS has been edited to clarify. Thank you.
37138-64	3.1-441The 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.	Based on your comment the FEIS has been edited to clarify. Thank you.
37138-65	3.1-441 -3Paragraph 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."	Based on your comment the FEIS has been edited to clarify. Thank you.
37138-66	3.1-551Two 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.	Based on your comment the FEIS has been edited to clarify. Thank you.
37138-67	3.1-63,1-73,1-8,3.1-9Table 3.1-6Table 3.1-7Fig. 3.1-1, Fig 3.1-2, Fig 3.1-3, Fig 3.1-4Provide data source information, including period of average for the two tables.	Based on your comment the FEIS has been edited to clarify. Thank you.
37138-68	3.1-105HeadingChange "Historic" to "Historical"	Based on your comment the FEIS has been edited to clarify. Thank you.
37138-69	3.1-1041Replace "Regional Predicted Trends section" with "Historical Regional Climate and Predicted Future Trends sections"	Based on your comment the FEIS has been edited to clarify. Thank you.
37138-70	3.1-1123 and 4Replace 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.	Based on your comment the FEIS has been edited to clarify. Thank you.
37138-71	3.1-1212Replace, "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 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.	Based on your comment the FEIS has been edited to clarify. Thank you.
37138-72	3.1-1234Replace, "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.	Based on your comment the FEIS has been edited to clarify. Thank you.
37138-73	3.1-13113 and 4The 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".	Based on your comment the FEIS has been edited to clarify. Thank you.
37138-74	3.1-1319It 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.	Based on your comment the FEIS has been edited to clarify. Thank you.

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ID	Comment	Response
37138-75	3.1-1465 and 6The 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."	Based on your comment the FEIS has been edited to clarify. Thank you.
37138-76	3.1-1522The 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:On September 27, 2010, Clark County (Hydrographic area 212) was re-designated as attainment for carbon monoxide (CO) by EPA.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.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.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.	Based on your comment the FEIS has been edited to clarify. Thank you.
37138-77	3.1-1527-9Based 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."	Based on your comment the FEIS has been edited to clarify. Thank you.
37138-78	3.1-153Please correct the section number reference for Geologic Resources to 3.2.1.2.	Based on your comment the FEIS has been edited to clarify. Thank you.
37138-79	3.1-17Table 3.1-8In 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.	Based on your comment the FEIS has been edited to clarify. Thank you.
37138-80	3.1-2034-6Emission 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.	It is assumed that road stabilization activities required by Clark County would have a 50 percent control efficiency.
37138-81	3.1-208 (last)1-4Revise the text on conformity analysis to match the updated ozone and PM10 status (maintenance) for Clark County as per the above comment.	Based on your comment the FEIS has been edited to clarify. Thank you.
37138-82	3.1-217The 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.	The text has been revised to clarify the authors meaning.
37138-83	3.1-2185-9Revise the Las Vegas Valley analysis by reflecting the current maintenance status.	Based on your comment the FEIS has been edited to clarify. Thank you.
37138-84	3.1-23Table 3.1-9Table 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).	Impacts are separated between short-term and long-term timeframes consistently throughout the FEIS for all resources.
37138-85	3.1-26,3.1-273, 5As 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 stabilization such as graveling, paving, and/or use of dust suppressants, as required by Clark County air quality management.	It is assumed that road stabilization activities required by Clark County would have a 50 percent control efficiency.
37138-86	3.1-26,3.1-273, 5Residual Impacts paragraph is missing for Alternatives D and E.	The information regarding mitigation and residual impacts is only presented once. This information is the same for all subsequent Alternatives, unless otherwise stated.
37138-87	3.1-26,3.1-294, 1Revise the conformity analysis to match the updated ozone and PM10 status (maintenance) for Clark County as per the comments above.	Based on your comment the FEIS has been edited to clarify. Thank you.

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ID	Comment	Response
37138-88	3.1-3621 to 3Since 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.	Based on your comment the FEIS has been edited to clarify. Thank you.
37138-89	3.2-352Suggest adding "Selection 6301" before Paleontological Resources Preservation Act.	Sections 6301 to 6312 of PL 111-011 deal with preservation of paleontological resources. The section information is not relevant to the analysis in the EIS. No text changes.
37138-90	3.2-643"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.	The commenter is referred to Bell (1981) and Bell et al (2002) and Bell et al (2008). What is termed by Bell as the southern subsidence bowl is located between McCarran Airport and the intersection of Las Vegas Boulevard and Flamingo Road which puts the bowl just north of the airport. Portions of the airport may be within the subsidence bowl. No changes to the text of the EIS.
37138-91	3.2-651"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).	The sentence on page 3.2-6 was amended to say "When the ground subsides, the Las Vegas faults can be sites for fissuring to occur especially in the more fine-grained deposits"
37138-92	3.2-931-2The 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.	GIS analysis indicates that the Guilmette Formation and Simonson Dolomite are crossed by proposed pipeline, powerline, and road ROWs as well as within groundwater development areas. No revision of EIS text have resulted.
37138-93	3.2-9PaleoReference11In 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.	Actually, the new time scale shows the Quaternary and Pleistocene starting at the same time, approximately 2.6 million years ago (Ma)(Geological Society of America and International Commission on Stratigraphy). The text will be revised in the side-bar on page 3.2-2, Section 3.2.1.1 to indicate that the beginning of Quaternary is now considered to be 2.6 Ma rather than 1.8 Ma.
37138-94	3.2-9424Under 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. 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 for buried paleo resources based on the occasional find in other valleys in Nevada. Suggest referencing (see theSunshine 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.	The text on page 3.2-9 in Section 3.2.1.2 under the Paleontological Resources heading was revised to indicate that the deposits have high potential for important fossils and a brief discussion of the Sunshine locality was inserted as requested.
37138-95	3.2-95121This 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.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.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://www.sangres.com/nevada/stateparks/cathedralgorge.htm). Suggest reviewing a geological formation map of eastern Nevada to see where the Panaca Formation is located.	The text on page 3.2-9 in Section 3.2.1.2 under the Paleontological Resources heading was revised as requested by deletion of the paragraph and bullet item concerning the Muddy Creek and Panaca formations. The references to the Muddy Creek and Panaca formations were deleted from Table F3.2-1.
37138-96	3.2-2463"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.	The text on page 3.2-24 in Section 3.2.2.9 under the karst subheading was deleted as follows: The phrase "and potential groundwater contamination" was deleted.
37138-97	3.2-2611Suggest 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.	The term void is not solely synonymous with small pores or interstices. Void is a general geotechnical term for non-rock space that can range from pores (less than 0.25 inch) to vugs and cavities (from 0.25 to 24 inches) and caves (openings greater than 24 inches). Because of the wide range of subsurface openings that could be present and contribute to lost circulation and could possibly impact caves, the term void is valid. No change was made to the EIS text.

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ID	Comment	Response
37138-98	3.2-322nd bullet“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 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.”	Reduced pumping and seasonal fluctuations in the water table in the Las Vegas Valley have shown rebound of subsided areas as documented by Bell. However, rebound would occur in materials where elastic behavior would be expected such as sand and gravel. In aquifers dominated by clays and clay layers, compaction would not be expected to be elastic and would be, for all practical purposes, permanent. For impact analysis purposes, it was assumed for EIS analysis that compaction of aquifer materials would occur, but it is acknowledged that rebound can also take place. The text of the EIS was revised on page 3.2-32 in Section 3.2.2.9 under residual impacts to indicate it is possible that rebound can occur, but it is not likely the ground surface would return to its original elevation prior to pumping.
37138-99	3.2-41,3.2-48Table3.2-13,Table 3.2-18Table 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.	The alternatives description in Section 2.1.1 indicates that Alternative C has the lowest overall volume of water pumped over time. This would account for the difference in area of potential subsidence. The analysis of Alternative C was conducted using the same approach as the other alternatives. See Figure 3.3.2-21 where drawdown after 200 years is less than 100 feet and compare Alternative C to the estimated drawdown of the other alternatives.
37138-100	3.3-125-6Description of basin dimensions and elevations is not consistent with Section 3.2 (See page 3.2-1). Suggest revising overview statements to be consistent.	Text was modified for consistency with Section 3.2.
37138-101	3.3-531Figure 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.	Text modified for clarification.
37138-102	3.3-542The 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.	Text was modified for clarification.
37138-103	3.3-65While 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 (Pyramid Lake Paiute Tribe of Indians v. Ricci, 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 (Pyramid Lake Paiute Tribe of Indians v. Ricci) 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.”	Your suggestions have been carefully considered by the BLM, but have not resulted in changes to the document.
37138-104	3.3-91Figure3.3.2-1On 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.	The figure was updated to include the names of the creeks as requested.
37138-105	3.3-115Figure3.3.2-10SNWA 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.	Not changed due to NSE 2012 rulings.
37138-106	3.4-5Table 3.4-1Indicate what the numbers in the table represent. Are they percentages, miles, acres, etc.? Please specify the units in the table.	The numbers are the percentages of the basin area for each characteristic. Soil areas can have more than one characteristic so total of percentages is greater than 100%. This has been edited in the table heading for the Final EIS.
37138-107	3.4-61, 2Last andfirstThe 2nd bullet point should be combined with the 1st bullet point.	Changes to the text have been made in the FEIS.
37138-108	3.4-641-3The 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.”	Changes to the text have been made in the FEIS.
37138-109	3.4-717-10Change 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.”	The recommended change slightly alters the intended meaning so the change was not made.
37138-110	3.4-951Suggest 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.	Paving or graveling is described as an ACM in Chapter 2 and in Appendix E. The assumptions on this page state that BMPs and ACMS will be implemented. Therefore, it is not necessary to add one of the many ACMs that were considered to the list of assumptions.

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ID	Comment	Response
37138-111	3.4-1062-3Please provide the acreage of prime farmland that will be permanently altered.	Until the exact locations of facilities are known and the site-specific evaluations of soils are completed for each of those locations, the precise acreage of prime farmland soils that will be permanently altered cannot be stated. It will be a subset of those prime farmland soils with short-term impacts, so less than 19 percent of the proposed ROWs and facility footprints.
37138-112	3.4-1045-6Hydric soils and droughty soils are identified in the table, but are not described in the following discussions. Please describe in discussions.	Droughty soils is a contributing factor to the low reclamation potential ratings and are referenced in the paragraph discussing soil quality (top of page 3.4-12 in Draft EIS). A statement was added regarding hydric soils.
37138-113	3.4-11 through3.4-16Tables 3.4.-2 through 3.4-4The 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.	The figure on page 3.4-7 was included to provide an idea of the distribution of soils with each characteristic but was generated using a different data source than that used to calculate the percentages. The dataset used to generate the map could only identify entire soil map units that meet the criteria for LRP. Most soil map units are comprised of several soil series, often with different characteristics. The percentages of each soil characteristic in the tables were generated using the SSURGO tabular database by calculating the acreage of each soil component with the parameter of interest (such as LRP or high wind erosion) using the percentage of each soil component with that characteristic. This method is more accurate for calculating the acreage and percentage of soil types that have LRP because it takes into account the components of each map unit. The components are not delineated spatially, however, so only entire map units that meet the LRP criteria are shown in the inset map.
37138-114	3.4-13105-6Hydric soils and droughty soils are identified in the table, but are not discussed in the bullet items as the text indicates.	Droughty soils are mentioned in the first bullet at the top of page 3.4-14. A sentence was added to reference hydric soils.
37138-115	3.4-1941It would be helpful to list the contaminants of concern. This issue also does not appear to be further discussed in the analysis sections.	This issue was derived from public scoping and the contaminants were not always identified. References to radionuclides and erionite were added to the bullet on pages 3.4-19 and 3.4-30.
37138-116	3.4-19121-2Change Dry Valley to Dry Lake Valley	A change to the text has been made in the FEIS.
37138-117	3.4-19123-4Since 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.	Changes to the text have been made in the FEIS.
37138-118	3.4-229420% of 4,700 acres is 940 acres, not 960. Revise accordingly.	960 acres is 20.4% of 4700 acres. All acreage and percentages presented are approximate and have been rounded to whole numbers.
37138-119	3.4-234420% of 4,600 acres is 920 acres, not 930. Revise accordingly.	All acreage and percentages presented are approximate and have been rounded to whole numbers.
37138-120	3.4-2311Insert "as under the Proposed Action" after "same ACMs". Repeat for all of the Alternatives.	Changes to the text have been made in the FEIS.
37138-121	3.4-271420% of 4,000 acres is 800 acres, not 820. Revise accordingly.	All acreage and percentages presented are approximate and have been rounded to whole numbers.
37138-122	3.4-3041It would be helpful to list the contaminants of concern. This issue also does not appear to be further discussed in the analysis sections.	This issue was derived from public scoping and the contaminants were not always identified. References to radionuclides and erionite wre added to the bullet on pages 3.4-19 and 3.4-30. It is not discussed further because, as described on page 3.4-8, testing has shown that radionuclides in the soils are no longer harmful and there is no evidence of erionite in the study area.
37138-123	3.4-30141,4The cumulative surface disturbance effects should reference hydric soils, not vegetation communities. Change "vegetation communities" to "hydric soils".	Changes to the text were made. The soils issues related to surface disturbance relate more to soil productivity and stability rather than to changes to hydric soils.
37138-124	3.5-145In the 4th paragraph, change to "...for many of the vegetation types. Most of the vegetation types...."	Change was made as requested.
37138-125	3.5-414-5Please reference "prior permit application" mentioned in 1st paragraph.	The location of the reference has been changed to encompass both permit applications.
37138-126	3.5-551-5This 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 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.	The first sentence and citation has been removed from the document.
37138-127	3.5-524Add "Animal and Plant Health Inspection Service 2000" cite to the References list (under 3.5 Vegetation Resources page 1).	Edits were made as requested
37138-128	3.5-564Change 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..."	Change was made as requested.

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ID	Comment	Response
37138-129	3.5-671States “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.	Text has been changed to "eleven land cover types".
37138-130	3.5-7Table 3.5-2Neither 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.	Edits were made in the document to address the comment.
37138-131	3.5-7Table 3.5-2The “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>).	Edits were made in the document to address the comment.
37138-132	3.5-7Table 3.5-2Neither 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.	Edits were made in the document to address the comment.
37138-133	3.5-7Table 3.5-2The 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>).	Edits were made in the document to address the comment.
37138-134	3.5-8Table 3.5-48th row downThe species nomenclature is not consistent with NRCS Plants Database. Change “Blaine pincushion” to “Blaine fishhook cactus”. Revise throughout document.	Change was made as requested.
37138-135	3.5-9Figure 3.5-2Change “Source: Elmore et al. 2003” to “Source: Elmore et al. 2006”, as it is listed in the References section for Vegetation Resources.	Edits were made in the document to address the comment.
37138-136	3.5-10Figure 3.5-3Within the map change “Alt. H” to “Opt. 3”.	Figure 3.5-3 has been revised.
37138-137	3.5-10 and 11Figure 3.5-3 and 3.5-4In 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.]	"ET Areas" has been added above the vegetation types, as suggested.
37138-138	3.5-1355Change “...(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.	Edits were made in the document to address the comment.
37138-139	3.5-1414-6The 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.	Multiple text changes have been made in this paragraph to better describe the swamp cedar occurrences. These include referring to the groups as "stands" rather than "populations" to avoid improperly implying specific genetic relationships between the groups, as these have not been thoroughly examined.
37138-140	3.5-15Table 3.5-74thcolumnIn 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.	Edits were made in the document to address the comment.
37138-141	3.5-15Table 3.5-7In 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.	Table 3.5-7 has been modified accordingly.
37138-142	3.5-15Table 3.5-7Please 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	Change was made as requested

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ID	Comment	Response
37138-143	3.5-1531 Explain how playa was mapped and whether the USGS moist bare soil and playa categories were combined.	Playas were mapped using the National Land Cover Data (modified 21-class Anderson land cover classification derived from early to mid-1990s Landsat Thematic Mapper satellite data). The primary use for this data was to aid in the location and digitizing of playas throughout the ET Project Area. Furthermore, Southwest Regional Gap Analysis Program (1999-2001 Landsat7 imagery classification using the National Vegetation Classification System) was also used to clarify land cover types. Southwest Regional Gap Analysis Program was utilized this dataset again to aid in the digitizing of playas. USGS moist bare soil and playa categories were combined. Further refinement of land cover types involved the use of USGS Digital Orthophoto Quarter Quads (DOQQs1999) one meter pixel resolution black and white ortho-rectified aerial photography of the entire ET Project Area were available as a seamless ESRI SDE layer and used as a background for interpretive digitizing. Clark County October 2004 one foot pixel resolution color aerial photos were also used for the following hydrographic basins: California Wash (218), Muddy River Springs Area (219), Lower Moapa Valley (220), Pahrangat Valley (209) and the southern part of Lower Meadow valley Wash (215). These were used in addition to the DOQQs as a higher resolution background source to further refine interpretive digitizing. Landsat7 Enhanced Thematic Mapper Plus (ETM+) Imagery (June 2002) dataset was used to aid in the definition of the boundary between phreatophytic and non-phreatophytic communities on the valley floor where previous study polygons were either unclear or unavailable. USGS moist bare soil and playa categories were combined.
37138-144	3.5-1532 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".	Text change was made as requested.
37138-145	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)."	Text change was made as requested.
37138-146	3.5-2532 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..."	Text change was made as suggested.
37138-147	3.5-2533 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.	Text change was made as suggested.
37138-148	3.5-2538 Change "...the Proposed Action." to "...the Proposed Action and Alternatives A through C."	Text change was made as requested.
37138-149	3.5-26118-21 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. 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".	Text change was made as requested.
37138-150	3.5-2617-12 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..."	Text change was made as requested.
37138-151	3.5-26 Side bar 41-5 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."	Text change was made as requested.
37138-152	3.5-2858 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.	The reference to saguaros and ocotillos was to address the potential success of transplanting cactus species. It was not meant to infer that they would be transplanted within the potential impact areas.

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ID	Comment	Response
37138-153	3.5-2822-3States "...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)."	Text change was made as requested.
37138-154	3.5-2834-8The 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.	Table 3.5-2 reflects special status plants and habitat that occur within the ROW. Table 3.5-4 reflects special status plants that are known or potentially present within the Groundwater Development Areas. Table F3.5-4 in Appendix F3.5 are Special Status Plants that could potentially occur within the overall Project Area.
37138-155	3.5-2847Revise "...special plant species..." to "...special status plant species..." This text needs to be changed throughout the vegetation resources section.	Changes were made as requested on pages 3.5-28, 32, 35, and 42.
37138-156	3.5-303.5-333.5-365311-222The 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.	The FEIS has been modified as requested.
37138-157	3.5-3353The 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.	Edits were made in the document to reflect acreage correction.
37138-158	3.5-3452Text 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..."	Text change was made as suggested.
37138-159	3.5-3452States "...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..."	Text change was made as suggested.
37138-160	3.5-3521States "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.	Edits to document have been made based on the updated 2011 BLM Special Status Species list.
37138-161	3.5-36Table 3.5-12Alignment 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.	Change was made in the table to correspond with data presented in Chapter 2.
37138-162	3.5-36Table 3.5-12Delete third row "Alignment Options" and "Analysis".	This is a formatting issue and will be corrected for the Final EIS.
37138-163	3.5-36Table 3.5-12Last row/secondcolumn, first bulletStates "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.	Alignment Option 4 was re-analyzed and the numbers were corrected in the text of Table 3.5-12.
37138-164	3.5-37Table 3.5-13The 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"	Title change was made as requested.
37138-165	3.5-38102-4Insert "future" before the second "ROW construction" in this sentence.	Insert was made as requested.
37138-166	3.5-39Table 3.5-12Please 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.	Table 3.5-12 does not have a column titled "SNWA ET". This text was previously added to Table 3.5-7.
37138-167	3.5-39510Change reference from "Steinwald et al." to "Steinwand et al."	Change was made as requested.

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ID	Comment	Response
37138-168	3.5-3976The 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.	Change was made as requested.
37138-169	3.5-4065This 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.	To facilitate information synthesis, the text related to the climate change analysis was reorganized in the Final EIS. Information previously presented in the air resources Section 3.1 has been reorganized into the cumulative effects section of each resource potentially affected by climate change. Section 3.1 still presents an overview of regional climate and potential future trends to the project area, as well as an estimate of potential greenhouse gas emissions associated with the project. Potential climate change impacts specific to vegetation resources can now be found in Section 3.5.3.
37138-170	3.5-42104Change “Implementation of GWD-VEG-2...” to “Implementation of GW-VEG-2...”	Text change was made as requested.
37138-171	3.5-4374Suggest adding sentence: “Swamp cedar communities could be similarly affected. These areas . . .”	Text change was made as requested.
37138-172	3.5-4539Suggest adding sentence: “Rocky Mountain swamp cedar communities could also be affected by reduced availability of soil moisture in basin shrubland communities.”	Text change was made as suggested.
37138-173	3.5-4533California bulrush (Schoenoplectus californicus) 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.	Table 3.5-5 reflects plants that are dominant within each hydrologic basin. California bulrush (Schoenoplectus californicus) is not listed in this table because it is not a dominant component of the plant community.
37138-174	3.5-4541Reference 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.	Citations and the appropriate references have been added to the document as requested in your comment.
37138-175	3.5-47Table 3.5-14Change “a” in the statement in the 1st bullet point to “in,” so it reads “would likely result in long-term changes.”	Text change was made as requested.
37138-176	3.5-48Table 3.5-14Under “Mitigation Recommendations” Table 3.5-14 is missing mitigation recommendations GW-VEG-1 and GW-VEG-2. Please include these in the table.	Insertions were made as requested.
37138-177	3.5-48Table 3.5-14Under “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.	Text changes were made as requested.
37138-178	3.5-48, 3.5-51, 3.5-54, 3.5-57, 3.5-60, and 3.5-63Tables 3.5-14, 3.5-15, 3.5-16, 3.5-17, 3.5-18, and 3.5-19Reference 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.	Citations have been added to the document as requested in your comment.
37138-179	3.5-48, 3.5-51, 3.5-54, 3.5-57, 3.5-60, and 3.5-63Tables 3.5-14, 3.5-15, 3.5-16, 3.5-17, 3.5-18, and 3.5-19Under 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: - 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).The text “Lehman and Snake Creek in GBNP and adjacent Utah.” Should be removed from Tables 3.5-14 through 3.5-17.	Changes to all tables were made as requested.
37138-180	3.5-59Table 3.5-18Under “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.	The FEIS has been modified as requested.
37138-181	3.5-67102Section 2.8.1 is not “Past and Present Actions”. Suggest changing to “Section 2.9.1” for Past and Present Actions.	Text change was made as suggested.
37138-182	3.5-67111States “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.	Text change was made as suggested.

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ID	Comment	Response
37138-183	3.5-67121The reference to Figure 3.0-2 does not seem correct. Is Figure 3.0-3 the correct reference that should be used?	The FEIS has been modified as requested.
37138-184	3.5-6931The reference to "Figure F3.5-1" should be "Figure F3.5-2" (see Appendix F3.5 – Vegetation Resources, page F3.5-52).	Text change was made as requested.
37138-185	3.5-69Table 3.5-21Table 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.	Edits were made in document to reflect comment.
37138-186	3.5-7011"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.	Text change was made as requested.
37138-187	3.5-7034States "...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.	Text change was made as requested.
37138-188	3.5-7021-2States "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).	Changes as requested except Hidden Valley is not part of this project.
37138-189	3.5-7122States "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.	Text changes were made as requested.
37138-190	3.5-7131-7States "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.	Table 3.5-2 represents Special Status Plant Species Occurrence and Suitable Habitat within the Right-of-way, while Table 3.5-8 represents Special Status Species Known or Potentially Present within Groundwater Development Areas. These tables do not match due to the dissimilarity between the ROW and the Groundwater Development Areas (GWDAs). Much of the ROW does not overlap with the GWDAs, therefore impacts to special status plant species differ for each potential impact area.
37138-191	3.5-7141,4, and5Please clarify what is meant by "additive reduction".	The word "additive" has been deleted from the text.
37138-192	3.5-7143With 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.	Text changes were made as suggested.
37138-193	3.5-7171-2States "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.	Text changes were made as requested.
37138-194	3.5-7172States "...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.	Change to table reference was made as suggested.
37138-195	3.5-7226Change "...and Lower Meadow." to "...and Lower Meadow Valley Wash."	Text change was made as requested.

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ID	Comment	Response
37138-196	3.5-7211-2States “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.”	Text change was made as suggested.
37138-197	3.5-7552-4California bulrush (Schoenoplectus californicus) 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.	Table 3.5-5 reflects dominant plants within each hydrologic basin. California bulrush (Schoenoplectus californicus) is not a dominant plant within these basins and therefore is not included in Table 3.5-5.
37138-198	3.5-7563The “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 (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?	The FEIS has been modified as requested to ensure consistent presentation across alternatives. the change from Dry Lake Valley to Lake Valley was made as requested.
37138-199	3.5-7667-8States “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.”	Text change was made as suggested.
37138-200	3.5-7716Suggest changing “...and Lower Meadow.” to “...and Lower Meadow Valley Wash.”	Text change was made as suggested.
37138-201	3.5-7719-10Why is White River Valley not mentioned (see Figures 3.5-17 and 3.5-18)?	Text has been modified to include White River Valley, and exclude Hamlin Valley (which is not analyzed in the referenced figures).
37138-202	3.5-78, 3.5-82, 3.5-85, and 3.5-88Last paragraph,1,1, and 11, 1, 1,and 1Consider 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...”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...”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...”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 “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...”	Changes have been made in the FEIS text to address this comment.
37138-203	3.6-152“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.	The FEIS has been updated based on the updated BLM sensitive species list.
37138-204	3.6-221Change “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.	Text change was made as requested.
37138-205	3.6-2412-13“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.	The FEIS has been updated to include available information from the 2012 Nevada Wildlife Action Plan update.
37138-206	3.6-115 and 6Tortoise 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.	Units have been made consistent in the FEIS.
37138-207	3.6-177The EIS should explain why the western burrowing owl (which is a raptor) is analyzed separately from other raptors.	Analysis of the western burrowing owl was thought to be clearer in a separate discussion because the species has a different nesting strategy than other raptors (it uses burrows) and because the applicant included species-specific ACMs. An explanation for this separate treatment has not been added as there does not appear to be any confusion with this approach.
37138-208	3.6-1894There are no records of kangaroo mice in Delamar Valley. See also 3.6-27 at paragraph 3, line 3.	Updated kangaroo mouse data was requested from NDOW and NNHP and relevant edits were made in the FEIS.

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ID	Comment	Response
37138-209	3.6-2161Please add a citation for the winter record for peregrine falcon in Spring Valley.	The GBBO noted the species in the valley, but not in GWD areas. The species has been removed from the GWD section as it is not relevant to the discussion.
37138-210	3.6-3132Change "(e.g., raptors and eagles)" to "(e.g., eagles and other raptors)".	Text change was made as requested.
37138-211	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.	The FEIS text has been revised to include a conclusion.
37138-212	3.6-35Third bulletChange "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.	The clarifying edit to the FEIS has been made.
37138-213	3.6-35LastTo 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.	The FEIS has been revised per the comment.
37138-214	3.6-3593Change "134" to "133" to be consistent with Table 3.6-3 and "260" to "259" to be consistent with Table 3.6-4.	The numbers in the text have been made consistent with the table in the FEIS.
37138-215	3.6-3615-6Please state which various types of raptors are culturally significant to regional Tribes.	The Tribes identified 'raptors' as being culturally significant. Specific types were not identified . No change made.
37138-216	3.6-36611-13The 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.	The 52 DbA at 500 feet is the correct estimate of noise levels, and the statement in Section 3.19 will be revised accordingly.
37138-217	3.6-37114Change "20" years to "15" years to be consistent with Chapter 3.5, pg 3.5-25, para. 3, lines 3-4.	The text has been revised per the comment.
37138-218	3.6-37115Change "1,006" acres to "1,004" acres to be consistent with Chapter 3.5, pg 3.5-25, para. 3, lines 4-5.	The number in the text has been made consistent with Section 3.5 in the FEIS.
37138-219	3.6-39LastChange "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.	The FEIS text has been revised per the comment.
37138-220	3.6-40Table 3.6-7Change "with" to "within".	The FEIS text has been revised per the comment.
37138-221	3.6-42First bulletClarify that the commitment to avoid siting aboveground facilities within 2 miles of active sage-grouse leks does not apply to power lines.	The FEIS text has been revised per the comment.
37138-222	3.6-4231Capitalize "assurances". Same goes for the reference on page 3.6-45 (last line).	The FEIS text has been revised per the comment.
37138-223	3.6-45Last2-3The 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.	The FEIS text has been clarified per the comment.
37138-224	3.6-46Bats5Change "To demonstrate impacts to bats," to "To demonstrate the range of impacts to bat habitat acreage," (for clarity).	The FEIS text has been clarified per the comment.
37138-225	3.6-46Bats12-14Clarify 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.	The FEIS text has been clarified per the comment.
37138-226	3.6-4966Change "822" to "823" to be consistent with Table 2.6-2.	The text number has been made consistent with the number in Table 3.5-10 in the FEIS.
37138-227	3.6-494The measures ROW-VEG-1 Reducing Spread of Noxious Weeds and ROW-VEG-2 Reducing Risk of Accidental Wildfire are not titled correctly. Section 3.20 titles them as ROW-VEG-1 Green Stripping, and ROW-VEG-2 Fire Prevention Plan.	The measure titles have been made consistent in the test.
37138-228	3.6-5023-4Change "8,840" to "8,843" and "820" to "823" to be consistent with Table 2.6-2.	The text numbers have been made consistent with the numbers in Table 3.5-10 in the FEIS.
37138-229	3.6-5222-5There are no records of kangaroo mice in Delamar Valley, so the acreage calculation should not include Delamar	Updated kangaroo mouse data were requested from NDOW and NNHP and any relevant edits were made in the FEIS.
37138-230	3.6-5271Change "10,697" to "10,696" to be consistent with Table 2.6-2.	The text number has been made consistent with the number in Table 3.5-11 in the FEIS.

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ID	Comment	Response
37138-231	3.6-5343Change "10,700" to "10,696" to be consistent with Table 2.6-2.	The text number has been made consistent with the number in Table 3.5-11 in the FEIS.
37138-232	3.6-54Last1-2Fix the following statement as indicated: "Direct impacts would reduce include 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."	The FEIS text has been revised to address the comment.
37138-233	3.5-5531-2Fix 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."	The FEIS text has been revised to address the comment.
37138-234	3.6-5531-2There are no records of kangaroo mice in Delamar Valley, so the acreage calculation should not include Delamar	Updated kangaroo mouse data were requested from NDOW and NNHP and any relevant edits were made in the FEIS.
37138-235	3.6-56 to-58Tables 3.6-9 and 3.6-10Table 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.	The FEIS includes a footnote for each table explaining the approach.
37138-236	3.6-58Table 3.6-10DVKmouse and note2The acreage should be for Dry Lake Valley only as the desert valley kangaroo mouse is not known to occur in Delamar Valley.	Dark kangaroo mouse, rather than the subspecies Desert Valley kangaroo mouse, is now a BLM sensitive species. Updated dark kangaroo mouse data were requested from NDOW and NNHP and any relevant edits were made in the FEIS.
37138-237	3.6-6126The 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.	The FEIS text has been clarified per the comment.
37138-238	3.6-62Table 3.6-11Explain the difference between "None Identified" and "0".	NDOW GIS layers do not identify some habitat types for big game, such as crucial summer range for pronghorn as an example. Where this is the case, "None identified" or "NI" is used. Where a habitat type is identified by the NDOW GIS layer, but it does not occur in the valley named in the table, then a "0" is used.
37138-239	3.6-6224Change "5,061" to "5,069" to be consistent with Table 3.6-12.	The numbers in the text have been made consistent with the table in the FEIS.
37138-240	3.6-6521, 2Add parenthetical descriptions of what GW-AB-1 and GW-AB-2 require.	Parenthetical descriptions were added per the comment.
37138-241	3.6-66Table 3.6-15It would be useful to add a column identifying the total acreage of each groundwater development area by valley for comparison purposes.	While the acreages of the groundwater development areas are provided in Table 3.5-3, a column has been added to Table 3.6-15 to facilitate comparison.
37138-242	3.6-68Text boxGW-WL-1 should be GW-WL-3	The FEIS text has been edited per the comment.
37138-243	3.6-7045Since the desert valley kangaroo mouse is not known to occur in Delamar Valley, the acreage in that valley should not be considered.	Dark kangaroo mouse, rather than the subspecies Desert Valley kangaroo mouse, is now a BLM sensitive species. Updated dark kangaroo mouse data were requested from NDOW and NNHP and any relevant edits were made in the FEIS.
37138-244	3.6-711The measure GW-WL-6 Pre-construction Surveys and Avoidance of Baking Powder Flat Blue Butterfly Occurrences and Habitat is not listed in Section 3.20 Monitoring and Mitigation Summary.	This measure has been added to Section 3.20 of the FEIS.
37138-245	3.6-7453According to Appendix Figure F3.6-12, gila monsters do not occur in Pahrnagat Valley.	NDOW has gila monster occurrence information for Pahrnagat Valley. The CISA in the FEIS has been updated.
37138-246	3.6-761st and 5th bulletsAdd "ACM" before the ACM number in the parentheses.	The FEIS text has been edited per the comment.
37138-247	3.6-769th bulletAdd "with Assurances" after "Candidate Conservation Agreement".	The FEIS text has been edited per the comment.
37138-248	3.6-762Under 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.]	The FEIS text has been revised per the comment.
37138-249	3.6-768-9Under 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.]	The FEIS text has been revised per the comment.

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ID	Comment	Response
37138-250	3.6-7610This 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.	The FEIS text has been revised to address the comment.
37138-251	3.6-7611th bullet1Identify the source of the first adaptive management measure.	The FEIS text has been revised to match the bullet in the Aquatic Biology section.
37138-252	3.6-7611Under 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.]	The FEIS text has been revised to address the comment.
37138-253	3.6-801st bullet3Change "P points of diversion ODs" to "points of diversion".	The FEIS text has been edited per the comment.
37138-254	3.6-811st bullet2Change "are in areas may be impacted" to "are in areas that may be impacted".	The FEIS text has been edited per the comment.
37138-255	3.6-8213Strike "now".	The FEIS text has been edited per the comment.
37138-256	3.6-9032Add "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. 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.	The word "effects" has been added in the suggested places in the FEIS.
37138-257	3.7-1Quick ReferenceGBNP – GBNP should be GBNP – Great Basin National Park	The FEIS text has been edited per the comment.
37138-258	3.7-1114-16It 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, Tippet Valley, and Pleasant Valley are also excluded.	The FEIS text has been revised to address the comment.
37138-259	3.7-1114-16The 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.	Reference to the particular portion of the region of study was deleted.
37138-260	3.7-2Figure 3.7-1Rename Alts F – I to Options 1 – 4 to be consistent with the rest of the DEIS.	The FEIS text has been revised to address the comment.
37138-261	3.7-331Change "(NDOW and the UDWR)" to "(NDOW and the UDWR, respectively)".	The FEIS text has been revised to address the comment.
37138-262	3.7-336-7Change "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.	The FEIS text has been revised as suggested.
37138-263	3.7-33lastAdd the missing parenthesis to the last line of the paragraph.	The FEIS text has been revised as suggested.
37138-264	3.7-4Figure 3.7-2Legend 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.	The FEIS figure has been revised as suggested.
37138-265	3.7-86The 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.	The FEIS text was revised to clarify that no fish were collected during field surveys.
37138-266	3.7-11Table 3.7-2Add "Results of" to the beginning of the title of the table.	The FEIS figure has been revised per the comment.
37138-267	3.7-11Table 3.7-2North Little Spring and Unnamed spring #2 in Snake Valley are adjacent to, but not within, the Groundwater Development Areas.	The title was revised and a footnote was added to note that these springs are adjacent to the groundwater development areas.
37138-268	3.7-2023Change "Wild Earth" to "WildEarth".	The FEIS text has been revised per the comment.
37138-269	3.7-21Bullets 11and 13Bullet 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.	Clarification was added that seasonal waterbodies were identified as a general habitat type used by amphibians, but they were not mapped.
37138-270	3.7-2254Change "20-foot ROW" to "20-foot-wide ROW".	The FEIS text has been revised per the comment.

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ID	Comment	Response
37138-271	3.7-2271-10This 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.	The FEIS text has been revised per the comment.
37138-272	3.7-235 and textbox3-4Paragraph 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.	The text box was revised to be consistent with "up to 100-foot wide on each bank".
37138-273	3.7-23Bullet 3Correct 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.”	The FEIS text has been revised per the comment.
37138-274	3.7-24The full description of ROW-AB-1 is provided twice on this page. The second description is unnecessary.	The FEIS text was revised to refer to this mitigation measure but the detailed description was deleted.
37138-275	3.7-24Bullet 2Remove the stray “C”.	The FEIS text was revised per the comment.
37138-276	3.7-2411Mitigation 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.	The FEIS text was revised as suggested.
37138-277	3.7-2481Preface ROW-AB-3 with “If the open-cut trenching method is used, timing restrictions...”	The FEIS text was revised as suggested.
37138-278	3.7-31Table 3.74Wambolt 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.	Wambolt Springs was deleted from this ROW option.
37138-279	3.7-3521Change “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”.	The FEIS text was revised using the words "cannot be determined".
37138-280	3.7-3574Where 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.	The reference to the figures was added.
37138-281	3.7-3652-3Change “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.”	The FEIS text was revised as suggested.
37138-282	3.7-40For 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.	A new table was added for the Proposed Action groundwater development impact summary.
37138-283	3.7-4492There are no special status species in Minerva Springs. Utah chub is introduced and not a special status species in Nevada.	The FEIS text was revised; however, Utah chub is considered a species with limited distribution in Nevada.
37138-284	3.7-4492There are no special status fish species in Minerva Springs. Utah chub is introduced and not a special status species in Nevada.	The FEIS text was revised; however, Utah chub is considered a species with limited distribution in Nevada.
37138-285	3.7-4637-8The 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.	The FEIS text was revised to indicate 1.8 miles for both time frames.
37138-286	3.7-4742-4The 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.	The FEIS text was revised to address the comment.
37138-287	3.7-4753North Little Spring is in Snake Valley, not Spring Valley.	The FEIS text was revised as suggested.
37138-288	3.7-475-10In 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).]	This information was added as additional bullets.

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ID	Comment	Response
37138-289	3.7-47111In 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.	The FEIS text was revised as suggested.
37138-290	3.7-48Bullet 1Is there an ACM that can be referenced for this measure?	The ACM reference number was added.
37138-291	3.7-4941Change GWD-WR-4 to GW-WR-5.	The FEIS text was revised as suggested.
37138-292	3.7-51Table 3.7-6Please 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.	The FEIS text was revised as suggested.
37138-293	3.7-51Table 3.7-6In 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.	The FEIS tables were revised as suggested.
37138-294	3.7-53101-2Delete "and Minerva" as there are no special status fish in Minerva Spring.	The FEIS text was revised as suggested.
37138-295	3.7-59102Delete "Minerva Spring and" as there are no special status fish in Minerva Spring.	The FEIS text was revised as suggested.
37138-296	3.7-65101Delete "and Minerva".	The FEIS text was revised as suggested.
37138-297	3.7-86Table 3.7-18To 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".	The FEIS text was revised as suggested.
37138-298	3.7-89LastIt 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.	A sentence was added to the beginning of paragraph to address the comment.
37138-299	3.7-91210Add the missing parenthesis after [Option 2 alignment]).	Revision made as suggested.
37138-300	3.7-10347-8Change "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).	Revision made as suggested.
37138-301	3.8-516-7At 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-private-owned agricultural lands.	This sentence was unnecessary and has been deleted. The next sentence was clarified to indicate that agricultural areas were only found on private lands.
37138-302	3.8-722The 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 removed. 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.	The text has been clarified to reflect this information.
37138-303	3.8-791-3As 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.	The EIS analysis uses the best available GIS information provided by SNWA and BLM. Despite the concerns noted in the comment, Section 3.8.2.9 states "it is assumed that no agricultural lands would be disturbed by construction or converted to permanent facilities." Therefore, any potential GIS error noted would have no effect on the analytical conclusion.
37138-304	3.8-11,3.8-14,3.8-17Tables 3.8-1,3.8-4,3.8-7Correct acreages affected by construction consistent with general comments above.	Thank you for your comment. The EIS analysis uses the best available GIS information provided by SNWA and BLM.
37138-305	3.8-2255Remove "it" from the last sentence on the page.	The edit has been made.
37138-306	3.8-2314The 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.	The text has been edited.

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ID	Comment	Response
37138-307	3.8-25,3.8-16Tables3.8-14,3.8-16These 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.	The best available GIS information was used in the analysis in accordance with NEPA to enable informed decision-making. Although the information presented may not be entirely consistent due to the programmatic nature of the project data, the analysis gives a close approximation of affected areas and associated impacts from the proposed project and alternatives.
37138-308	3.8-26Table 3.8-153The 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).	The summary table presents a comparison between alternatives. The permanent area disturbed by alternative is presented in Chapter 2.
37138-309	3.9-325References Figure F3.9-1 (Appendix F) Please add this figure to the Appendix.	Reference to Figure F3.9-1 has been removed.
37138-310	3.9-819In the last sentence of the 1st paragraph, change "include" to "including."	This edit has been made.
37138-311	3.9-1132-3.Add a clause: "dispersed recreation resources, including cultural sites, historic properties, and rock art locations, in the immediate vicinity of construction activities."	Dispersed recreation was defined in the text as "such as biking, camping, OHV use, and special events"
37138-312	3.9-1296Add 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."	The following clause was added to clarify "including the recreational setting".
37138-313	3.9-1482-4In the 2nd sentence of the last paragraph, change "western-most edge the Chief" to "western-most edge of the Chief."	This edit has been made.
37138-314	3.9-1432ACM 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.	This edit has been made.
37138-315	3.9-276For 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).	Since locations of future facilities in groundwater development areas are unknown at this time, number of game fish streams crossed by those facilities is currently unknown. The Aquatic Resources section (3.7) provides a list of game fish streams that occur within the groundwater development areas.
37138-316	3.10-7Table 3.10-3Change years "2011 to 2022" to "2012 to 2023" (see SNWA's Conceptual Plan of Development Table 4-2).	Table 3.10-3 has been updated as directed in this comment.
37138-317	3.10-11Table 3.10-6Change years "2011 to 2018" to "2012 to 2019"	Table 3.10-6 has been updated as directed in this comment.
37138-318	3.10-15Table 3.10-9Change years "2011 to 2019" to "2012 to 2020"	Table 3.10-9 has been updated as directed in this comment.
37138-319	3.11-3HeadingBoth the terms "saleable" and "salable" are used. Please correct the DEIS, so use of the term is consistent throughout the DEIS.	The heading on page 3.11-3 was changed to the correct spelling.
37138-320	3.11-641-2States "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".	The references were changed to read 43 CFR 2009.
37138-321	3.11-731Instead of stating that the "ROWs for the proposed facilities may be in place indefinitely", please use the duration for the ROW.	The text was amended as follows on page 3.11-7, 3rd paragraph: the phrase "for the duration of the ROW" was inserted to replace "indefinitely".
37138-322	3.11-10113The 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.	The text on page 3.11-10 was amended as follows: 5,800 was deleted and 4,963 was inserted.
37138-323	3.11-13Table 3.11-3Alternative 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."	The text in Table 3.11-3 was amended to indicate Alt. C is the same as Alt. A, and the phrase "or in Snake Valley" was added to the sentence under Alternative D.
37138-324	Entire SectionIt 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.	Ephemeral streams are not a part of the resource analysis, therefore all references to ephemeral streams have been eliminated.
37138-325	3.12-121Much 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...."	Text modified as requested.

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ID	Comment	Response
37138-326	3.12-127-8Suggest 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.	Modified text to eliminate referring to all shrub types as being high in protein.
37138-327	3.12-1210The 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.	Text modified as requested.
37138-328	3.12-1QuickReferenceInclude “APE” in Quick Reference box – see page 3.12-39.Include “AUM” in Quick Reference box	Eliminated the use of APE and replaced it with water resources region of study. AUMs are no longer being used for impact analysis and do not appear in Section 3.12.
37138-329	3.12-2 Figure 3.12-1Clarify what the Grazing Allotment numbers are on the figure. They don’t match the numbers on Table 3.12-2.	Text has been modified to read: The location of grazing allotments in relation to the project’s proposed ROWs, groundwater development areas, and the water resources region of study (hydrologic model boundary) is shown in Figure 3.12-1 (grazing allotment numbers in the figure are arbitrary and only intended to isolate individual allotments for locational clarification).
37138-330	3.12-4Quick ReferenceThe region of study for this section is defined by the water resources region of study, not the boundary analyzed for natural resources. Revise accordingly.	Text modified as requested.
37138-331	3.12-415-6The 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.	Corrections have been made to the acreage totals.
37138-332	3.12-6 2 6 Insert end parentheses after Table 3.12-6.	Text modified as requested.
37138-333	3.12-722-3The 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.	Text modified as requested.
37138-334	3.12-7Table 3.12-6The 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.	The analysis focuses only on perennial streams. The text introducing Table 3.12-6 has been modified to properly relate to the table.
37138-335	3.12-9After 5th bulletIn 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	Text modified as requested.
37138-336	3.12-93.12.2.1Ensure 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.	Text was modified as requested.
37138-337	3.12-93.12.2.1In 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	Text was modified as requested.
37138-338	3.12-93.12.2.1Ensure 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.”	Text was modified as requested.

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ID	Comment	Response
37138-339	3.12-93-4The “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 Section 3.12.2.8, on 3.12-39.“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.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.”	The first and third sentences describes how the parameters are utilized in the analysis of ROW impacts and are appropriate. The second sentence gives justification for the geographic boundary of the analysis area and therefore is necessary. The remainder of the discussion describes how surface disturbance to vegetation communities is quantified using ecological site descriptions, which applies to ROW construction not groundwater pumping.
37138-340	3.12-9101Insert “potential” after allotments and before reductions so the first sentence reads, “To quantify impacts to grazing allotments, potential reductions to vegetation communities were evaluated.	Text was modified as requested.
37138-341	3.12-9137Delete “stock tanks” and “corrals”, as these areas will not be re-vegetated.	Text was modified as requested.
37138-342	3.12-1011-2Please 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.	Text was modified as requested.
37138-343	3.12-1711Suggest 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,”	Text was modified as requested.
37138-344	3.12-1827,10For consistency with other sections, underline “Effectiveness” and “Effects on other resources”.	Text was modified as requested.
37138-345	3.12-2046Delete “corrals”, as these areas will not be fenced.	Text was modified as requested.
37138-346	3.12-2558-10To 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.”	Modified text to read: In the long-term, annual precipitation from year to year, and the seasonal use by livestock and wildlife within the allotment would determine the survival of reseeded plants. Left in the text regarding year to year precipitation because this would be a long term reclamation effort.
37138-347	3.12-2557, 10For consistency with other sections, underline “Effectiveness” and “Effects on other resources”.	Text was modified as requested.
37138-348	3.12-392nd bullet2Delete “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.	Text was modified as requested.
37138-349	3.12-415The measure GW-WL-1 Wildlife Resources is not titled correctly. Section 3.20 titles the measure GW-WL-1 Avoid siting facilities in key big game habitats.	Text was modified as requested.
37138-350	3.12-43Table 3.12-16The 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.	Text was modified as requested.
37138-351	3.12-4423The referenced Tables F3.12.2 and F3.12.4 should be F3.12-2 and F3.12-4.	Text was modified as requested.
37138-352	3.12-462nd bulletDelete “And drawdown effects” from second bullet under impacts of future ROW construction. This impact is not associated with surface disturbance from construction.	Modified text to read: Estimate of change to livestock carrying capacity and management in grazing allotments based on short- and long-term displacement of, and effects on, forage production for impacted allotments.
37138-353	3.12-463rd bulletThird 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.	Modified text to refer to Chapter 2 Section 2.9.
37138-354	3.12-4753Change “2.8” to “2.9” here, and throughout section.	Text was modified as requested.
37138-355	3.12-47 through 3.12-55Tables 3.12-17 through 3.12-23Tables 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.	The row labels in Tables 3.12-18 and 3.12-20 were incorrect. Ephemeral streams were not part of the analysis.
37138-356	3.12-49Figure 3.12-3The title of the figure only includes Perennial streams, however the Y-axis label includes perennial and ephemeral streams. Revise accordingly. 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.	Modified Figure 3.12-3 to correct label of the Y axis. Modified section 3.13 to clarify the water resources region of study as the boundary for analysis.

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ID	Comment	Response
37138-357	3.13-4Table3.13-4This 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.	Modified text to read as follows: Table 3.13-4 identifies the HMAs that intersect the region of study and the AMLs for each (BLM 2007). In Nevada, only Muddy Mountains and Silver King HMAs are totally within the region of study. In Utah, only the Choke Cherry HMA is completely within the water resources region of study.
37138-358	3.13-532-3The 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.	The Methodology for Analysis for ROW construction was modified as directed above. The Methodology for Analysis for Groundwater Development and Pumping was modified to read: "Impact parameters for groundwater development areas are similar to those used for ROW construction. The water resources region of study is used for analysis of groundwater drawdown impacts as water is the limiting factor for herd health. BLM RMP management actions and best management practices plus current applicant-committed protection measures were evaluated to limit the extent and duration of predicted impacts. Additional mitigation measures were recommended to reduce or offset impacts, mitigation measure effectiveness was estimated, and a residual impact summary was developed for each impact issue."
37138-359	3.13-1812th bulletThe 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."	Changed text as directed.
37138-360	3.13-221GW-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.	Modified text to read: GW-WH-1: Water Source Maintenance. In cooperation with the BLM, SNWA shall identify key natural water sources and monitor those sources on a regular basis (frequency determined by the BLM). If impacts to those sources are observed, SNWA would consult with the BLM to identify locations where artificial water sources could be maintained to supply herds with adequate water supplies. This mitigation measure is not limited to impacts that are a result of the SNWA groundwater development activities.
37138-361	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.	Modified text to read: Estimate of change to HMA carrying capacity and management based on short- and long-term displacement of forage vegetation.
37138-362	3.13-264Spring 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 3.13.3.5 states that "The Proposed Action surface disturbance would overlap with two reasonably foreseeable future actions located within areas occupied by wild horses."
37138-363	3.14.-125-6The 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.	The current and other descriptions of ISAs noted in the comment are all correct. Additional clarifying text was added with a reference to Section 603 of FLPMA.
37138-364	3.14-11172-4Figure 3.8-5 does not show the water treatment facility or the storage reservoir being outside of the utility corridor.	Proposed Project Components have been added to Figure 3.8-5.
37138-365	3.14-1365The 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.	The information noted is irrelevant to the LWC analysis presented, however, it was added as requested.
37138-366	3.14-134The measure ROW-SD-1 should include its title to be consistent with previous descriptions of measures. Its title is ROW-SD-1 Construction Area Siting. (see Table 3.20-1)	Text was modified as requested.
37138-367	3.14-1310The measure ROW-SD-1: Avoid Temporary Surface Disturbance in Special Designation Areas appears to be an incorrect title. The title should be ROW-SD-1 Construction area siting. (see Table 3.20-1)	Text was modified as requested.
37138-368	3.14-22 2 1-4 This mitigation is not in Chapter 3.20.	Text was modified as requested.
37138-369	3.15-922-5States "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.	The ON Line Transmission project is included in the cumulative Section 3.15.3.2.
37138-370	3.15-963-4Text 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.	Foreground-middleground distance zone definition is from the BLM Visual Resource Management System. The text on the following paragraphs define foreground as viewing distances under 0.5-mile; 'middle-ground' to distances between 0.5 and 4 miles, and 'background' to distances over 4 miles. This does not conflict with the BLM definition, but is meant to refine the distance zones to better analyze impacts to viewers in close proximity to ROW facilities.
37138-371	3.15-985There is no "NPS 2009" reference listed in the Reference Section of the EIS.	The citation has been corrected to NPCA 2009 in the FEIS; referring to the National Parks Conservation Association.
37138-372	3.15-1033-4States "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.	Section 3.15.1.2 has been revised to include Lund as a local light source in the FEIS.

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ID	Comment	Response
37138-373	3.15-1055-6States "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.	The location of Pony Express Trail has been verified with NPS data, and the sentence has been removed from Section 3.15.1.2 in the FEIS.
37138-374	3.15-1321States "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.	The text in Section 3.15.2.1 has been revised to state that 12 simulations were prepared in the FEIS.
37138-375	3.15-14 and3.15-15Last and firstThe current Applicant-Committed Measures do not appear to be correctly referenced in this text, please update and revise.	Applicant Committed Measures on pages 3.15-14 and -15 has been revised to reference revised APPENDIX A – APPLICANT ENVIRONMENTAL PROTECTION MEASURES in the FEIS.
37138-376	3.15-1531-2States "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.	The text in Section 3.15.2.2 has been revised to replace 'structures' with 'textures' in the FEIS.
37138-377	3.15-15312-14States "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."	The referred to text in Section 3.15.2.2 has been revised similar to comment L-37138-377-325 in the FEIS.
37138-378	3.15-1855-6States "...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.	The FEIS has been revised to remove the reference to Appendix F3.15
37138-379	3.15-2061-3States "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"	The FEIS has been revised similar to comment L-37138-379-325.
37138-380	3.15-2136-7Suggest 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 ..."	The FEIS has been revised similar to comment L-37138-380-325.
37138-381	3.15-2131Suggest adding a clause "... would be seen from dispersed recreation areas and any recorded or unrecorded cultural resource sites on west aspects ..."	The FEIS has been revised similar to comment L-37138-379-325.
37138-382	3.15-2226-7States "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.	The FEIS has been revised similar to comment L-37138-379-325.
37138-383	.15-22last2-5ON Line Transmission project is a cumulative project and should be discussed in the cumulative section, 3.15.3.	The ON Line Transmission project is included in the cumulative Section 3.15.3.2 of the DEIS.
37138-384	3.15-23Table 3.15-3The 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)."	The FEIS has been revised similar to comment L-37138-384-325.
37138-385	3.15-2532-3Change "170" acres to "166" acres and "2,800" acres to "2,833" acres as shown in Table 3.15-3.	The FEIS has been revised to ensure consistency with the text and Table 3.15-3.
37138-386	3.15-2583-4Change "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.	The FEIS has been revised to make the text and Tables 3.15-3 through 3.15-5 consistent.
37138-387	3.15-2594Change "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.	The FEIS has been revised to make the text and Tables 3.15-6 through 3.15-8 consistent.
37138-388	3.15-2672Suggest 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 ..."	The referred to text in Section 3.15.2.2 in the FEIS has been revised similar to comment L-37138-388-324.

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ID	Comment	Response
37138-389	3.15-2761States “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.)	The FEIS has been revised to add the mileage detail to residual impacts in Sections 3.15.2.3 and 3.15.2.4
37138-390	3.15-2911Mitigation measures ROW-VR-6 and 7 do not exist. Change text to “...ROW-VR-1 through ROW-VR-5...”	Change made.
37138-391	3.15-2932Change to impacts would not occur in “Hamlin or Snake valleys.”	Text in Section 3.15.2.4 has been revised to incorporate Hamlin Valley in statement.
37138-392	3.15-2933-5States “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.	Section 3.15.2.4 has been revised to incorporate tables for Alternative E similar to tables done for the other alternatives.
37138-393	3.15-29106Delete “not” in “Construction lighting would not briefly alter the nighttime viewshed.”	Text in Section 3.15.2.4 has been revised to delete “not” from sentence as in comment L-37138-393-325.
37138-394	3.15-3032Suggest 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 . . . “	Additional text “and from cultural resource sites or rock art locations” inserted in to sentence in Section 3.15.2.3.
37138-395	3.15-3045-6States “. . .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.	KOPs have been revised to the correct numbers in Section 3.15.2.4.
37138-396	3.15-3083No facilities would be constructed in Hamlin Valley either. Please add in Hamlin Valley.	Text in Section 3.15.2.4 has been revised to include Hamlin Valley in statement.
37138-397	3.15-31Table 3.15-9First 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 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.	The KOPs have been revised to the correct KOP number throughout Section 3.15.
37138-398	3.15-32Table 3.15-10Double check values with Tables 3.15-2, 3.15-4, 3.15-7, and 3.15-8 and correct inconsistencies.	The tables have been reviewed, and inconsistencies in Table 3.15-10 (revised to Table 3.15-13) have been identified and revised.
37138-399	3.15-335The subheading “Groundwater pumping” should be added between the 2nd and 3rd bullets under “Assumptions.”	The subheading “Groundwater Pumping” was added before the third bullet under Assumptions in Section 3.15.2.9.
37138-400	3.15-36Table 3.15-11 and textPlease 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.	Table 3.15-11 (now Table 3.15-14) has been revised to include the recalculated acres of groundwater development areas in VRM classes. As shown in the revised table and Figure 3.15-2, no groundwater development acres are within VRM Class I areas.
37138-401	3.15-3642-4Revise to “Unless sited and screened from view, activities may 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.	The sentence evaluating conformance with VRM objectives in Section 3.15.2.10 has been revised as indicated in comment L-37138-401-325.
37138-402	3.15-3831-3Correct 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.”	Reviewed section 3.5 – Vegetation; verified correct section and figure numbers, and revised vegetation section references.
37138-403	3.15-38 7 7 Correct acreages consistent with general comments..	Reviewed groundwater development acreages for Alternatives A through F; all acreages were correct. No changes to text.
37138-404	3.15-4087Correct acreages consistent with general comments.	Reviewed groundwater development acreages for Alternatives A through F; all acreages were correct. No changes to text.
37138-405	3.15-4111Change 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.	The referred to text in Section 3.15.2.13 in the FEIS has been revised similar to comment L-37138-405-325.
37138-406	3.15-4232Change 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.”	The referred to text in Section 3.15.2.15 in the FEIS has been revised similar to comment L-37138-406-325.
37138-407	3.15-43Table 3.15-12Include reference for acreage cited for Alt B and D Groundwater Development in VRM Class II areas. Correct disturbance totals consistent with general comments.	Reviewed groundwater development acreages for Alternatives A through F; all acreages were correct. No changes to text.
37138-408	3.15-4471Full build out is currently scheduled for 2050 not 2022.	Full build-out has been revised to 2022 in Section 3.15.3.

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ID	Comment	Response
37138-409	3.15-443rd bulletThe 3rd bullet under “issues” for “right-of-way and facilities maintenance” should be a subheading for “Groundwater Pumping Effects,” not a bullet point.	Bullet point has been removed, and text revised to subheading “Groundwater Pumping Effects” in Section 3.15.3.
37138-410	3.15-44 10th bullet 2 Change “FFAs” to “RFFAs.”	FFAs has been revised to RFFAs in section 3.15.3.
37138-411	3.15-4566Update the status of the Spring Valley Wind Project litigation. Preliminary injunction was denied and construction may have begun.	Status of wind project verified that construction has begun, and is scheduled to be completed in the summer of 2012. Section 3.15.3.2 has been revised with the updated information from Pattern Energy.
37138-412	3.15-4854-5States “...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.	The cumulative section has been revised to include Delamar Valley in the bulleted list describing potential conflicts with VRM Classes.
37138-413	F3.15-8Table F3.15-2Although 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).	Table F3.15-2 has been revised to indicate there is no photo-simulation for KOP 40.
37138-414	F3.15KOP 15The road should not be constructed as shown going through the wash with a bridge. Access can be provided using existing roadways.	The location of the access road has been verified; and the simulation for KOP 15 has been revised to remove the new access road and show the proposed 69 kV transmission line; and graded and revegetated pipeline ROW.
37138-415	F3.15KOP 35Lake Valley Pumping station should be depicted on the west side of US 93 as opposed to the east side as shown.	The North Lake Valley Pumping Station is not the same facility as the Lake Valley Pumping Station. The North Lake Valley Pumping Station is part of the Option 2 facilities, and is described in Chapter 2 as a 60-acre site located along Highway 93, 3 miles south of the intersection with Atlanta Road. Simulation for KOP 35 is correct and consistent with the POD and Chapter 2 description of Option 2. No change to F3.15.
37138-416	F3.15KOP 41Beginning 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.	The caption for the KOP 41 photo-simulation has been revised to reference Alignment Options 1 through 4.
37138-417	F3.15F3.15-22Beginning 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.	Change made for FEIS.
37138-418	3.16-145Suggest rephrasing sentence to state what are written in Section 106 regulations. Remove the term “cultural resources” and insert “historic properties.”	Text was modified as requested.
37138-419	3.16-1Quick ReferenceAdd RFFA to the Quick Reference box.	Text added per the comment.
37138-420	3.16-213451Regulations 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.	Text was modified as requested.
37138-421	3.16-252 - 3Rather 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...”	Text was modified as requested.
37138-422	3.16-252Please 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...”	Text was modified as requested.
37138-423	3.16-384Suggest 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.	Term added to glossary.
37138-424	3.16-32A 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”	Text was modified as requested.
37138-425	3.16-634The project alignment does not go through the Osceola Mining District; however, the project does go through the Cooper Mining District, west of Osceola.	Text was modified to address the comment.
37138-426	3.16-8212Delete “cultural resources” after 657 and insert “sites and isolates” per the language in the Class I. Delete resources after 657 and insert “sites and isolates” per the language in the Class I	No change; existing text distinguishes between sites and isolates in the total of "cultural resources."
37138-427	3.16-8312Delete “cultural resources” after 657 and insert “sites and isolates” per the language in the Class I. Suggest rephrase sentence, “Twenty-two of the sites are historic properties eligible for listing on the NRHP.”	1) No change; text distinguishes between sites and isolates in the total number of cultural resources. 2) Text changed per comment.

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ID	Comment	Response
37138-428	3.16-848Suggest rephrasing to “establish the locations and importance of historic properties of cultural and religious importance, e.g., TCPs.	Text was modified as requested.
37138-429	3.16-8415Clarify whether the “documentary research” means a Class I files search. 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.	No change; text was provided by the BLM State Office.
37138-430	3.16-949th bullet1-2The definition of historic property, under the heading methodology for analysis, should include a citation. 36 C.F.R. § 800.16(l)(1). And, the quotation should end after NRHP, because the clause “maintained by the NPS” is not in the regulation. 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.”	Text was modified as requested.
37138-431	3.16-9;3.16-15;3.16-194;4;51Suggest 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.]	Text was modified as requested.
37138-432	3.16-912 (2nd bullet)1 - 2Under Methodology of Analysis: 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.	Text was modified as requested.
37138-433	3.16-1053“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 . . .”	Text was modified as requested.
37138-434	3.16-1093Replace “5) address inadvertent discoveries” with “address unanticipated discoveries.” In the PA, inadvertent discoveries are not discussed in the details given to unanticipated discoveries.	Text was modified as requested.
37138-435	3.16-10101Suggest rephrasing interested tribes to “interested federally recognized tribes.” Under the rules of Section 106 the BLM does not consult with non-federally recognized tribes.	Text was modified as requested.
37138-436	3.16-114 (3rd bullet)1The sentence would be more accurate if “site’s setting” was rephrased to “. . .or eliminate visual effects on a historic property’s setting.”	Text was modified as requested.
37138-437	3.16-12;3.16-13;3 and 9;2For 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.”	Text was modified as requested.
37138-438	3.16-13Table 3.16-11st – 4th rowsSee 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.	Text was modified as requested.
37138-439	3.16-1351Under 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.”	Text was modified as requested.
37138-440	3.16-1462Suggest “Site-specific data on the number and types of historic properties or cultural resources that could be affected by groundwater pumping is unavailable.”	Text was modified as requested.
37138-441	3.16-14102 - 3Under 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 . . .”	Text was modified as requested.
37138-442	3.16-15;3.16-166, 105; 9The 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)”	Text was modified as requested.
37138-443	3.16-1917 (3rd bullet1 - 3Rephrase 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.	Text was modified as requested.
37138-444	3.17-1Quick ReferenceAdd RFFA to Quick Reference Box	Text was modified as requested.

Comments and Responses - Local Government

ID	Comment	Response
37138-445	3.17-38Last51-2Change “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).”	Text was modified as requested.
37138-446	3.17-3110 - 12Since 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).”	Text was modified as requested.
37138-447	3.17-511 -2Suggest 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.	Text was modified as requested.
37138-448	3.17-76HeadingSuggest renaming the heading Government-to-Government Tribal Consultation.	Text was modified as requested.
37138-449	3.17-8Table 3.17-1On 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”).	Text was modified as requested.
37138-450	3.17-811-2The 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.	Text was modified as requested.
37138-451	3.17-11Last1-2The 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.	Text has been added to reflect this comment.
37138-452	3.17-12LastThe 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).”	Text was modified as requested.
37138-453	3.17-1228Because 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”.	Text was modified as requested.
37138-454	3.17-1251 - 4This 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.”	No change. Text in the paragraph was provided by the BLM.
37138-455	3.17-1312Suggest “human remains” be replaced with “Native American remains and funerary objects,” as non-native burials are handled under different rules and procedures.	Text was modified as requested.
37138-456	3.17-1321Under 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.	Text was modified as requested.
37138-457	3.17-1322Under 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.	Text was modified as requested.
37138-458	3.17-14; 3.17.19; 3.17-20; 3.17-21; 3.17-22;5;3;3, 9;6;2,81The 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)	Text was modified as requested.
37138-459	3.17-16In table 3.17-3, in the first alternative, remove the track changes indicator on the colon following “Option Description:”	Text has been revised.
37138-460	3.17-1871 - 3Suggest 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 . . . “	Text was modified as requested.
37138-461	3.17.1887 (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...”	Text was modified as requested.

Comments and Responses - Local Government

ID	Comment	Response
37138-462	3.17-1873.17.2.9 – 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.	No change. The current text describes the types of impacts that could occur. Previous text (Section 3.17.2.2) already describes in detail the procedures for unanticipated discoveries.
37138-463	3.17.1951To 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...”	Text was modified as requested.
37138-464	3.17-19;3.17-20;3.17-21;3.17-225; 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.	Text was modified as requested.
37138-465	3.17-2491 - 2Suggest 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.”	Text was modified as requested.
37138-466	3.17-24111 - 2Suggest 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...”	Text was modified as requested.
37138-467	3.17-26EndAdd the no action alternative.	Your comment has been reviewed for inclusion in the FEIS.
37138-468	3.18.1FN 1The 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.	Thank you for your comment. The footnote has been revised.
37138-469	3.18-315The 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.	A citation has been added.
37138-470	3.18-452Please verify the Clark County population figure for 1970 and cite source.	The 1970 Clark County population was a July 1 estimate prepared by the Nevada State Demographer and published in several locations including the 1999 Nevada State Water Plan , http://water.nv.gov/programs/planning/stateplan/documents/NV_State_Water_Plan-complete.pdf .
37138-471	3.18-512This figure should be 702,291. Source: US Census Bureau: http://quickfacts.census.gov/qfd/states/32/32003.html	The data entry in the table has been verified as correct, using the source cited in the comment.
37138-472	3.18-517Both 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.	Thank you for your comment. The statement regarding migration has been revised in the FEIS.
37138-473	3.18-527Recommending using the year 2010 figure of 891,000 from the same source. (http://www.clarkcountynv.gov/depts/comprehensive_planning/demographics/Pages/default.aspx).	Thank you for your suggestion. The data presented in the DEIS reflects data available from Clark County as the document was being finalized. The text was not changed, because the differences between the 2008 and 2010 are minor and wouldn't alter the underlying assessment.
37138-474	3.18-531The recession began in late 2007 and not 2008. Source: http://www.nber.org/cycles/dec2008.html	Thank you for providing the clarification. The text has been revised.
37138-475	3.18-743-4The 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.	Thank you for your suggestion. The data presented in the DEIS reflects data available from the U.S. Census Bureau as the document was being finalized. The text was not changed, because the differences between the 2009 and 2010 are minor, wouldn't alter the underlying assessment, and would necessitate tracking through to make other changes in the document.
37138-476	3.18-9Table 3.18-6Update UNLV-CBER population projections in table and accompanying text with 2011 report.	Thank you for expressing your concerns related to the Draft EIS. Your suggestions have been carefully considered by the BLM. The table and discussion cited in the comment has been revised and moved to Section 3.18.2.17 No Action.
37138-477	3.18-921-2The 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.	The text cited on Pg. 3.18-8 has been revised, noting the adjustment and the effect of those adjustments.
37138-478	3.18-924Recommending adding the word "approximately" before 10.	Thank you for your comment. The text has been revised.
37138-479	3.18-10Figure 3.18-4The figures on the vertical axis are truncated, please fix.	Thank you for pointing out the problem. The figure has been revised.
37138-480	3.18-1012The 13.5 figure does not match with 13.7 shown on Table 3.18-8	The number "13.5" does not appear on the page cited in the comment, or on the immediately preceding or following pages..

Comments and Responses - Local Government

ID	Comment	Response
37138-481	3.18-337Consider 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.	Thank you for the suggestion. The discussion in the cited paragraph and Table 3.18-19 have been updated. However, updated poverty data from the 2010 Census are not yet available.
37138-482	3.18-4131The 390 figure is incorrect. According to Table 3.18-23, the correct figure should be 329.	Thank you for pointing out the problem. The figure has been revised.
37138-483	3.18-4862There 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.	Thank you for noting the discrepancy. The text has been revised, consistent with the updated development assumptions.
37138-484	3.18-5344There 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.	Thank you for noting the discrepancy. The text has been revised, consistent with the updated development assumptions.
37138-485	3.18-7169-11The 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.	Thank you for your comment. The referenced statement does not infer that the process influences SNWA's 2009 Water Resource Plan. Rather it demonstrates a consistency between various planning processes with respect to a outlook for future development. A statement to that effect has been added.
37138-486	3.18-97Table 3.18-49Row 1, col.2 row1, col.3 row1, col.4 row1, col.5Change for proposed action "144 to 176" wells to "144 to 174" per table 2.6-2 page 2-46Change for Alt. A "108 to 131" wells to "97 to 117" per table 2.6-2 page 2-46Change for Alt. B "116" wells to "136" per table 2.6-2 page 2-46Change for Alt. C "108 to 131" wells to "97 to 117" per table 2.6-2 page 2-46 There appears to be some organizational confusion in this section in that construction is addressed only underRight-of-Ways and Ancillary Facilities, and operation is addressed under Groundwater Development Areas. Construction and operation should be addressed under both sections.	Thank you for noting the discrepancies regarding the number of production wells. The cell entries have been revised. Short-term construction are addressed in both sections, with the estimates of temporary employment and population effects included in the summary table for each alternative, e.g., Table 3.18-36. Operations employment for the pipeline and wellfields are addressed under the groundwater development area because of the relatively few jobs involved, the lack of distinction between pipeline and wellfield jobs, and lack of information regarding where these jobs would be based.
37138-487	3.19-183There is no Table 3.19-1 in this appendix. Suggest that this reference be just "Appendix F3.19".	Agree with comment. Text was modified as requested.
37138-488	3.19-27EndNeed to include text regarding the operations of the ancillary facilities in this section.	Agree with comment. Text was modified as requested.
37138-489	3.19-516-7Remove last sentence. The standards referred to are not listed in Appendix F3.19 and there is no Table F3.19-2.	Agree with comment. Text was modified as requested.
37138-490	3.19-531-5Move this text to Section 3.19.1.2 following the last paragraph on pg 3.19-2 under "Hazardous Materials andWaste" 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.	Agree with comment. Text was modified as requested.
37138-491	3.19-541-3Copy this paragraph and insert on pg 3.19-2 following the text moved in the comment above.	Agree with comment. Text was modified as requested.
37138-492	3.19-510-11Copy 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.	Agree with comment. Text was modified as requested.
37138-493	3.19-621Change "gathering" pipelines to "collector" pipelines to be consistent with Chapter 2	Agree with comment. Text was modified as requested.
37138-494	3.19-711Add "and Ancillary Facilities" to the title for 3.19.2.1	Agree with comment. Text was modified as requested.
37138-495	3.19-8, 3.19-11, 3.19-137,11,entire pageThe discussion on potential impacts from pipeline rupture should be discussed under Rights-of-Way, notGroundwater Development.	Agree with comment. Text was modified as requested.
37138-496	3.19-127Operation of water treatment facilities should be discussed under Rights-of-Way, not GroundwaterDevelopment.	Agree with comment. Text was modified as requested.
37138-497	3.19-1423rd Bul.Change "main and lateral" pipelines to "collector" pipelines.	Agree with comment. Text was modified as requested.
37138-498	This section is missing some of the measures identified in the resource chapters, and some descriptions of themeasures are inconsistent.	Revised for consistency.
37138-499	3.20-5GW-VR-4(Site Groundwater Development Structures and Facilities in BLM VRM Class III or IV Areas) This measure isduplicative and should be omitted from this page. It is correctly listed on page 3.20-13.	Text was modified as requested.
37138-500	3.20-7GW-AQ-3Under 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.	Corrected.

Comments and Responses - Local Government

ID	Comment	Response
37138-501	4-421Under Native American Traditional Values. To be consistent with the Native American Traditional ValuesChapter, suggest rephrasing to “Construction disturbance to sites associated with Native Indian traditional values would be irretrievable . . .”	Text was modified as requested.
37138-502	3.5 Veg. Resource pg 411Change spelling of “Naumberg” to “Naumburg”.	"Naumburg" has been spelled correctly throughout the document.
37138-503	E“Appendix A” is listed as a subheading on each page.	Your comment has been reviewed for inclusion in the FEIS.
37138-504	F3.5-1121Change text from “Water hemlock (Cicuta maculate)” to “Water hemlock (Cicuta maculata)”.	The FEIS has been modified as requested.
37138-505	F3.5-14Table F3.5-2The 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.	The FEIS has been modified as requested and the reference has been added.
37138-506	F3.5-15, Pg116-7The reference to the BLM National List of Invasive Weed Species of Concern should be added to the Reference section of Appendix F3.5.	Reference added.
37138-507	F3.5-15, Pg112The 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”.	The referenced link appears in the BUREAU OF LAND MANAGEMENT RISK ASSESSMENT FOR NOXIOUS & INVASIVE WEEDS Clark, Lincoln, and White Pine Counties Groundwater Development Project Right of Way for Main Pipeline document. Therefore, it cannot be edited as it is part of a published document.
37138-508	F3.5-15, Pg236-8States “...in the SNWA Plan of Development (POD), and in Section 2.3, Facility Components and DesignCommon 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 DEISeither but since the risk assessment was based on the data in this table, the table should remain as is.	Change made as requested.
37138-509	F3.5-15, Pg525States “...include the two power line routes through the Schell Range (see Map 1);...” However the two powerline 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).	The figure appears in the BUREAU OF LAND MANAGEMENT RISK ASSESSMENT FOR NOXIOUS & INVASIVE WEEDS Clark, Lincoln, and White Pine Counties Groundwater Development Project Right of Way for Main Pipeline document. Therefore, it cannot be edited as it is part of a published document.
37138-510	F3.5-15, Pg814-5The statement “Also for green stripping to prevent weed spread and fire.” is not a complete sentence. Suggestrevising.	Revised as suggested.
37138-511	F3.5-15, Pgs10-15Maps 1 though 6The 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.	The maps appear in the BUREAU OF LAND MANAGEMENT RISK ASSESSMENT FOR NOXIOUS & INVASIVE WEEDS Clark, Lincoln, and White Pine Counties Groundwater Development Project Right of Way for Main Pipeline document. Therefore, they cannot be edited as they are part of a published document.
37138-512	F3.5-9Please add and provide descriptions for the noxious weed poison hemlock (Conium maculatum), invasive weedtree of heaven (Ailanthus altissima), invasive weed bur buttercup (Ceratocephala testiculata), invasive weed tumble mustard (Sysimbrium altissimum), invasive weed horehound (Marrubium vulgare), and invasive weed Russian thistle (Salsola kali) 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.	Thank you for your comment. This description list only includes information on invasive species that are widely distributed within the ROW area. Please see Appendix F3.5 for a listing of Weed Species Known to Occur within the Study Area including poison hemlock.
37138-513	F3.5-66The following cites from the text are not listed in the reference list of this appendix and need to be added: BLM2005; Lovich and Bainbridge 1999; IUCN-WCN 2007; and Parker 2007.	The text/table and corresponding references have been removed.
37138-514	F3.6-4Table F3.6-1Desert Kangaroo o rat Not in Delamar Valley	Updated desert kangaroo rat data was requested from NDOW and NNHP and appropriate edits to reflect the updated data have been made in the FEIS.
37138-515	F3.6-4Table F3.6-1Desert pocket mouse Not in Pahrnagat, Delamar, or Dry Lake Valley	Updated desert pocket mouse data was requested from NDOW and NNHP and appropriate edits to reflect the updated data have been made in the FEIS.
37138-516	F3.6-4Table F3.6-1Desert Valley kangaroo mouse Not in Delamar, Pahroc, or White River Valley	Dark kangaroo mouse, rather than the subspecies Desert Valley Kangaroo mouse is now a BLM sensitive species. Updated dark kangaroo mouse data was requested from NDOW and NNHP and appropriate edits to reflect the updated data have been made in the FEIS.
37138-517	F3.6-5Table F3.6-1Pale kangaroo mouseNot in Pahrnagat Valley	Updated pale kangaroo mouse data was requested from NDOW and NNHP and appropriate edits to reflect the updated data have been made in the FEIS.
37138-518	F3.6-7, F3.6-21Table F3.6-1,Table F3.6-2Red-headed woodpec kerThis is an Eastern U.S. species that does not occur in Nevada or Utah. It not listed in the Nevada WildlifeAction Plan or the Utah Comprehensive Wildlife Conservation Strategy. It should be removed from the document.	The species has been removed from the FEIS.

Comments and Responses - Local Government

ID	Comment	Response
37138-519	F3.6-43Table F3.6-4Dark kangaroo mouseDelamar acreage calculations should be removed as the species is not known to occur in Delamar Valley.	Updated dark kangaroo mouse data was requested from NDOW and NNHP and appropriate edits to reflect the updated data have been made in the FEIS.
37138-520	F3.6-45Table F-3.6-5Dark kangaroo mouseDelamar acreage calculations should be removed as the species is not known to occur in Delamar Valley.	Updated dark kangaroo mouse data was requested from NDOW and NNHP and appropriate edits to reflect the updated data have been made in the FEIS.
37138-521	F3.6-47Table F-3.6-6Dark kangaroo mouseDelamar acreage calculations should be removed as the species is not known to occur in Delamar Valley.	Updated dark kangaroo mouse data was requested from NDOW and NNHP and any relevant edits were made in the FEIS.
37138-522	F3.6-49Table F-3.6-7Dark kangaroo mouseDelamar acreage calculations should be removed as the species is not known to occur in Delamar Valley.	Updated dark kangaroo mouse data was requested from NDOW and NNHP and appropriate edits to reflect the updated data have been made in the FEIS.
37138-523	F3.6-51Table F-3.6-8Dark kangaroo mouseDelamar acreage calculations should be removed as the species is not known to occur in Delamar Valley.	Updated dark kangaroo mouse data was requested from NDOW and NNHP and appropriate edits to reflect the updated data have been made in the FEIS.
37138-524	F3.6- 91AppendixFigure F3.6-2In the legend, please add “desert tortoise habitat” after “USGS Modeled potential” (assuming this is correct). If not, identify what this layer refers to.	Edit made as requested.
37138-525	F3.6-93AppendixFigure F3.6-3The pronghorn habitat in Utah is year-long use area, not year-long crucial habitat.	Edit made as requested.
37138-526	F3.6-110Figure 3.6-12Gila Monster CISAThe CISA should extend as far north as Hiko in Pahrnagat Valley as NDOW has a Hiko occurrence record.	This edit has been made in the FEIS.
37138-527	F3.6-110Figure 3.6-12Gila Monster CISAThe CISA should extend as far north as Hiko in Pahrnagat Valley as NDOW has a Hiko occurrence record.	This edit has been made in the FEIS.
37138-528	F3.7-10Table 3.7-4Big SpringsAdd Utah sucker to Big Springs fish listed	Revision made as suggested.
37138-529	F3.7-20AppendixTable F3.7-6Please remove Toquerville pyrg from table – it is not a special status species.	Revision made as suggested.
37138-530	F3.16Glossary of termsThe page numbering is incorrect for the Appendix A of the Programmatic Agreement. The pages should be numbered “A-” rather than “B-.”	Text has been revised.
37138-531	F3.16Add the definition of “consulting party”.	Change made as requested.
37138-532	F3.163In 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.	Your comment has been reviewed for inclusion in the FEIS.

White Pine County

35954-1	White Pine County requests that these comments, and all attachments be included as part of the administrative record. White Pine County further requests that all documents, articles, and reports cited in these comments and attached expert testimony be included as part of the administrative record of this action. See County of Suffolk v. Secretary of Interior, 562 F.2d 1368, 1384.n.9 (2d Cir. 1977) (addressing scope of NEPA administrative record), cert. denied, 437 U.S. 1064 (1978); Silva v. Lvn. 482 F.2d 1282 (1st Cir. 1973) (same): see also Thompson v. United States Dep’t of Labor. 885 F.2d 551, 555 (9th Cir. 1989) (administrative record consists of all documents and materials directly or indirectly considered by agency and includes evidence contrary to agency’s position). White Pine County has closely reviewed the comments submitted by the Great Basin Water Network and by Dr. Jim Deacon and hereby incorporates those comments by reference.	All of the materials noted in your comment have been included in the Project Administrative Record.
35954-2	Among its most glaring deficiencies, the DEIS is based on a patently deficient description of the Project and the physical conditions and environmental resources in its vicinity.	Thank you for expressing your concerns. While statements of opinion do not require specific responses or text revisions under the NEPA regulations, they will be considered by the BLM and documented in the administrative record associated with this EIS.
35954-3	a grossly inadequate assessment of the purpose and need for the Project	Please see revised text in Chapter 1. Please also see standard resource response GEN-9.
35954-4	and a failure to examine the Project’s feasibility and likely adverse environmental impacts.	Standard Resource Response SocEcon-1 provides additional information regarding project feasibility.
35954-5	In all these regards, the DEIS fails to comply with NEPA, and we believe that the only appropriate action for the BLM to take is to correct its deficient analysis and issue a new DEIS for public comment.	Thank you for expressing your concerns. While statements of opinion do not require specific responses or text revisions under the NEPA regulations, they will be considered by the BLM and documented in the administrative record associated with this EIS.

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ID	Comment	Response
35954-6	At minimum, the BLM must consider all of the reasonably foreseeable impacts of the proposed project. including impacts of the proposed pumping at true production well sites as direct impacts of connected projects.	Additional assessment of the impacts associated with specific well locations and pumping defined quantities of water from specific basins will be analyzed in subsequent NEPA. A conceptual analysis of distributed pumping and other alternatives is contained in the FEIS. Please review standard resource responses WR-1, Gen-1 and Gen-2.
35954-7	This level of analysis would require the BLM to prepare a groundwater model based on sufficient data to enable it to predict impacts more precisely. Without such a model, a grant of a ROW would be premature because the analysis of impacts in the DEIS is inadequate.	Please refer to standard resource response WR-1 for information regarding this comment.
35954-8	The BLM misuses tiering and wrongly segments the analysis and disclosure for the project, thus undermining full and fair public review of the impacts of the project in violation of NEPA.	Please review standard resource response Gen1 and Gen-2 for information regarding this comment.
35954-9	BLM must disclose and consider all of the connected, cumulative and similar projects· significant impacts together.	Section 2.9 provides a comprehensive list of projects used for cumulative impact assessment. The cumulative analysis for each resource also addresses the contribution elements described by the commenter.
35954-10	Cumulative impacts analysis in multiple EISs is not sufficient where projects are so closely connected as they are here and will result in significant degradation of pub lie lands that now serve multiple uses including providing high-quality occupied habitat for a threatened species.	The alternatives for the project include estimates of the effects of future groundwater development. The cumulative analysis will be updated at each NEPA tier to provide analysis of cumulative effects. Each NEPA tier will be based on basin-specific groundwater and modeling data that will improve the analysis of environmental effects.
35954-11	The DEIS cites and relies on SNWA's population projections to show the need for the Project. DEIS § 1.6.1. Without an analysis of the reliability of these projections, there is no way for the public to know whether or not they are reliable and provide a sound basis for decision.	The Socioeconomic Section 3.18 provides a variety of information sources for population and other projections. The text on population in Section 1.6.1 is intended only as a portion of the description of SNWA's authorities and mandates in the State of Nevada.
35954-12	It is apparent that the DEIS failed to consider alternative population projections because "[t]he BLM has no administrative or regulatory authority over the SNWA's demand projections, the timing or quantity of water required, potential alternative sources of water, or priorities established with respect to procuring additional sources." DEIS 1-12. However, this lack of regulatory authority does not relieve the BLM of the duty to evaluate SNWA's stated population projections for reliability.	Thank you for your comment. Please see SocEcon-2 regarding the role of projected long-term population and economic growth in Clark County in regards to BLM's NEPA assessment of the proposed GWP project.
35954-13	Further, throughout the brief assessment of future water demand, the BLM passively accepts projections of continued population growth without any examination of the sustainability of this trend or the obvious opportunities to moderate this trend through regular periodic planning summits to set population, and other goals. DEIS 1-12, 13. See Sonoran Institute. Growth and Sustainability in the Las Vegas Valley (20 10), attached here to as Exhibit A. The recent economic downturn alone calls SNWA's projections into question.	Thank you for your comment. Please see SocEcon-2 regarding the role of projected long-term population and economic growth in Clark County in regards to BLM's NEPA assessment of the proposed GWP project.
35954-14	The DEIS also fails to acknowledge that population increases make it just as clear that there is an even greater need for aggressive implementation of conservation in the desert region that makes up SNWA's service area.	This information will be provided to SNWA for their use in future water resource planning. See also Standard Resource Response Gen-3.
35954-15	Throughout the brief discussion of water demand and conservation in section 1.6.1, the DEIS betrays a bias in favor of obtaining additional water supply rather than aggressively pursuing additional available opportunities for increased conservation. See DEIS 1-12, 13. The assessment of future demand is limited to SNWA's per capita water use goal and contains no discussion of the conservation measures currently in place or those that are readily available to SNWA but have not been implemented.	The draft and final EIS included the SNWA Water Plan (2009) which discusses their current actions and future plans regarding the topics brought forth in your comment. The BLM has considered your comment and the information in the SNWA Water Plan in its choice of the agency preferred alternative presented in this final EIS. The information in this comment will be provided to SNWA for their use in future water resource planning. Refer also to Standard Resource Responses GEN-3 and SocEcon-2 for additional information.
35954-16	Many of these efficiency improvements can be implemented at a lower cost and with fewer social and environmental impacts than developing new water supplies, including proposed efforts to tap groundwater systems in eastern Nevada via new pipeline infrastructure.	The draft and final EIS included the SNWA Water Plan (2009) which discusses their current actions and future plans regarding the topics brought forth in your comment. The BLM has considered your comment and the information in the SNWA Water Plan in its choice of the agency preferred alternative presented in this final EIS. The information in this comment will be provided to SNWA for their use in future water resource planning. Refer also to Standard Resource Responses GEN-3 and SocEcon-2 for additional information. Section 2.7 of the FEIS provides the rationale and analysis for alternatives not considered in the NEPA process.
35954-17	The purpose and need discussion also fails to adequately describe or address the opportunities to meet anticipated water demand through the construction of more cost effective desalination facilities.	See revised text in Chapter 1. Please refer to standard resource response Gen-3 for information on this topic.
35954-18	The conservation achievements of Southern Nevada water users, along with responsible management of Colorado River resources, desalination opportunities, and the end of the rapid population and homebuilding booms of the early 2000s make the Groundwater Development Program unnecessary.	Based on your comment, text has been added to Chapter 1. Appendix A also contains information concerning this comment. Plewase refer to standard resource response Gen-3 for information on this topic.
35954-19	As detailed in the report of Dr. Tom Myers (attached hereto as Exhibit 1), the DEIS is grossly deficient in many regards concerning the hydrogeology of Spring, Snake, Cave, Dry Lake, and Delamar Valleys and of the hydrologic impacts of the proposed project. That report and the criticisms contained therein are herby incorporated by reference in these comments.	Your comments on the Draft EIS have been considered. The comments contained in Dr. Myers report have been included in this comment analysis.

Comments and Responses - Local Government

ID	Comment	Response
35954-20	<p>2. The DEIS Fails to Include an Adequate Description of the Proposed Project Facilities and Pumping Regimes As a result of the BLM's decision to tier the analysis of site specific impacts, the DEIS's conceptual level description of the project lacks sufficient information for the public to gain an understanding of exactly what the project entails, how it will be managed, and what impacts would be likely to which resources. Without more detailed information and data gathering at this stage of the permitting process, neither the public nor the BLM has sufficient information to determine what level of impact the project will have on the resources described in the DEIS. For this reason, the DEIS is not only deficient, but is premature.</p>	<p>Please see standard resource response Gen-1 and Gen-2</p>
35954-21	<p>3. The DEIS Fails to Include Cost Estimates To allow the public to make a fair assessment of the feasibility of the project, the DEIS must include an independent accounting of the costs of the project to date, the costs of compliance with NEPA and other federal and state regulations to allow the project to go forward. The costs of construction and operation of the project, the financing costs associated with the project, future monitoring and mitigation costs, and the estimated cost per rate payer to support the project. It must also include documentation of SNWA's ability to finance the Project.</p>	<p>Thank you for your comment. Please see SocEcon-1, SocEcon-3 and SocEcon-6 regarding the inclusion of project cost information in the FEIS.</p>
35954-22	<p>SNWA's own most recent estimate put the cost at more than \$15 billion exclusive of operating and monitoring and mitigation costs, which likely will be enormous. Southern Nevada Water Authority. Summary of Cost Estimate for Clark, Lincoln, and White Pine Counties Groundwater Development Project (June 2011) (attached hereto as Exhibit J); Hobbs. Ong & Associates, et. al. Ability to Finance Report to the Southern Nevada Water Authority (June 27, 2011) (Attached hereto as Exhibit K). Not only is the estimate incomplete given its failure to include operating and monitoring and mitigation costs, the estimate was prepared based on a conceptual plan of development, as opposed to a more concrete set of specifications, and thus, does not contain the specificity necessary to determine whether it is a reasonable estimate of the project's costs. White Pine County has attached a critique of SNWA's financing report by Sharlene Leurig of Ceres that was submitted by White Pine County to the Nevada State Engineer in the bearing on SNWA's water rights applications in Spring, Cave, Dry Lake, and Delamar Valleys. The report is attached hereto as Exhibit L: see also, Ceres. The Ripple Effect: Water Risk in the Municipal Bond Market (2010). attached hereto as Exhibit M.</p>	<p>Thank you for the comments regarding SNWA's estimated project costs and financing. Information on project costs are included in the FEIS. See Standard Resource Responses SocEcon-1, SocEcon-3 and SocEcon-6.</p>
35954-23	<p>The BLM's DEIS fails to consider a reasonable range of alternatives to the Project. Under NEPA, federal agencies must "study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources." 42 U.S.C. § 4332(2)(E); 40 C.F.R. § 1508.9(b). The discussion of reasonable alternatives section is the "heart" of any environmental analysis under NEPA. 40 C.F.R. § 1502.14. The DEIS limited its consideration of alternatives to alternate pumping scenarios and failed to explore different levels of pumping, alternative sources of water, piping from different sources, desalination, different combinations of pumping among valley fill and carbonate wells, various mitigation measures, and a water conservation alternative. See Section C, supra, discussions re Conservation and Desalination and accompanying Exhibits. This narrow focus does not constitute a reasonable range of alternatives. Thus, the DEIS is inadequate for the purpose of providing a basis for informed decision making.</p>	<p>Please see standard resource responses Gen-3 and Gen-5.</p>
35954-24	<p>The BLM's DEIS should have established the proper baseline upon which to base its impacts analyses and conduct the requisite "trends analysis," i.e., an assessment of the environmental impacts of all activities affecting the various resources over an extended period of time. Only by properly defining the baseline and engaging in a trends analysis can the BLM get a sense of the changes that have occurred and will occur over time. At a minimum, baseline data on water rights and claims (unrecorded vested, recorded vested, permitted, certificated, and applications), historic and current water uses, locations of all springs and seeps (on both private and public land), locations of all wet meadows and wetlands, locations of water-dependant flora and fauna, aquifer recharge rates, and information on the connectivity between the alluvial groundwater and carbonate system throughout the affected region is needed in order to properly analyze the impacts (direct, indirect, and cumulative) of the proposed action, Because the DEIS fails to adequately establish a baseline, it is inadequate under NEPA.</p>	<p>Baseline water resource information is summarized in Section 3.3 of the EIS and additional detailed information is provided in the series of baseline reports that are incorporated by reference in the document.</p>
35954-25	<p>Under NEPA, an agency must honestly address the various uncertainties surrounding the scientific evidence upon which it relies in its environmental evaluations. The agency has a duty to respond to credible opposing points of view, and it may not ignore reputable scientific opinion. See, e.g., Seattle Audubon Soc'y v. Espy. 998 F.2d 699, 704 (9th Cir. 1993); Public Service Co. v. Andrus. 825 F. Supp. 1483, 1496-99 (D. Idaho 1993); see also Sierra Club v. Watkins, 808 F. Supp. 852,864-69 (D.D.C. 1991). An agency's NEPA analysis must expose scientific uncertainty regarding the risk of a proposed action and inform decision makers of the full range of responsible scientific opinion on the environmental effects of the proposed action. Friends of the Earth v. Hall. 693 F. Supp. 904,926.934 (W.D. Wash 1988). Also, federal agencies are responsible for overseeing and ensuring the accuracy of environmental impact statements produced by contractors. 40 C.F.R. § 1506.5(c).</p>	<p>BLM takes its role in preparing the EIS and ensuring the professional and scientific integrity of the information presented in the EIS seriously. As such, BLM has carefully reviewed the information presented and, to the extent feasible, documented the methodologies, including uncertainties, and sources relied upon for the conclusions reached in the EIS.</p>

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ID	Comment	Response
35954-26	The DEIS does not present and is not based upon the required high quality scientific data and analysis required by NEPA. In order to adequately analyze the direct, indirect, and cumulative impacts of the proposed action, the BLM will need to review and collect more scientific data. At a minimum, the BLM needs to complete sufficient pump tests (with monitoring) to detail the variability in hydraulic conductivity across the basins. In addition, the BLM needs to prepare a detailed groundwater model that includes all of the basins in the carbonate province and the overlying valley fill aquifers and contains sufficient precision to model effects to specific sites and resources within these basins. In order to properly account for the uncertainty in modeling, the BLM should also prepare a detailed and comprehensive monitoring and plan that includes triggers action and forcing mechanisms, and carefully review and consult all other available (or soon be available) studies on the aquifer system and the impacts of groundwater pumping on the area's natural resources.	Please see Gen-1 which discusses programmatic analysis and subsequent NEPA. The detail you request likely would be more appropriately addressed in subsequent NEPA. Please also see standard resource responses MM-1 and MM-2 which contains information concerning mitigation and monitoring of impacts.
35954-27	In light of the listed incomplete or unavailable information, especially that related to the conceptual model. this DEIS is premature and should be updated and resubmitted for full public review a tier the information described in this section is obtained.	This EIS has been completed following appropriate policy and guidance including the requirement for disclosure of incomplete information.
35954-28	The DEIS is missing critical information on springs, streams, seeps, and wetlands in the "large" regional study area which may be directly affected by pumping drawdowns. The proposed project could have massive impacts over a huge area of eastern Nevada and western Utah. However, the size of the area does not provide an acceptable excuse for the paucity of information in the DEIS on the affected environment, especially the desert's scarce water resources, and the impacts of the GWD project.	The EIS provides an adequate and substantial discussion and summary of available baseline data necessary to describe the potential effects to water and water dependant resources within the region of study. For example, see Section 3.3.1 Water Resources, Affected Environment for a comprehensive summary of the baseline conditions for surface and groundwater resource within the region of study.
35954-29	The DEIS provides no information on tracking of missing information would be collected, who would collect it, and how the public would have access to such information. The DEIS also fails to disclose the costs of collecting future information and the timeframe for collecting such information. In any event, without knowing the majority of water resources to be affected by the GWD project, it seems futile for anyone to collect information on dried up springs discovered in the future. How would collecting missing information affect BLM ROW decisions which have already been made or any future decisions?	Please see standard resource response MM-1 and MM-2.
35954-30	Other incomplete and unavailable information - visual resource information, soils, wildlife information, special status species, Great Basin National Park, caves, groundwater flow modeling/water resource information, and climate change- is critical for the public and the BLM to make informed comments and decisions on this DEIS. The EIS process should not proceed until this information is available to analysts and the public.	Comments from the National Park Service regarding Great Basin National Park have been included in this comment analysis. Please review updated chapter 3 for information regarding this comment.
35954-31	In addition to inadequate information regarding affected resources, the DEIS is lacking critical information about the project and its impacts to these resources. In particular. project descriptions for well sites have not been provided to the BLM by the applicant using "groundwater development areas" in the DEIS for impacts analysis purposes leaves out of the NEPA analysis large areas with SNWA water rights applications. If approved, these additional water resources would be transported through the SNW A pipeline on the BLM ROW.	Please see standard resource response Gen-1 and Gen-2.
35954-32	The DEIS inappropriately limits the drawdown impact areas to those which appear between the estimated 1 and 10 foot drawdown contours, even though major impacts could occur in draw down areas less than 10 feet BLM justifies eliminating the areas affected by 1-10 foot drawdowns because that is what the agency has done in the past. However, such a limitation is inappropriate given that areas affected by less than a 10 foot drawdown may cover hundreds of square miles, including springs, wetlands, sub-irrigated meadows, wells, and vegetation. Unanalyzed climate change impacts to the study area could also affect water-dependent resources. Likewise, limiting the timeframes of impacts analysis in the DEIS to only 200 years constitutes a failure to disclose all of the potential impacts of granting the ROW request for the proposed GWD project. It is an arbitrary decision, because BLM in Nevada commonly analyzes the effects of open-pit mines that will take more than 200 years to fill with groundwater.	See response WR-1 regarding the use of the model simulated 10-foot drawdown, and WR-2 regarding the future time frames, considered for the programmatic analysis of potential effects to water dependant resources. Uncertainties regarding future climate were discussed in Section 3.2 of the EIS.
35954-33	Finally, the DEIS does not disclose when equilibrium would be reached with various pumping amounts in the Proposed Action and alternatives or the relevance of this missing information. Does the BLM hydrological model show that significant pumping impacts continue to occur beyond 200 years until equilibrium is reached? If so, the DEIS fails to disclose the fact that pumping will cause a large amount additional damage to public lands and resources beyond the 200 year timeframe.	See response WR-2 regarding the future time frames considered for the programmatic analysis of potential effects to water dependant resources.
35954-34	On page 3-1, the DEIS states that Chapter 3 answers the question: "if impacts still occur at a higher than acceptable level of intensity after applying all avoidance and protection measures, what mitigation measures are recommended to approve additional resources?" However, the DEIS fails to disclose the "acceptable" levels of impacts. Deferring this critical determination to some future process not subject to NEPA prevents the public and the BLM from making informed comments and decisions on the DEIS. There may be substantial differences of opinion among decision makers, stakeholders, and the affected public about the definition of "acceptable" levels of impact. This critical missing information undermines the impacts analysis in the EIS.	The DEIS used relative magnitude (low, moderate, and high) in describing impacts before and after implementation of BMPs, applicant-committed measures, and additional mitigation. The text on page 3-1 states "if impacts are still considered to be at a higher level of intensity after applying all protection measures" and not "if impacts still occur at a higher than acceptable level of intensity after applying all avoidance and protection measures", as indicated in the comment. Please see standard resource responses MM-1 and MM-2.

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ID	Comment	Response
35954-35	The discussion of impacts to the environmental resources and values contained in Chapters 3.1 through 3.19 in the DEIS are deficient for multiple reasons thoroughly discussed in comments submitted by the Great Basin Water Network, and hereby incorporated by reference.	Comments from the National Park Service regarding Great Basin National Park have been included in this comment analysis. Please review updated chapter 3 for information regarding this comment.
35954-36	Additionally, the deficiencies related to water resources and hydrology (Chapter 3.3) are described in detail in the Technical Memorandum by Tom Myers dated October 5, 2011 and attached hereto as Exhibit L	This should not have been bracketed as a comment.
35954-37	Deficiencies related to impacts to vegetation resources (Chapter 3.5) are described in detail in the report submitted to the Nevada State Engineer by the Great Basin Water Network, White Pine County, and others authored by Dr. Duncan Patten and attached hereto as Exhibit N; see also Patten et al., Isolated Springs and Wetlands (2008), attached hereto as Exhibit O; Elmore Regional Patterns of Plant Response to Changes in Water, attached hereto as Exhibit P.	<div></div> Changes have been made in the FEIS text in section 3.5 (vegetation) to address the central concern that underlies this comment.
35954-38	Deficiencies in the discussion of terrestrial wildlife (Chapter 3.6) and aquatic biological resources (Chapter 3.7) are also described in detail in the DEIS comments submitted by Dr. Jim Deacon and attached hereto as Exhibit Q, and the reports submitted to the Nevada State Engineer by the Great Basin Water Network, White Pine County, and others authored by Dr. Jim Deacon and attached hereto as Exhibits R and S. See also Deacon, J. et al., Fueling Population Growth in Las Vegas: How Large-scale Groundwater Withdrawal Could Burn Regional Biodiversity, Vol 57, No.8 BioScience 688 (September 2007), attached hereto as Exhibit T.	Thank you for your comment regarding biological resources. Responses to Dr. Deacon's comments are provided separately.
35954-39	Deficiencies in the discussion of socioeconomics (Chapter 3.18) are described in detail in the Memo by Karen Rajala, attached hereto as Exhibit U, and in Snake Valley Socio-Economic Analysis, attached hereto as Exhibit V. Finally, additional information on the socioeconomics and socioeconomic potential of White Pine County is contained in Exhibits W through HH; see also Dr Maureen Kilkenny reports to the State Engineer by the Great Basin Water Network, White Pine County, and others in the hearing on SNWA's water rights applications in Spring, Cave, Dry Lake, and Delamar Valleys, attached hereto as Exhibits II and JJ	Changes have been made in the FEIS text in section 3.18 (socioeconomics and environmental justice) to address the central concern that underlies this comment.
35954-40	The likely long-term response of the groundwater system to the proposed extraction or native groundwater has been analyzed by Dr. John Bredehoeft See John D. Bredehoeft, Report on the Hydrogeology of Proposed Southern Nevada Water Authority Groundwater Development (2011), attached hereto as Exhibit KK. Dr. Bredehoeft concludes that once the groundwater system is perturbed the effects of the perturbation from pumping will ripple outward though the system slowly with great persistence. The drawdown from pumping will migrate slowly outward from the area of the pumping wells and will continue to decline at some distance from the wells for many years, even after pumping has stopped. Consequently, even subtle indications of adverse impacts might not be observed for several decades. As a result, once an adverse impact to the system is observed by the proposed monitoring system, it will be too late to reverse the impact by stopping the pumping.	This literature has been review and addressed in the FEIS as appropriate. Please refer to standard resource responses MM-1 and MM-2 for information on how new information will be iused to adjust or revised the land use authorizations for this project.
35954-41	Close monitoring of water levels and quality in the groundwater system may provide some early warning that the project is creating adverse environmental impacts even though these impacts may be impossible to stop. However, early warning signs of adverse impacts will be very subtle and small drawdowns due to the Project could easily be confused with impacts of nearby pumping or unusual climatic events. Because of the potential for long lasting effects, the Project would have to be halted very early on in order to prevent the significant adverse impacts discussed above. Given the enormous investment of funds necessary before project operations even begin, it is implausible to expect that the Project would .be shut down early in its life where indications of impacts are subtle. See Bredehoeft Report, Exhibit KK; Bredehoeft, J. & Durbin, T., Ground Water Development-The Time to Full Capture Problem, Groundwater, v. 47, pp. 506-514 (2009), attached hereto as Exhibit LL; Bredehoeft, J , D., Monitoring regional groundwater extraction; the problem: Ground Water (2011), attached hereto as Exhibit MM; Brcdehoeft, J.D., The water budget myth revisited: why hydrogeologists model, Ground Water, v. 40 pp. 340-345 (2002), attached hereto as Exhibit NN.	Please see Standard Resource Response MM-1.

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ID	Comment	Response
35954-42	<p>The DEIS fails to adequately analyze the indirect effects of the Project. Indirect effects are effect that are caused by the action but occur later in time or are further removed in distance. See 40 C.F.R. § 1508 (b). Indirect effects "may include growth including effects or other effects related to induced changes in pattern of land use: population density or growth rate; and related effects on air, water, and other natural resources." Id. Here, the indirect effects of the Project include, but are not limited to, the future growth and development of the Las Vegas Valley and the indirect effects on the region's human and wildlife communities that will result from the proposed pumping of the aquifer. Unfortunately, the DEIS fails to take a meaningful let alone the required "hard." look at these impacts.</p>	<p>Thank you for your comment. The subsection entitled "Relationship of the GWD Project to Potential Growth Inducing Effects" in Section 3.18.2.9 addresses the role of water in enabling but not causing economic development. Furthermore, the issuance of a ROW grant does not assure the project would go forward, or that the anticipated economic benefits would be realized (see SocEcon-4). Indirect effects on other natural resources, including wildlife, comprise much of Section 3. Please also see standard resource response MM-1, MM-2 and MM-3 for information on the mitigation and monitoring program. The EIS concludes that the long-term production and conveyance of water to the Las Vegas Valley and portions of Lincoln County could function in conjunction with other factors to enable future population growth anticipated by Clark County, Lincoln County, and their municipalities. While a lack of water would be a constraint to growth, water availability, in and of itself, would not be the underlying cause of future growth. The EIS identifies in Section 3.18.2.9 the complex factors (e.g., climate change, changes in the Colorado River system flows, augmentation of Colorado River allocations from Lincoln and White Pine Counties) which influence the extent to which water supply could enable or constrain growth. In addition to water supply, the EIS also identifies other factors which influence growth, including global, national, and local economic conditions, as well as state and local laws, ordinances, policies, and plans which manage growth and the effects of anticipated growth. Given the multiplicity and complexity of these factors, identifying the infrastructure, associated costs, and environmental degradation associated with enabling growth attributed to water supply is not possible, and would be entirely speculative. Moreover, during the NEPA scoping process, public meetings and public comment, and consultation with state and local officials, BLM solicited comments and recommendations regarding additional analysis of growth induced effects. That process did not yield any additional methodology to study growth induced effects beyond analysis set forth in Section 3.18.29.</p>
35954-43	<p>The DEIS does not properly analyze the cumulative effects of the Project because it does not: (1) identify the significant cumulative effects issues associated with the proposed action: (2) establish the proper geographic scope for the analysis: (3) establish an appropriate time frame for the analysis: or (4) identify other actions affecting the resources, ecosystems, and/or human communities of concern. Thus, the DEIS is deficient in all regards concerning cumulative effects.</p>	<p>All of these factors have been considered in the cumulative impact analysis. Issues are the same as those identified for the project, as identified for each resource; the geographic scope has been established for each resource at the beginning of each cumulative impacts section.</p>
35954-44	<p>In this case, establishing the proper geographic scope or boundary for a cumulative impacts analysis is extremely important because the proposed action will have direct, indirect, and an "additive" affect on resources beyond the immediate area. To determine the appropriate geographic boundaries for a cumulative effects analysis, therefore, the BLM's DEIS should first have: (1) determined the area and resources (i.e, the aquifers) that will be affected by their proposed action (the "project impact zone"): (2) made a list of resources within that area or zone that could be affected by the proposed action: and (3) determined the geographic areas occupied by those resources outside the immediate area or project impact zone. The largest of these areas would be the appropriate area for the analysis of cumulative effects. By way of example, for resident or migratory wildlife, the appropriate geographic area for the cumulative impacts analysis will be the "species habitat" or "breeding grounds, migration route, wintering areas, or total range of affected population units." See e.g., NRDC v. Hodel, 865 F.2d 288, 297 (D.C. Cir. 1988) (agency violated NEPA by failing to consider the synergistic effect of simultaneous development on migratory whales).</p>	<p>Appropriate geographic areas were determined by resource (see section 3.0)and are disclosed for the construction phases, as well as the operational phases of the project.</p>
35954-45	<p>Indeed, because the Project will directly impact a vast aquifer system (valley fill and carbonate), the scope of the cumulative impacts analysis in the DEIS must encompass the entire aquifer system. Some of Nevada's and Utah's aquifers are connected among basins. As such, the development of water resources in one basin may affect water levels in or discharges to other basins. It therefore is imperative that the scope of the BLM's cumulative impacts analysis extend far beyond Spring, Snake, Cave, Dry Lake, and Delamar Valleys, transcend State boundaries, and include the entire aquifer system (this includes the States of Idaho, California, and Utah). Unfortunately however, the DEIS fails utterly to engage in this broad analysis.</p>	<p>Section 3.0 provides a description of the cumulative affects analysis which incorporates multiple regional groundwater flow systems, approximately 35 hydrographic basins, and a study area of over 20,000 square miles.</p>
35954-46	<p>The DEIS therefore should have taken into account and analyzed a number of state, private, and other federal actions as well as natural occurrences or events that have taken place (historic and current pumping), are taking place, or arc proposed to take place that will similarly impact the region's aquifers, wildlife populations and habitat and human communities (i.e., existing rights, domestic wells). Individually, each groundwater pumping activity- though serious- may not rise to the level of posing a significant risk to the aquifer. Collectively, however, the impacts of all of these and other activities- whether conducted by private individuals, state agencies, or other federal agencies- may be significant and must be analyzed. See e.g., Grand Canyon Trust, 290 F.3d at 346 (discussing collective impacts to Zion National Park): NRDC v. Hodel. 865 F.2d 288 (D.C. Cir. 1988) (discussing collective impacts to migratory whales). As the D.C. Circuit Court noted, federal agencies must "give a realistic evaluation of the total impacts (of the action) and cannot isolate the proposed project, viewing it in a vacuum." Grand Canyon Trust, 290 F.3d at342. Even "a slight increase in adverse conditions ... may sometimes threaten harm that is significant. One more factory ... may represent the straw that breaks the back of the environmental camel" 290 F.3d at 343 (quoting Hanlv v. Kleindienst, 471 F.2d 823 (2nd Cir. 1972)).</p>	<p>The Council on Environmental Quality (CEQ) NEPA regulations define cumulative impacts in Section 1508.7: "The impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individual minor but collectively significant actions taking place over a period of time." The water resources analysis provided in the EIS evaluated both the incremental and cumulative effects to water resources associated with the groundwater pumping scenarios included in the Proposed Action and alternative to the Proposed Action using the methodology described in Section 3.3.2.8. The cumulative pumping scenarios used for the model simulations of these alternatives were developed specifically to comply with the requirements of CEQ regulation 1508.7 and include the combined effects of the incremental impacts of the action added to other past, present, and reasonably foreseeable future actions.</p>

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ID	Comment	Response
35954-47	<p>The public participation process for comment on the DEIS was inadequate to provide for meaningful public participation. The Project presents complex and highly controversial issues of great public import. The complexity of the issues that the public must consider and comment on within the time period provided is shown by the fact that it took SNWA, the BLM, and other cooperating agencies many years to produce the DEIS. To provide the public with a reasonable opportunity to address these issues, the BLM should have provided the public with enough time to carefully consider the DEIS and to consult with people possessing the necessary expertise to independently evaluate the issues, particularly considering the fact that the public must do this without access to the awesome resources of SNWA, the BLM, and the other state and federal agencies that contributed to the preparation of the DEIS. This is especially true given that the Nevada State Engineer's hearings on SNWA's water rights applications in the project basins coincide with the comment period, making it especially difficult for the public to participate fully in both processes. Given these factors, the public comment period for the DEIS should have been at least 180 days.</p>	<p>Thank you for your comment regarding public participation for the Draft EIS. The BLM extended the comment period on the Draft EIS by 30 days in response to requests such as yours.</p>
35954-48	<p>A major deficiency with the DEIS is that it limits impacts to those which occur within the 10-foot drawdown cone, although major impacts can occur with less drawdown, including dried springs and wetlands and effective loss of water rights for wells that depend on a few productive zones. A second major deficiency is the DEIS considers impacts for only 200 years into the future. Groundwater model simulations do not reach equilibrium within that time frame, therefore the impacts will continue to increase after 200 years. Unless there are guarantees that the pumping will cease in 200 years, the DEIS must consider the impacts of pumping until equilibrium is reached. Based on the Myers model simulations, equilibrium requires at least 10,000 years.</p>	<p>See response WR-1 regarding the use of the model simulated 10-foot drawdown, and WR-2 regarding the timeframes considered for the programmatic analysis of potential effects to water dependant resources.</p>
35954-49	<p>The groundwater model used to simulate the impacts of this project has many problems and is inappropriate for analyzing the impacts of this project. For one, it is too coarse to simulate such significant drawdown; the model cells are too large and the model layers too thick. Drawdown amounts at the wells are grossly underestimated as a result. The model is poorly conceptualized as evidenced by the fact that model simulations do not converge without the modelers having set all layers as confined. The model poorly simulates the area water balance and does not even attempt to simulate most springs. It has also placed fault barriers and conductive zones so as to minimize the predicted impacts to important spring.</p>	<p>See response WR-1 regarding comments on the limitations and uncertainty with respect to the groundwater flow model; and WR-3 regarding the representation of faults in the flow model. Confining the model layers is a common approach for large geologically complex regions such as the Great Basin. This technique was also employed in the United States Geological Survey's groundwater model for the Death Valley Regional Flow System of Nevada and California (Belcher and Sweetkind, 2010). The authors of the MODFLOW computer application, the platform for the CCRP model, have designed many packages that assist in dealing with limitations that may arise from this configuration and those packages were used in the development of the CCRP model. The effect of using confined versus unconfined layers has been analyzed by Faunt, et al., (2011) for the Death Valley Regional Flow System Model and by Wylie (2004) for the Eastern Snake Plain Aquifer Model. Both studies report that using the same techniques as were used in the CCRP model provided high quality results. The comments also makes unsubstantiated comments regarding model simulated water balance and spring discharge. The water balance derived from the model simulations is reasonable within the range of estimates provided by others published studies in the region (SNWA 2009a and 2009b). Major regional springs and selected intermediate springs were represented in the model (SNWA 2009b). The potential effects to all other springs in the regions were evaluated using the methodology described in Section 3.3.8 of the EIS.</p>
35954-50	<p>The DEIS fails to consider a range of pumping options that would involve pumping different amounts of water. The DEIS considers pumping the full application amount for the five valleys, at the original application points of diversion (PODs) and at distributed pumping locations. Just one alternative (A) considers a reduced pumping amount, although another alternative considers intermittently pumping the full application amount. Considering the distributed pumping layout with a much reduced pumping rate would provide a comparison of the marginal impacts of increasing the pumping from low rates to much higher rates.</p>	<p>The programmatic analysis provided in the EIS considers a range of pumping scenarios with total pumping rates ranging from 176,655 AFY to 78,755 AFY as described in chapter 2 of the FEIS.</p>
35954-51	<p>The BLM presents impacts only to the ten-foot drawdown level, for reasons described in chapter 3 (p. 3.3-87). They do this even though they acknowledge that lesser drawdowns could cause additional impacts that they are ignoring. "Drawdowns of less than 10 feet could reduce flows in perennial springs or streams that are controlled by discharge from the regional groundwater flow system, which in turn could potentially cause declines in the diversity and abundance of associate riparian flora and fauna that may only be able to tolerate water declines on the order of a few feet" (Id.). BLM has acknowledged that the use of 10-foot drawdowns for their analysis is a failure to disclose all potential impacts from the pumping project. BLM makes several excuses for limiting the analysis to the 10-foot drawdown. First, the "BLM does not believe that it is reasonable or appropriate to use the regional model to quantify changes in groundwater elevation" (Id.) because of the model's regional scale and "unavoidable uncertainty associated with the model predictions" (Id.). They could have developed a more detailed model for the targeted valleys, such as Myers (2011a and 2011b). Even so, understanding that predictions are uncertain is much better than just ignoring the impacts. The point about uncertainty in the predictions is irrelevant. If the model has been objectively constructed, each contour line represents an expected value for that contour value. In the absence of obvious model bias, model error should be normally distributed (Hill et al 1998). There is just as much chance that the contour is underestimated as overestimated. All predictions should be treated as though there is a confidence band around them. If the BLM has concerns about the uncertainty, they should require the modeler to put confidence bands around the contour estimates.</p>	<p>See response WR-1 regarding the use of the model simulated 10-foot drawdown for the programmatic analysis of potential effects to water dependant resources.</p>

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ID	Comment	Response
35954-52	<p>Second, the BLM is concerned that 10 feet is similar to the magnitude of natural variation. Seasonal variation in water levels at any point may exceed the predicted drawdown, but a constant drawdown would cause a new median level around which the natural changes would fluctuate. Where seasonal variability causes springs or wetlands to dry, the additional drawdown may cause them to be dry longer. The DEIS fails to disclose the impacts to those resources that have a significant natural variability.</p>	<p>See response WR-1 regarding the use of the model simulated 10-foot drawdown for the programmatic analysis of potential effects to water dependant resources.</p>
35954-53	<p>Third, the BLM justifies its use of 10-foot drawdown by mentioning other DEISs in which it used similar reasoning. The fact that the BLM did it wrong in the past is not a justification for doing it wrong in this project. This is particularly important because the area between the predicted 10-foot and 1-foot drawdown may be hundreds of square miles. The following are reasons to include lesser drawdowns. □ Springs can be dried even if the water table is lowered less than 10 feet. Not identifying the springs between 10-ft and 1-ft of drawdown is a failure to present potential impacts of the proposed project. □ Lowered water tables can dry or significantly change the wetland ecosystem types. The same argument as for springs can be made for wetlands. A wetland that is naturally stressed could be killed with just a few feet of drawdown. □ Less than 10 feet of drawdown can affect wells with a productive zone near the top of the screens. Halford and Plume (2011) presented drawdown contours as low as 0.3 ft, without making a detailed uncertainty analysis. They did mention the uncertainty in the placement of a contour as being equal in magnitude as the length of a side of a cell.</p>	<p>See response WR-1 regarding the use of the model simulated 10-foot drawdown for the programmatic analysis of potential effects to water dependant resources.</p>
35954-54	<p>Inadequacy of Limiting the Analysis to 200 Years The DEIS considers the alternatives for only 200 years, which is a failure to disclose all the potential impacts of granting this right-of-way and allowing the concomitant pumping. This is an insufficient time period because the groundwater systems do not even approach equilibrium within 200 years. Equilibrium would occur at the time that the pumping essentially ceases to remove groundwater from storage. It is the time at which the pumping has captured an equivalent amount of natural discharge, meaning wetlands evapotranspiration (ET) and spring discharge. At this point the drawdown will have reached its maximum extent and the impacts caused by the project will be at a maximum. The DEIS does not identify these potential impacts. Predicted water levels for various wells, for example, well 184 N11E6713B1 USBLM (DEIS, Figure 3.3.2-7), begin to decrease by the time of full build-out, but in the long-term trend almost linearly downward. Two hundred years after full build-out, the water levels are decreasing almost as rapidly as just a few years after full build-out. This demonstrates clearly that the impact will continue to worsen far beyond the time period as presented in the DEIS. The 200-year time frame is arbitrary. The BLM in Nevada commonly analyzes the effects of open pit mines that will take more than 200 years to fill with groundwater, thereby forming a pit lake¹. Longer analyses are necessary even though the predictions become more uncertain. The choice the BLM leaves the reader is between uncertain predictions and no predictions at all. The issues regarding uncertainty beyond 200 years are similar to those discussed and rejected above regarding the use of a 10-foot drawdown cone. The uncertainty could be considered with a stochastic analysis wherein they present the drawdown contours and hydrographs with a confidence band. Unless there is a viable plan for ending the project after 200 years, the analysis should consider a much longer pumping period.</p>	<p>See response WR-2 regarding the future time frames considered for the programmatic analysis of potential effects to water dependant resources; and reasons why the analysis was not extended for 1,000 of years until the model reached equilibrium. The three representative time frames selected for presentation of results (full build out, full build out plus 75 years, and full build out plus 200 years time frames) were selected to provide to evaluate potential long term changes (or effects) to water resources.</p>
35954-55	<p>Alternatives Analysis The BLM presented impacts of its various alternatives and the No Action alternative as a series of drawdown maps and hydrographs of water levels and fluxes. The impacts of the project alternatives are the difference in the drawdown caused by the sum of the No Action and project alternatives and the No Action alternative. Although not stated in the DEIS, this assumes that drawdowns for No Action and the projects is additive. The No Action alternative assumes that too many existing rights will be developed in the future. For example, No Action includes the future development of water for a power plant in Steptoe Valley, SNWA developing the 8000 af/y it has on the ranches it owns in Spring Valley, and the water rights to be transferred from Lake Valley to Coyote Springs (DEIS, chapter 2, Figure 2.2-1). The impacts caused by these projects may not occur; if SNWA is not granted water rights in Spring Valley, it may not develop the other rights it has purchased. The BLM should develop a No Action alternative that includes only existing pumping. The other options should be considered reasonably foreseeable future actions. The impacts of the action alternatives should be determined without pumping the No Action alternatives simultaneously. This would remove the potential nonlinearities which could skew the estimates of the with-project impacts. Predicted impact would be estimated with certainty that they are not potentially due to existing pumping.</p>	<p>Cumulative Impacts have been updated.</p>
35954-56	<p>The DEIS ignores too many applications that should be considered a reasonably foreseeable future action. Applications listed as APP, RFA, or RFP in 11 basins total almost 488,000 af/y (Table 5). BLM did not adequately justify its decision regarding which to consider as reasonably foreseeable. The BLM should include more of the potential future uses, especially since some are owned by credible entities including SNWA, Vidler, and Lincoln County. The DEIS ignores the effects that developing existing surface water rights may have on groundwater. Surface water rights affect groundwater rights in two ways. First, groundwater pumping lowers the water table which may induce recharge from perennial streams; if those streams have been diverted there will be no induced recharge. Second, surface water rights to runoff may divert water that naturally would become recharge further downstream, at the intersection with alluvial fans for example, and reduce the perennial yield of a basin.</p>	<p>The CCRP groundwater flow model simulates the effects of existing water rights on a regional scale. More detailed modeling would be required to provide a more site specific analysis of the effects associated with existing surface water rights. An explanation and justification for the RFFAs used in the cumulative effects analysis for groundwater pumping is provided in chapter 2 of the FEIS.</p>

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ID	Comment	Response
35954-57	<p>Drawdown Effects The DEIS presents many maps and figures showing drawdown for the various alternatives. Even though SNWA's analysis underestimates the drawdown, the results presented in the DEIS show that any of the alternatives will cause massive drawdown and dry up much of the valleys within the 200-year analysis period. Alternative B, pumping the original application amounts at the original locations cause the deepest drawdowns within the targeted valleys. The drawdowns, which exceed 1000 feet at the wells, are excessive. The drawdown results from the aquifers not being able to provide 6 or 10 cfs at an original application point. The proposed action, a distributed pumping option, which would pump from 800 to 1000 gpm from as many as five times as many wells, cause a more widespread drawdown that is not as deep at specific well points. DEIS Table 3.3.2-6 tabulates the devastation that would be caused by the proposed action. At full build-out, and 75- and 200-years after full build-out, drawdown will affect 7, 16, and 18 basins, respectively; the proposed action clearly affects much more than the target basins. It will also affect 6, 80, and 112 miles of perennial streams and 25, 145, and 212 surface water rights, respectively. Well over a hundred springs could be affected. DEIS Table 3.3.2-6 also demonstrates how pumping the proposal will dry up Spring Valley. At full build-out, and 75- and 200-years after full build-out, the percent reduction in ET and spring discharge is 45, 77, and 84 percent, respectively. The similar values for Snake Valley are 0, 28, and 33 percent, respectively. The Snake Valley full build-out reduction is 0 because project pumping in Snake Valley only begins at full build-out. Big Springs would be dry within 75 years of full build-out. Numerous springs in Spring Valley will be substantially dried (DEIS, Table 3.3.2-7). Predicted drawdown reaches the model boundary at Pine Valley (DEIS, p. 3.3-110). This demonstrates the BLM made an error in establishing the boundaries for the numerical groundwater model. The maps and tables present the best estimates from the calibrated model (SNWA 2009b). Although the model has many errors and great uncertainty, if it has been calibrated objectively, the estimates may be considered an expected value (Hill et al 1998). This is similar to determining the mean where the observations around the mean are the variability but the mean may be an expected value. In general, the estimates should not be considered conservative. Drawdown and springflow reductions are as likely to have been underestimated as overestimated. One model simplification likely causes an underestimate in the extent of drawdown. That is the assumption that groundwater flow is Darcian and that the aquifers are a homogeneous porous media. If the pumping affects a fracture or other preferential flow zone, it could draw water from much further away than the porous media simulation allows.</p>	<p>See response WR-6 regarding the selection of the northeast model boundary that coincides with the hydrographic basin boundary for Hamlin and Snake Valley. As described in Section 3.3, the drawdown area for some alternatives and cumulative pumping scenarios intersects this northeast boundary along the boundary between Hamlin and Snake Valley (within the model) and Pine Valley (located east of the model). However, the potential effects to water resources in Pine Valley were evaluated in the EIS for each alternative. For example, see the description under the minor heading Utah Surface Water Resources in Section 3.3.2.9 of the DEIS (and FEIS). The model calibration process is summarized in Section 3.3.2.8 of the EIS and additional detail is provided in the model documentation that was incorporated by reference. As described in the model documentation reports, a basic assumption for using MODFLOW and other porous media type groundwater flow model is that flow through fractured rock can be simulated as an equivalent porous media. All of the other regional models described in Section 3.3.2.8 that encompass all or portions of the study area (i.e. RASA Model, GBNP Model, and ENWU Model) are based on this same equivalent porous media assumption.</p>
35954-58	<p>Steptoe Valley Steptoe Valley is of special interest because it is not directly targeted by SNWA's pumping and it is the center of White Pine County's population. However, the DEIS shows that the pumping will affect Steptoe Valley with drawdown and by drawing more flow into Spring Valley. Drawdown in Steptoe Valley due to this project will be as high as 50 in the southeast corner of Steptoe Valley (BLM, 2011, Figure 3.3.2-5). This peak drawdown occurs under the Schell Creek Mountains and likely changes the location of any current groundwater divide between the valleys. The drawdown will divert some of the drawdown that occurs in the Schell Creek Mountains. Based on steady state and project water budget estimates, 1500 af/y of water could be drawn from Steptoe Valley. The predictions report (SNWA 2010a) shows basin-by-basin water budgets for each pumping scenario at three times – full build-out, and 75-and 200 -years post full build-out. Model file IBFUCTH814_1944SS shows that under steady state conditions in SNWA's groundwater model, Steptoe Valley provides 500, 2600, 3600, 4400, 8800, and 15,500 af/y to Tippet, Cave, Jakes, Lake, Spring, and White River Valley, respectively, and receives 12,800 af/y from Butte Valley. The sum of the interbasin flow originating in Steptoe Valley is 35,400 af/y and the net interbasin flow is 22,600 af/y from Steptoe Valley. File No_Action_ucpd949_ZB_2250_200.pdf shows that the No Action alternative increases the interbasin flow from Steptoe Valley to 22,700 af/y 200 years after full build-out. File ZB_2250_200 for the proposed action shows the flow from Steptoe increases to 23,500 af/y 200 years after full build-out, an increase of 800 af/y from the No Action alternative. The DEIS model predicts the current PODs (alternative B) will increase the flow from Steptoe to 24,000 af/y, or 1300 af/y more than the No Action alternative. Distributed pumping draws less flow from Steptoe Valley because more of the pumping occurs further north in Spring Valley. Simulations below using the Myers (2011a and 2011b) show that more than 10,000 af/y could be drawn from Steptoe Valley by the time the system approaches equilibrium. The interbasin flow estimates to and from Steptoe Valley are just that – estimates, although they are the expected value. There is as much chance the estimates are low as there is that they are high, if the model accurately describes the flow paths, due to the parameter estimates. If the model conceptualization does not account for preferential flow paths, such as through fracture zones, the effect on interbasin flow could be grossly underestimated.</p>	<p>Section 3.3 (water resources) has a complete discussion of the data and modeling used for the project. The supplemental disk included with the FEIS contains the model reports and information used during the preparation of this analysis.</p>

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ID	Comment	Response
35954-59	<p>Monitoring and Mitigation The primary interest of this review is the monitoring and mitigation as applied to the groundwater development activities (BLM, 2011, p. 3.3-97). The DEIS proposes most of the monitoring and mitigation as part of the stipulated agreement, for Spring Valley and Delamar, Dry Lake, and Cave Valleys (BLM, 2011, p. 3.3-113) (included in the DEIS Appendix C). The stipulated agreements do not include Snake Valley. There is no interstate agreement regarding Snake Valley. The DEIS provides no basis for monitoring or mitigation in Snake Valley. The stipulated agreements are intended to only protect “federal” resources, including water rights or the national park. These stipulations are a poor basis for monitoring and mitigation for this entire project. They do not contain mitigations for other water rights. The DEIS presents a circular monitoring and mitigation discussion regarding the stipulate agreements and the BLM’s authority. Basically, the M&M plan purportedly would allow “SNWA and the BLM to identify, avoid, minimize, and mitigate adverse effects associated with the proposed pumping in all five hydrographic basins” (DEIS, p. 3.3-116). It would “address uncertainties in predicting potential effects of SNWA’s groundwater production on water dependent resources and water rights holders”. The impacts could be far worse than predicted, but the DEIS does not present a plan for avoiding even the predicted impacts, such as drying up 84 percent of the discharges from Spring Valley or completely drying Big Springs, so it is unclear why the DEIS focuses on uncertainties. This could be due to the stipulated agreements occurring before the DEIS modeling predicted the valleys would be dried by the pumping. The monitoring sites shown on Figures 3.3.2-9 and -10 may or may not be adequate – it is impossible to know until the actual location of the pumping wells is known. These monitoring wells were located based on the stipulated agreement, but until the actual well locations are known, the value of these monitoring wells is unknown. The monitoring wells specified in the stipulated agreements were based in part on the location of the original applications, which are the PODs for which the stipulated agreements were developed. However, the proposed action places pumping wells across the basins far from the current PODs, so the monitoring well sites may not be in the best locations. Adaptive management must assure that new monitoring sites be established prior to pumping by a sufficient time period to establish a baseline. The DEIS fails by not describing the “groundwater-dependent, early warning thresholds” (DEIS, p. 3.3-116). In the appendix, they indicate that it is necessary to collect baseline data “before specific early warning thresholds can be identified” (DEIS, p. A-49). This is simply not correct because they should use the DEIS model to establish thresholds. In establishing thresholds and monitoring , BLM must consider the “time to full capture” problem. Once a monitoring well indicates that impacts are occurring, it may be too late to stop or mitigate them. Drawdown cones expand even after pumping ceases. The BLM admits as much on p. 3.3-120, where it claims that “specific adaptive management measures ... may not successfully mitigate long-term impacts to surface water resources” and a “long-term reduction in surface discharge” is likely to occur. BLM considers this an unavoidable adverse impact. Having established early warning thresholds based on the DEIS modeling, the monitoring sites would be established as long as possible before the pumping commences. Data collection at the sites would establish the range of natural variability before any pumping effects could occur. This is essential to understanding whether a change is project induced.</p>	<p>Thank you for your comment. Please see Standard Resource Responses MM-1 and MM-2.</p>

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ID	Comment	Response
35954-60	<p>The DEIS lists five adaptive management actions to reduce observed or predicted impacts, including geographic redistribution of the groundwater withdrawals, reduction or cessation, augmentation of water supplies using surface and groundwater sources, conducting recharge to offset local groundwater drawdown, and cloud seeding. These actions had been listed in the stipulated agreements. Reducing or ceasing the pumping or significant changes in its location are the only potentially effective adaptive management actions. Augmentation and recharge should not be relied upon because both require additional water – using them merely transfers the impact elsewhere in the valley. There is no unused water in any of the valleys, including surface water that may reach the playas in wet years because the moisture holds together the playa soils. Cloud seeding is unproven technology which, if it works, must actually reduce precipitation somewhere downgradient. At various points, the DEIS notes that the BLM will require the implementation of mitigation measures, which could include the cessation of pumping. “If the BLM determines those early warning thresholds have been reached as a result of the SNWA’s groundwater withdrawal; (sic) one or more adaptive management measures may be implemented” (DEIS, p. 3.3-116, emphasis added). “If the BLM determines that SNWA groundwater withdrawals have likely caused or contributed to the adverse effect, BLM will require that one or more adaptive management measures be taken” (DEIS, App E, p. A-54). The BLM should state its authority for requiring mitigation measures that will reduce the amount of water pumped from the project, because elsewhere the BLM maintains that the NSE establishes the amount of water that may be pumped from a water right, not the BLM. Also, these statements do not purport with the stipulated agreements which indicate a technical review team will consider whether the pumping has damaged resources. The DEIS should specify a M&M plan that protects the resources in the project area. It should do so as best it can with current data and update the plan as new data and modeling becomes available. The following a basic steps that should be used: <input type="checkbox"/> Identify resources to protect <input type="checkbox"/> Define what it means to protect them <input type="checkbox"/> Use existing modeling to establish monitoring sites <input type="checkbox"/> Use existing modeling to establish triggers or early-warning thresholds. <input type="checkbox"/> Use existing modeling to specify the mitigation that could be used – moving the pumping wells or reducing the amount being pumped. Predict if/when resources will be impacted. <input type="checkbox"/> Every five years, use the monitoring data to verify and validate the model. if the data shows the model was poorly conceptualized, it should be reconstructed. If the data shows the basic model structure is adequate, the new data should be used to recalibrate the model. <input type="checkbox"/> Use updated model and repeat # 3, 4, and 5. <input type="checkbox"/> Continue through the life of the project Several additional M&M factors should be considered in the DEIS. One, the DEIS states the groundwater model “identified areas of uncertainty with regard to geologic and hydraulic characteristics” (DEIS, p. 3.3-120). These areas should be specified in the DEIS. The additional studies suggested (Id.) should be completed prior to finalizing the EIS. Second, the DEIS specifies that SNWA will develop a “groundwater flow system numerical model ... specific to Snake Valley” (DEIS, p. 3.3-121). This indicates the BLM has no confidence in the results of the CCRP model used for this DEIS - an admission that the DEIS is insufficient at presenting the potential impacts of this project. Third, as part of mitigation GW-WR-5, the DEIS notes that the pumping will likely affect Shoshone Ponds, and also specifies that deepened or new wells to replace the existing source shall draw water from the same aquifer. This may not be possible if the source is a layer of highly conductive gravel with artesian pressure related to recharge uphill on the fan above the ponds.</p>	<p>The adaptive management noted in the comment was prepared by SNWA as part of the initial POD. BLM is proposing a comprehensive monitoring, management, and mitigation (COM) plan to be developed (section 3.20). Please also see Standard Resource Responses MM-1 and MM-2.</p>
35954-61	<p>The maps throughout the DEIS should show Indian reservations along with the FWS, NPS, and state lands.</p>	<p>These areas are shown on maps reflecting land ownership. It is not feasible to include these areas on all maps, as there is too much other information to convey.</p>
35954-62	<p>The DEIS should not cite the Spring Valley or the Cave, Dry Lake, and Delamar state engineer rulings for the perennial yield in those valleys (DEIS, p. 3.3-66, Table 3.3.1-20). These rulings have been rescinded by court ruling and the perennial yield values will be reconsidered. It is more appropriate to use previous PY estimates for this purpose.</p>	<p>The perennial yield estimates provided in Table 3.3.1-20 were updated to reflect the recent (March 22, 2012) Nevada State Engineer Rulings for Spring, Cave, Dry Lake and Delamar Valleys</p>
35954-63	<p>The DEIS considers the risks to springs based on being within a ten-foot drawdown cone and on their susceptibility. The DEIS inappropriately downplays the risk to valley margin springs (DEIS, p. 3.3-89) by considering them to have just a moderate risk due to a lack of understanding of their hydrologic control. The BLM should complete more site-specific study of these springs. Springs that are controlled by normal faults are likely connected to the regional water table but a spring near recharge zone at the top of the fan may be perched. The simple classification used in the DEIS may downplay the importance of or risk to certain springs. Similarly, the DEIS should not specify flow reductions that would be important in modeled springs (DEIS 3.3-92). It should simply provide hydrographs of spring/stream flow so that the reader can assess the potential impacts. The DEIS correctly claims these estimates are uncertain, but uncertainty cuts both ways. Spring flow is just as likely to be decreased more than simulated as it is to be affected less. The problems highlighted in the DEIS with modeling Big Springs (DEIS, p. 3.3-93) are disturbing. The placement of a flow barrier east of the springs allowed the model to simulate the spring reasonably accurately, but the BLM requested the fault be moved west of the springs so that it would not limit the drawdown. Geologic mapping shows dual faults – a normal fault west of the springs and two of them just east of springs. The coarseness of the model discretization makes it difficult to simulate both faults because they are only one model cell apart. Another solution to the BLM’s problem with the fault protecting the spring from Snake Valley pumping would be to have higher conductance on the fault to the north. A relatively impermeable HFB may be necessary at the spring, but faults are not homogeneous along their length.</p>	<p>The water resource analysis does not downplay the risk to perennial surface water features located within the valley margin areas. In fact, all tables provided in the EIS that quantify the numbers of springs or miles of perennial streams at risk of drawdown related effects conservatively include the total number or springs (or miles of perennial stream) identified within either the moderate or high risk areas (for example, see Table 3.3.2-6 and footnote 3 for that table). Other comments included the discussion of Big Springs are noted but did not result in changes to the analysis.</p>

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ID	Comment	Response
35954-64	<p>SNWA's description of the method, however, indicated they really do not understand their own estimate. Their map of recharge does not account for geology: It must be noted that this spatial distribution only accounts for variation of recharge rates with altitude. It does not explicitly account for the geology of the units through which precipitation infiltrates to recharge the flow system, and it does not explicitly distribute the recharge from runoff to the actual locations where it occurs. The quantity of recharge from infiltration is, however, implicitly included in the recharge estimated using the groundwater-balance method. (CMR, page 9-10) While SNWA acknowledges the map is inaccurate, their explanation is partly wrong. The map accounts for the variation of recharge with precipitation which, while correlating with altitude, is not the same as varying with altitude. It does not account for geology, as they correctly state. The method merely describes a means of determining recharge in each basin based on the precipitation bands (volume of precipitation between two depths, such as 12 and 16 inches). It is based on balancing overall flow system recharge with flow system discharge considering only the precipitation variation around the flow system. The recharge estimate includes both mountain block and mountain front recharge. These differ due to geology because high elevation precipitation may recharge where it falls on carbonate outcrops or run off from other bedrock outcrops and recharge at the mountain front. The recharge estimates are incorrect because the groundwater discharge estimates are incorrect. SNWA used various methods to estimate the ET rates by phreatophyte type, and compiled a range of potential estimates from the literature – in fact, the CMR and appendices actually summarize almost every method and estimated rate available in the literature. Their final choice apparently is the BARCASS estimates for the basins within White Pine County. ET rates (regardless of whether the source is ground or surface water) vary within a fairly narrow range, typically within 20%. SNWA's GWET estimates are wrong because of how they allocate the source water to accommodate that ET – groundwater, precipitation, surface runoff, or unsaturated zone water. Groundwater ET emanating exclusively from the saturated zone is difficult, if not impossible, to measure separately. ET rates derived from field data (using ET towers) represent the total ET rates from the plants and the soils under and around the plants. The measured ET rates may include several sources of water: groundwater and soil moisture uptake by the plants, groundwater and soil moisture lost by evaporation, and water on the plant leaves lost by evaporation. The following simplifying assumption is usually made to derive mean annual groundwater ET rates: all sources of water, other than groundwater, can be attributed to the mean annual precipitation. Estimates of groundwater ET rates can then be obtained by subtracting the local mean annual precipitation rate from the measured annual ET rate. (CMR, page 7-6, emphases added) SNWA acknowledges the various sources but makes the "simplifying assumption" that precipitation can represent all sources other than groundwater. Most precipitation at a site with GWET does satisfy the ET demands because wetland sites are usually flat and have little runoff – most precipitation infiltrates or ponds on the surface. SNWA's assumption ignores the following sources of water:</p> <ul style="list-style-type: none"> o Surface runoff from offsite: Surrounding wetland areas are upland areas that usually have more topographic gradient than the much flatter wetland. Water runs off of that area and onto the wetland area thus satisfying more of the ET demands. If just 10% of the annual precipitation runs onto adjoining wetlands, because the surrounding upland may be larger, it could satisfy a much larger portion of the ET demand. o Surface runoff from the mountains: Most wetland areas lie in the low portions of valleys, such as the playas and surrounding moist wetlands in Spring Valley. Most of the streams that discharge from the mountains infiltrate at the mountain front and contribute to basinwide recharge. During wet years, however, the streams flow to the valley bottoms and become another source of surface water to the wetlands, as evidenced by the playa lakes that form throughout the Great Basin. o Mountain front springs contribute water to low-lying wetlands. An example is the regional springs in White River Valley which, predevelopment, satisfied ET demands in the wetlands below the springs. o Lateral unsaturated zone flow: Water that infiltrates the ground surface adjacent to the wetlands will flow both vertically and laterally, and some will reach the unsaturated zone beneath the wetland areas. Simply stated, SNWA modeled GWET as equal to the predicted ET minus predicted onsite precipitation (SNWA 2009a, pages 3-4 and 7-6) therefore estimated GWET depends on precipitation. SNWA used PRISM to estimate precipitation around the study area after rejecting other estimation methods. PRISM overestimates annual precipitation at most stations (Figure 6- 4), as acknowledged and discussed by SNWA. "The comparison shows that the PRISM distribution slightly overestimated the period-of-record mean precipitation values for most stations" (CMR, page 6-5). Jeton et al (2005) substantially agree – PRISM overestimates precipitation. Yet, SNWA chose to use it for this study, claiming it would be a conservative estimate. "As precipitation is subtracted from ET to obtain groundwater ET, the larger estimates of precipitation derived from the PRISM grid will lead to smaller estimates of groundwater ET and, therefore, smaller recharge estimates. This demonstrates that the use of the PRISM precipitation distribution leads to conservative estimates of recharge and is appropriate in this study" (CMR, page 6-5, emphasis added). The argument is conservative only if the other sources of water to satisfy ET listed above are ignored because they still overestimate GWET and recharge. This is understood by understanding the process through which precipitation becomes recharge (Wilson and Guan, 2004), as simulated with the BCM (Flint and Flint, 2007; Flint et al, 2004). The BCM estimates recharge using a water balance of the soil moisture zone in areas that are not wetlands; the method calculates infiltration and runoff. The infiltration either evapotranspires or becomes recharge; the runoff either recharges further downstream, at the mountain front, for example, or discharges to the playa. Up to 85% of runoff that does not become recharge goes to satisfying the ET from the wetland areas (Flint et al 2004). Nothing in SNWA's basinwide recharge estimate accounts for the proportion of precipitation that runs off and 	Please see Standard Resource Response WR-19 regarding estimation representation of recharge.

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	<p>satisfies the ET demand – in fact, the method as used by SNWA does not require that the precipitation pass through the groundwater at all before it satisfies ET. A consideration of how much the CMR GWET estimates, by flow system, exceed the recon report estimates (Scott et al in CMR Table 6-1) demonstrates the potential for additional water in the basins to make up some of the ET demands. PRISM estimated precipitation as being substantially more than the recon reports in all of the flow systems with Meadow Valley Wash being by far the largest difference (Table 3). Much of the overestimated precipitation occurs in Hamlin Valley; the overestimate was so great that SNWA had to manually lower the recharge estimate they made for the basin (see the NMR section review below). Halford and Plume (2011) also noted this problem).</p>	
35954-65	<p>Miscellaneous Comments on the Conceptual Model Spring Types: The difference between regional and intermediate springs appears to be arbitrary, with Gandy Warm and Big Springs considered intermediate. The basis is location in the basin, temperature, flow rate and its variability, hydrogeologic setting, and geochemistry. Regional springs are warm and constant, but the actual bounds were not specified. With respect to modeling, the difference is not important. Interbasin Flows to Adjoining Flow Systems: SNWA estimated interbasin flows from the model domain to surrounding flow systems based on a probability distribution of material properties and gradient over the boundary. They assumed the gradient across the boundary equaled the gradient between mid-basin wells – “Because carbonate wells are scarce, water levels in the central parts of the basins were assumed to represent regional potentiometric levels, i.e., carbonate aquifer is connected to alluvial aquifers (CMR, 8-4)”. This is an unfounded assumption. The gradient could be estimated using bedrock contours estimated in BARCASS or in chapter 5 of the CMR. The estimates are not well supported by the analysis, but are within the same orders of magnitude as should be expected (Welch et al, 2008). Depth-decay relations: SNWA estimated a conductivity/depth relationship to justify lowering the conductivity at depth, but the regression relationships barely justify it. CMR Figures C-9, C-10, and C-11 show the R2 for Log K v depth regressions are 0.16, 0.27, and 0.43 for LC, LVF, and UVF, respectively; from the figures it is also apparent the relations would not be as good as they are, such as it is, except for a few very deep values. This spurious correlation may artificially increase the confidence in the relations. Groundwater Contour Map: The SNWA GW contour map includes both basin fill and carbonate water levels (CMR, Figure 5-2). This may imply a substantial connection. Also they do not show any flow into Fish Springs Flat or Tule Valley, although their geologic analysis properly notes the presence of carbonate rock. BARCASS had treated the mountains on the east side of Snake Valley as a potential flow pathway.</p>	<p>Please see Standard Resource Response WR-18 for a discussion related to the representation of springs.</p>

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35954-66	<p>The DEIS used the Central Carbonate Rock Province (CCRP) model to simulate the proposed action and alternatives. This section reviews some of the details of that model, and shows that it is insufficient for NEPA analysis and may bias the simulations to minimize the predicted impacts. The model calibration was not based on stresses similar to that expected in the future, which far exceed anything observed to date. The model will be used to predict drawdown that goes far beyond any drawdown observed to date so the model parameters are not representative of likely future conditions. The SNWA model is too coarse, both horizontally and vertically, to use for predicting the impacts due to this proposed groundwater development. SNWA's model cells are all 3281 ft square. D'Agnese (2011, p. 2) pointed out that the simulation of drawdown at a pumping well improves with improved discretization but SNWA failed to implement it in their modeling effort. The model layers are too thick and simulate too much of the deeper aquifer layers. The CCRP model layer thickness varies from 328 to 984 feet over layers 2 through 5, from 328 to 6562 feet for layer 1, and 984 ft or thicker for layers 7 through 11; the total model thickness varies but the bottom is about 10,000 feet below sea level so at the center of Spring Valley, thickness would be about 16,000 ft. Halford and Plume (2011) generally did not simulate an overall model thickness more than 4000 ft because they expected little deep circulation. The lower half of the CCRP model is wasted. SNWA's model is poorly conceptualized as demonstrated by the convergence problems they could only solve by simulating all layers as confined, including layer 1 (SNWA, 2009, p. 4-2, 4-4). SNWA set the top of layer 1 to coincide with the top of the water table so that the layer had a constant transmissivity and did not change the layer type during transient simulation. This means that layer-1 transmissivity remains constant through the simulation even though the thickness is significantly decreasing. There are areas where the simulated drawdown exceeds 328 feet, so the layer should go dry; SNWA's assumption would maintain the transmissivity and flow even when simulating heads below the bottom of the layer. SNWA attempts to fix the problem by setting storage coefficients to represent specific yields. The valley fill storage is set at 0.015, which is higher than it should be for specific storage but lower than a specific yield; this is the value for the upper six layers. The model will therefore release more water for a given drawdown than it would had a proper specific storage had been used. The combination of high specific storage and unchanging transmissivity would cause the model to underestimate the drawdowns. This will dampen the predicted effect of pumping and decrease the predicted drawdown. Convergence problems during steady state simulations are typically caused by an inaccurate representation of the flow system. In this case, the model cell size may be too big to accurately simulate the details of flow in the upper layers. The model very precisely inputs the perceived geology (depths to formations and thicknesses) over a coarse grid. This requires detailed calculations in the HUF2 package and elsewhere to set the parameter values for each cell; this could cause rapid changes between cells, as formations pinch out, which also causes instability in the water balance calculations for these cells. Either the use of smaller grid cells or specifying the model layers with hydrogeologic units could obviate this problem.</p>	<p>Please see Standard Resource Response WR-1, -3, -6.</p>
35954-67	<p>SNWA's model calibration is biased to look better than it actually is. SNWA presented unweighted residuals, in Figure 6-9 (SNWA, 2009), which shows extreme bias in the distribution of residuals. In the area of Dry Lake and Pahroc Valleys, six residuals are between -440 and -220; five more are between -200 and -50 (Figure 1). Just east of Dry Lake Valley, in a trend that looks very much like the PRISM precipitation overestimates in Patterson, Lake, and Cave Valleys, are at least ten residuals from 200 to 955 and another ten from 20 to 200 (Figure 1). The CCRP model ranges from gross overestimation of head in Dry Lake/Pahroc Valleys (simulated exceeds observed in a negative residual) to gross underestimation of heads 10 to 20 miles to the east. SNWA's numerical model report addresses the residual problem between Patterson and Dry Lake Valley (SNWA, 2009, p 5-8). They used two low-K horizontal flow barriers (HFBs) to force the head to drop over 1000 feet between the valleys, but just were unable to do this which resulted in the high residuals. (The steady state model simulates 1600 af/y from Patterson to Dry Lake Valley). This should have caused SNWA to reconsider the overall conceptual model for the area. Their model simulates too much recharge in Dry Lake Valley, most specifically in the mountains on the east side of the valley between Dry Lake and Patterson Valleys; this extra recharge increases the head on each side of the fault and topographic divide so that the model cannot simulate sufficient head drop between valleys. SNWA emphasizes the value of using "weighted" observations to calibrate the model. Weighting attempts to account for the accuracy of the observation measurement and may be based on many things, from the method of determining the ground surface elevation or the depths to water to the seasonal variability of a series of measurements (from which a variance for the observed values can be determined). Ultimately, setting a "weight" is as fraught with uncertainty as the observation itself. Halford and Plume (2011) set weights based on the source of the observations, but described weighting individual observations as a "fool's errand" because model-discretization error "typically dominates measurement error". In other words, SNWA's use of weighted observations should not increase the perception of accuracy in the model. Two other obvious problems are the high positive residuals in north Spring Valley and along the mountain front in Snake Valley (Figure 1). The model does not accurately simulate the water table in the higher elevations along the boundary of the valleys. There should be little confidence in the simulated drawdown in these areas, potentially biasing the predicted results.</p>	<p>Please see Standard Resource Response WR-1, -3, -6.</p>

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35954-68	<p>The SNWA model handles faults in a way that may be biased because there is very little data to support their ultimate parameter choices. The following sections describe some of the problems. Pahranaagat and Coyote Spring Valleys The Pahranaagat shear zone causes a head drop of about 700 feet across one model cell, as represented by the blue in the hydrogeology at column 62 (Figure 2); this is modeled with a series of HFBs. Further east (right) in column 72 is a conductive fault in LC3 (lower carbonate rock). The conductivity (K) in the fault ranges from 17 to 62 ft/d, over 3281 feet, while the surrounding LC3 cells have K about 0.5 ft/d. The high K fault runs north/south through Coyote Spring Valley to just south of the Pahranaagat Shear zone (Figure 3); the fault is shown on Figure 3 just east of the highway; it ends approximately where it intersects the shear zone. Based on K, this fault zone would transport vastly more groundwater than the surrounding rock. The source of the Pahranaagat springs in SNWA's model is a highly conductive fault running down the middle of Pahranaagat Valley. This fault gathers and transports groundwater from the north and west; K in the carbonate rock ranges to 30 ft/d for one or two column widths. The Pahranaagat shear zone is simulated with a series of HFBs which prevent much of the flow from passing and also force groundwater to the surface to form the springs. Flow from the east to the central part of Pahranaagat Valley is blocked by a normal fault that bounds the east side of the valley. The head drop across the HFB is about 300 feet (row 336); some flow occurs during steady state conditions but the HFB would be slow to respond to upgradient pumping. SNWA protects the Pahranaagat Springs with an HFB that has not been proven on the ground. Further south three faults converge in Coyote Spring Valley which allows groundwater to move to the Muddy River Springs area through a zone of very high K LC3 rock. Figure 4 shows two of the faults and high K zones right of the faults; Figure 5 shows the convergence of these faults and the fault on the east which impedes the flow causing it to surface at the springs. Figure 6 shows the three faults north of the springs near their convergence into the broad high K LC3 material. These figures demonstrate how a model simplifies complex geology but the problem with this is the broad zones with very high K cover as much as 20 model rows by 15 columns, or about 300 square kilometers. There is no geologic evidence for such a broad fractured zone in this area. Such a zone may bias the results for this area. The springs probably discharge from a narrow highly conductive fracture zone which could be drained sooner by pumping than would a 300 square km, 10,000 feet thick zone, with high K. SNWA should use different storage coefficients for the high K zones. Clearly, highly fractured areas would have different storage properties than unfractured media. SNWA added a constant head boundary between Pahranaagat and Tickaboo Valleys to "allow some of the discharge to flow out of the model area" which was necessary because "discharge by groundwater ET from Pahranaagat Valley tended to be larger than expected" (SNWA, 2009, p. 5-13). In other words, they needed a release valve even though the Death Valley Flow System (DVFS) analyses had not included such an outflow. The reason a "release valve" was needed was, once again, that SNWA estimated far too much recharge in the WRFS, mostly in Dry Lake and Delamar Valleys.</p>	<p>Please see Standard Resource Response WR-3.</p>
35954-69	<p>Spring Valley The CCRP model simulates Spring Valley with faults on each side, but only the normal fault on the west side affects the flow (Figure 7). An HFB runs between the bedrock and fill, causing a significant head drop. The bedrock is all low K, therefore the flow into the fill is probably low; the northern portion of Spring Valley has mostly mountainfront recharge. The east side fault shows as large displacement, but the K is not significantly different from the surrounding rock. The carbonate rock that underlies northern Spring Valley extends into Tippet Valley, under the Antelope Range. The K under Tippet Valley is almost two orders of magnitude higher, and the normal faults along the boundaries of Tippet Valley have high K. SNWA simulates the fill in Spring Valley as high to very high K. The primary feature is that the fill is modeled as a bowl, with high K fill surrounded by bedrock. SNWA models specific storage in lower layers of the fill, 5000 ft bgs, as 0.015. This imparts a huge bias on the predicted results because much more water is released for a unit drop in head than is realistic. Anderson and Woessner (1992, Table 3.4) specified a range of specific storage values ranging from 0.02 to 0.000049 m-1 for material ranging from clay through dense sandy gravel; the high range is for plastic clay, not the type of material found in Spring Valley. Halford and Plume (2011) used a specific storage of 2x10-6 ft-1 for their layers 2 through 4. These references support the use of a lower specific storage than was used by SNWA (2009). SNWA's choice would improperly minimize the predicted drawdown by causing the model to release more water to pumping for a given drawdown than is realistic. It biases the drawdown prediction to be much lower than would occur in reality. SNWA (2009, p 3-2) notes that measured storage properties may not convert to model scale storage properties. This is similar to the scale issues for K as discussed by authors such as Schulz-Makoch et al (1999). It is reasonable that storage coefficients would increase with scale as the volume under consideration includes more connected fractures, but the issue with SNWA's choices in the previous paragraph refers to fill for which porous-media flow is more predominant and scale issues much less important. SNWA uses high K cells on the boundary in the uppermost layers. These presumably were set to allow recharge into the zone near the mountain front. Underlying the high K cells, the K is an order of magnitude lower, which causes the groundwater to pond.</p>	<p>Please see Standard Resource Response WR-3.</p>

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35954-70	<p>Steptoe to Spring Valley Groundwater contours along row 160 show a gradient through carbonate rock from Steptoe to Spring Valley (Figure 8). The model includes an HFB, but no mounding of contours. This is an example of how the CCRP model allows flow from Steptoe to Spring Valley, in contradiction to their geology models. Figure 9 and 10 demonstrate how a groundwater level contour map can show a divide while there is clearly flow at depth. The source of Big Springs, in the model, appears to be a large expanse of carbonate rock that has K very near 0.413 ft/d. The carbonate rock extends through the thickness of the model meaning the upgradient transmissivity is very high. A fault forces groundwater to surface.</p>	<p>Please see Standard Resource Response WR-3.</p>
35954-71	<p>Gandy Warm Spring The simulated flow from Gandy Warm Spring is approximately one-third of the targeted flow (NMR, page 5-5), which is likely an error in the conceptual flow model. However, the simulated discharge overall from Snake Valley is within 4% of the targeted value. The valleywide discharge does not require the discharge from Gandy Warm Springs. The problem is that discharge which should be discharging from the springs is actually simulated as discharging from elsewhere in the valley, where it can be captured by the proposed pumping and decrease the predicted impacts of pumping. The error in simulating the spring is likely that SNWA treats the spring as intermediate rather than regional (CMR page 7-41), described as follows: Gandy Warm Springs is located on the western edge of Snake Valley in the northern portion of the study area (Plate 1). It discharges water from alluvial materials approximately 1.6 mi west of a normal fault. The spring was selected for inclusion in the conceptual model because of its large discharge. The average spring discharge is approximately 17 cfs. (CMR, page 7-41) SNWA misses the two most likely sources of water to the spring: the substantial carbonate rock on the northeast side of the Snake Range southwest of the spring and interbasin flow from Spring Valley. A fault diverts flow from the Snake range. SNWA discounts the idea that interbasin flow from Spring Valley could support the spring (NMR, page 5-6). This is curious because the model simulates 11,800 af/y of interbasin flow to just north of Snake Valley which is of the same order of magnitude as the approximately 16,000 af/y estimated for this region in BARCASS (Welch et al, 2008, Figure 41). If even a third of that amount combined with carbonate recharge in the northeast portion of the Snake Range, the Gandy Warm Springs flow could be accurately reproduced.</p>	<p>Thank you for your comment. Standard Resource Response WR-18, related to representation of springs will help your understanding of the constraints related to spring data sources. In addition, please see Gen-1 for a discussion related to programmatic analysis and subsequent NEPA. That response discusses the need for gathering additional site-specific information as subsequent NEPA analyses are completed for future project-related areas.</p>
35954-72	<p>Recharge Redistribution The recharge estimates used in SNWA's numerical model are not the same as in SNWA's conceptual model, which had estimated recharge by basin. SNWA somewhat reshuffled the recharge distribution during numerical model calibration so that the recharge can meet the discharges specified from the model (SNWA, 2009, p. 4-62 – 4-64). In other words, SNWA started the process over during their numerical model calibration but did not constrain the estimates by basin. This explains the differences in recharge by basin and difference in interbasin flow for the numerical model as compared to the conceptual model. The PRISM precipitation estimates also caused too much interbasin flow from Hamlin to Snake Valley (SNWA, 2009, p. 3-3). This was due to the PRISM precipitation estimate for that area being much too high. Halford and Plume (2011) found similar problems.</p>	<p>Please see Standard Resource Response WR-19 for a discussion related to recharge.</p>
35954-73	<p>Shingle Pass The model conceptualization of Shingle Pass is as complicated as any in the model, with several formations including carbonate rock and several faults (Figure 12). The faults within Cave Valley are simulated with HFBs which prevent flow from leaving Cave Valley. The mountain front faults on the east side of White River Valley have very high K, being high displacement faults. The high K zones extending north and south along the west side of the Egan Range capture and transmit substantial recharge from the mountains to the springs. However, SNWA does not include an HFB on these faults which would force water to surface in to the springs. Thus, the model is biased so that Cave Valley flow does not support the springs in two ways – HFBs within Cave Valley prevent flow from reaching White River Valley and high K faults along the east side of WRV bring water from the north to the springs rather than from the east.</p>	<p>Please see Standard Resource Response WR-3 for a discussion of faults as barriers to flow.</p>

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35954-74	<p>Combining Inappropriate Formations in One Cell The HUF2 routine (SNWA, 2009, p. 4-6) inappropriately combines grossly different media into one cell. "Although the HUF Package allows model layers to be defined independently of hydrogeologic units, careful definition of the model layers is important to represent properly the flow through the simulated area. Specifying model-layer boundaries that coincide with or are parallel to hydrogeologic-unit boundaries is helpful" (Anderman and Hill, 2000, emphasis added). If the HUF or HUF2 package combines significantly different hydrogeologic units, the cell properties may be an average of significantly different flow types. SNWA does not carefully define the model layers by combining formations in one cell, which results in an average K which is a meaningless number. The east front of the Snake Range, near Baker, is a great example of inappropriately averaging formations in one cell. As may be seen (Figure 13), on column 149, the model averages UVF and LC3 properties. In column 150, the model averages LVF and LC3 properties. Considering the conductivity values by cell, the model combined values that differ by more than an order of magnitude (Figure 14). Also, the model would not allow continuous flow among columns within the LC3 unit under Snake Valley because the unit does not match in adjacent cells (Figure 13). This forces the groundwater to follow unrealistic pathways. It would essentially force water in the LC3 unit in column 149 to flow into the LVF unit in column 150. Forcing the flow into the valley fill, as just described, would minimize predicted drawdowns from the model. This is because the model pumps primarily from the valley fill units where the storage coefficient is much higher than in the carbonate units. The HUF2 package, as used by SNWA in this model, forces a connection so that water flow into the LVF where it supplies SNWA's wells, in the model, and may significantly bias the model to underestimate drawdown in these locations. The numerical model simulated flow from Fish Springs Flat into Snake Valley (SNWA, 2009, p. 5-13). This goes against most other reports, which SNWA cites, showing that because of the high discharge from the springs there must be inflow from elsewhere. SNWA did not do any verification modeling for this model, although they have data to do so with. They should use 2005-2010 data to verify for a model and DEIS being released now, in 2011.</p>	<p>Please see Standard Resource Response WR-12 for a discussion regarding the depth decay of hydraulic conductivity and Standard Resource Response WR-10 for a discussion of different model approaches.</p>
35954-75	<p>Conclusion The DEIS used a regional groundwater flow model to make predictions of drawdown to be expected from pumping the No Action and action alternatives in Snake, Spring, Cave, Dry Lake, and Delamar Valley. It is inappropriate for use in predicting detailed drawdown impacts due to pumping the alternatives for many reasons documented in this report, including the following: 1. The model cells are too coarse for detailed drawdown predictions. 2. The model layers are too thick and the model domain extends much deeper than necessary for simulating the details of pumping their applications. 3. SNWA simulated all layers, including layer 1, as confined. This assumption biases the simulation to underpredict drawdown in Spring Valley because it does not adjust the transmissivity as the water table lowers. 4. The conceptual model used for the numerical model is substantially different from the conceptual model used to develop the numerical model. 5. The numerical model structure was far too complex for the quantity and quality of hydrologic data used to calibrate it. 6. The model relies on faults to control the flow even though there is little collaborating hydrologic data. 7. In many areas, the model is poorly conceptualized which allows the model to protect certain resources and to transmit too much water to certain areas.</p>	<p>Please see Standard Resource Response Gen-1 for a discussion of programmatic analysis and subsequent NEPA. Inherent in the role of subsequent NEPA is the assumption that additional, site-specific data will be generated, collected, and used in the subsequent NEPA analysis. Please also see Standard Resource Response WR-10 for a discussion of different model approaches.</p>

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35954-76	<p>Simulation of Proposed Action with Myers Spring/Snake Valley Groundwater Model The review of the SNWA CCRP model has shown that it is too coarse to make sufficiently accurate predictions for the study area. To provide an alternative tool for considering the impacts in Spring and Snake Valley, I ran the Myers (2011a) model to consider two alternatives. The first is the DEIS proposed action and the second is similar to the reduced pumping option, with the Snake Valley pumping reduced to 36,000 af/y for the entire valley and in Spring Valley reduced to one-third its proposed value. This is less pumping in Spring Valley than the reduced pumping option in the DEIS to better bracket the impacts and to determine whether the drawdown extent differs substantially even for much reduced pumping. Simulations were run exactly as in Myers (2011b). Three stress periods, 75, 125, and 10,000 years long were used to simulate impacts up to 200 years and to allow the system to come to equilibrium at up to 10,200 years, if that is possible. Figure 15 shows the pumping locations, as for the DEIS, for each scenario; the difference between scenarios is the pumping rates. Pumping was drawn from model layers 4 and 5, 400 to 2000 ft bgs. Wells were not targeted to specific formations, however, as was done in the DEIS (BLM, 2011, p. 3.3-97) because water rights' applications do not limit the pumping to a given formation. Starting the pumping in each valley at the same time allows better comparisons of predicted drawdown between valleys. The DEIS simulation included pumping in some valleys during the construction period; the DEIS drawdown maps show the results of much less pumping in Snake Valley than in Spring Valley. Nothing legally binds SNWA to pumping schedules as analyzed in the DEIS which means they could begin pumping the full amount from each valley as soon as any water rights are granted. Also, the pumping includes only the project, so there is no confusion with ongoing pumping in the valleys – the drawdowns and changes in fluxes reported are due simply to pumping SNWA's proposals. Results Drawdown maps for the two scenarios are presented for two different model layers, 2 and 5, at two different times, 75 and 200 years after pumping begins (Figures 15 through 22). Flux values for the proposed action are shown in Figures 23 through 25 and for the reduced pumping option in Figures 24 to 26. Appendix A contains hydrographs for various monitoring points (Figure 15) for layers 2 and 5 for both pumping scenarios. Layer 2 is for 80 to 200 ft bgs and layer 5 is from 800 to 2000 ft bgs. Differences in water level at a point between the layers represent a vertical gradient. Drawdown predicted with the Myers model for the proposed action is similar in extent to that predicted by the DEIS, with several exceptions (Figures 15 through 18). First, the drawdown of course clusters around the pumping wells. However, the Myers model simulates numerous areas near those wells with drawdown in excess of 200 feet whereas the DEIS simulation does not (BLM, 2011, Figure 3.3.2-5). Only for pumping the full amount from the original locations does the DEIS predict drawdown near the wells to exceed 200 feet (BLM, 2011, Figure 3.3.2-18). There are even some small areas with drawdown exceeding 500 feet in layer 5 after 200 years (Figure 18). The SNWA model may underestimate drawdown at the wells because it simulates pumping to occur from 400 to 2000 ft bgs; a longer screen length may spread the impacts over a thicker aquifer section for modeling. This may bias the results because such long screens may not be feasible. Also, the SNWA model simulates all layers as confined, with specific storage too high. Such simulation maintains a constant transmissivity as the water level lowers which may minimize drawdown at the wells. The Myers model also predicts more drawdown in the middle of the north half of Spring Valley (Figures 15 through 18); the DEIS modeled drawdown did not exceed 10 feet under a broad section of the playa even after 200 years. The DEIS probably underestimated discharge reductions in this area. The reasons for the difference are probably SNWA's specific storage values being too high (releasing more water for a unit head drop). Pumping the DEIS proposed action causes most of the simulated spring flows to approach zero within 200 years (Figure 23). For example, Spring Creek and Millick Springs dry in 30 years, Big Springs in 80 years, Stateline Springs in 11 years, and discharge to Cleve Creek ceases in 120 years (Figure 24); Swallow Springs are relatively protected by the mountain-front normal fault. Flow from Steptoe Valley to Spring Valley increased by 3000 af/y within 200 years and by 10,000 af/y after 10,200 years. The system does not come to equilibrium for over 10,000 years. Even at 10,000 years, approximately 1140 af/y continues to be removed from storage; the cumulative amount up to this time is about 100 million af. Over the 10,000 years, the total natural discharge, the sum of ET and springs, reduced from about 163,000 to 38,000 af/y, for a reduction of approximately 125,000 af/y. Total pumping is approximately 142,000 af/y, so the pumping has captured about 90 percent of its total from natural discharge. As noted, some groundwater continues to be removed from storage; the remainder is changes in flow across the model boundaries, so the pumping in Spring and Snake Valley will ultimately affect surrounding valleys with up to 17,000 af/y being drawn from or prevented from flow to those valleys. The drawdown for reduced pumping option is nearly as extensive as the proposed action, but not as deep (Figures 19 through 22). This is due to the bounds in the model. The central and northern Schell Creek Range and the central two-thirds of the Snake Range are mostly impermeable – pumping quickly draws water from the available aquifer to those boundaries. The 1- through 10-foot drawdown contours near these boundaries are very similar between scenarios. The proposed action has deeper drawdown toward the middle of the valleys as compared to the reduced pumping scenario. Another difference is that the drawdown does not extend as far north into Tippet Valley as quickly. Although the drawdown extents are similar, the reduced pumping option reduces the various fluxes proportional to the difference in pumping rates (Figures 26 through 28). The reduced option does not avoid impacts because even this option captures most of its pumping from discharge. Wetlands and springs will have reduced flow, but will continue to discharge groundwater. The lesser discharge is due to the decreased drawdown, but then the drawdown is less because less discharge must be captured to offset the pumping.</p>	<p>Please see Standard Resource Response Gen-1 for a discussion of programmatic analysis and subsequent NEPA. Inherent in the role of subsequent NEPA is the assumption that additional, site-specific data will be generated, collected, and used in the subsequent NEPA analysis. Please also see Standard Resource Response WR-10 for a discussion of different model approaches.</p>

Comments and Responses - Local Government

ID	Comment	Response
	<p>However, even after 10,200 years, the system has not reached equilibrium for reduced pumping, meaning that the pumping has not totally captured an equivalent amount of discharge. The change in storage flux is about 860 af/y, with a total of 39 million af being removed from storage in 10,200 years. The difference in cumulative storage between the options reflects the different drawdown depths. The area most affected by pumping the reduced amount varies from the area most affected for pumping the full application amount. Some of the springs that dried quickly for the proposed action do not dry at all with reduced pumping – these include Millick Springs and the discharge to Cleve Creek. Pumping significantly affects the Snake Valley springs, with the time to complete drying just being increased due to reduced pumpage. The differences between the impacts to Spring and Snake Valleys reflects the fact that the pumping in Snake Valley was only reduced to 36,000 from 50,000 af/y but the pumping in Spring Valley was reduced to one-third of its original rate. The monitoring well hydrographs (Appendix A) reveal much about the different responses to pumping around the model domain. Some areas initially have higher head in layer 5 than in layer 2; this represents an upward gradient. The Baker monitoring site demonstrates this clearly with about a 60-foot head drop between layers 5 and 2; this reflects the subirrigated pastures near Baker and the circulation of recharge in the carbonate in the Snake Range and at the head of the alluvial fans. Although the gradient varies, similar upward gradients occur at Garrison, both Swamp Cedar sites, Shoshone Wells, South Spring Valley Playa, Minerva, and barely at Big Springs. Pumping reduces or eliminates the vertical upward gradient, as is apparent at Baker and Shoshone Springs, which suggests the subirrigated meadows will eventually be dried and the well at Shoshone Wells will no longer be artesian. Another obvious point from the monitoring well hydrographs is that the system is still undergoing significant change at 200 years. This may be seen by comparing the 10,200-year hydrographs with the 200 –year hydrographs. In the long-term, the drawdown will overwhelm the vertical gradient. After a few hundred years, the head level for both layers will be similar with the differences due to pumping scenario. Less drawdown at any point occurs with the reduced pumping option. Drawdown at points near the center of the valley for the DEIS proposed action exceeds that caused by the reduced pumping option by much more than three times. At some of these points, the hydrographs suggest equilibrium has been established after several hundred years for the reduced pumping option while drawdown from the proposed action just continues to increase. The difference is that the proposed action draws the water table below the extinction depth for the ET zones; once that occurs, there is no more discharge to capture at the point. Continued water table lowering does not decrease the discharge, so at that point the system cannot come into equilibrium. The water table will continue to lower so that the drawdown extent can increase to capture more discharge. In Spring Valley, drawdown can only extend north or south to capture other discharges. This is why the water table continues to deepen after the ET discharge has ceased. The Center South Spring playa site is a good example: the proposed action causes the water table to draw down indefinitely and completely eliminates the upward gradient; the reduced pumping option allows the upward gradient to continue.</p>	
35954-77	<p>Summary of Alternatives Simulations Pumping either the DEIS proposed action or the reduced pumping scenario would cause widespread drawdown around both Spring and Snake Valleys. With time, either option draws groundwater from surrounding valleys, causing drawdown and intercepting discharge there. The DEIS proposed action will cause very substantial drawdown near the centers of pumping. The groundwater system does not come into equilibrium for more than 10,000 years. Reducing the pumping rate to one-third of the full application amount, or about 30,000 af/y, allows the system to almost come to equilibrium with a some wetland ET discharge and spring flow continuing. Although the valley resources would be severely damaged, they would at least still remain while the proposed action would almost completely dry the valley.</p>	<p>Thank you for expressing your concerns.</p>