

Comments and Responses - Non-governmental Organizations

ID	Comment	Response
AGC Las Vegas		
34033-1	To grow and prosper, Southern Nevada's construction industry must have a reliable, dependable water supply. For the past decade, we've come to realize how vitally important it is for the Southern Nevada community to insulate itself from the adverse effects of drought.	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.
34033-2	There is a demonstrable need for Southern Nevada to access these resources. However, the Draft Environmental Impact Statement fails to address the economic and social consequences that could befall Clark County should the SNWA Groundwater Development Project not proceed. However, the DEIS does include a detailed analysis of what effects the project may have on Lincoln and White Pine counties. In the interest of fairness and with the knowledge that Southern Nevada provides the lion's share of the state's economic output, this discrepancy must be addressed in the DEIS.	Thank you for your comment regarding the potential implications for Clark County should the GWDP not proceed. The concern is identified in Section 3.18. See also 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.
Andean Tapir Fund		
34061-1	I have reviewed the above draft EIS and am very alarmed at the enormity of what is being proposed. The Southern Nevada Water Authority plans to drain vast areas of the southeastern and eastern Nevada desert as well as parts of Utah in order to import 57.6 billion gallons of water per year (176,656 acre feet/year). This is in order to fuel the rampant growth of the Las Vegas megalopolis, and the audacity of SNWA is proportional to its thoughtlessness! The proposed drainage of water would have a devastating effect on a vast and unique desert ecosystem and would cause water tables to recede by many feet.	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.
34061-2	This would negatively affect all forms of plant and animal life, including many rare or threatened species such as endemic pupfish.	Please review section 3.7 (aquatic biological resources) for a discussion of potential impacts from groundwater withdrawals.
34061-3	As well as affecting important traditional game animals such as black-tailed mule deer, pronghorn, bighorn, and elk, this water drainage project would have a very damaging effect upon the awe-inspiring wild horses and burros.	Please review section 3.6 for information relevant to the comment.

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34061-4	<p>As a wildlife ecologist and fourth generation Nevadan, I have observed, photographed, written about, and defended these wonderful presences throughout my life. They should be regarded as returned natives to North America, since the fossil record as well as genetic examination proves that they originated upon this continent and that when Europeans reintroduced them here they were in fact restoring the missing equid component to the life community. North America is the true cradle of evolution for the entire horse family, Equidae, as all three extant branches (in addition to others now extinct) both originated and experienced their long-standing evolution right here, including Nevada. The horses and burros are a different type of herbivore; they are not ruminant, but rather post-gastric digesters. This makes them natural gardeners who fertilize the soils and spread intact seeds of a great variety of plants wherever they roam. This they do to a much greater degree than is the case with ruminant digesters, precisely because their post-gastric digestive system does not as thoroughly degrade their food as does the ruminant digestive system of cattle, deer, elk, bighorn and domestic sheep, etc. Also, wild horses and burros spread their grazing pressure over vaster areas, and these animals are capable of accessing remoter, steeper and rockier land than many ruminants, particularly domestic cattle and sheep. Also they do not camp on riparian, or stream/lake-side including meadow, habitats as do cattle, unless forced to do so by man's fences, barricaded water sources, etc. These wonderful presences are restorers and healers of Nevada, yet they are being used as scapegoats for what is basically humans' destructive doings, especially the overgrazing of livestock or the over promotion of big game species and the elimination of natural predators such as puma that goes along with our society's overemphasis upon livestock and big game production. As builders of the humus content of soils through their feces, wild horses and burros make soils both more nutrient-rich and more water-retentive- and this has a major positive effect in enhancing the ecosystem and building up the "living sponge" watershed at all levels, low or high, in any given hydrographic basin. But we people must allow these animals to fill their respective niches. We must learn to value wildhorse- or-burro-containing ecosystems and let them realize their own internal harmony. Such an ecosystem is a unique and special community of living beings and kinds that restores so much that is truly valuable here in Nevada as in our nation and world. As members of Homo sapiens, our challenge is to learn to live in harmony with this enhanced natural home. And we can start by finding within ourselves sufficient humility to objectively observe, read up about, and thus come to better understand the wild-horse containing ecosystem. It is truly a God-send for our state as for the West in general, and I believe will prove key to restoring a wholesome way of life, leading us out of the destructive pitfalls of too much material indulgence and into a leaner but more spiritually awakened lifestyle and value system. The latter will heal and restore Nevada's life community, mend its broken links, and avert it from its present blind and arrogant, "same-old, same-old" path to destruction. As one who personally familiar with the potential for ecotours, believe me when I say that thoughtfully conceived, promoted, and realized ecotours to respectfully observe the returned native wild horses and burros together with all the other fascinating plants and animals of Nevada's basins and ranges would prove itself to be an absolute powerhouse for positively transforming our society. I know there are literally thousands of people both here in the Silver State and in other states and nations who are dying to come see, listen to, and experience the wild horses and burros living as God intended in their natural freedom. These animals have done so much for mankind over not just centuries but thousands of years, but their truer place is realized when living free in the biodiverse world of Nature as they have for many millions of years past. Their ongoing life and unfoldment into the future is something awesome, indeed, of which to partake; and I highly recommend that you get yourselves in touch with Las Vegas' vital organization America's Wild Horse Advocates, which has members who could get wild horse and burro photo safaris, nature hikes, etc., going right away.</p>	<p>Please review standard resource response REC-1 for a response to this comment.</p>
34061-5	<p>The lives of many wild horses and burros and their great draw for ecotourism would be terribly damaged by the proposed drainage of eastern Nevada's water. This project would have a devastating impact upon the small remnant populations of wild horses and burros and the hundreds of other plant and animal species that go together with them. Many springs upon which these species depend would be adversely affected by the gigantic draw-down of the regional aquifer, and it is disingenuous on the part of those persons preparing this Draft Environmental Impact Statement to omit presenting maps and discussions revealing the Zero-to-Ten Feet groundwater draw-down this project would entail. This omission ignores the pervasive, large-scale, detrimental effect upon naturally living plants and animals in the region who would be deprived of at- or close to- surface waters. Even a drawing of a few feet in a desert can drive many populations, marginally surviving subspecies, and even entire species to extinction. I know this drawdown of the regional aquifer would have a lethal effect on the scant remaining wild horses and burros here as well as hundreds of other species of interdependent animals and plants that form their natural community.</p>	<p>Please review section 3.13 (wild horses), 3.18 (socioeconomics and environmental justice), and 3.9 (recreation) for information relevant to this comment. Please also see standard resource response REC-1.</p>

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34061-6	<p>What would our already abused Nevada look like after this project? Take a trip to the Near or Middle East and you will see just what a barren and relatively lifeless wasteland a once healthy desert can become! And this devastating effect would not be just for Nevada but also for significant parts of Utah including at least five wild horse Herd Management Areas: Choke Cherry, Confusion, Conger, Kingtop and Sulfur, the latter of which contains a rare Spanish barb population stemming from the early Spanish explorers who came here in the 1600's. Herds affected in Nevada would include many I have visited, including the twelve of the Caliente Complex, which though unfairly zeroed out by BLM Ely District in 2009, legally could and should be restored; the Eagle complex of HMAs, the Pancakes, and the Triple B Complex of HMAs, as well as Antelope East HMA. These contain remnants of the historic Shoshone herds and their further diminishment due to the major depriving of water by the Groundwater Development Project would strike at Nevada's very soulful quality of life. With the draw-down being contemplated, there simply wouldn't be enough water left for these herds, and the federal authorities would simply opt to zero them all out. As usual, it would be the horses and burros who would continue to be set up for elimination - those who offer the most for truly restoring the lands. This must not be allowed!</p>	<p>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.</p>
34061-7	<p>The affected areas of the Groundwater Development Project would encompass ca. 20,000 square miles, an area about the size of Vermont, would affect 35 hydrographic basins, five National Wildlife Refuges, four State Wildlife Areas, several State Parks and two National Parks including the Great Basin National Park. It would jeopardize 305 springs, 112 miles of streams, 8,000 acres of wetlands- the vital lifeblood of the desert and home to the majority of its biodiversity- and destroy 191,506 acres of shrub land wildlife habitat, including areas that are of vital survival value for the threatened Great Basin Sage Grouse, Desert Tortoise and Pygmy Rabbit. It would cause the regional water table to drop anywhere from ten to 200+ feet over two centuries and much more during the five ensuing centuries. It would have a parching effect on the Earth's surface resulting in enormous quantities of dismal, pore-clogging dust particles and sand storms. The dust alone would increase by 34,742 tons per year. (For those wishing more information on these kinds of life-smothering effects, ask for me for my "Overgrazing Is By Mankind.")</p>	<p><div>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.</div></p>
34061-8	<p>BLM officials must reject this ecologically insane proposal by SNWA by selecting the No Action Alternative and denying Rights of Way for the project. This they must do in fulfillment of their legal duty to protect the Public Trust. Please extend DEIS comment period to 90 days as befits such a gargantuan proposal. Also please order a supplemental EIS addressing impacts from specific wells, disclose project costs, and assess the purpose and need for the project, for the latter has been seriously overlooked in the DEIS. You should delay your decision, because SNW A possesses no water rights, no well locations, and neither is there a shared water agreement that involves both Nevada and Utah, the two states that would be enormously affected by this project. I again emphasize that this DEIS has failed to sufficiently analyze the many adverse impacts by the project on wildlife including wild horses and burros and how this would impact our quality of life both in the short- and long-term. All species are related.</p>	<p>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.</p>
34061-9	<p>With Global Climate Change, or Warming, increasing the DEIS must analyze how this project will exacerbate its effects. This DEIS notoriously fails to examine this life threatening global process that has been brought on by humanity's pollution of the atmosphere and for which we must ALL accept responsibility and respond accordingly.</p>	<p>Thank you for expressing your concerns. While statements of opinion do not require specific responses. Please see standard resource response Air-15.</p>
34061-10	<p>The Clark, Lincoln, and White Pine Counties Groundwater Development Project is an arrogant, ignorant and backward-thinking proposal that represents an extreme of hubris and disregard for the living world of Nature, its processes and its future on Earth - and for the crucial changes that are now needed to prevent tragic catastrophe for all of life - not man apart. It is blind tradition at its worse! What is needed instead is a bold new proposal to curb humanity's reckless addiction to unending expansion upon and exploitation of the Earth's life community including its so-called inanimate foundation in all of the very rocks, mountains and waters, all of which are inter-tied. Obviously, more water conservation is absolutely essential for Our Common Future as is energy conservation and eating less highly on the food chain, meaning less animal products. Also I view adversely the promotion of massive solar energy projects upon our Public Lands both in the Great Basin and elsewhere in the West. Many of these operate on water evaporation and consume enormous quantities of water. Instead, photovoltaic panels should occupy our rooftops by the thousands not our precious Public Lands! The latter need to be restored to Nature. Also, this way the common individual and ordinary citizen will get a piece of the revenue pie for energy sales generated above his/her head on his/her vacant rooftop. Our decision here is a no-brainer! What is so urgently needed today is a new direction based on a new value system, though ironically this newness involves going back to the basics of what sustains life and the common sense logic that will preserve life on our planet. And here we have much to learn from the natural lifestyle that was practiced for thousands of years by Native Americans, e.g the Paiute, the Shoshone ... We need to develop a lifestyle that consumes less and expands less into the domain of Nature. We must redefine our notion of progress to mean a greater refinement of our lifestyle and value system that establishes a greater harmony with all the Rest of Life and a restoring of its indispensable freedom. And by this word "freedom," I mean, not the liberty to destroy that far-righters have claimed but the liberty of each individual and its kind to realize their own unique and indispensable place in all of creation - and the mutual respect - yes, the charity, the true love - it takes to make this happen. May God help us all in honorably meeting this crucial challenge.</p>	<p>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.</p>

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Baker Area Citizens Advisory Board		
34877-1	Senior Water Rights. Not protected under DEIS. Big Springs has flow eliminated in most of the alternatives, other springs greatly affected. Against NRS. How can BLM have authority to okay a project that will break state statutes?	While the EIS recognizes existing water rights in Section 3.3, only the Nevada State Engineer has the authority to grant and manage Nevada water rights as described in both Chapters 1 and 3.3. These rights are granted by NSE only after careful consideration of the provisions of Nevada Revised Statutes. The BLM has chosen Alternative F as the preferred alternative, which shows fewer impacts to Big Springs than the alternatives that include Snake Valley. It may be helpful to also look at the impacts analysis for Alternative E, which analyzes water quantities slightly less than what the NSE granted in his rulings. Potential impacts to Big Springs would likely be somewhere between those presented for Alternatives E and F.
34877-2	Pipeline described isn't what it will be. Groundwater areas are shown to be north and south of Baker, but the pipeline stops south of Baker. Where will it go around? What size? What perennial creeks will be crossed? What cultural areas? SNWA needs to supply more information.	Your comments on the Draft EIS have been considered. Also see Standard Resource Response Gen-2 for a discussion on programmatic analysis and subsequent tiering under NEPA.
34877-3	Alternative needed that won't go into Snake Valley and won't affect Snake Valley resources.	Alternatives were analyzed that do not involve pumping in Snake Valley.
34877-4	Another alternative should exist that won't take 125+ years of recovery after 75 years of pumping (as mentioned in Section 3.3 and in one of the appendices).	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.
34877-5	Snake Valley 3M Plan Inadequate, and makes it sound like private property holders have virtually no say in forming the plan, reviewing it, or making sure that it is implemented correctly. (See appendix B.)	Thank you for your comment. Please see Standard Resource Response MM-1.
34877-6	Subsidence. The DEIS says 525 square miles will subside 5 feet or more. Will this cause the pipeline to break? Decrease property values? Who will pay for damages?	Monitoring and mitigation measures related to groundwater pumping impacts are focused on the framework and process at this stage of the project. Costs can be estimated when specific details are defined for these measures. Costing could be initiated after the Record of Decision for this EIS is completed and continue into subsequent NEPA analysis.
34877-7	Dust is a major health hazard. How will area residents be protected?	Please review standard resource response AIR-8, AIR-10 and AIR-14 for a response to this comment.
34877-8	Model only shows drawdown of 10 feet or more. Local springs, wetlands, even some wells would go dry with a smaller drawdown, More detailed model needed.	See response WR-1 regarding model development and the use of the model simulated 10-foot drawdown for the programmatic analysis of potential effects to water dependant resources.
34877-9	Information in Chapter 2 needs to be more specific so that the DEIS analysis can better specify where wells go, number of wells, size of pipelines, timeline, etc. Information being presented to the State Engineer right now is different than that presented in the DEIS.	See Standard Resource Response Gen-1 and Gen-2 for a discussion on programmatic analysis and subsequent tiering under NEPA.
34877-10	Why is the Snake Valley ROW being pursued now before Snake Valley hearing? If an ROW is granted, it could unduly affect the Nevada State Engineer.	A range of alternatives were analyzed in the EIS, some of which do not involve ROWs in Snake Valley.
34877-11	How long will this EIS be good for - 5 years? 10 years? 20 years? Ready to be pulled off the shelf for SNWA?	Although EISs do not have a set expiration date, they must be reviewed and updated periodically. The proponent will be required to update their POD. Additional review and analysis may be required before the proponent is issued a notice to proceed.
Center for Biological Diversity		
34284-1	The proposed project is ill-conceived, morally and ethically wrong and unneeded.	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.
34284-2	The proposed pipeline and especially the pumping of ancient groundwater to fill it would at the most fundamental levels destroy natural ecosystems and human communities located within its zone of impacts, which is far reaching, far beyond the physical locations of the pipeline right-of way ("ROW") or well locations.	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.
34284-3	The fossil groundwater intended to be pumped and mined ¹ largely comes from the carbonate aquifers of the White River and Great Salt Lake systems. There is much science to support the contention that these aquifers are inner-connected systems, and direct, indirect and cumulative impacts in one basin will have temporally removed impacts on the rest of the basins of the system. ¹ Throughout these comments the terms "mined" or "mining" will be used to describe the proposed pumping of groundwater to fill the pipeline. We believe these terms better describe the activity, since the pumping of 176,000 acre-feet per year of groundwater is by no means a sustainable venture. It will not only "capture" the annual recharge of the aquifer basins by precipitation, but also take the water needed by native plants that currently utilize it, resulting in the catastrophic impacts described in the DEIS and the subject of these comments.	Please review section 3.3 for a discussion of impacts to groundwater withdrawals
34284-4	Declines in groundwater elevations will in some areas exceed 200-feet, resulting in subsidence of an area over 3,000 square miles. This subsidence, besides threatening local water supplies and causing extensive infrastructure damage,	Section 3.2 (geology) and 3.3 (water resources) discuss the potential impacts for subsidence.

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34284-5	will dry up over 192,000 acres of iconic Great Basin shrubland, over 8,000 acres of wetlands, and adversely impact over 310 springs and 125miles of perennial streams. As a result of the loss of native vegetation and aquatic flows, hundreds of native species of plants and animals will be faced with extirpation or even in some cases extinction. At least 35 species of native springsnails, 14 species of rare desert fish, 4 species of amphibians, the greater sage grouse, southwestern willow flycatcher, pronghorn antelope, mule deer and elk, plus many other species are threatened by the core ecological changes that would be caused by the groundwater mining. Some of these species are already protected by the Endangered Species Act (“ESA”) such as the Moapa dace, White River spinedace, Pahrnagat roundtail chub, White River springfish, Hiko White River springfish and Pahrump poolfish, Big Springs spinedace, and southwestern willow flycatcher; other species have been found to be warranted for protections under the ESA, including the greater sage grouse and relict leopard frog; other species such as 35 springsnails and the northern leopard frog have been found warranted for a 12-month review under the ESA. Still others such as over 11 new or undescribed species of cave fauna or dozens of other aquatic or terrestrial species depend on the conditions of the Great Basin ecosystems and its ties to the groundwater systems, but have not received extensive inventory or scientific study.	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. Please review the revised sections 3.6 (wildlife) and 3.5 (vegetation) for updated information relevant to your comment.
34284-6	The subsidence and loss of native vegetation and water features will give rise to unrivaled clouds of new dust and particulate matter – some carrying radioactive materials deposited downwind from historic atomic weapons tests on the former Nevada Test Site. The DEIS discloses that over 37,000 tons of new dust per year will be generated as a result of direct or cumulative impacts. This source of hazardous particulate matter will pose serious health impacts on downwind communities, such as Salt Lake City, leading to increased diseases and rates of death. The dust will also impair the scenic and visual quality of the impacted basins and surrounding areas, including the Great Basin National Park and Congressionally-designated Wilderness Areas and potential Wilderness found in Wilderness Study Areas and Inventoried Roadless Areas.	Please see standard resource responses Air-3, Air-4, and Air-5.
34284-7	Rural communities and ranchers will be hard hit as their wells are contaminated from pollution seeping in from land surface cracks, and the need to re-drill and deepen their wells due to drops in groundwater elevation caused by the groundwater mining. Valuable local water that might have gone to foster increased local economic health and development, including water needed by proposed future solar renewable energy zones, will be “stolen” to fuel unsustainable growth in the greater Las Vegas Valley.	Please refer to standard resource responses SocEcon-5.
34284-8	The true irony and shame is that the Southern Nevada Water Authority (“SNWA”) does not need the proposed project to meet its current and reasonable future needs. The population basis that the SNWA used to forecast future supply needs are vastly outdated and irrelevant. By their own accounting in water resource plans and from data contained in third-party reports on future southern Nevada water supply and demand, enough water to meet needs far into the future could be obtained through enhanced indoor and outdoor conservation. Further into the future, new sources of water could be obtained from desalinization of ocean and other brackish water and possible augmentation of the Colorado River system with imported Mississippi River flood waters, among other options.	Thank you for your comment. The specifics of SNWA's projected water demand, the population growth projections embedded therein, and its consideration of alternative sources of water are outside the scope of this EIS. As noted in Sections 1.1 and 1.6, SNWA is acting within its statutory obligations and responsibilities in the development of its water plan, recognizing the long lead-times and uncertainties associated with securing additional water resources and major capital facility development. Standard Resource Responses Gen-3 and SocEcon-2 provide additional response to this comment.
34284-9	Our comments that follow will elaborate on these issues and others, and will cite to scientific and other data to substantiate them. The Center’s bottom-line request is that the BLM recognize the many deficiencies in the DEIS and, after further study and analysis, issue a supplemental DEIS that discloses the new results of analysis and make them available for further public review and comment. Perhaps the greatest need for such a supplemental arises from the fact that the SNWA has no current rights to groundwater to support such a pipeline, and further, this DEIS used hypothetical well locations to model impacts from the groundwater mining which in fact have no real scientifically supportable basis. The Center and its members wish to remain on any mailings or notifications of further developments in this or related NEPA processes, and thank the BLM for this opportunity to comment.	Thank you for your comment. Please see Standard Resource Response Gen-2 for a discussion of programmatic analysis and tiering.
34284-10	The DEIS errs in the way the Purpose and Need are developed and in the subsequent Alternatives that are analyzed. According to the Council on Environmental Quality (“CEQ”) regulations implementing the National Environmental Policy Act (“NEPA”), the Purpose and Need of an EIS shall:...briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action. 2The DEIS narrowly defines the Purpose as considering the SNWA’s request for construction and operation of a proposed groundwater conveyance system, and the Need as arising from responsibilities under the FLPMA to respond to such requests.3While when looked at in a narrow bureaucratic sense, this is factually correct, it does not address the CEQ requirements regarding the “underlying purpose and need”, which when reviewing the SNWA stated need under section 1.6 of the DEIS seems to be to meet the future water supply needs of the Las Vegas Valley, Boulder City and Laughlin.4	Thank you for your comment. The BLM agrees that the purpose and need statement is factually correct. As stated in revised chapter 1, it has been written in compliance with NEPA and BLM/DOI guidance and regulations. See also Standard Resource Responses Gen-1, Gen-2 and Gen-9.

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34284-11	In defining the water needs for these areas, the DEIS errs in using out-of-date information ⁵ to document the future supply demands. The reason this is important is that the information in the DEIS comes from 2008 data which only begins to reflect the current economic reality of the SNWA service area which is a declining population. Between 2009 and 2010, almost 50,000 left Clark County. ⁶ The economic turmoil being experienced in Nevada and Clark County are nationally known. Nevada leads the nation in home foreclosures and Clark County leads Nevada and is commonly reported as the “foreclosure capital” of the country. ⁷ In August of 2011, there were 5279 new notices of default issued, and there were over 62,500 houses in the various stages of the foreclosure process. ⁸	Thank you for your comment regarding underlying challenges in developed long-term economic and demographic projections, and the potential for unforeseen events to result in actual changes that vary from those projections. However, as noted in Sections 1.1 and 1.6, SNWA is acting within its statutory obligations and responsibilities in the development of its water plan, recognizing the long lead-times and uncertainties associated with securing additional water resources and major capital facility development. Consequently, the specifics of SNWA's projected water demand, the population projections that help drive that demand, and alternative sources of water are outside the scope of this EIS. Please refer to Standard Resource Responses SocEcon-2 and Soc-Econ-6.
34284-12	The DEIS states that based on 2008 data, the population of Clark County would surge to an estimated 3.65 million by 2035. However, using Information from the State Demographer’s Office October 2010 report, the population is forecasted to be between 1,979,045 based on the “low job growth” scenario, or 3,066,872 based on the “high job growth” scenario. ⁹	Thank you for your comment. The specifics of SNWA's projected water demand, the population growth projections embedded therein, and its consideration of alternative sources of water are outside the scope of this EIS. As noted in Sections 1.1 and 1.6, SNWA is acting within its statutory obligations and responsibilities in the development of its water plan, recognizing the long lead-times and uncertainties associated with securing additional water resources and major capital facility development. Standard Resource Responses Gen-3 and SocEcon-2 provide additional response to this comment.
34284-13	Despite rhetoric by elected officials that the economy is diversifying, facts suggest that tourism remains the primary economic driver by far. ¹⁰ According to the Bureau of Labor Statistics, unemployment in the Las Vegas-Paradise census area was 14% in July, 2011. ¹¹ Construction jobs had fallen from 95,000 in January 2008 to just under 40,000 in July 2011 – a 42% decline. ¹²	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. Please also see Standard Response Soc-Econ-2.
34284-14	Applying common sense, it would seem more likely that the 2030 population would be closer to the lower figure than the higher. Even applying an arithmetic mean of 2,522,958, the difference with the projected demand figure used in the DEIS is almost 550,000 people.	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. Please also see Standard Response Soc-Econ-2.
34284-15	This calls to question the true nature of the SNWA stated need, which in turn directly relates to the alternatives analyzed in the DEIS. Moreover, SNWA’s recent decision to abandon important conservation programs (such as by allowing homeowners to re-install water-wasting lawns) further calls into question SNWA’s purpose and its water “needs” estimates. To further call into question the need for the pipeline, General Manager Pat Mulroy stated on the “State of Nevada” public radio program, “We are not planning to build it”, in reference to the pipeline. She asserted that the SNWA merely want to have that option on the shelf in case it was needed in the future. ¹³ Purpose and need aside, this is in direct violation of federal regulations that require a construction be begun within 5-years of the issuance of a right-of-way permit. ¹⁴	Thank you for expressing your concerns regarding the SNWA need for the project. The Record of Decision will specify the terms related to the issuance of a right-of-way permit.
34284-16	The statement of purpose and need and the alternatives are closely linked since "the stated goal of a project necessarily dictates the range of ‘reasonable’ alternatives." City of Carmel, 123 F.3d at 1155. The Ninth Circuit recently reaffirmed this point in National Parks Conservation Assn v. BLM, 586 F.3d 735, 746-48 (9th Cir. 2009) (holding that "[a]s a result of [an] unreasonably narrow purpose and need statement, the BLM necessarily considered an unreasonably narrow range of alternatives" in violation of NEPA). The reason for the requirement that the purpose and need statement not be unreasonably narrow, and NEPA in general is, in large part to "guarantee[] that the relevant information will be made available to the larger audience that may also play a role in both the decision-making process and the implementation of that decision." Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 349 (1989). The agency should not attempt to limit its analysis or avoid robust public input but unduly narrowing the scope of the analysis, because "the very purpose of a draft and the ensuing comment period is to elicit suggestions and criticisms to enhance the proposed project." City of Carmel-by-the-Sea, 123 F.3d at 1156. The agency cannot circumvent relevant public input by narrowing the purpose and need so that no alternatives can be meaningfully explored or by failing to review a reasonable range of alternatives. The NEPA requires that a range of meaningful alternatives be explored in the environmental review process. 42 U.S.C. §§ 4332(C)(iii),(E). The agency must "study, develop, and describe appropriate alternatives to recommend courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources." 42 U.S.C. § 4332(2)(E); see also CEQ Forty Questions, 46 Fed. Reg. at 18027 ("Section 1502.14 requires the EIS to examine all reasonable alternatives to the proposal. In determining the scope of alternatives to be considered, the emphasis is on what is ‘reasonable’ rather than on whether the proponent or applicant likes or is itself capable of carrying out a particular alternative. Reasonable alternatives include those that are practical or feasible from the technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant." (emphasis in original)).	Based on this comment and others, Chapter 1 was revised to clarify the purpose and need statement. Please also see Standard Resource Response GEN-9.

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34284-17	The BLM attempts to avoid questioning the SNWA's approach and options for meeting the stated need through means other than a pipeline and groundwater pumping (mining) by stating, "The SNWA's projected requirement for in-state groundwater water resources, the timing of that requirement, alternative sources of water, priorities for expanding its water resource portfolio, conservation targets, water pricing by the SNWA's member water purveyors, or, the allocation of these water resources to serve growth or bolster supplies in times of drought", are outside the Scope of this DEIS.15Once again, the BLM errs in applying the NEPA. The CEQ addressed the issue of the requirement to analyze alternatives outside the jurisdiction or capability of the agency, when it stated:"An alternative that is outside the legal jurisdiction of the lead agency must still be analyzed in the EIS if it is reasonable. A potential conflict with local or federal law does not necessarily render an alternative unreasonable, although such conflicts must be considered."16	Please see Standard Resource Response Gen-3.
34284-18	The BLM acted arbitrarily and capriciously in not analyzing viable and reasonable alternative available to the SNWA for meeting its future water demands including maintaining and expanding conservation and efficiency measures.It is not the duty of the public to conduct analysis that should have been complete by the agency in the DEIS, but as points for consideration we offer the following.	Thank you for your comment. Please see Standard Resource Response Gen-3.
34284-19	The DEIS itself mentions the ability of conservation to generate "new" water to meet demand. The SNWA Water Resource Plan has a goal set by the Board overseeing the SNWA of reducing demand to 199 gallons per capita per day ("gpcd"), thereby saving approximately 276,000 acre feet of water per year ("afy") – an amount 100,000 afy more than the proposed action plans to provide via the pipeline.17 The savings would be achieved through enhanced indoor and outdoor water use efficiencies. What's more, this goal is still significantly above the gpcd of other desert cities such as Albuquerque, Phoenix and Tucson. Peter Gleick and Heather Cooley of the Pacific Institute recently prepared a study that found:"Furthermore, combining reductions in both projected population and per capita demand may completely eliminate the need for the new supplies. If SNWA reduced per capita demand to about 166 gpcd – higher than Los Angeles's current rate, and comparable to the current delivery rates of Albuquerque and Phoenix – by the year 2035, and population within Clark County grows to 3.13 million people instead of 3.65 million, 15 total water demand in SNWA's service area would be about the same as it is now."18	The draft and final EIS include the SNWA 2009 Water Resource Plan 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. Please see Standard Resource Responses SocEcon-2 and Gen-3.
34284-20	Related to this is establishing a program to incentivize the conversion of septic systems, often old and leaking, in the Las Vegas Valley to the municipal sewer system to afford the opportunity to collect and utilize this water usage for additional return flow credits. This author, when the Environmental Planning Manager for Clark County proposed such an idea to the SNWA, and based on internal studies, we estimated that an additional 5,000 acre feet of water could be generated through the resultant return flow credits.19 To date the SNWA has not acted upon our suggestion, but Pat Mulroy on KNPR responded to a caller regarding this option praised it and said it needed to be voiced more so it would pick up the support of local elected officials.20Note that the population level stated in this report is likely higher than expected.	Please review section 3.18 for information related to this comment. Please also review Appendix A for more information on Las Vegas Valley's conservation and water development strategies. The draft and final EIS include the SNWA 2009 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 SNWA Water Plan in its choice of the agency preferred alternative presented in this final EIS. Please see Standard Resource Responses SocEcon-2 and Gen-3.
34284-21	Another reasonable alternative routinely dismissed by the SNWA is that of ocean desalinization.21 Desalinization is operational around the globe, and most recently is being tied to renewable energy sources to reduce costs and its carbon footprint.22 Plans for a desal plant at Dana Point in Orange County, California estimate the total annualized cost of capital and operations to be approximately \$20 million, producing an acre foot of water for around \$1287, while stating that such cost is conservative and is decreasing as new and better technologies become available; it also does not have an associated renewable power source which would further decrease costs.23 Numerous other examples exist that show desalinization is a technologically feasible and economically viable option. In fact, Pat Mulroy stated on the previously noted public radio program that the SNWA will one day be a partner in desalinization, most likely with Mexico.24 While desalination may also have environmental impacts, the BLM should have considered it as an alternative and studied the potential impacts of the proposed project in that context. Applied to the SNWA need, for example, desalinated water could be traded with Mexico and California for Colorado River water over the short term, while solar powered pumping stations could be explored for a pipeline to carry desalinated water to Las Vegas via the most favorable gradient route for the long term – if needed.	Thank you for your comment. Please see Standard Resource Response Gen-3.
34284-22	Another alternative would consist of a collection pipe in the lower end of the Imperial Irrigation District to collect drain flows which are about 3000 PPM salt and pipe them to a solar powered desalting plant to lower the water to 900 PPM. The fresh water would be piped to the exit of the All American Canal to be delivered to the farms. The water saved from the Saltan Sea would be credited to the SNWA in Lake Meade and delivered its customers. The amount of water would likely be at least 500,000 acre feet and with return flows it may be as much as 750,000 ac feet.	See Standard Resource Response Gen-3.
34284-23	Another alternative that the SNWA has publically proposed be studied is the augmentation of Colorado River water with flood flows from the Mississippi River. Mulroy stated on KNPR, "One man's flood water is another man's water supply.25	See Standard Resource Response Gen-3.
34284-24	The BLM must prepare a supplemental DEIS that analyzes the enhanced conservation, desalinization, and other alternatives to the proposed pipeline, and make the supplemental review available for public review and comment.	See Standard Resource Response Gen-3.

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34284-25	The DEIS segments its analysis of the impacts from the proposed project in violation of the NEPA. In this DEIS, the BLM explains that they are utilizing a "tiered" approach to the NEPA requirements for the project. In tier 1, represented by this DEIS, they propose to analyze the site specific impacts from the actual construction of the pipeline, which at the same time performing a programmatic analysis of the impacts from the pumping to fill that pipeline. Since specific well and lateral line locations are not presently known, the BLM proposes to conduct a second round of NEPA, a "subsequent tier" once the locations are finalized. They justify this approach by stating that the SNWA has informed them they will not file rights-of-way applications for the production wells and collector lines until after this EIS is finalized. ²⁶	A review of standard resource responses Gen-1 and Gen-2 may provide more information on this topic.
34284-26	A likely reason for at least part of this uncertainty is the fact that at present, the SNWA has no water rights in Spring, Dry, Cave, Lake or Delamar Valleys because a decision by the Nevada State Supreme Court stripped previously granted rights, or because the initial hearing has yet to be conducted as is the case in Snake Valley. ²⁷	Information in this comment has been superseded by recent NSE action. Chapter 1 contains the current updated information on this topic.
34284-27	According to CEQ regulations for implementing NEPA, tiering refers to: "the coverage of general matters in broader environmental impact statements (such as national program or policy statements) with subsequent narrower statements or environmental analyses (such as regional or basinwide program statements or ultimately site-specific statements) incorporating by reference the general discussions and concentrating solely on the issues specific to the statement subsequently prepared." ²⁸ In <i>South Fork Band v. DOI</i> , the court held that: "Though "tiering" to a previous EIS is sometimes permissible, the previous document must actually discuss the impacts of the project at issue. <i>Muckleshoot Indian Tribe v. U.S. Forest Service</i> , 177 F.3d 800, 810 (9th Cir. 1999) (holding that reliance on the EIS accompanying an earlier planning document was improper because it did not discuss the subsequent specific project in detail). The mere existence of an entirely separate draft EIS, discussing a similar issue with regard to a different project, but without any indication that it discussed the specific environmental impacts at issue, cannot satisfy NEPA." ²⁹ NEPA's implementing regulations explain that agencies should consider connected, cumulative, and similar actions in the same impacts statement. "Connected actions" must "be considered together in a single EIS." <i>Thomas v. Peterson</i> , 753 F.2d 754, 758 (9th Cir. 1985); 40 C.F.R. § 1508.25(a)(1). Connected actions are those actions that: i. Automatically trigger other actions which may require environmental impact statements.ii. Cannot or will not proceed unless other actions are taken previously or simultaneously.iii. Are interdependent parts of a larger action and depend on the larger action for their justification.	Please see Standard Resource Response Gen-1 for a discussion of the programmatic analysis for this EIS and subsequent NEPA tiering. This Final EIS does consider connected, cumulative, and similar actions in the same impact statement.
34284-28	40 C.F.R. § 1508.25(a)(1). Where two actions are "inextricably intertwined" they are connected actions that must be considered together. <i>Thomas</i> , 753 F.2d at 759; <i>Save the Yaak Committee v. Block</i> , 840 F.2d 714, 720 (9th Cir. 1988). Likewise, cumulative actions "which when viewed with other proposed actions have cumulatively significant impacts [] should [] be discussed in the same impact statement." 40 C.F.R. § 1508.25(a)(2). Similar, reasonably foreseeable actions also should be considered together in the same environmental review document when the actions "have similarities that provide a basis for evaluating their environmental consequences together, such as common timing or geography," and the "best way to assess adequately [their] combined impacts [...] or reasonable alternatives" is to consider them together. 40 C.F.R. § 1508.25(a)(3). The requirements that connected actions, cumulative, and/or similar actions be evaluated together prevents an agency from dividing a single project into segments that individually seem to have limited environmental impact, but as a whole have considerable impact. See <i>Thomas v. Peterson</i> , 753 F.2d at 758. It is important for federal agencies to consider connected actions together in a single NEPA process as opposed to segmenting review. <i>Daly v. Volpe</i> , 514 F.2d 1106, 1110 (9th Cir. 1975) (where actions are interconnected in terms of fulfilling a joint purpose it may be necessary to conduct a single NEPA review); <i>Sierra Club v. U.S. Dept. of Energy</i> , 255 F. 2d 1177, 1184 (D. Colo. 2002).	Cumulative impacts are discussed in the EIS for all resources.
34284-29	It is clear that the BLM has segmented their analysis by going along with the SNWA's request for a tiered approach. The true impacts from the water pumping to fill the pipeline approved in tier 1 will not be known until after the pipeline EIS is finalized, after the State Engineer rules on the SNWA's water rights and after the completion of a second site specific EIS for the production wells and collector pipeline system. In addition, the SNWA General Manager, Pat Mulroy has publically stated that, "We are not planning to build it", in reference to the pipeline, saying they just wanted to have it on the shelf in case it was needed in the future. ³⁰	Please review revised chapter 1 for a discussion of this issue. See also Standard Resource Responses Gen-1 and Gen-2.
34284-30	Complicating the matter is the fact that the BLM must require that construction be initiated on each section of the pipeline within five years of issuance of the right-of-way permit. ³¹ For this to be realistic, it seems that the SNWA would have to have a decision from the envisioned second tier in-hand before they would be willing to begin the \$15.5 billion or more project. This is a speculative venture at best given that the development of this DEIS has been on-going since 2005.	Chapters 1 and 2 have been clarified on the timing of this project.

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34284-31	<p>At minimum, the BLM consider all of the impacts of the proposed project, along with impacts of the actual pumping at true production well sites as direct impacts of connected projects. Even assuming for the sake of argument alone that the impacts could be described as indirect effects or "secondary" or "induced" effects attributable to the transmission line upgrade and the projects that are dependent on and facilitated by that upgrade, the need for adequate coordinated environmental review is no less. See <i>City of Davis v. Coleman</i>, 521 F.2d 661 (9th Cir. 1975) (requiring agency to prepare an EIS on effects of proposed freeway interchange on a major interstate highway in an agricultural area and to include a full analysis of both the environmental effects of the exchange itself and of the development potential that it would create).</p>	<p>See Standard Resource Responses Gen-2 and SocioEcon-2.</p>
34284-32	<p>In a related concern, the BLM fails to consider the cumulative impacts from groundwater pumping in Lincoln County, Kane Springs and Coyote Springs, all previously approved by the agency under separate NEPA and all pumping from the same carbonate, interconnected groundwater aquifer system.</p>	<p>Cumulative impacts have been addressed as appropriate. Please see section 2.9 introduction for a discussion of the groundwater development cumulative assessment process and section 2.9.3 for groundwater consumptive uses included for the cumulative impact evaluations.</p>
34284-33	<p>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. BLM must disclose and consider all of the connected, cumulative and similar projects' significant impacts together. To do otherwise would be unlawful. Cumulative impacts analysis in multiple EISs is not sufficient where projects are so closely connected as here and will result in significant degradation of public lands that now serve multiple uses including providing high-quality occupied habitat for a threatened species. To correct these substantive deficiencies, the BLM must prepare a supplemental DEIS and provide it for public review and comments.</p>	<p>Please see Standard Comment Response Gen-1 for a discussion of programmatic analysis and tiering under the NEPA.</p>
34284-34	<p>The BLM fails to meet its obligations to protect rare species under the Endangered Species Act, Federal Land Management Policy Act and internal agency directives. Obligations under the Endangered Species Act ("ESA") Congress enacted the Endangered Species Act (ESA) , 16 U.S.C. § 1531-1544, et seq., in 1973, acknowledging that fish and wildlife species are of great value to the people of the United States and that many species in the US were at risk of extinction. The ESA was enacted, in part, to provide a "means whereby the ecosystems upon which endangered species and threatened species depend may be conserved...[and] a program for the conservation of such endangered species and threatened species..." 16 U.S.C. § 1531(b). The ESA "is the most comprehensive legislation for the preservation of endangered species ever enacted by any nation." <i>Tennessee Valley Authority v. Hill</i>, 437 U.S. 153, 180 (1978). The Supreme Court's review of the ESA's "language, history, and structure" convinced the Court "beyond a doubt" that "Congress intended endangered species to be afforded the highest of priorities." <i>Id.</i> at 174. As the Court found, "the plain intent of Congress in enacting this statute was to halt and reverse the trend toward species extinction, whatever the cost." <i>Id.</i> at 184. The ESA applies to all federal agencies in its scope, and its purpose is threefold: 1. To provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved; 2. To provide a program for the conservation of such endangered species and threatened species; and 3. To take such steps as may be appropriate to achieve the purpose of the international species conservation treaties.</p>	<p>Protection measures for federally listed and other special status species are included in the EIS as applicant-committed measures and additional mitigation. The monitoring and mitigation planning process will identify specific measures to protect environmental resources and special status species during subsequent NEPA; see Standard Resource Response MM-1</p>

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34284-35	<p>The ESA assigns responsibility to the U.S. Fish and Wildlife Service (FWS) to designate areas of critical habitat for listed species and implement recovery plans for listed species. The Act also requires that all federal agencies consult with FWS regarding actions, such as development of land management plans that may affect endangered or threatened species. 16 U.S.C. §§ 1533(a)(1)-(3) & 1533(f). Specifically, the FWS must ensure that any such plan “is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of [designated critical] habitat of such species...” 16 U.S.C. § 1536(a)(2). Thus, the BLM must consult with FWS regarding the adequacy of the proposed action to avoid jeopardizing any listed species or damaging critical habitat. Section 2(c) of the ESA establishes that it is “...the policy of Congress that all Federal departments and agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes of this Act.” 16 U.S.C. § 1531(c)(1). The ESA defines “conservation” to mean “...the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this Act are no longer necessary.” 16 U.S.C. § 1532(3). Similarly, Section 7(a)(1) of the ESA directs that federal agencies to “utilize their authorities in furtherance of the purposes” of the ESA. 16 U.S.C. § 1536(a)(1). In other words, the ESA requires both survival and recovery of a listed species.³² In order to fulfill the substantive purposes of the ESA, Federal agencies, such as BLM in this instance, are required to engage in consultation with the Fish and Wildlife Service to “insure that any action authorized, funded, or carried out by such agency...is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the adverse modification of habitat of such species... determined...to be critical...” 16 U.S.C. § 1536(a)(2) (Section 7 consultation). Section 7 consultation is required for “any action [that] may affect listed species or critical habitat.” 50 C.F.R. § 402.14. As part of the consultation, the action agency must first prepare a biological assessment. 16 U.S.C. § 1536(c)(1). Although procedural, consultation is the backbone of the ESA. As the Ninth Circuit recognized, “[o]nly by requiring substantial compliance with the act’s procedures can we effectuate” Congressional intent to protect species. <i>Sierra Club v. Marsh</i>, 816 F.2d at 1384 (9th Cir. 1987). Section 7 embodies an explicit congressional decision to give first priority to conserving endangered species, a priority that overrides other statutory missions of federal agencies.³³ In applying section 7, an agency must “give the benefit of the doubt” to the species.³⁴ In fact, in language that “admits of no exception,”³⁵ the ESA requires federal agencies to “insure” that their actions are not likely to jeopardize the continued existence of threatened and endangered species or adversely modify the species’ designated critical habitat.³⁶ In this way, an agency complies with the ESA’s policy of “institutionalized caution.”³⁷ In meeting this unambiguous and “rigorous” requirement,³⁸ agencies must base their decisions on the best scientific and commercial data available.³⁹³² <i>Sierra Club v. U.S. Fish & Wildlife Serv.</i>, 245 F.3d 434, 441–42 (5th Cir. 2001) (“‘Conservation’ is a much broader concept than mere survival. The ESA’s definition of ‘conservation’ speaks to the recovery of a threatened or endangered species.”); <i>Gifford Pinchot Task Force v. U.S. Fish & Wildlife Serv.</i>, 378 F.3d 1059, 1070 (9th Cir. 2004) (“[T]he ESA was enacted not merely to forestall the extinction of species (i.e., promote a species survival), but to allow a species to recover to the point where it may be delisted.”).</p>	<p>The BLM is consulting with the USFWS for the agency preferred alternative. Mitigation is proposed for federally listed species and their critical habitat. Please see Standard Resource Response MM-1.</p>
34284-36	<p>Obligations under the Federal Land Policy and Management Act (“FLPMA”) FLPMA requires BLM to “take any action necessary to prevent unnecessary or undue degradation of the lands” and “minimize adverse impacts on the natural, environmental, scientific, cultural, and other resources and values (including fish and wildlife habitat) of the public lands involved.”⁴⁰ It further requires the BLM to issue permits with terms and conditions that, “minimize damage to scenic and esthetic values and fish and wildlife habitat and (to) otherwise protect the environment”, and “protect federal property”.⁴¹ Federal water rights, particularly reserved rights are federal property and the BLM must ensure, under the force of law, that ground water pumping by the SNWA does not adversely impact these rights.⁴² The BLM in this DEIS has failed to properly identify and analyze impacts to the resources including the listed and sensitive species in the project area. As will be detailed below, the BLM’s failure in this regard violates the most basic requirements FLPMA and undermines the BLM’s ability to ensure that the proposal does not cause unnecessary and undue degradation of public lands. See <i>Island Mountain Protectors</i>, 144 IBLA 168, 202 (1998) (holding that “[t]o the extent BLM failed to meet its obligations under NEPA, it also failed to protect public lands from unnecessary or undue degradation.”); <i>National Wildlife Federation</i>, 140 IBLA 85, 101 (1997) (holding that “BLM violated FLPMA, because it failed to engage in any reasoned or informed decision making process” or show that it had “balanced competing resource values”).</p>	<p>As noted in Standard Resource Response WR-9 concerning federal reserved water rights, BLM has considered all impacts to water sources and these impacts have been summarized, evaluated and considered in the EIS. Further, BLM is evaluating the ROW application in accordance with FLPMA and LCCRDA and will identify necessary and appropriate terms and conditions in the ROD and in any ROW granted as a result of the ROD.</p>
34284-37	<p>Obligations under BLM Internal DirectivesThe sensitive species are those that have been identified by the BLM Nevada State Office as sensitive under BLM Manual 6840.2. These species are species of concern that occur on BLM administered lands for which the BLM has the capability to significantly affect the conservation status through management. This direction establishes that, “...the BLM shall designate Bureau sensitive species and implement measures to conserve these species and their habitats, including ESA proposed critical habitat, to promote their conservation and reduce the likelihood and need for such species to be listed pursuant to the ESA.”</p>	<p>See Standard Resource Response MM-1. The COM Plan would be implemented to protect resources including BLM sensitive species and their habitat.</p>

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34284-38	<p>Section 6840.2 C. on implementation of this direction provides:a. On BLM-administered lands, the BLM shall manage Bureau sensitive species and their habitats to minimize or eliminate threats affecting the status of the species or to improve the condition of the species habitat, by:b. Ensuring that BLM activities affecting Bureau sensitive species are carried out in a way that is consistent with its objectives for managing those species and their habitats at the appropriate spatial scale.c. Working with partners and stakeholders to develop species-specific or ecosystem based conservation strategies.d. Considering ecosystem management and the conservation of native biodiversity to reduce the likelihood that any native species will require Bureau sensitive species status.</p>	<p>See Standard Resource Response MM-1. The COM Plan would be implemented to protect resources including BLM sensitive species and their habitat.</p>
34284-39	<p>e. The absence of conservation strategies, incorporate best management practices, standard operating procedures, conservation measures, and design criteria to mitigate specific threats to Bureau sensitive species during the planning of activities and projects.</p>	<p>See Standard Resource Response WL-3.</p>
34284-40	<p>DEIS InadequaciesDeacon, et. al. estimated that 157 at-risk species are threatened by the proposed ground water mining.⁴³ While the BLM has done a partial job of cataloging the biological resources of the “region of study”, the proposed action fails miserably to meet the agency’s obligations under the ESA, FLPMA and internal directives to protect, conserve and minimize adverse impacts. In what follows, these failures will be demonstrated through examples from the DEIS.</p>	<p>See Standard Resource Response WL-3.</p>
34284-41	<p>Aquatic Biological ResourcesSpecies that live in or around water such as amphibians, fish and invertebrates, and their habitats, are considered to be aquatic biological resources in the DEIS.⁴⁴ In Chapter 3.3, the BLM discloses that 307 springs could be adversely impacted by the ground water mining over the course of the 200 year study period. However, of these only 59 have been inventoried and documented.⁴⁵ The same table discloses that 112 miles of perennial streams could be adversely impacted.</p>	<p>The EIS discloses specific impacts on perennial springs and streams that support game fish and special status aquatic species. Although inventory information is lacking for numerous springs, the EIS acknowledges that invertebrates could be adversely affected in any springs within the 10-foot drawdown areas.</p>
34284-42	<p>A concern about these figures, that will also be discussed in another section of these comments, is that the DEIS only shows the impacts for ground water pumping where the model indicated greater than a 10-foot drawdown. There was no disclosure of the impacts for areas with lesser drawdown, not any convincing discussion provided on why the less than 10-foot drawdown impacts were not important to species and ecosystems that could be adversely impacted. Depending upon the hydro-geologic characteristics of the specific aquifer, a 1-10-foot drawdown could conceivably impact hundreds of square miles and untold springs and streams, even to the point that they dry or suffer significant adverse impacts. Hence, the impacts on aquatic species and ecosystems will likely be greater than analyzed and disclosed in the DEIS. To correct this, the BLM must issue a supplemental EIS disclosing the impacts from groundwater drawdowns below the currently provided 10-foot level.</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>
34284-43	<p>Springsnails Springsnails are an umbrella species for the conservation of other wildlife, meaning that by protecting the ecosystem conditions on which springsnails depend, habitat would be simultaneously protected for other species. Protecting the springsnails will protect the springflow which sustains not only the snails but also myriad other wildlife species which would be negatively affected by spring desiccation due to groundwater pumping and spring diversion. Springsnails have narrow environmental preferences, and their presence indicates stable ecological conditions over time, which gives them high biogeographical significance. Springsnails exhibit habitat specificity and low dispersal ability, and endemism is prevalent. Because many springsnail species in the western United States are found at only one to a few isolated springs, they are at considerable risk of extinction. Endemic populations are particularly vulnerable to disturbance, and many organisms unique to the Great Basin have experienced declines in distribution and abundance, including 16 taxa which have already gone extinct.⁴⁶ On February 17, 2009, the Center for Biological Diversity (“Center”) petitioned the U.S. Fish and Wildlife Service through the Department of Interior to seek protections for 42 species of springsnails found in the Great Basin of Nevada and Utah under the Endangered Species Act.⁴⁷ Twenty-five of the petitioned species are found in the area potentially impacted by the proposed action.⁴⁸ On September 13, 2011, the FWS published a positive 90-day finding in the Federal Register for 35 of the species – all of which are found in the DEIS to some degree, Table F3.7- 13C being the most comprehensive location.⁴⁹ The Camp Valley pyrg was the only springsnail species included on the table which did not receive a positive 90-day finding, and will be further discussed later in this section.</p>	<p>Thank you for the comment regrading springsnails. The EIS acknowledges the importance of springsnails and their spring habitats. Please review updated section 3.7 for further information.</p>
34284-44	<p>In addition, the Nevada BLM State Director has designated six of the potentially affected springnails as sensitive species protected under BLM Manual 6840.2.⁵⁰ All these species have been petitioned for protections under the ESA and are included in the 25 species mentioned above.</p>	<p>The petitioned springsnail species are included in the impact analysis.</p>
34284-45	<p>There are at least a dozen other species of springsnails not yet petitioned for protection under the ESA or BLM Manual 6840.2 that if adversely affected could rise to the level of concern that such protections would be initiated.</p>	<p>Other special status springsnail species (e.g., BLM sensitive) are included in the impact analysis.</p>

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34284-46	According to groundwater modeling done by the proponent, six of the petitioned species' habitats would experience changes in spring flow ranging from 17 to 100% of normal. Four others would experience reductions ranging from 1 to 3%, and for the other 15, there is not adequate data and information to form an estimate. ⁵¹ These impacts are based on habitats within the 10-foot drawdown area and do not take into account impacts resulting from less drawdown, which is a speculative and unsupported assumption.	The method of using the 10-foot drawdown area on a regional scale is a reasonable and appropriate approach for this EIS. Additional details on the methodology are provided in Section 3.3.2.8, Defining the Drawdown Area.
34284-47	To further document the destruction, the DEIS discloses that, "Flow reductions in Big Springs Creek and Lake Creek could result in substantial loss of habitat and aquatic species", and that, "Substantial flow reductions in Butterfield, Flag and Wambolt springs could result in the loss of Butterfield, Flag and Lake Valley pyrg populations due to their limited occurrence (one spring/one basin)". ⁵² By "loss" is meant extinction. Another example of the dire impacts that would be suffered by springsnails is the example of the Longitudinal gland pyrg who's habitat at Big Springs, which currently flows at 4289 gallons per minute, will be completely dry by 75- years after full build out and who's other three spring habitats would be adversely impacted, but data does not exist to ascertain to what degree. ⁵³	The purpose of the EIS analysis is to disclose potential project impacts on environmental resources. The BLM appreciates that you have identified specific concern for these aquatic species and their habitat. Your comment has been considered in the development of additional mitigation in the EIS.
34284-48	As previously mentioned, the Camp Valley pyrg was the only springsnail petitioned in the pipeline pumping study area to not receive a positive 90-day finding. ⁵⁴ The Center believes this was due to the fact that the DEIS falsely asserted that there would be no impacts from the ground water mining on this species. ⁵⁵ Careful inspection of Figure 3.3.3-5 however, reveals that at the 200-year mark, when cumulative effects are considered, the spring home to this species along Camp Valley Creek in Spring Valley Basin 201 is likely to be impacted by a 10 to 50-foot drawdown. ⁵⁶ The resolution and scale of the map provided does not allow for a more precise statement. The Center is also concerned that by failing to disclose drawdown impacts less than 10-feet, the BLM has been less than forthcoming regarding the potential impacts on this species.	This spring was added to the analysis. The results indicated risk to the spring for the No Action (200 year time frame) and Alternative D (75 and 200 year time frames. No effects were indicated for the Proposed Action and Alternatives A - C and E and F.
34284-49	A review of the DEIS, makes it is very clear that imperiled and seemingly protected species of springsnails will be highly vulnerable to impacts from the proposed pipeline that may well lead to their extinction. Nowhere in the DEIS has the BLM disclosed why or how approval of the proposed action would not go against their obligations under the ESA, FLPMA or the BLM Manual 6840.2.	<p>Potential impacts to springsnails and other sensitive species are identified and evaluated in section 3.7 in accordance with BLM's NEPA guidelines and BLM's obligations under the ESA, FLPMA, and BLM Manual 6840. In addition, the U.S. Fish and Wildlife Service will prepare a Biological Opinion in accordance with Section 7 of the ESA and is acting as a cooperating agency for preparation of the EIS.</p> <p>Springsnail occurrence within the region of study is listed in EIS Appendix F, Table F3.7-7. The list of springsnail species includes those considered to be BLM sensitive or special status in Nevada or Utah. Specific biological surveys conducted in springs within the groundwater development areas identified the presence of springsnails in two springs: an unnamed spring south of Caine Spring in Snake Valley and an unnamed spring east of Cleve Creek in Spring Valley.</p> <p>Six of the BLM sensitive springsnails and an additional 20 springsnail species have been petitioned for federal listing (Appendix F, Table F3.7-1). USFWS negotiated a stipulated agreement with Wild Earth Guardians that will lead to a listing determination by the end of FY 2012 or early FY 2013 for four of the petitioned species that occur in the region of study (bifid duct pyrg, longitudinal gland pyrg, Hamlin Valley pyrg, and sub-globose Snake pyrg). The other petitioned species were included in a separate petition from the Center for Biological Diversity (2009). A 90-day finding on these species has not yet been published in the Federal Register.</p> <p>Four springsnail species (<i>P. breviloba</i>, <i>P. lata</i>, <i>P. sublata</i>, and <i>P. anguina</i>) are currently included as technical assistance species in the ESA Section 7 consultation for the GWD Project. The BLM has agreed to include these species in the consultation at the request of SNWA and the U.S. Fish and Wildlife Service, to develop mitigation and minimization measures to help avoid adverse impacts to these species. Please also see Standard Resource Response MM-1.</p>
34284-50	Amphibians As mentioned in the DEIS, there are four special status amphibian species located within the area potentially impacted by the ground water pumping – Northern leopard frog, Columbia spotted frog, relict leopard frog and the Arizona toad.	These four amphibian species were included in the impact analysis for this EIS.
34284-51	Amphibians As mentioned in the DEIS, there are four special status amphibian species located within the area potentially impacted by the ground water pumping – Northern leopard frog, Columbia spotted frog, relict leopard frog and the Arizona toad.	These four amphibian species were included in the impact analysis.

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ID	Comment	Response
34284-52	The Northern leopard frog is a species petitioned for listing under the ESA and has received a 90-day finding that a 12-month status review is warranted. It is protected by the state of Nevada and is considered to be “imperiled”. ⁵⁹ Crucial areas of its habitat such as Keegan, North Millick and South Millick Springs and the Shoshone Ponds area will be completely or nearly completely dried by the proposed action, leading to destruction of habitat and extirpation of the species. ⁶⁰ Other habitat could be equally impacted, but no hard data exists to quantify the threat. ⁶¹ It is a species to be provided protections under a conservation agreement, and is a BLM sensitive species.	Springs inhabited by northern leopard frog and potentially affected by groundwater drawdown are included in the Spring Valley Monitoring Plan as monitoring sites. Please see Standard Resource Response MM-1.
34284-53	The Columbia spotted frog is a species of concern in the states of Utah and Nevada, and is considered by both to be “imperiled”. ⁶² It is covered by an interagency conservation agreement which is to provide protections to preclude the need for further protections under the ESA. Insufficient data exists to assess the level of threat from the proposed action, but because they habitat is down gradient from Snake Valley basin, it can be expected to be impacted by any pumping that occurs there.	The EIS acknowledges that there is a slight risk of drawdown effects on springs in Tule Valley, some of which are habitat for the Columbia spotted frog. However, there is considerable uncertainty regarding the amount of subsurface flow between Snake Valley and Pine, Wah Wah, Tule, and Fish Springs valleys.
34284-54	The Arizona toad is a species protected by the state of Nevada as “imperiled”. It is found in the Lower Meadow Valley Wash, as well as other areas of Clark and Lincoln Counties not yet described or known. For unexplained reasons, the DEIS does not describe the impacts and threats to the toad either in Chapter 3 or Appendix F3.7.	The discussion of effects to the Arizona toad has been added to the Final EIS. See Section 3.7.2.9.
34284-55	A review of the DEIS, makes it is very clear that imperiled and seemingly protected species of amphibians will be highly vulnerable to impacts from the proposed pipeline that may well lead to their extinction. Nowhere in the DEIS has the BLM disclosed why or how approval of the proposed action would not go against their obligations under the ESA, FLPMA or the BLM Manual 6840.2.	The BLM is committed and responsible for protecting special status amphibian species. Please see Standard Resource Response MM-1 for additional information.
34284-56	A review of the DEIS, makes it is very clear that imperiled and seemingly protected species of amphibians will be highly vulnerable to impacts from the proposed pipeline that may well lead to their extinction. Nowhere in the DEIS has the BLM disclosed why or how approval of the proposed action would not go against their obligations under the ESA, FLPMA or the BLM Manual 6840.2.	The BLM is committed and responsible for protecting special status species including amphibians and their habitats. Please see Standard Resource Response MM-1 for additional information.
34284-57	The least chub is a species that has been petitioned for listing under the ESA by the Center and others, and is currently included in a settlement agreement between the Center and FWS which mandates a listing determination not later than 2014. ⁶³ It is also to be protected under an interagency conservation agreement and strategy, and is a Utah special concern species considered to be “critically imperiled”. ⁶⁴	The least chub is included in the impact analysis.
34284-58	The Bonneville cutthroat trout is states of Nevada and Utah protected as “critically imperiled”, a BLM and Forest Service sensitive species and to be protected under an interagency conservation agreement and strategy.	Bonneville cutthroat trout is included in the impact analysis.
34284-59	In addition to these named species in DEIS Chapter 3.7, there are other species of desert fish equally or more threatened by the ground water mining, but not mentioned in the DEIS, although some are listed in Appendix Table F3.7-13A. These species include: ⁶⁵ • Meadow Valley Wash desert sucker – State of Nevada “imperiled” and a BLM sensitive species. • Flannelmouth sucker – “critically imperiled and a BLM sensitive species (not in Appendix F3.7). In addition to these named species in DEIS Chapter 3.7, there are other species of desert fish equally or more threatened by the ground water mining, but not mentioned in the DEIS, although some are listed in Appendix Table F3.7-13A. These species include: ⁶⁵ • Meadow Valley Wash desert sucker – State of Nevada “imperiled” and a BLM sensitive species. • Flannelmouth sucker – “critically imperiled and a BLM sensitive species (not in Appendix F3.7).	All special fish species that occur within the regional study area were included in the impact analysis. Results of the impact analysis were provided in the Appendix F3.7 tables. Impact summaries were provided for other special status fish as a group due to the large number of species.
34284-60	By excluding the flannelmouth sucker, Clover Valley speckled dace, and Meadow Valley speckled dace from analysis and disclosure, the BLM has failed to meet its requirements under NEPA.	Special status aquatic species including the referenced fish were include in the impact analysis, with specific results provided in the Appendix F3.7 tables. Due to the large number of species, impact discussions used a combined summary of other special status fish species.
34284-61	For those species which had impacts analyzed and disclosed, the results were stunningly horrific. As disclosed in the DEIS, fish suffered many consequences of flow reductions in their habitat, such as those that would occur at springs and streams in the areas impacted by the ground water mining. Fish diversity of species present, abundance, behavior, growth rates and other physiological traits declined, while parasites and invasive species increased. ⁶⁶ Fish inhabiting springs are especially sensitive to changes in volume and flow as such parameters define the limits of their suitable habitat.	See Standard Resource Response MM-1. The COM Plan would be implemented to protect resources including aquatic species.

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ID	Comment	Response
34284-62	From the disclosure in Chapter 3.7, it is quite clear that local extirpations will occur if not out-right extinctions. Flows to Big, Keegan, and North and South Millick Springs will essentially go dry, wiping out relict dace, speckled dace, mottled sculpin, Utah chub, northern leopard frogs, and petitioned springsnails. ⁶⁷ Other springs such as Butterfield and Flag will experience habitat degrading flow reductions of nearly 20%, impacting the critical habitat for the endangered White River spinedace, White Rive sculpin, White River desert sucker, White Rive speckled dace, and several species of petitioned springsnails. ⁶⁸ Perhaps even more disconcerting are the 24 springs providing habitat for special status species that are disclosed as having negative impacts from the ground water mining, but not enough is known about the geohydrology to predict the impacts on the species of concern. ⁶⁹ For these species it is a game of chance on whether or not they will be afforded the opportunity for viability and survival. The promised monitoring and mitigation would be ineffectual and will be further discussed in another section of these comments.	The BLM is committed and responsible for protecting special status species. Please see Standard Resource Response MM-1 for additional information.
34284-63	Once again, it is clear that imperiled and seemingly protected species of fish and other aquatic life will be highly vulnerable to impacts from the proposed pipeline that may well lead to their extinction. Nowhere in the DEIS has the BLM disclosed why or how approval of the proposed action would not go against their obligations under the ESA, FLPMA or the BLM Manual 6840.2.	The BLM is committed and responsible for protecting special status species. Please see Standard Resource Response MM-1 for more information.
34284-64	The "surplus" ground water the SNWA hopes to mine is actually largely water needed and used by native plants and ecosystems for evapotranspiration ("ET"). The DEIS discloses that the modeling used suggests that there will be an 84% reduction in ET in Spring Valley, a 33% reduction of ET in Snake Valley and a 54% reduction of ET in the Great Salt Lake Desert Flow System, with a much lesser reduction in the White River Flow System south of Spring Valley. ⁷⁰	This information has been updated in the EIS. The NSE controls the amount of water to be used for beneficial use in the state of Nevada. Nevada State Water Law outlines the rules of beneficial use and environmental considerations. Please see standard resource response WR-19.
34284-65	The impacts from such reductions would result in a catastrophic ecosystem change in composition, structure and function. Plants utilizing surface or shallow ground water (phreatophytes ⁷¹ and meadow species) would be decimated and would be largely replaced by species not needed as much water. The DEIS discloses that, in response to a 10-foot or greater drawdown of ground water, meadows would become less vigorous and dry and be replaced by dry land species of grass, while the current basin shrublands, so valuable for wildlife habitat, would see canopy cover progressively thinned, and dominant plant composition change to dry land species, including invasive non-native species such as cheatgrass, which in turn will spark a wholesale change in the frequency and intensity of wildfires (fire regime). This in turn will fundamentally change the ecosystem values and services that the sites can provide. ⁷²	Please review Standard Resource Response Veg-1 for a response to this comment.
34284-66	Naumburg et.al. (2005), noted that, "Although changes in depth to groundwater occur naturally, anthropogenic alterations may exacerbate these fluctuations and, thus, affect vegetation reliant on groundwater. These effects include changes in physiology, structure, and community dynamics, particularly in arid areas where groundwater can be an important source of water for plants. To properly manage ecosystems subject to changes in depth to groundwater, plant responses to both rising and falling changes in depth to groundwater tables must be understood." ⁷³	Impacts to groundwater dependent vegetation are identified in the revised section 3.5 of the FEIS.
34284-67	The area of land that will be affected is staggering. The DEIS estimates that over the 200-year study horizon, 191,506 acres of basin shrubland will be impacted along with 8,048 acres of wetlands and meadows. ⁷⁴ Keep in mind that these impacts ignore changes from drawdowns less than 10-feet in nature. Hence, the impacts on terrestrial species and ecosystems will likely be greater than analyzed and disclosed in the DEIS.	Thank you for expressing your concerns related to the Draft EIS. Your suggestions have been carefully considered by the BLM, but have not resulted in changes to the analyses presented in this document. For a detailed explanation of the 10-ft drawdown contour, its use, and application, please see Standard Resource Response WR-1.
34284-68	There was no disclosure of the impacts for areas with lesser drawdown, and not any convincing discussion provided on why the less than 10-foot drawdown impacts were not important to species and ecosystems that could be adversely impacted. Depending upon the hydro-geologic characteristics of the specific aquifer, a 1-10-foot drawdown could conceivably impact hundreds of square miles and untold springs and streams, as well as countless acres of terrestrial habitats, even to the point that they dry or suffer significant adverse impacts. Hence, the impacts on terrestrial species and ecosystems will likely be greater than analyzed and disclosed in the DEIS.	Please see Standard Resource Response WR-1 for discussion regarding use of the 10-foot drawdown contour.
34284-69	To correct this, the BLM must issue a supplemental EIS disclosing the impacts from groundwater drawdowns below the currently provided 10-foot level.	Please see Standard Resource Response WR-1 for a discussion of the 10-foot drawdown.
34284-70	A further glaring omission in the DEIS is the complete absence of any analysis or disclosure of the effects of pumping on predatory mammals such as coyotes, cougar, bobcats, and badgers. Current conservation biology science recognizes the critical roles that predators play in healthy ecosystem function and the cascade of problems that occur when they are eliminated. ⁷⁵ Since the impacts to prey species due to large-scale vegetation and ecosystem changes are likely to be great and significant, it stand to reason the impacts on their predators will be at least as large.	The FEIS has been revised to include additional discussion on predators.
34284-71	To correct this problem, the BLM must issue a supplemental EIS disclosing the impacts from groundwater mining on predators found in the study area.	Please see Standard Resource Response WL-3.

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ID	Comment	Response
34284-72	Whenever such large and fundamental changes to ecosystems are made, all species and aspects of the system are impacted. The number of affected species in this case could easily number in the hundreds. However, the DEIS chooses to only analyze a subset of all the species that could be potentially impacts, apparently using a habitat surrogate approach. While taking this approach may have some validity in science, the BLM has failed to document and disclose why it feels such an approach is valid and for which specific species the very broad vegetative classifications are representing.	Species analyzed were determined through extensive scoping and interdisciplinary team processes discussed in detail in Chapter 1 of this EIS. Your comment on the Draft EIS has been considered, but has not resulted in changes to the document.
34284-73	To remedy this deficiency, the BLM must prepare a supplemental EIS which better documents the scientific basis for using vegetation as a surrogate for species, and disclose a complete listing of the species that will be impacted and to what extent.	Thank you for your comment. Analyses of effects to specific species have been performed to the extent possible at this programmatic level of analysis. Additional site-specific analyses will be performed during subsequent NEPA, as appropriate, to disclose the potential impacts to individual species.
34284-74	For sake of demonstration of the potential impacts, a few of the species that are included in the DEIS will now be explicitly covered in our comments, with the understanding that far more impacts will exist. These examples are meant to demonstrate the fundamental analysis and disclosure flaws found in the DEIS.	This comment should not have been bracketed as a comment.
34284-75	The greater sage grouse was found to be warranted for protections under the Endangered Species Act in March 2010. ⁷⁶ The sage grouse has also been identified by the BLM Nevada State Office as sensitive under BLM Manual 6840.276 Federal Register, March 5, 2010. See: http://www.fws.gov/mountain-prairie/species/birds/sagegrouse/FR03052010.pdf .	Information on this issue has been updated in the FEIS in section 3.6 (wildlife resources). Please also refer to standard resource response WL-2.
34284-76	Sage grouse, as the name implies, is closely allied and dependent on various stages of sage brush development for their life stages and survival. Grouse are found in different stages of sagebrush development depending upon the season and the needs of the grouse during that time. ⁷⁷ Despite the well-known importance of this habitat to sage grouse and other sagebrush obligates, the quality and quantity of sagebrush habitats have declined for at least the last 50 years and the welfare of the grouse mirrors this trend. ⁷⁸ ⁷⁹ Sage grouse have a strong fidelity to their display, breeding, summering and wintering areas. Male grouse typically travel up to 1.3 miles to their lek sites, while during the breeding season, females typically travel less than 3 miles, but up to 22 miles to nest. Sage grouse exhibit both migratory and non-migratory behaviors, and populations of the grouse can contain both behaviors. Non-migratory grouse usually do not travel more than 6 miles annually, although migratory birds typically travel 21 miles annually, but travels up to 100 miles have been documented. ⁸⁰ In general, sage grouse nests are placed under shrubs having larger canopies and more ground and lateral cover as well as in stands with more shrub canopy cover than at random sites. Sagebrush cover near the nest site was greater around successful nests than unsuccessful nests in Montana and Oregon, and successful nests were in sagebrush stands with greater average canopy coverage than those of unsuccessful nests. ⁸¹ Characteristics of sage grouse winter habitats are relatively similar throughout most of the species' range. Studies have shown that the grouse prefer sagebrush habitats with greater than 20% canopy cover. During winter, sage grouse feed almost exclusively on leaves of sagebrush. ⁸²	Please note response to your comment #75 above.
34284-77	As previously noted, the DEIS discloses that these types of basin shrublands will be dramatically altered in terms of structure and expanse, much to the detriment of the sage grouse.	Please note response to your comment #75 above.
34284-78	Faced with increasing demands on wild public lands to supply sites for renewable energy development, the Nevada Department of Wildlife ("NDOW") developed conservation standards to help protect and conserve the species and their habitats. ⁸³ This document gathered and synthesized the most currently available research and scientific knowledge regarding the topic, and represents the current state-of-the-art and science. While the proposed action is not an energy project, aspects of it such as transmission lines, well and pumping stations and the activity associated with the operations of the project are similar. To repeat, the Nevada standards for the conservation of sage grouse reflect the most current peer-reviewed science and the measures used by other states. They significantly strengthen the protections for the grouse by expanding the no occupancy/no disturbance areas. To highlight some of the more pertinent standards: ⁸³ Nevada Governor's Sage-Grouse Conservation Team. 2010. Nevada energy and infrastructure development standards to conserve greater sage-grouse populations and their habitats. 58 pages plus appendices.	Please refer to Standard Resource Response WL-2 regarding Greater sage-grouse revisions in the FEIS.
34284-79	Regarding the testing and exploration phase: "1. Avoid drilling and associated activities within 3 miles of an active sage-grouse lek whenever possible. 2. If drilling within 3 miles of an active sage-grouse lek is unavoidable, conduct drilling activities from 15 July to 30 November to avoid disturbing sage-grouse during the breeding, nesting, early brood rearing, and winter periods. a. Temporary noise shields should be constructed around portions of the drilling rigs and used on standard construction equipment. 3. Avoid drilling activities in identified winter habitat (even if outside a 3 mile radius from an active sage-grouse lek) from 01 December through 01 March to minimize disturbance to wintering sage-grouse. a. In areas where winter and nesting habitat overlap and drilling cannot be avoided during the winter avoidance period (01 December through 01 March) then noise reduction abatement techniques (equipment) should be utilized to help minimize disturbance. 4. Avoid drilling activities within 0.6 miles (1 km) of springs, meadows or riparian corridors in identified brood rearing habitat from 01 June through 01 September to avoid disturbance (access to water sources) during the brood rearing period." ⁸⁴	Please refer to Standard Resource Response WL-2 regarding Greater sage-grouse revisions in the FEIS.

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ID	Comment	Response
34284-80	<p>With regards to development site selection: “1. The NGSCT considers Category 1 habitats (leks and nesting habitat) irreplaceable and Category 2 habitats (quality winter and brood rearing habitats) critical to the long term persistence of sage-grouse populations. Energy or transmission development should be avoided within Category 1 and 2 sage-grouse habitats. 2. Energy development is strongly discouraged from occurring in Category 3 habitats; however, if unavoidable, projects in these habitats should be situated to minimize impact through placement in the least suitable portion of habitat. 4. Renewable energy developers are encouraged to pursue project development activities within Category 4 and 5 habitats within the range of sage-grouse in Nevada. 5. If habitat categories have not been identified for a certain area, energy facilities and transmission lines should not be sited within 3 miles of the nearest active lek location for non-migratory populations. • To the greatest extent possible, energy developers should work closely with NDOW and pertinent federal agency biologists to determine important nesting, brood rearing and winter habitats and avoid those areas. 6. Where populations of sage-grouse are considered migratory, energy facilities and transmission lines should not be sited within 3 miles of the nearest active lek location and should not be sited within the associated nesting habitat for that particular population. • Consideration should also be given to movement corridors between breeding, nesting, brood-rearing or winter habitat. These movement corridors may not be well defined unless significant radio marking investigations have been conducted for a particular population. It is recommended that these investigations take place where project proponents are proposing developments in likely movement corridors for sage-grouse. 7. No development should occur within a 0.6 mile (1 km) radius around seeps, springs and wet meadows within identified brood rearing habitats. “</p>	<p>Please refer to Standard Resource Response WL-2 regarding Greater sage-grouse revisions in the FEIS.</p>
34284-81	<p>With respect to the development and operational phases: “1. Where sage-grouse populations are non-migratory energy facilities should not be constructed within 3 miles of the nearest active lek site (see Chapter 1, Section C). 2. Where populations of sage-grouse are considered migratory, energy facilities should not be constructed within 3 miles of the nearest active lek location and should not be sited within the associated nesting habitat for that particular population. 3. If construction within 3 miles of an active sage-grouse lek is absolutely unavoidable, conduct construction activities from 15 July to 30 November to avoid disturbing sage-grouse during the breeding, nesting, early brood rearing and winter periods. • If pumping stations are placed within 3 miles of an active lek, consideration should be given, and attempts made to place these features in an area where noise would least impact the actual lek using topography to help mask noise. 5. Avoid practices that remove sagebrush cover in these habitat categories as they may be the most important areas to sage-grouse using these habitats. 6. No development or infrastructure features should be placed within 0.6 miles (1 km) of identified late brood rearing habitats, especially meadow complexes and springs. These features can provide a competitive advantage for avian predators; therefore increasing sage-grouse mortality during a period when birds may be susceptible. 7. A comprehensive monitoring plan approved by the Nevada Department of Wildlife will be required to monitor sage-grouse demographics, vital rates and movement patterns before, during and after the construction phase within Category 1 – 3 habitats. The Western Agencies Sage and Columbian Sharp-tailed Grouse Technical Committee provide sound recommendations in their Interim Guidelines for Evaluating the Impacts of Energy Development (Appendix D). 8. Within Category 1-3 sage-grouse habitats, a company representative should be on site to oversee compliance during construction and provide environmental training to on-site personnel. This individual is responsible for overseeing compliance with all protective measures and coordination in accordance with the permitting authority and resource agencies should have the authority to issue a “stop work order” if deemed necessary. 9. Human Activity (Daily Operations/Maintenance) • Vehicle trips should be limited to those times that would least impact nesting or wintering grouse: i. Vehicle trips should not occur on a regular basis within 3 miles of an active lek or in identified nesting habitats from 01 March through 15 May. 1) If vehicle trips are required during the lekking period, vehicles should only be operated from 10:00 a.m. to 5:00 p.m. daily. ii. Public access to construction areas should be limited if construction activities are occurring from 01 March through 15 May. “85</p>	<p>Please refer to Standard Resource Response WL-2 regarding Greater sage-grouse revisions in the FEIS.</p>
34284-82	<p>There are other standards found in the NDOW document pertaining to standards for associated infrastructure that should be included in any stipulations for this proposed project.</p>	<p>Please review responses to your comments #78-81 above. Please note that the revised FEIS has additional and updated mitigation that addresses these concerns.</p>
34284-83	<p>It is quite clear that the right-of-way and pumping impacts on sage grouse from the proposed action would be immense and the mitigation measures envisioned (such as 2-miles buffers from leks) less than those called for by NDOW standards and current best science.</p>	<p>Please refer to Standard Resource Response WL-2 regarding Greater sage-grouse revisions in the FEIS.</p>
34284-84	<p>Previously in these comments the characteristics of sage grouse nesting and brood-raising and winter habitats were briefly described based on work done by Connelly and his associates. The DEIS reveals that 280,006 acres of sage grouse nesting and early brood-raising habitat would be adversely impacted along with 351,839 acres of winter range.⁸⁶ These acreages amount to 59% and 75% respectively of the total available habitat.⁸⁷ We refer to the NDOW standards for an indication of the significance of these impacts. The standards state, “The NGSCT considers Category 1 habitats (leks and nesting habitat) irreplaceable and Category 2 habitats (quality winter and brood rearing habitats) critical to the long term persistence of sage-grouse populations. Energy or transmission development should be avoided within Category 1 and 2 sage-grouse habitats.”⁸⁸</p>	<p>Please refer to Standard Resource Response WL-2 regarding Greater sage-grouse revisions in the FEIS.</p>

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ID	Comment	Response
34284-85	By all accounts of the best available scientific information, it would appear that the impacts from the proposed ground water mining would set the viability of the sage grouse spiraling downward and would greatly contribute to the bird's threats of extinction. Nowhere in the DEIS has the BLM disclosed why or how approval of the proposed action would not go against their obligations under the ESA, FLPMA or the BLM Manual 6840.2.	The intent of the EIS process under NEPA is the disclosure of potential impacts related to a proposed project. Please see Standard Resource Response MM-1.
34284-86	The southwestern willow-flycatcher is a species protected as endangered under the ESA. ⁸⁹ On August 15, 2011, a notice appeared in the Federal Register announcing a proposal by FWS to revise the designation of critical habitat for this flycatcher. ⁹⁰ Among the areas to be designated in Nevada are the Key Pitman State Wildlife Management Area and the Paharagant National Wildlife Refuge. ⁹¹ The DEIS discloses that both the above area of critical habitat and the Meadow Valley Wash, another area of habitat for the flycatcher would be adversely impacted by the proposed ground water mining, due to the connectivity of the ground water flow system in the area. ⁹²	The FEIS analysis considers the Southwest Willow Flycatcher Revised Proposed Critical Habitat; this species and the revised proposed critical habitat will also be addressed through the ESA section 7 consultation.
34284-87	Once again, it is clear that imperiled and seemingly protected southwestern willow-flycatcher will be highly vulnerable to impacts from the proposed pipeline that may well lead to their extinction. Nowhere in the DEIS has the BLM disclosed why or how approval of the proposed action would not go against their obligations under the ESA, FLPMA or the BLM Manual 6840.2.	The intent of the EIS process under NEPA is the disclosure of potential impacts related to a proposed project. The BLM makes land use decisions under FLPMA based on the results of that disclosure. Multiple use under FLPMA does not preclude irreversible or irretrievable impacts to protected species or other elements of the natural or human environment. The BLM is working with the USFWS to address impacts to federally listed species as directed by the Endangered Species Act. The ESA consultation has been included in the FEIS.
34284-88	The desert tortoise is a species protected as threatened under the ESA. ⁹³ The proposed pipeline right-of-way would negatively impact 2350 acres of tortoise habitat, including 1759 acres of formally designated critical habitat. ⁹⁴	The purpose of the NEPA (EIS) process is to disclose potential project impacts. Please refer to standard resource response WL-3 for information relevant to this comment.
34284-89	The DEIS incorrectly assumes that the tortoise would not suffer any indirect impacts from the ground water mining aspects of the proposed action. ⁹⁵ Maps of the predicted drawdowns for the 200-year mark show up to 200-foot declines in parts of Delamar Valley, Kane Springs Valley and Pahranaagant Valley, all of which provide habitat for the desert tortoise. ⁹⁶ These declines threaten the species that the tortoise relies upon for its habitat, including creosote bush.	Indirect impacts to Desert tortoise from groundwater pumping are not anticipated as the tortoise does not depend on groundwater dependent vegetation. Creosote bush for example, is not dependent on groundwater.
34284-90	Again, it is clear that imperiled and seemingly protected desert tortoise will be highly vulnerable to impacts from the proposed pipeline that may well be adverse to their local populations and recovery. Nowhere in the DEIS has the BLM disclosed why or how approval of the proposed action would not go against their obligations under the ESA, FLPMA or the BLM Manual 6840.2.	The intent of the EIS process under NEPA is the disclosure of potential impacts related to a proposed project. The BLM makes land use decisions under FLPMA based on the results of that disclosure. Multiple use under FLPMA does not preclude irreversible or irretrievable impacts to protected species or other elements of the natural or human environment. The BLM is working with the USFWS to address impacts to federally listed species as directed by the Endangered Species Act. This information is in the FEIS.
34284-91	Native ungulates, including deer, elk, pronghorn and big horn sheep are important contributors to healthy and viable ecosystems. ⁹⁷ They are also a fundamental part of Nevada's natural heritage and a source of recreation for thousands of hunters. The adverse impacts to native ecosystems outlined in the Terrestrial Animal and Rare Plant Resources introductory section have dire consequences on native ungulate species: • Over 649,200 acres of pronghorn habitat, including 25,000 acres of crucial winter range affected; • Over 203,000 acres of mule deer habitat, including 17,000 acres of crucial summer and 58,000 acres of crucial winter range affected; • Over 195,000 acres of year-round elk habitat affected; and, • Over 15,900 acres of big horn sheep habitat affected.	As explained in the methodology section, the acreages in Table 3.6-11 of the FEIS are not the acreage of impact, but the acreages of overlap with the proposed groundwater development (GWD) areas. The location of future facilities within the proposed GWD areas is unknown, thus the programmatic approach to the analysis in this portion of the document. Maximum construction and permanent acreages are provided by Alternative in the text. For example, the Proposed Action (Section 3.6.1.9) would result in a total construction acreage disturbance (within the GWD areas) of between 3,590 and 8,410 acres. Of this, 2,374 to 5,536 acres, would remain permanently. Only a small percent (less than 1%) of the area within the GWD area would be impacted by future facilities. Tables in Appendix F, (e.g. F3.6-5) provide the percent of the GWD area that is habitat for the various species in order to help the reader understand the likelihood that future facilities will overlap with habitat. Still, only a total disturbance of 8,410 acres for the Proposed Action, for example, would be disturbed. The FEIS table 3.6-11 has been revised to include a footnote to reference the maximum acreages for each alternative.
34284-92	While not all these acres will be impacted to the same degree or intensity, large areas of habitat will none-the-less be destroyed or degraded.	Please review section 3.6 which discusses the potential wildlife impacts from the project's groundwater withdrawals.
34284-93	The proposed mitigation measure of providing artificial water sources for the ungulates will not address the adverse impacts caused by the loss of over 192,000 acres of basin shrubland habitat	Thank you for your comment. Please see Standard Resource Response MM-1.
34284-94	Although these species are not necessarily rare or imperiled, they are co-managed by NDOW, and are of cultural significance to both Native American Tribes and sportsmen with long-standing hunting traditions. The desert subspecies of big horn sheep is a BLM sensitive species.	Please review section 3.6 which discusses the potential wildlife impacts from the project's groundwater withdrawals.
34284-95	It should be clear from the above sections, the DEIS has failed to satisfactorily analyze and disclose the impacts to the species, ecosystems and the related human cultures, and to disclosed why or how approval of the proposed action would not go against their obligations under the ESA, FLPMA or the BLM Manual 6840.2. As such, the BLM must prepare a supplemental DEIS to rectify these substantive deficiencies, and make it available to the public for review and comment.	The intent of the EIS process under NEPA is the disclosure of potential impacts related to a proposed project. The BLM makes land use decisions under FLPMA based on the results of that disclosure. Multiple use under FLPMA does not preclude irreversible or irretrievable impacts to protected species or other elements of the natural or human environment. The BLM is working with the USFWS to address impacts to federally listed species as directed by the Endangered Species Act.

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34284-96	The purposes for which the NEPA was enacted are: "To declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation; and to establish a Council on Environmental Quality."98	Please review section 3.6 which discusses the potential wildlife impacts from the project's groundwater withdrawals.
34284-97	An integral way through which the NEPA process accomplishes its purposes is through the identification of mitigation measures. Measures considered to be mitigation include: "(a) Avoiding the impact altogether by not taking a certain action or parts of an action. (b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation. (c) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment. (d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action. (e) Compensating for the impact by replacing or providing substitute resources or environments."99	Thank you for your comment. Please see Standard Resource Response MM-1.
34284-98	A long-standing concern about mitigation in the NEPA context is with follow-through – was what was promised in a NEPA document and decision actually implemented, and if it was, did the action have the intended results? Earlier this year, the CEQ issued a memorandum for the heads of federal departments and agencies to clarify what was expected when mitigation is used in the NEPA process.100 The CEQ noted that failure to implement, document and monitor mitigation fails to advance the NEPA purpose of informed and transparent environmental decisionmaking and could undermine the very integrity of the Act.101	Thank you for your comment. Please see Standard Resource Response MM-1.
34284-99	We believe major portions of the proposed mitigation in the DEIS is flawed not only scientifically, but also legally, particularly with respect to CEQ regulations and memorandums. Stipulated Agreements and Monitoring, Management and Mitigation Plans The DEIS makes repeated incorporation by reference to several external documents created by Stipulated Agreements between Department of Interior Agencies and the SNWA – the Spring Valley and the Delamar, Dry Lake and Cave Valleys Hydrologic Monitoring and Mitigation Plans, and the draft Snake Valley Monitoring, Mitigation and Management Plan.102 Unfortunately, these plans have fundamental flaws which may them useless for purposes of this EIS and meeting the requirements of the NEPA. We will highlight the major ones in the following.	See Standard Resorce Response GEN-7 and MM-1 for a discussion of long-term mitigation and monitoring.
34284-100	Using the Spring Valley Agreement and Plan as a representative for the others, the general theme of these agreements and plans is that the federal agencies will drop or not file protests before the Nevada State Engineer with regards to any SNWA groundwater right applications in the covered valleys (basins). In return, monitoring, management and mitigation plans are to be mutually developed, which in theory would lead to achieving common goals such as studying and characterizing the groundwater flow systems, manage the development of groundwater by the SNWA to avoid unreasonable adverse effects to water-dependent ecosystems, and to avoid unreasonable degradation of the scenic values and visibility from Great Basin National Park due to particulate pollution and loss of surface vegetation (emphasis added).103	Please review standard resource responses MM-2 and MM-3 for information responsive to this comment.
34284-101	The agreement also established three groups to facilitate the implementation of the Monitoring, Management, and Mitigation Plan ("MMMP"). An Executive Committee ("EC") comprised of one manager from each of the parties to the agreement would be a decision body that receives and acts upon information and data from the other two groups. A Technical Review Panel ("TRP") comprised of one representative from each of the parties, would meet to address the geo-hydrologic concerns such as development of a regional groundwater flow numerical model, aquifer studies, and review of results from the monitoring of production pumping. A Biological Working Group ("BWG") would mirror the TRP but have the appropriate expertise related to water-dependent ecosystems. Both the TRP and the BWG would make recommendations to the EC on the needs and conduct of the MMMP.104	<div></div> Please review standard resource response MM-1 for information responsive to this comment.
34284-102	This structure is flawed for a number of reasons: 1. The structure could easily result in decision delays that could threaten ecosystems and species. All three bodies were to fulfill their purposes using consensus decision-making. Consensus is a long, often drawn out process, which can result in excellent decisions under the right circumstances, but also allows a minority of members to hold the others hostage in making a decision. The EC was to make decisions based on recommendations from the TRP and BWG, and if either of those groups could not reach consensus (no guidance as to the time allowed for consensus to be reached) would make the ultimate decision. Nothing in the agreement or plans describe upon what basis the EC was to reach consensus, leaving such decisions on the welfare of water-dependent ecosystems at rick to political rather than best- available science. If the EC could not reach consensus, the matter would be referred to the State Engineer or another agreed upon third-party.105 Given the number of layers and the time to reach consensus, it is quite probable that reaching an ultimate decision will take months and possibly years. Such delays when poorly understood groundwater systems and imperiled species are involved could lead to disastrous results.	Please review standard resource responses MM-1 and MM-3 for information responsive to this comment.

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34284-103	2. The system for collection of data, and its interpretation and handling and reporting is wide open to malfeasance. Another fundamental flaw is that the SNWA is the primary entity charged with data collection, handling, summarizing, analyzing, interpreting and reporting. This lack of unbiased oversight and control leads to dubious scientific credibility. A much improved structure would be to have a neutral third-party handle these tasks and then report them to the BWG and TRP.	Comments on the Stipulated Agreements were compiled and sent to the executive committee who provides oversight on the implementation of the agreements. Section 3.20 describes how BLM will use the conditions and information generated through the Stipulated Agreement process. Please also refer to standard resource responses MM-1, MM-2 and MM-3.
34284-104	3. The MMPS do not have pre-set biological triggers or threshold points to prompt action. Even if good, unbiased monitoring occurs, the question what it means to ecosystems and species remains. There is a lack of a priori biological or physical indicators that would trigger an appropriate reduction or stoppage of groundwater pumping to protect water-dependent ecosystems. Without such pre-set triggers, due to the factors discussed in #1 above, there could be a considerable delay in response which could imperil species or even drive them to extinction. Any monitoring or triggers should be conservative in nature and in accordance with the precautionary principle. The BWG should establish an acceptable range of variation of nested targets and ecological indicators.	Please see Standard Resource Responses MM-1, MM-2 and MM-3. Mitigation related to groundwater development will be included in subsequent NEPA and associated valley-specific COM Plans as described in section 3.20. All comments on the stipulated agreements have been provided to the executive committee overseeing the implementation of the Stipulated Agreements.
34284-105	Mitigation based on aquifer monitoring has an inherent problem with its efficacy – aquifer systems don't have instantaneous response times like a faucet, there are inherent delays in response to cessation of pumping. Bredehoeff and Durbin reported on this phenomenon in the journal Ground Water. They observed that particularly in large aquifer systems there is a delayed response between observation of an impact and its maximum effect, along with a long time lag between changing the stress and observing an impact at a distant location. The result is that the maximum impacts are larger than those observed when pumping is halted, and once halted the recovery to the pre-pumping state occurs very slowly – perhaps over a millennium for large systems.106	This article was reviewed and cited for this FEIS. Information on aquifer recovery is discussed in section 3.3 and in appendix F3.3. Please refer to standard resource responses MM-1, MM-2 and MM-3.
34284-106	SNWA proposes to reduce or cease groundwater withdrawals to avoid adverse unacceptable environmental impacts. Setting aside immense doubt and skepticism that once the pipeline is built that it will ever be allowed to have reduced flows, this mitigation is another case of something that sounds good, but which in fact is unreliable.	Please refer to standard resource responses MM-1, MM-2 and MM-3 for information relevant to this comment. All comments on the stipulated agreements have been provided to the executive committee overseeing the implementation of the Stipulated Agreements
34284-107	For this measure to have any hope of success, very detailed resource-specific thresholds and criteria for curtailing pumping in response to adverse impacts would need to be in place, based on soil and plant water requirements throughout the pumping impact area. In theory, for instance, if soil water needed by native plants is insufficient to sustain their health and vigor, pumping from well linked to discrete monitoring sites would then be shutdown or have pumping reduced. This theoretical mitigation measure, however, runs up against the problem of aquifer response time. Production wells can reduce spring flows and groundwater levels relatively quickly compared to the time needed for the water table to replenish and be able to supply the water needs in question.	Please refer to standard resource responses MM-1, MM-2 and MM-3 for information relevant to this comment. All comments on the stipulated agreements have been provided to the executive committee overseeing the implementation of the Stipulated Agreements.
34284-108	Nothing in the DEIS or MMMPs suggest a proposed measure with enough scientific vigor or specificity to address this concern. At best such a measure is speculative and a theory that should be subjected to small scale experimentation rather than being the foundational piece of mitigation.	Please review standard resource responses MM-1, MM-2 and MM-3 for information responsive to this comment.
34284-109	Given this uncertainty with timing and impacts, the use of the MMMPs as mitigation measures in the DEIS is highly inappropriate and scientifically unjustified.	Please review standard resource responses MM-1, MM-2 and MM-3 for information responsive to this comment.
34284-110	5. The Stipulated Agreements and MMMPs have low standards. As previously mentioned, the lack of a clear basis on which decisions will be made is a fundamental flaw. Likewise, goals and objectives modified with the undefined terms “reasonable” or “unreasonable” provide little or no certainty or assurance of what is being gained through the MMMPs. It is easy to produce a great sounding document, but without regulatory or other assurances, the words can be hollow and meaningless.	Comments on the Stipulated Agreements have been compiled and sent to the executive committee who provides oversight on the implementation of the agreements. Section 3.20 describes how BLM will use the conditions and information generated through the Stipulated Agreement process. Please also refer to standard resource response MM-1, MM-2, and MM-3.
34284-111	6. The Stipulated Agreements lack regulatory and other assurances that the mitigation measures proscribed will be actually carried out. The Stipulated Agreements governing the MMMPs include the provision: “Any commitment to funding by the DOI bureaus or the SNWA in the stipulation, including specifically any monitoring, management, and mitigation actions provided for in Exhibit A is subject to appropriations by Congress or the governing body of the SNWA as appropriate.”	Thank you for your comment. Please see Standard Resource Response MM-1.
34284-112	In the present (and long-term) political climate, funding from public sources is under extreme pressure. Long-term survival of the MMMPs is therefore highly speculative and even unlikely. The MMMPs as described will, over the long term, make aquatic biological resources in the area of impact increasingly dependent on continuation of the program, while the program itself becomes increasingly unlikely to exist.	Thank you for your comment. BLM has assembled all comments on the stipulated agreements and have provided them to the Executive Committee which oversees the implementation of the agreements. Please refer to standard resource response MM-3.

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34284-113	The EIS must acknowledge that fact and explain how it is to be overcome, and what adequate and reliable regulatory and administrative assurances will be put in place to ensure the MMMPs as included in the EIS will actually be implemented.	BLM's discussion of the stipulated agreements, which were negotiated in the context of the Nevada State Engineer proceedings, is by way of background information on design features of the proposed action intended to minimize potential impacts. EIS, Section 2.3.2. SNWA has committed to and BLM has considered mitigation measures beyond those in the stipulated agreements. BLM has also identified recommended measures that will be considered in subsequent NEPA analyses. These proposed measures, including but not limited to the Snake Valley 3M Plan (GW-WR-4), Applicant Committed CAM Framework (Appendix E), and other specific measures (Shoshone Ponds mitigation in GW-WR-5 and well and water rights mitigation in GW-WR-6), are consistent with CEQ's recommendations for mitigation measures. Processes will be put in place to ensure any mitigation requirements imposed as conditions of approval on the potential future right-of-way grants will be implemented and their effectiveness monitored.
34284-114	Reliance on the Stipulated Agreements and MMMPs violates the CEQ Memorandum on Mitigation Measures ¹⁰⁷ for several reasons. First, there is no clear and secure assurance in place that the SNWA will actually have the monies available to fulfill their commitments and nothing in place to address what would occur if they didn't. The CEQ memorandum addresses this concern in several places. First it states, "Agencies should not commit to mitigation measures considered in an EIS or EA absent the authority or expectation of resources to ensure the mitigation is performed." ¹⁰⁸	Thank you for your comment. Please see Standard Resource Responses MM-1, MM-2 and MM-3.
34284-115	Once the pipeline ROW is granted and water flowing in the pipe, it is not clear that the BLM would have any authority or leverage to enforce the implementation of the mitigation measures, particularly those in the MMMPs.	Thank you for your comment. Please see Standard Resource Response MM-1.
34284-116	The Memorandum also addresses the concern that SNWA is both the proponent and the monitoring agency, casting doubt on the credibility of any monitoring results and reports. Citing the Memorandum with respect to monitoring, it states, "Any outside parties consulted should be neutral parties without a financial interest in implementing the mitigation and monitoring plans, and should have expert knowledge, training, and experience relevant to the resources potentially affected by the actions and – if possible – the potential effects of similar actions." ¹⁰⁹	Thank you for your comment. Please see Standard Resource Responses MM-1, MM-2 and MM-3. Additionally, Section 3.20 describes an independent process for development of a monitoring, management and mitigation plan that is informed by the stipulated agreements consistent with the 2011 CEQ memorandum guidelines.
34284-117	Clearly, this is not the case under the Stipulated Agreements and MMMPs, where SNWA hold disproportionate power and control over the process (see previous comments on MMMPs). The Memorandum also calls for the agency to put in place a suitable tracking system to ensure the mitigation measures are implemented. It states that, "For mitigation commitments that warrant rigorous oversight, an Environmental management System (EMS), or other data or management system could serve as a useful way to integrate monitoring efforts effectively." ¹¹⁰	Please see response to above comment (#116).
34284-118	In the DEIS, the BLM is silent as to how it would achieve either implementation of effectiveness monitoring of the mitigation measures, seemingly deferring to and processes described in the Stipulated Agreements.	Please see Standard Resource Responses MM-1, MM-2 and MM-3. Mitigation related to groundwater development will be included in subsequent NEPA and associated valley-specific COM Plans as described in section 3.20. All comments on the stipulated agreements have been provided to the executive committee overseeing the implementation of the Stipulated Agreements.
34284-119	Finally, the CEQ Memorandum calls for full public involvement in implementation and effectiveness monitoring, stating: "Public involvement is a key procedural requirement of the NEPA review process, and should be fully provided for in the development of mitigation and monitoring procedures. Agencies are also encouraged, as a matter of transparency and accountability, to consider public involvement components in their mitigation and monitoring programs." ¹¹¹	Thank you for your comment. Please see Standard Resource Response MM-1. Please also refer to section 3.20 which describes the public involvement process associated with the monitoring, management and mitigation plan developed through the EIS for this ROW.
34284-120	From what is disclosed in the DEIS, it is unclear how the BLM envisions including the public in monitoring the SNWA's commitments for mitigation and holding them accountable.	Please refer to standard resource responses MM-1, MM-2 and MM-3 for information relevant to this comment. All comments on the stipulated agreements have been provided to the executive committee overseeing the implementation of the Stipulated Agreements
34284-121	DEIS specific measures Apart from incorporating the stipulated agreements and MMMPs in to the project mitigation, the DEIS also envision a number of other actions, some appropriate other not, as well as important omissions. A general concern we have is that there is no comprehensive place to go in the DEIS that documents all the intended mitigation measures and applicant committed protection measures ("ACM"). Indeed, while some ACMs can be found in section 2.5.3 of the DEIS, others designated as ACM C only appear scattered among the various sections.	In response to this comment and others, text has been added to the EIS. Please refer to section 3.20. Please also refer to standard resource response MM-1.
34284-122	We document our specific concerns in the following: • Sage Grouse Protections. Construction and ROW mitigation measures should incorporate the Nevada Governor's Sage Grouse Conservation Team's energy and infrastructure development standards to conserve sage grouse and their habitats. ¹¹² These standards incorporate the best available science and state-of-the-art for sage grouse conservation. Among other things, they impose timing considerations not found in the DEIS. ACM-B.5.1 violates these Nevada Standards. • ROW-WL-1: Big game restoration and habitat improvement. Despite promises that key habitat will be replaced on a 2:1 basis, given the magnitude of the habitat degradation expected over a 200-year and beyond horizon, there can be no assurances that this will even be feasible or a possibility. • ROW-WL-6: Sage grouse habitat restoration. Given the magnitude of the habitat degradation expected over a 200-year and beyond horizon, there can be no assurances that this will even be feasible or a possibility.	Please refer to general comment response WL-2 regarding Greater sage-grouse revisions in the FEIS. Mitigation measure ROW-WL-1 described in section 3.6 is intended to address mitigation for acreages of key big game habitat converted to permanent facilities.

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34284-123	<p>• <input type="checkbox"/> GW-G-3: Subsidence Monitoring. Monitoring along is not a sufficient mitigation measure with regards to land subsidence. Subsidence causes fundamental changes in hydrological and ecological process, as well as damaging or destroying human infrastructure. A plan with monitoring thresholds should be put in place to detect early problems associated with subsidence, and a method to effectively deal with the impacts.</p>	<p>Potential impacts related to groundwater pumping have been addressed at a programmatic level in this EIS. Subsequent NEPA will be required to determine and disclose site-specific impacts and develop site specific COM Plans. Please see Section 3.20 for more information. Please also refer to standard response MM-1.</p>
34284-124	<p>GW-WL-1: Same remarks as for ROW-WL-1.</p>	<p>Mitigation measure GW-WL-1 described in section 3.6 is intended to address mitigation for acreages of key big game habitat converted to permanent facilities.</p>
34284-125	<p>GW-WL-2: Violates Nevada Standards for sage grouse conservation</p>	<p>Please refer to standard resource response WL-2 regarding Greater sage-grouse revisions in the FEIS.</p>
34284-126	<p><input type="checkbox"/> ACM C 1.16 and ACM C 1.42 – monitoring of spring discharge and stream flow should be regularly disclosed to the public, particularly those aquatic bodies that have special status species or other specific concerns, not just Big Springs and Cleve Creek.</p>	<p>Please refer to standard resource response MM-1 for information relevant to this comment.</p>
34284-127	<p>ACM 1.38 – see comment regarding ACM 1.16.</p>	<p>Please refer to standard resource response MM-1 for information relevant to this comment.</p>
34284-128	<p>ACM C 1.42 pertaining to sage grouse breeding and late brood rearing – while monitoring the impacts from the water mining is good, there is no affirmative action required to mitigate what can be expected to be devastating effects. See ROW WL-6.</p>	<p>Thank you for your comment. Since the release of the Draft EIS, the BLM has issued IM 2012-043, which provides greater sage-grouse interim management policies and procedures. The IM requires the BLM to work with applicants to minimize habitat loss, fragmentation, and direct and indirect effects to greater sage-grouse and its habitat. Further, the IM requires BLM to work with NDOW to assess the impacts to greater sage-grouse and its habitat, ensure that reasonable alternatives are considered, and to identify technically feasible BMPs and conditions that may be implemented in order to eliminate or minimize impacts. Through the technical assistance process, the USFWS will also be involved with this coordination, which will result in development of specific mitigation, minimization, and/or avoidance measures.</p>
34284-129	<p>ACM 2.1 – the question begs to be asked, are there any available water rights that the SNWA can acquire for special status species recovery, and if there water rights available will the water quality and chemistry match the species habitat needs? This ACM is an empty feel good promise.</p>	<p>Thank you for your comment. During preparation of the final Plan of Development, SNWA will be provided comments specific to their applicant committed measures.</p>
34284-130	<p>ACM C2.15 is at least a speculative promise.</p>	<p>Thank you for your comment. During preparation of the final Plan of Development, SNWA will be provided comments specific to their applicant committed measures.</p>
34284-131	<p>ACM C2.4 – while the ecological needs of swamp cedar are to be studied, nothing commits the SNWA to ensure its long tern viability or survival.</p>	<p>These changes would be to the Applicant committed measures that SNWA has agreed and committed to in the plan of development and for the use in the NEPA analysis. These measures cannot be changed by BLM unless the applicant agrees upfront to the changes or the NEPA analysis shows additional monitoring or mitigation measures are needed to protect resources identified. See section 3.20 for additional information on a project-wide COM Plan and mitigation identified from the NEPA analysis. See also MM-1.</p>
34284-132	<p>ACM 2.5 – seeding over large areas without adequate rodent control and advantageous precipitation has never been proven successful. Promises by the SNWA to, “Conduct large-scale seeding to assist with vegetation transition from phreatophytic communities in Spring and Snake Valleys”, amounts to a concession that entire productive Great Basin ecosystems will be destroyed and converted to wastelands filled most likely with invasive species and noxious weeds. No scientific citation is provided to sustain the efficacy of this proposed measure.</p>	<p>A comprehensive Restoration Plan (Plan) will be developed after the final project design is completed and submitted to the BLM. The BLM will identify site-specific goals and objectives that will be based on reference sites within the specific ecoregion where the disturbance is occurring. The SNWA will submit a Plan identifying their approach to restoration that will meet BLM's goals, as well as an approach to monitoring the success of their restoration. Restoration success would be reported to the BLM, and is considered complete when the goals and objectives are met. SNWA will be provided your comment for consideration during development of their Plan.</p>
34284-133	<p>ACM C 2.7 – how would the SNWA conduct wetlands restoration at Big Springs and Pruess Lake when the impacts from the groundwater mining are expected to completely dry up Big Springs in 75-years? Where would the water come from to do the restoration? Another feel good empty promise.</p>	<p>Please refer to updated section 3.20. Please refer to standard resource responses MM-1, MM-2 and MM-3 for information relevant to this topic.</p>
34284-134	<p>ACM 2.21 – what are “facilitated recharge projects”, and where would the water come from to do the recharge?</p>	<p>Please refer to standard resource response MM-1 for information relevant to this comment.</p>
34284-135	<p>Monitoring and mitigation recommendations GW-MN-AB-1, GW-MN-AB2, GW-MN-AB-3, GW-MN-AB-4, and GW-WR-4 mentioned in Table 3.7-6 could not be found in the DEIS or in Appendix F3.7 as stated.</p>	<p>These monitoring and mitigation measures are described under Monitoring Recommendations for the Proposed Action pumping effects discussion.</p>
34284-136	<p>In the face of and due to these serious deficiencies in assuring effective monitoring and mitigation, and because of serious questions as to how the BLM's proposals in the DEIS comply with existing agency and interagency directives on monitoring and mitigation, the BLM must conduct further analysis and issue a supplemental DEIS to address the deficiencies and provide it to the public for further review and comment.</p>	<p>Please review standard resource responses MM-1 and MM-2 for information responsive to this comment.</p>

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34284-137	<p>The warming of our climate system is unequivocal.113 There have been significant increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea level. Eleven of the past twelve years rank among the warmest in the instrumental record of global surface temperature, and it is likely that average temperatures in the Northern Hemisphere have been the highest in at least the past 1,300 years. Satellite data since 1978 show that Arctic sea ice is shrinking at a rate of 2.1-3.3% per decade, with even larger declines in summer sea ice.11113 Climate Change 2007: Synthesis Report – Summary for Policymakers, International Panel on Climate Change, page 2. Technical Report Document for Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the Clean Air Act. Climate Change Division, Office of Atmospheric Programs, U.S. Environmental Protection Agency, Washington, D.C. April 17, 2009, page ES-2. Proposed Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 2023(a) of the Clean Air Act; Proposed Rule. 78 Fed. Reg., 18896 (April 24, 2009).</p>	<p>Please see standard resource response Air-15.</p>
34284-138	<p>Regarding the Great Basin, intermountain region and the southwest, several recent reports115from high ranking U.S. science groups have made the following factual findings regarding the environmental impacts resulting from increased GHG emissions and climate change, now and into the future: • “[A] severe drought has affected the southwestern United States from 1999 through 2009”; • “Human-induced climate change appears to be well underway in the Southwest.” (Includes Nevada and Utah); • “The average temperature in the Southwest has already increased roughly 1.5°F compared to a 1960-1979 baseline period. By the end of the century, average annual temperature is projected to rise approximately 4°F to 10°F above the historical baseline.” • “The annual peak of streamflow in snowmelt-dominated western mountains is now generally occurring at least a week earlier than in the middle of the 20th century. Winter stream flow is increasing in basins with seasonal snow cover. The fraction of annual precipitation falling as rain (rather than snow) increased in the last half century”; • “Most climate models project an increase in winter precipitation in the northern tier of states and a decrease in portions of the Southwest during the 21st century”; • “The snow-covered area of North America increased in the November to January season from 1915 to 2004 due to increases in precipitation. However, spring snow cover in mountainous regions of the western United States generally decreased during the latter half of the 20th century. The IPCC determined that this latter trend is very likely due to long-term warming...”; • “Conditions observed in recent years can serve as indicators for future change. For example, temperature increases have made the current drought in the region (Southwest) more severe than the natural droughts of the last several centuries”. • “As the climate warms, stream temperatures are likely to increase, with effects on aquatic ecosystems. There is some evidence that temperatures have increased in some western U.S. streams, although a comprehensive analysis has yet to be conducted. Temperature changes will be most evident during low flow periods, when they are of greatest concern”; • “Stream temperatures are likely to increase as the climate warms and are very likely to have effects on aquatic ecosystems and water quality. Changes in temperature will be most evident during low flow periods, when they are of greatest concern.” • “Streamflow peaks in the snowmelt-dominated western mountains of the United States occurred one to four weeks earlier in 2002 than in 1948 (Stewart et al., 2005)”; • Many studies predict that warmer temperatures may cause rainfall to change to snow later in the fall, and make spring snowmelt earlier. In addition to snowpack retreating to increasingly higher elevations, the long-term result could be reduced snowpacks, increased winter stream-flow, lower and earlier spring run-off, and longer summer and fall low flows. • “The area that is expected to face the most serious water constraints is the arid southwestern United States”;</p>	<p>Please see standard resource response Air-15.</p>

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34284-139	<p>Regarding the Great Basin, intermountain region and the southwest, several recent reports¹¹⁵ from high ranking U.S. science groups have made the following factual findings regarding the environmental impacts resulting from increased GHG emissions and climate change, now and into the future:</p> <ul style="list-style-type: none"> • “[A] severe drought has affected the southwestern United States from 1999 through 2009”; • “Human-induced climate change appears to be well underway in the Southwest.” (Includes Nevada and Utah); • “The average temperature in the Southwest has already increased roughly 1.5°F compared to a 1960-1979 baseline period. By the end of the century, average annual temperature is projected to rise approximately 4°F to 10°F above the historical baseline.” • “The annual peak of streamflow in snowmelt-dominated western mountains is now generally occurring at least a week earlier than in the middle of the 20th century. Winter stream flow is increasing in basins with seasonal snow cover. The fraction of annual precipitation falling as rain (rather than snow) increased in the last half century”; • “Most climate models project an increase in winter precipitation in the northern tier of states and a decrease in portions of the Southwest during the 21st century”; • “The snow-covered area of North America increased in the November to January season from 1915 to 2004 due to increases in precipitation. However, spring snow cover in mountainous regions of the western United States generally decreased during the latter half of the 20th century. The IPCC determined that this latter trend is very likely due to long-term warming...”; • “Conditions observed in recent years can serve as indicators for future change. For example, temperature increases have made the current drought in the region (Southwest) more severe than the natural droughts of the last several centuries”. • “As the climate warms, stream temperatures are likely to increase, with effects on aquatic ecosystems. There is some evidence that temperatures have increased in some western U.S. streams, although a comprehensive analysis has yet to be conducted. Temperature changes will be most evident during low flow periods, when they are of greatest concern”; • “Stream temperatures are likely to increase as the climate warms and are very likely to have effects on aquatic ecosystems and water quality. Changes in temperature will be most evident during low flow periods, when they are of greatest concern.” • “Streamflow peaks in the snowmelt-dominated western mountains of the United States occurred one to four weeks earlier in 2002 than in 1948 (Stewart et al., 2005)”; • Many studies predict that warmer temperatures may cause rainfall to change to snow later in the fall, and make spring snowmelt earlier. In addition to snowpack retreating to increasingly higher elevations, the long-term result could be reduced snowpacks, increased winter stream-flow, lower and earlier spring run-off, and longer summer and fall low flows. • “The area that is expected to face the most serious water constraints is the arid southwestern United States”; 	Please see standard resource response Air-15.

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34284-140	<p>A U.S. Forest Service Report 117 on the vulnerability of resources on the Humboldt-Toiyabe National Forest revealed the following pertinent facts: • In the last 100 years, the region warmed by 0.5 to 1.5°C (1 to 3°F) and is projected to warm another 3.6 to 9°F (2 to 5°C) by the end of the century (Chambers and Pellant 2008). • Winter temperatures are increasing more rapidly than summer temperatures, particularly in the northern hemisphere, and there has been an increase in the length of the frost-free period in mid- and high-latitude regions of both hemispheres (Loehman 2010). • The onset of snow runoff in the Great Basin is currently 10–15 days earlier than 50 years ago, with significant impacts on the downstream utilization of this water (Ryan et al. 2008). • Higher temperatures will increase evapotranspiration, the Palmer Drought is predicted to increase, and the region will likely become more arid (Chambers 2011). • Spring events have been advancing by an average 2.8–3.2 days per decade. Species' range boundaries have shifted polewards with a mean velocity of 6 km per decade, as well as upward in elevation (Parmesan et al. 2011). • Approximately 20% of the sagebrush ecosystem's native flora and fauna are considered imperiled, and many sagebrush-associated species are declining in numbers (Wisdom et al. 2005). • Altered disturbance regimes and climate change have resulted in major changes in plant community composition. Since the 1860s, many bunchgrass and sagebrush–bunchgrass communities, which dominated the Intermountain West, have shifted to pinyon and juniper woodland or introduced annual dominated communities (Miller and Tausch 2000). • Rapid expansion of invasive species can be attributed to ongoing perturbations resulting from elevated CO2 and N deposition, past and present land uses, and the direct and indirect effects of climate change (Chambers and Pellant 2008). • Noxious and invasive weeds are responding to increased CO2 concentrations by increasing the rate of growth and plant biomass (Ziska 2003). • Changes in stream environments will parallel trends in the climate system, with streams becoming warmer, more variable in flow timing and amount, and subject to more frequent extreme events that could be synchronized across broader areas through regional flooding, droughts, and wildfires. Climate change is also likely to influence channel structure and forest and riparian communities through altered patterns and severity or intensity of wildfire, inputs of sediment and large wood, and disturbances such as debris flows (Rieman and Isaak 2010). • Due to an increase in precipitation as rain, we are likely to see higher stream flows in winter. Due to generally more arid conditions, increased evapotranspiration and warmer temperatures, summer stream flows will likely be reduced. In many low flow systems of the Great Basin, this could result in even higher water temperatures and drying of the stream systems in the summer. This will decrease connectivity for both aquatic organisms and riparian species. More variable and more extreme precipitation events could result in increased floods and exacerbate ongoing stream incision. (Chambers 2011). • Climate change could affect rates of embryo development and the timing of emergence with the timing of available food sources. It will also likely effect aquatic species by altering predation, competition, disease occurrence, growth rates, reproduction, migration, metabolism, forage availability and stress levels (Rieman and Isaak 2010). • Riparian areas also serve as the foundation of much of the region's biological diversity. Declining conditions in riparian areas are likely to have cascading effects not only on aquatic species, but on the many upland species that use these ecosystems as their sole source of water (Chambers 2011). • Big sagebrush habitats throughout the western U.S. could decrease in area by 59% before the end of the 21st century, with devastating consequences for sage grouse, mule deer, pronghorn and other species that depend on these habitats (Glick 2006). • The loss of contiguous sagebrush habitat, due to increased fire occurrence and introduction of invasive plants, primarily cheatgrass, has diminished the ability of sage grouse to migrate between populations. The result is limited movement for mating, and lowered viability of the genetic pool needed for a sustainable population. A warmer climate will result in the loss of more sage grouse habitat. • Arid ecosystems of the western U.S. are particularly sensitive to climate change and climate variability because organisms in the region live near their physiological limits for water and temperature stress. Slight changes in temperature or precipitation regimes, or in magnitude and frequency of extreme climatic events, can significantly alter the composition, abundance, and distribution of species (Archer and Predick 2008). • The rarest plants of the Great Basin occur at the lowest elevations where they are typically restricted to specialized habitats that usually have only a few hundred foot elevation range. Valley floor taxa are more susceptible to stressors such as habitat modification or destruction and invasive species (Caicco et al. 2011). • Approximately 85% of the water used by humans in the Great Basin and Rocky Mountain region flows from spring melt of mountain snow packs. Warmer wintertime temperatures and earlier melt dates will deplete this virtual reservoir, leaving much less available water for natural systems and human uses. Water resources in the region are totally allocated, with 80% of available water used for agriculture. (Loehman 2010).</p>	Please see standard resource response Air-16.
34284-141	<p>Also not assessed by the DEIS is the impacts from the 34,742 tons of dust that will be generated annually from wind erosion across lands denuded of vegetation due to the pumping drawdown effects.118</p>	Please see standard resource response Air-9.
34284-142	<p>Impacts from this dust will be exacerbated and enhanced by the impacts of climate warming and drying.119 Local impacts from this dust will be effected on the glaciers and snow cover of Great Basin National Park, and further afield on the snowpack of the Wasatch Range in Utah and the Southern Rocky Mountains in Colorado.</p>	Please see standard resource response Air-18.
34284-143	<p>Emerging research is finding that dust on snow increases the heat absorption of the snow which normally reflects back around 80% of the energy. The consequence is an earlier and faster snowmelt.120</p>	Please see standard resource response Air-18.

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34284-144	Locally in the DEIS study area this means that recharge to the groundwater aquifers fed by the Wheeler Peak Range will be less efficient and reduced.	Section 3.3 (water resources) discuss the potential impacts from groundwater withdrawals.
34284-145	In the Wasatch and Rocky Mountain Ranges, it means that snowmelt will occur faster, and runoff will be flashier, likely resulting in less flow captured in the Colorado River System.	Please see standard resource response Air-18.
34284-146	Painter and his colleagues estimate that Colorado River flows at Lee's Ferry are currently reduced by 5%, and that on the whole the system has lost 35 billion cubic feet of water due to the impacts of dust on snow.121	Please see standard resource response Air-18.
34284-147	Nowhere does the DEIS mention, analyze or disclose this indirect and cumulative impact.	Please see standard resource response Air-20.
34284-148	As shown above, the DEIS fails miserably in assessing and disclosing the combined impacts (direct, indirect and cumulative) of climate change and the groundwater mining.	Please see standard resource response Air-15.
34284-149	While some uncertainty about the site specific impacts of global warming exist, for a regional scale analysis the BLM has more than adequate information to analyze and disclose the carbon footprint of the proposed action and the indirect and cumulative likely impacts on resources including air quality, water quality and quantity, aquatic ecosystems, and impacts to terrestrial ecosystems, including imperiled plants and animals.	Please refer to the GHG calculations in Section 3.1.2. In addition, please see standard resource response Air-15.
34284-150	Regarding the presence of a level of uncertainty about the precise degree of future change in climate conditions, uncertainty does not excuse the BLM from addressing this issue. As a report by the Climate Change Science Program states, "It is not possible to predict the changes that will occur, but managers can get an indication of the range of changes possible. By working with a range of possible changes rather than a single projection, managers can focus on developing the most appropriate responses based on that range rather than on a 'most likely' outcome."122	Please see standard resource response Air-15.
34284-151	In a Ninth Circuit case, Center for Biological Diversity v. National Highway Traffic Safety Administration, 508 F.3d 508, 555 (9th Cir. 2007), involving an NHTSA rule for corporate average fuel economy standards for light trucks, the court found that climate change satisfied several of the "intensity" factors in 40 C.F.R. § 5108.27(b). First, the court found that although the NHTSA rule at issue may have an "individually insignificant" effect on climate change, it may nonetheless have a "cumulatively significant" impact, thereby satisfying 40 C.F.R. § 1508.27(b)(7). In addition, the court found that climate change will affect public health and safety, satisfying 40 C.F.R. § 1508.27(b)(2).	Please see standard resource response Air-15.
34284-152	The National Environmental Policy Act ("NEPA") requires that each agency disclose relevant environmental information to the public and demonstrate that the agency took a "hard look" at the consequences of the proposed decision, and alternatives that might be pursued with less environmental harm, before making its decision. See, e.g., Kern v. U.S. Bureau of Land Mgmt., 284 F.3d 1062, 1066 (9th Cir. 2002). To that end, agencies must first describe the environment of the area that will be affected by the proposed decision. 40 C.F.R. § 1502.15.	A discussion of the Affected Environment is included in each resource section.
34284-153	In addition, agencies must "study, develop, and describe appropriate alternatives to recommend courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources." 42 U.S.C. § 4332(2)(E). This requirement applies whether the agency undertakes an environmental assessment ("EA") or an environmental impact statement ("EIS"). 42 U.S.C. § 4332(2)(E); see 40 C.F.R. §§ 1501.2(c), 1508.9(b).	Please review standard resource responses Gen-3 and Gen-5 for information responsive to this comment.
34284-154	The BLM cannot ignore the gravity of the threat of climate change to life within the planning area, and not take a hard look at the impacts. Federal agencies' mandatory duty to take a hard look at the ongoing impacts of global warming in NEPA documents has been affirmed by the courts. As the Ninth Circuit has recognized: Global warming has already affected plants, animals, and ecosystems around the world. Some scientists predict that 'on the basis of mid-range climate-warming scenarios for 2050, that 15-37% of species in our sample of regions and taxa will be 'committed to extinction.'" In addition, there will be serious consequences for human health, including the spread of infectious and respiratory diseases, if worldwide emissions continue on current trajectories. Sea level rise and increased ocean temperatures are also associated with increasing weather variability and heightened intensity of storms such as hurricanes. Past projections have under-estimated sea level rise. Several studies also show that climate change may be non-linear, meaning that there are positive feedback mechanisms that may push global warming past a dangerous threshold (the 'tipping point'). See CBD v. NHTSA, 538 F.3d at 1190-91 (citations omitted).	Please see standard resource response Air-15.
34284-155	Global warming's well-established impacts on resources including air quality, water quantity and quality, and threats to aquatic and terrestrial ecosystems and imperiled plants and animals, when combined with the impacts from groundwater mining, will exacerbate the direct, indirect, and cumulative adverse impacts of the proposed project.	Please see standard resource response Air-15.

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34284-156	At a minimum, a description of the effects of climate change on existing conditions and resources, such as on important habitat for wildlife and habitat connectivity, the availability of water and the health of springs, streams, riparian areas and wetlands, air quality impacts from increased dust and hazardous materials carried into the wind, and the prevalence of exotic plant species, all provide critical baseline information necessary for the BLM to determine whether public land resources can withstand the adverse impacts from the proposed project. Without this basic foundational information about the existing impacts of climate change on the land, and future expected impacts, it is impossible to make informed decisions about the level, location, and kind of activities the land and its ecosystems can support in the future.	Please see standard resource response Air-15.
34284-157	Given the tremendous significance and far-reaching implications of these analyses and conclusions, and the direct relevance of this information for the proposed action, the BLM must issue a supplemental DEIS to address the impacts and disclose it to the public for review and comment.	Please review standard resource responses Air-9, Gen-1 and Gen-2 for information responsive to this comment.
34284-158	As defined by the CEQ regulations: "Cumulative impact" is 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 individually minor but collectively significant actions taking place over a period of time. 40 C.F.R § 1508.7.	Cumulative analysis based on the criteria described can be found in each of the resource sections.
34284-159	A cumulative impact analysis must provide a "useful analysis" that includes a detailed and quantified evaluation of cumulative impacts to allow for informed decision-making and public disclosure. Kern v. U.S. Bureau of Land Management, 284 F.3d 1062, 1066 (9th Cir. 2002); Ocean Advocates v. U.S. Army Corps of Engineers, 361 F.3d 1108 1118 (9th Cir. 2004) (holding "[t]he Corps' findings about cumulative impacts [in an EA] were perfunctory and conclusory and do not provide a helpful analysis of past, present, and future projects"). The NEPA requirement to analyze cumulative impacts prevents agencies from undertaking a piecemeal review of environmental impacts. Earth Island Institute, 351 F.3d at 1306-7.	Cumulative analysis based on the criteria described can be found in each of the resource sections.
34284-160	"The CEQ regulations also require that 'cumulative actions' be considered together in a single EIS." Thomas v. Peterson, 753 F.2d at 759, quoting 40 C.F.R. § 1508.25(a)(2). "'Cumulative actions' are defined as actions 'which when viewed with other proposed actions have cumulatively significant impacts.'" Id. A cumulative impact is defined as the impact on the environment that results from the incremental impact of the proposed actions when added to other past, present, and reasonably foreseeable future actions, and "can result from individually minor but collectively significant actions taking place over a period of time." 40 C.F.R. § 1508.7. "Both connected actions and unrelated, but reasonably foreseeable, future actions may result in cumulative impacts." Save the Yaak, 840 F.2d at 721.	This definition (as respresented in the BLM NEPA handbook) was used in defining the scope of cumulative impacts.
34284-161	At minimum, an adequate cumulative effects analysis must: 1) identify the past, present, and reasonably foreseeable actions of the BLM, proponent and other parties affecting each particular aspect of the affected environment; (2) provide quantitative information regarding past changes in habitat quality and quantity, water quality, resource values, and other aspects of the affected environment that are likely to be altered by agency permitted actions; (3) estimate incremental changes in these conditions that will result from agency actions in combination with actions of other parties, including synergistic effects; (4) identify any critical thresholds of environmental concern that may be exceeded by agency actions in combination with actions of other parties, and; (5) identify specific mitigation measures that will be implemented to reduce or eliminate such effects.	Topic 1 has been addressed; topic 2 has been addressed at a qualitative level for most resources, based on available information; topic 3 has been addressed in terms of resource effects from groundwater drawdown, and the additive effects of surface disturbance; topic 4 has been addressed in terms of magnitude, duration, and intensity of effects, without specifying thresholds; topic 5 has been addressed for cumulative effects as well project alternatives in the COM Plan.
34284-162	While the DEIS is partially successful in meeting these requirements, it fails to meet the standards established under regulations and court interpretations of these regulations.	Cumulative analysis based on the criteria described can be found in each of the resource sections.
34284-163	The DEIS failed to include the Solar Energy Zones in Lincoln and Clark Counties that were analyzed in the BLM's Draft Programmatic Environmental Impact Statement for Solar Energy as reasonably foreseeable future actions. The DPEIS identified four solar energy zones – Dry lake Valley North, Delamar Valley, East Mormon Mountain and Dry Lake, and for each estimated the likely amount of water requirement for construction, operation and maintenance. While the amount of water varied by type of solar technology, the BLM could easily have constructed a range of water needs, or made a good-faith assumption of the technology type based on what was provided in the DPEIS. Since the amount of water required by these facilities is significant, the impacts when combined with the proposed groundwater mining and other foreseeable projects would result in cumulative effects and impacts far in excess of those disclosed in the DEIS.123 See: http://solareis.anl.gov/ .	While solar energy zones were identified, no specific projects with ROW applications were identified within these areas within the time frame of this EIS.
34284-164	An area of grave concern is that of current and impending climate change. The DEIS largely ignored the connected and cumulative impacts and effects of climate change and the negative synergistic impacts changes in climate would have when combined with the proposed pumping and other foreseeable impacts.124 Change in climate is a reasonably foreseeable future action as described by CEQ regulations.	Climate change effects by resource have been moved to cumulative effects section of individual resources, and acknowledged as a potential resource effect.

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34284-165	The DEIS failed to describe the effects of climate change on existing conditions and resources, such as on important habitat for wildlife and habitat connectivity, the availability of water and the health of springs, streams, riparian areas and wetlands, air quality impacts from increased dust and hazardous materials carried into the wind, and the prevalence of exotic plant species. This information and analysis would provide critical baseline information necessary for the BLM to determine whether public land resources can withstand the adverse impacts from the proposed project. Without this basic foundational information about the existing impacts of climate change on the land, and future expected impacts, it is impossible to make informed decisions about the level, location, and kind of activities the land and its ecosystems can support in the future.	The climate change discussion has been moved to the cumulative effects section of each resource. The BLM believes this treatment will provide more background for evaluating potential project-caused changes.
34284-166	While the DEIS, in various commentary and tables in both its body and appendices, describes very basic information on the cumulative impacts, it does not provide sufficient specific information on the impacts, including the long term ramification for ecosystem and species viability and existence, particularly the synergistic and additive effects of the multiple impacts.	The level of detail on specific impacts is commensurate with the level of current knowledge. Long term ecosystem responses can only be generally estimated at this time - more detailed discussions of cumulative effects will be addressed in future NEPA documents for individual hydrologic basins.
34284-167	For example, with regards to greater sage grouse, two short paragraphs in Chapter 3 describe in the briefest of terms the cumulative pumping impacts on the grouse, and a map and a table in the appendices display grouse habitat and provide a percentage of vegetation type to be affected.125 Nowhere in the DEIS is there an analysis done or disclosure made as to the meaning of this information with regards to the health and survival of the grouse. This superficial level of analysis sorely fails to meet the standards set by the Council on Environmental Quality in their NEPA regulations as well as direction provided in CEQ's document, Considering Cumulative Effects Under the National Environmental Policy Act.126125 DEIS, page 3.6-92 and Figure F3.6-10 and Table F3.6-17.	Given the programmatic nature of the NEPA analysis for future groundwater facilities/pumping and the scale of the project, the EIS analysis provides valley by valley information on groundwater dependent habitats in order to address potential impacts to species. Appendix F3.6 includes a table for each alternative showing the percent of potential affected groundwater dependent habitats in the valleys where impacts could potentially occur. By providing the percent of the total available groundwater dependent habitat in the valley that has the potential to be impacted, the EIS discloses the potential valley by valley risks to habitats upon which the species depend - like greater sage-grouse. The percent provides a metric of intensity within that valley.
34284-168	To make matters worse, the analysis done for sage grouse is typical of that for other species of concern included in the DEIS.	Based on this comment and others, information has been added to section 3.5 concerning sage grouse. Standard resource response WL-2 contains information responsive to this comment.
34284-169	Another flaw in the cumulative impacts analysis was the decision to only model impacts from a 10-foot or greater drawdown. Depending upon the hydro-geologic characteristics of the specific aquifer, a 1-10-foot drawdown could conceivably impact hundreds of square miles of terrestrial vegetation and untold springs and streams, even to the point that they dry or suffer significant adverse impacts. Hence, the impacts on aquatic and terrestrial ecosystems and species will likely be much greater than analyzed and disclosed as cumulative impacts in the DEIS.	Please refer to response WR-1 for an explanation of the 10-foot drawdown index, and the extent to which this index reasonably estimates the effects to water dependent vegetation and springs.
34284-170	A crucial part of cumulative impacts analysis process is to avoid, minimize or mitigate the significant cumulative effects. The DEIS fails to acknowledge this step and concentrates on mitigating proposed action-specific impacts. This is partially due to the poor overall job done in the DEIS identifying and analyzing the cumulative impacts. The CEQ guidance on cumulative impacts states, "If it is determined that significant cumulative effects would occur as a result of a proposed action, the project proponent should avoid, minimize, or mitigate adverse effects by modifying or adding alternatives."127 The guidance goes on to say, "By analyzing the cause-and-effect relationships resulting in cumulative effects, strategies to mitigate effects or enhance resources can be developed. For each resource, ecosystem, and human community of concern, the key to developing constructive mitigation strategies is determining which of the cause-and-effect pathways results in the greatest effect. Mitigation and enhancement strategies that focus on those pathways will be the most effective for reducing cumulative effects."128	The analysis evaluates the additive drawdown effects of No Action and the specific pumping alternative, which is the requirement for cumulative impacts disclosure. In general, the types of cumulative impacts are the same as those identified for project alternatives. Consequently, project alternative monitoring and mitigation measures are applicable to cumulative impacts, which may occur over a larger geographic area, or at a greater local intensity than project-specific impacts. The COM Plan addresses both project alternative and cumulative impacts within its scope.
34284-171	Again, we observe that from the language and expectations expressed in the CEQ guidance, it is quite clear that the BLM has failed to fulfill their regulatory and legal obligations under the NEPA.	BLM has prepared this EIS in accordance with BLM policy as outlined in its NEPA Handbook 1790-1 and with CEQ regulations, policy and guidance. This is discussed in chapter 1.
34284-172	To remedy these deficiencies, the BLM must conduct further analysis and disclose it for public review and comment in a supplemental DEIS.	The FEIS has been updated. Please review standard resource responses Gen-1 and Gen-2 for information responsive to this comment.
34284-173	Subsidence is the movement or sinking of the land's surface, in this context, caused by the removal of water beneath the land's surface. A primary cause is the loss of internal support within an aquifer provided by the water it contained, and the subsequent compaction of clays and silt causing the land surface to fall.129	Updated Section 3.2 (geology) discusses potential impacts of subsidence.
34284-174	The DEIS does disclose dramatic and disturbing predicted subsidence that is modeled to occur as a result of the proposed action. It predicts that over 2500 square miles will experience subsidence of at least 1-foot in depth, including 525 square miles where subsidence will cause drops in land surface greater than 5-feet. Additionally, another 647 square miles will experience subsidence less than one foot.130	Updated Section 3.2 (geology) discusses potential impacts of subsidence. Please also review standard resource response Gen-1.
34284-175	Such long term declines in groundwater levels and the resulting subsidence result in serious, irreversible consequences – that is the lowering of the land surface elevation is permanent and cannot be appreciably reversed. For instance, subsidence has caused large areas of human habitation to be abandoned in North Las Vegas, Nevada, Houston-Galveston, and parts of Arizona and California. Infrastructure of all sorts can be damaged or destroyed, including roads, homes, bridges, canals storm and sanitary sewers and wells. 131	Updated Section 3.2 (geology) discusses potential impacts of subsidence. Please also review standard resource response Gen-1.

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34284-176	One feature of subsidence is the development of surface cracks. These cracks develop in the aquifer and spread up to the land's surface. Once a crack appears, it will likely continue to grow as the aquifer is further depleted. As a result, a direct connection is established between the surface and contaminants found there to move downward to the aquifer resulting in pollution of the groundwater.132	Updated Section 3.2 (geology) discusses potential impacts of subsidence. Please also review standard resource response Gen-1.
34284-177	As a result, drinking water would need additional treatment before use. While this is not a major problem for the SNWA since they will as a matter of fact do subsequent treatment once the waters reach their facilities in the Las Vegas Valley, it is a significant problem for rural communities and individuals who depend upon clean groundwater and who lack the means of subsequent treatment.	Potential impacts related to groundwater pumping have been addressed at a programmatic level in this EIS. Subsequent NEPA will be required to determine and disclose site-specific impacts.
34284-178	Another concern associated with land surface cracks is the hazards they pose for humans, livestock and native wildlife. Recreationists, particularly those on motorized equipment are at increased risk of injury and death from falling into hard to observe chasms. Livestock, a significant source of possible contaminants, are also at risk from falling into the cracks as are wildlife, particularly small creatures that may lack the ability to escape from the steep-sided fissures.	Updated Section 3.2 (geology) discusses potential geologic hazards. Please also review standard resource response Gen-1.
34284-179	Land subsidence and surface cracks cause many other problems such as cutting off connections between springs and streams and their nourishing groundwater supply, thus destroying these important aquatic and riparian areas and the wildlife that depend upon them.	Potential impacts related to groundwater pumping have been addressed at a programmatic level in this EIS. Subsequent NEPA will be required to determine and disclose site-specific impacts.
34284-180	Land subsidence and the associated aquifer level declines adversely impacts native vegetation and the species that depend upon them.133	Potential impacts related to groundwater pumping have been addressed at a programmatic level in this EIS. Vegetation impacts are discussed in Section 3.5 of this EIS. Subsequent NEPA will be required to determine and disclose site-specific impacts.
34284-181	Subsidence has a further disproportionate impact on rural communities and individuals who depend on wells for their water supply. The increased electrical energy cost to pump water is directly proportional to the aquifer level decline. Additionally, as aquifer elevations drop, wells will need to be re-drilled and deepened and new more powerful pumps installed at significant cost. Eventually, there could be a complete loss of groundwater supply and aquifer storage capacity as the water's elevation declines below the point of economic feasibility.134	Please see section 3.2 for a discussion related to Subsidence. See section 2.3.8 for a discussion of capital costs. See Section 3.20 for a discussion related to monitoring, management, and mitigation. Please also see standard resource responses MM-1, MM-2 and SocEcon-6.
34284-182	The DEIS fails miserably in analyzing and disclosing the ecological, economic and social impacts associated with subsidence. In fact, only a brief 5-line description is included in Chapter 3.2, and an even briefer mention is provided in Chapter 4 on Irreversible and Irrecoverable Commitment of Resources.135	The Final EIS has been updated with additional information on this topic. Potential impacts related to groundwater pumping have been addressed at a programmatic level in this EIS. Subsequent NEPA will be required to determine and disclose site-specific impacts.
34284-183	Considering that over 3000 square miles are potentially impacted by groundwater pumping related subsidence, and the scope and magnitude of the potential impacts, the BLM must prepare a supplemental DEIS that more fully and comprehensively analyzes and discloses the impacts and provide it to the public for further review and comment.	The Final EIS has been updated with additional information on this topic. Potential impacts related to groundwater pumping have been addressed at a programmatic level in this EIS. Subsequent NEPA will be required to determine and disclose site-specific impacts.
34284-184	Lacking is any discussion on how the BLM will ensure that federal water rights held by the National Park Service ("NPS"), U.S. Fish and Wildlife Service ("FWS"), Forest Service ("FS") and itself will be protected from diminishment by the proposal.	Impacts to all potential water sources – whether or not those sources are the subject of federal reserved water rights, state appropriation-based water rights, or are unappropriated waters – have been summarized, evaluated, and considered in the EIS. Similarly, project mitigation measures apply to all water sources regardless of water rights status. By analyzing potential impacts to all identified water sources, the EIS analysis thus encompasses potential impacts to any federal reserved water rights that may later be identified in or adjudicated on these sources. Finally, the EIS describes the background for federal reserved water rights in Chapter 3, Section 3.3.1.7, Water Resources. There is no federal authority prohibiting the grant of a federal right of way on BLM land prior to the adjudication of federal reserved water rights. In this instance, Congress specifically mandated that certain portions of the right-of-way be granted by the BLM for the GWD Project. See Pub.L. No. 108-424, § 301.
34284-185	Great Basin National Park is a unit of the National Park System established in 1986. It is managed by the NPS under the Park Service Organic Act, which requires it be managed to, "protect, manage, and administer the park in such manner as to conserve and protect the scenery, the natural, geologic, historic, and archaeological resources of the park, including fish and wildlife and to provide for the public use and enjoyment of the same in such manner as to perpetuate these qualities for future generations."136 The DEIS identifies dozens of springs, streams and cave system that will be adversely impacted by ground water withdrawals.137	Please see updated section 3.14 for a discussion of the NPS mission and the impacts of the project on the Great Basin National Park.
34284-186	These aquatic habitats in turn provide habitat to numerous fish, invertebrates and amphibians, some of which will be discussed below.138	The importance of these aquatic habitats for fish, amphibians, and invertebrates is acknowledged in Section 3.7.
34284-187	There are three National Wildlife Refuges ("NWR"), managed by FWS, which are at risk due to impacts from the proposed ground water mining. NWR's enjoy reserved federal water rights consistent with their reason for creation and necessity for management.139	See response standard resource response WR-9 regarding federal reserve water rights.

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ID	Comment	Response
34284-188	The Pahrnatagat NWR was established in 1963, primarily for migratory bird species, but it is also home to imperiled species such as the Southwestern willow-flycatcher, desert tortoise, Hubbs pyrg, grated Tryonia, and Pahrnatagat pebblestone springsnails, northern leopard frog, and Pahrnatagat roundtail chub and Pahrnatagat speckled dace. Predicted drawdowns of 10-20 feet are possible after 200-years, and even greater drawdowns are possible considering cumulative effects.140	Please refer to the updated section 3.14 for a discussion of impacts to the FWS refuges.
34284-189	The Moapa Valley NWR was established in 1979 to secure habitat for the endangered Moapa dace, a small fish commonly found throughout the headwaters of the Muddy River system. In the last decade, dace populations have declined due to habitat destruction and modification. Other imperiled species found there include the threatened desert tortoise, the Moapa White River springfish, and the Moapa pebblesnail, grated tryonia, Moapa warm spring riffle beetle, Amargosa naucorid, and the Moapa naucorid. Predicted drawdowns at 200-years with cumulative effects included would be in the range of 10-20 feet, resulting in a 61% reduction of spring flows.141	The project pumping alternatives indicate that project pumping is not expected to result in measurable reduction in flows in the Muddy River Springs discharge area over the simulation period (Full build out plus 200 years). The effects discussed are related to other RFFAs simulated in the region as discussed in Section 3.3.3 of the EIS.
34284-190	Fish Springs NWR was established in 1959 specifically to protect aquatic, riparian and wetland species such as the Utah chub, least chub and speckled dace fish, invertebrates, amphibians such as the Columbia spotted frog and northern leopard frog, and migratory birds. The DEIS does not project any drawdowns in excess of 10-feet, but did not analyze drawdowns less than 10-feet, leaving impacts open to speculation.	See standard resource response WR-5 regarding potential effects to Fish Springs.
34284-191	Congressionally designated Wilderness managed by the FS is found within the impact study zone at Mt Moriah, High Schells, Bald Mountain, Red Mountain, Grant Range, Rainbow Mountain, Mt Charleston and La Madre Mountain Wildernesses. NPS managed impacted Wildernesses include Mt. Wheeler, Muddy Mountains, Jimbilnan and Pinto Valley Wildernesses. BLM managed Wilderness include Arrow Canyon, Becky Peak, Big Rocks, Bristlecone, Clover Mountains, Delamar Mountains, Far South Egans, Fortification, Goshute Canyon, Government Peak, Highland Ridge, Meadow Valley Range, Mormon Mountains, Mt Graffton, Mt. Irish, Mt. Moriah, Parsnip Peak, South Pahroc Range, South Egan Range, Weepah, and White Rock Wildernesses.	Thank you for your comment.
34284-192	Reserved federal water rights for designated Wilderness areas are inferred by the language of the Wilderness Act of 1964: areas are designated, “for the preservation and protection (of wilderness areas) in their natural condition...(in order) to secure for the American people of present and future generations the benefits of an enduring resource of wilderness.”142	BLM Wilderness Areas, under federal statute do not contain federal reserve water rights. Please see standard resource response WR-9 and the updated section 3.3 for a discussion of federal water rights.
34284-193	In addition, there are several BLM Wilderness Study Areas which the BLM is tasked to manage so to protect their Wilderness values for the further action of Congress.	Thank you for your comment. Wilderness values are discussed in section 3.14.
34284-194	In addition to these federal reserved rights created for refuges, parks and wilderness, there are other federal water rights for water in springs and watering holes held by the BLM and FS. These are established under the authority of the agency’s Organic Acts and the Public Water Reserve No. 107 (PWR 107) executive order. The Department of Interior’s Board of Land Appeals holds that PWR 107 claims for water rights on the public domain also include water needed to grow crops and to sustain fish and wildlife, as well as water for flood, soil, fire, and erosion control.143	The DEIS states that “[t]he most common type of federal reserved water rights on BLM land in the project area are Public Water Reserves” and identified all federal reserved and state-adjudicated water rights located through searches of the NDWR and UDWRi databases. See EIS, Section 3.3.1.7. A Public Water Reserve may support a claim of a federal reserved water right in specific circumstances for the reservation of water available from public springs and water holes to preserve water for domestic and stockwatering, and to prevent monopolization of vast tracts of western lands by control of scarce water sources. Impacts to all potential water sources – whether or not those sources are the subject of federal reserved water rights, state appropriation-based water rights, or are unappropriated waters – have been summarized, evaluated, and considered in the EIS. Similarly, project mitigation measures apply to all water sources regardless of water rights status. By analyzing potential impacts to all identified water sources, the EIS analysis thus encompasses potential impacts to any federal reserved water rights that may later be identified in or adjudicated on these sources. Finally, the EIS describes the background for federal reserved water rights in Chapter 3, Section 3.3.1.7, Water Resources.
34284-195	Many of the springs and water features outside of Parks, Refuges and Wilderness Areas are critically important to the long term survival and viability of imperiled species associated with them – often springsnails, fish or riparian birds and amphibians.	The importance of springs to aquatic species including springsnails are discussed in Section 3.7.
34284-196	The DEIS fails to adequately inventory and describe federal water rights and also fails to describe how such rights will be defended from take by the SNWA project. With respect to federal reserved water rights, these are considered to be federal property, protected by federal law and court precedence, and cannot be given away by federal agencies, nor can an agency turn a blind eye to such a taking. 144 What’s more, a federal agency has a legal obligation to defend and protect federal reserved water rights.145	Impacts to all potential water sources – whether or not those sources are the subject of federal reserved water rights, state appropriation-based water rights, or are unappropriated waters – have been summarized, evaluated, and considered in the EIS. Similarly, project mitigation measures apply to all water sources regardless of water rights status. By analyzing potential impacts to all identified water sources, the EIS analysis thus encompasses potential impacts to any federal reserved water rights that may later be identified in or adjudicated on these sources. Finally, the EIS describes the background for federal reserved water rights in Chapter 3, Section 3.3.1.7, Water Resources. Please see standard resource response WR-9.
34284-197	A supplemental DEIS must be prepared to correct this deficiency and to afford the public an opportunity to review and comment on its adequacy.	Please see response to your comment #196 above.

Comments and Responses - Non-governmental Organizations

ID	Comment	Response
34284-198	Public Law 99-565, which established the Great Basin National Park (“GBNP”) in speaking of the park’s purpose, states, “...to preserve for the benefit and inspiration of the a representative segment of the Great Basin of the Western United States possessing outstanding resource and significant geological and scenic resources.”	Thank you for your comment.
34284-199	The very purpose of the GBNP will be threatened by the ecological degradation caused by the proposed groundwater mining.	Please see updated section 3.14 for a discussion of the impacts of the project on the Great Basin National Park.
34284-200	The ecosystems in and around the park will be altered at very fundamental levels. Among the irreversible and irretrievable impacts disclosed in the DEIS are the following: • A 192,000 acres of iconic Great Basin shrublands will be destroyed or degraded significantly, and replaced by plant species requiring low moisture levels such as annual grasses and forbs and non-native invasive species such as cheatgrass and Sahara mustard.146 With the disappearance of the shrubland, equally iconic Great Basin wildlife species such as greater sage grouse, mule deer, pronghorn antelope and Rocky Mountain elk will also be lost in the affected areas.147	Please see updated section 3.14 for a discussion of the NPS mission and the impacts of the project on the Great Basin National Park.
34284-201	• Over 8,000 acres of lush meadows of native plants, currently supported by shallow ground or surface water, will disappear and with them native animal species such as the Columbia spotted frog, northern leopard frog and insect-eating bats and birds.148 Up to 305 springs and over a hundred miles of perennial streams will be adversely impacted, or dried altogether, resulting in loss of native aquatic species such as the Bonneville cutthroat trout and springsnails.149	Updated sections 3.3 (water resources), 3.6 (wildlife) and 3.7 (aquatic resources) discuss potential impacts.
34284-202	Karst and cave resources, a keystone of the GBNP’s identity would be threatened.	Potential effects of groundwater pumping on karst and cave resources are address in Section 3.2.2 in the EIS.
34284-203	Land subsidence will occur on over 2500 square miles, including 525 square miles with subsidence over 5-feet in depth.150 Over 34,700 tons of new dust will be generated annually.151	Updated Section 3.2 (geology) discusses potential impacts of subsidence. Please also review standard resource response Air-10.
34284-204	In short, the entire character and natural heritage of the Great Basin will be eliminated or severely adversely impacted in or around the GBNP. The ability of the park to fulfill its establishment objectives would be called to question.	Please see updated section 3.14 for a discussion of the impacts of the project on the Great Basin National Park.
34284-205	Park visitations would undoubtedly decline as the surrounding area is laid bare – there would no longer be a Great Basin ecosystem to be experienced with native vegetation gone. The dust generated would obscure scenic views and damage pristine dark night skies that are now a unique feature of the park and for visitations.	Please see updated section 3.14 for a discussion of the impacts of the project on the Great Basin National Park. Please refer to standard resource response Air-10.
34284-206	While the impacts of the nature and fundamental attractiveness of the GBNP are an important aspect, equally important are the impacts to the gateway communities to the park, particularly in Snake Valley in Nevada and Utah.	These impacts are discussed in section 3.18 (socioeconomics and environmental justice).
34284-207	Currently these communities are small and rural with a great dependence on farming and ranching to sustain them. And, as the GBNP’s resources and appeal are degraded, the currently meager tourism-based economy is likewise threatened with the reduced visitations. As groundwater tables fall due to the pumping, the very existence of these rural communities is threatened.	These impacts are discussed in section 3.18 (socioeconomics and environmental justice).
34284-208	Co-laterally, the GBNP needs the gateway communities to provide the infrastructure and services to cater to the park’s visitors. Without visitors, the park flounders. While this tourism-based aspect to the economy is relatively small, there is a large potential to greatly increase park visits from both U.S. citizens and international visitors. Hence, the citizens of the U.S. who own the GBNP through the National Park System have a vested interest in seeing that the local gateway communities are protected from the impacts of the groundwater mining.	These impacts are discussed in section 3.18 (socioeconomics and environmental justice).
34284-209	The DEIS fails to examine this crucial environmental-social-economic aspect. A supplemental DEIS must be prepared to address this deficiency and presented to the public for review and comment.	The socioeconomic analysis within the FEIS has been prepared within the guidelines of CEQ regulations and standards. Please review standard resource response Gen-1 and Gen-2.
34284-210	Nowhere in the DEIS is there any disclosure or discussion of the economic costs and impacts from the proposed pipeline and groundwater mining. Such an analysis should be a fundamental part of the BLM’s responsibility to determine the fiscal ability of the SNWA to successfully complete and implement their proposal before approving and issuing a right-of-way permit.	Thank you for your comment. The BLM lacks authority and a need to independently analyze project costs, or the potential long-term implications on ratepayers, in conjunction with the ROW application. However, because of comments received to the EIS, information regarding project costs are included in the FEIS. Standard Resource Response SocEcon-3 provides additional information relating to this comment.
34284-211	Part of such an analysis must be not only the ability of the SNWA to successfully construct the project, but also their ability to operate and maintain it and their ability to fulfill commitments made in the DEIS, and connected Stipulated Agreements, for monitoring and mitigation that would detect and reduce expected environmental impacts.	See standard resource responses SocEcon-1, SocEcon-3 and SocEcon-6 for additional information project costs and Gen-7 regarding long-term assurances related to monitoring and mitigation. Please see Standard Resource Response MM-1.
34284-212	It is a matter of public record that the cost of construction will be close to \$15.5 billion in terms of 2007 dollars.152	Thank you for your comment. Please see Standard Resource Responses SocEcon-1, SocEcon-3, and SocEcon-6 for additional information regarding the inclusion of project cost information in the FEIS.
34284-213	It is further a matter of the public record that this estimate does not include operation and maintenance costs, the costs of distributed pumping, or the costs of monitoring and mitigation.153	Thank you for your comment. Please see Standard Resource Responses SocEcon-1, SocEcon-3, and SocEcon-6 for additional information regarding the inclusion of project cost information in the FEIS.

Comments and Responses - Non-governmental Organizations

ID	Comment	Response
34284-214	Council on Environmental Quality directions require agencies to assess the ability of proponents to fulfill promises made regarding monitoring and mitigation, and to not rely on or include actions that are suspect. 154	Thank you for your comment. Please see Standard Resource Response MM-1. Additionally, please see Gen-7 regarding the anticipated incorporation of monitoring and mitigation agreements into ROW grants issued to the SNWA and the role of such conditions.
34284-215	This DEIS has not fulfilled these requirement or stewardship responsibilities to the American people. As a result, the BLM must prepare a supplemental DEIS that analyzes and discloses the true costs of this proposed action, including the promised monitoring and mitigation measures, and provide it to the public for further review and comment.	Thank you for your comment. Please see SocEcon-1, SocEcon-3 and SocEcon-6 regarding the inclusion of project cost information in the FEIS and lack of authority or need for the BLM to independently analyze project costs in conjunction with the ROW application
Coalition of National Park Service Retirees		
34444-1	A groundwater pumping scheme is likely to affect a multitude of resources in the Great Basin region. Because National Park resources are to be protected for future generations, we are concerned about this project. There is not yet enough information to assure that Park resources will not be adversely affected, precluding the National Park from fulfilling its mission. Our comments are focused on Great Basin National Park but we recognize that this project may have consequences for other Parks in the area (e.g. Lake Mead National Recreation Area). We want to register our concern and underscore a few selected points.	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.
34444-2	Mission of Great Basin National ParkGreat Basin National Park was established “in order to preserve for the benefit and inspiration of the people a representative segment of the Great Basin of the Western United States possessing outstanding resources and significant geological and scenic values...” (Public Law 99-565). In establishing the Park, Congress provided that its mission would include interpreting the entire Great Basin region. This is a large geographic area extending from eastern California through western Utah and including most of Nevada. Since the Park boundaries preserve only the “range” resources of the Great Basin, protection of the “basin” portions outside Park boundaries is essential to interpret properly the Great Basin of the Western United States.	Please see updated section 3.14 for a discussion of the impacts of the project on the Great Basin National Park.
34444-3	The DEIS notes that air pollutant emissions will occur during the 11-year construction, disturbance, and reclamation phase of the project. There will also be a “minor increase in air pollutant emissions” from operation and maintenance. In addition, the DEIS notes that there is a “dust generation risk from soil surface drying” as well as “loss or reduction of basin shrubland vegetation” as a long term pumping effect.	Please see standard resource responses Air-4 and Air-6.
34444-4	The DEIS also notes that “changes in vegetation communities could gradually change the scenic views in terms of color, texture, density, and vegetation patterns.”	Please refer to updated section 3.15 (visual resources) for potential impacts.
34444-5	Groundwater pumping in Spring Valley and Snake Valley will likely result in air pollutant emissions and dust over the short and long term---during construction, operation and maintenance, and cumulatively into the future. While the specific effects on air quality/visibility in the vistas of Spring and Snake Valleys and within Great Basin National Park are unknown, it is probable there will be a diminution in the air quality.	Please see standard resource response Air-5.
34444-6	Night sky interpretation, which depends on clean air, is one of the Park’s major interpretive programs.	Please see standard resource response Air-5.
34444-7	Air quality monitoring demonstrates that the air quality and visibility of Great Basin National Park is among the best in the country. This significant asset is very susceptible to deterioration. The Park website (www.nps.gov/grba) states: “Studies of the effect of visibility on park visitors show that slight increases in air pollution are much more distinct and objectionable when and where the air is cleanest (O’Leary 1988).“	Please see standard resource response Air-5.
34444-8	Not only will the ability to see be affected, but this project will also alter what will be seen. The industrial nature of the project infrastructure will change the Park’s current rural, natural, and agricultural viewsheds.	Please refer to updated section 3.14 (sprecial designations) for potential impacts to Great Basin National Park.
34444-9	The DEIS notes that “the project would potentially reduce available moisture in the root zones of vegetation communities that transpire (evaporate) large quantities of soil water through plant leaves...”	Please refer to standard resource response Veg-1.
34444-10	The greatest risk would occur under the Proposed Action and Alternatives A and B in Spring and Snake Valleys.”	Your comments on the Draft EIS have been considered.
34444-11	Changes outside the park in composition of plant communities in both Spring and Snake Valley could have effects on wildlife inside the Park. Reductions in groundwater levels and inputs to surface flows would affect wildlife habitats.	Changes and impacts to the Great Basin National Park is discussed in updated section 3.14.
34444-12	It is not known at present what wildlife, including special status bird and bat species that migrate to and from the Park, would be affected.	Please review standard resource response WL-4 for information responsive to this comment. Please review section 3.6 and 3.7 for information on the impacts to aquatic and terrestrial wildlife.
34444-13	More studies are needed to determine what effects the changes in the valleys would have on plant and wildlife resources within the Park.	Please review standard resource responses Gen-1 and Gen-2 for information responsive to this comment. Subsequent NEPA would address this question in further detail.

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ID	Comment	Response
34444-14	The U.S. Geological Survey has reported that water resources, both surface water and springs, within the Park boundaries could potentially be susceptible to groundwater pumping in Snake Valley. Studies to determine more specific possible effects are ongoing.	The EIS evaluates potential effects to water resources in GBNP and incorporates information from the USGS susceptibility studies that have been conducted for the park (See Section 3.3.2.8 under the minor heading Identification of Springs and Streams Susceptible to Drawdown Impacts within Great Basin National Park; and Figure 3.3.2-1; and GBNP impact descriptions provided in Sections 3.3.2.9 to 3.3.2.16.
34444-15	Currently the Park and other agencies, including the Southern Nevada Water Authority, are establishing baseline inventories of water and other resources and monitoring potential effects of groundwater pumping in Spring and Snake Valleys. This effort is ongoing concurrent with other studies taking place.	Thank you for your comment. Please see Standard Resource Response MM-1. Ongoing studies and other research will be used to update and establish mitigation, management and monitoring plans as outlined in section 3.20. These ongoing studies will also be used to inform the subsequent NEPA as discussed in Chapter 1.
34444-16	We believe that not enough is yet known to be able to predict accurately the effects on Great Basin National Park resources. And we are concerned, if and when monitoring reveals a significant impact, it could be too late to mitigate the impact.	Please review standard resource responses Gen-1, Gen-2, MM-1 and MM-2 for information responsive to this comment.
34444-17	Studies have shown that there is interbasin water flow between Spring and Snake Valleys at the south end of the Park.	The CCRP regional groundwater flow simulates groundwater flow from Spring to Snake Valleys in through the southern Spring Valley and is consistent with the conceptual model for this area as described in the model reports (SNWA 2009a and 2009b).
34444-18	This information is contained in the full DEIS but not reflected in the Executive Summary. We recommend that this important information be included in the Executive Summary. Again, further studies are needed to determine what effects groundwater pumping in Spring Valley could have on Snake Valley.	The Executive Summary is intended to present an overview of the project and impact analysis. As you noted, the full analysis is contained in the EIS. Adding specific information such as the effects of pumping in Spring Vally on Snake Valley to the Executive Summary would compromise the intent of that document.
34444-19	RecommendationsAs a result of our concerns, we strongly recommend the "No Action" alternative. If, however, BLM decides to pursue an action alternative, our strong recommendation would be Alternative D.	Thank you for your comment. Please refer to general comment response Gen-6.
Cold Creek Canyon HOA		
34439-1	The Cold Creek Canyon Homeowners Association has been notified that there is a federal right of way currently being considered for approval that will directly affect the productivity of the wells that are used to supply water to our community. The pipeline is proposed to take water from basin # 161 and transfer the water to rural counties in Nevada.	Basin 161, Indian Springs Valley, is not within the hydrologic study area of this EIS, nor is any pumping or conveyance of water in Basin 161 associated with this project.
34439-2	Cold Creek Canyon, and other communities in this area, has existing water rights to access the water in this basin for the use for the community. Pumping high volumes of water from our basin to provide water for other areas is something that we feel will greatly jeopardize our ability to pump the water necessary for our community. This pumping will draw down the aquifer allowing less water to be accessible by the existing wells in the basin.	The Nevada State Engineer is responsible for the allocation of water rights and protection of senior water rights.
34439-3	Cold Creek Canyon Homeowners Association is adamantly apposed to the approval of the right of way for this pipeline.	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.
Colorado River Commission of Nevada		
34854-1	The Colorado River Commission of Nevada (CRCN) respectfully submits these comments on the above-referenced document. These comments provide additional clarification to the discussion of Colorado River Water Supplies in Chapter 1.6.2 of the Draft Environmental Impact Statement (DEIS) and on the overall need for the project.	Thank you for your comment.
34854-2	The CRCN is an agency of the State of Nevada, which is a sovereign state of the United States and a signatory party to the 1922 Colorado River Compact, 70 Cong. Rec. 324 (1928). Pursuant to NRS 538.171, the CRCN is Nevada's statutory trustee of all rights, interests and benefits in and to the waters of the Colorado River enjoyed by and within the State of Nevada. The CRCN is specifically charged with representing the State of Nevada relative to interstate negotiations involving management of the Colorado River.	This statement should not have been bracketed as a comment.
34854-3	The reality that is the genesis of this entire discussion is the fact that the Colorado River is over allocated. The Colorado River Compact of 1922 allocated 7.5 million acre-feet (maf) annually to each the Lower Basin and the Upper Basin of the Colorado River. In addition, by virtue of the Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande, Treaty Between the United States of America and Mexico (Treaty Series 994, 59 Stat. 1219), 1.5 maf is allotted annually to the country of Mexico.	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.
34854-4	Accordingly, the total annual allocation of Colorado River water is 16.5 maf, which substantially exceeds the amount of available Colorado River water. Between 1906 and 2006, the annual average inflow to the Colorado River was 13-15 maf (CRCN, 2006)1 • Thus, the total consumptive use of 16.5 maf results in the River operating at an annual deficit of between 1.5- 3.5 maf. Based on a hundred years of historical data, the River cannot supply enough water for all of its current uses.1 "Laws of the Rivers": The Legal Regimes of Major Interstate River Systems of the United States (2006). Colorado River Commission of Nevada.	Thank you for your comment. The subject of this comment is beyond the Draft EIS scope and does not require further agency response. However, your comment topic will be considered by the BLM during preparation of the Final EIS and Record of Decision.

Comments and Responses - Non-governmental Organizations

ID	Comment	Response
34854-5	Of the Lower Basin's annual 7.5 maf share, the Boulder Canyon Project Act (BCPA) established and the 1964 Decree (547 U.S. 150 (2006)) confirmed Nevada's 0.30 maf share of Colorado River water. By comparison, California and Arizona are respectively allocated 4.4 maf and 2.8 maf annually. As noted in the DEIS, southern Nevada is nearly completely dependent on this Colorado River share, as this volume supplies approximately 90% of its water. The 1964 Decree in Arizona v. California was incorporated in 2006 into the Consolidated Decree reported at 547 u.s. 150 (2006).	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.
34854-6	In addition to its small share of Colorado River water, Nevada is facing new threats to its water security. The Colorado River has experienced below average inflow for 9 of the past 12 years. This prolonged drought dropped the surface elevation at Lake Mead by 132 feet in the ten years between 2000 and 2010, resulting in two significant threats to Nevada's ability to take its full allocation of Colorado River water. The first threat is that Nevada's allocation will be reduced by 13,000 acre-feet when the level of Lake Mead drops below surface elevation 1075 feet. In November 2010, Lake Mead reached a low of 1082 feet, only 7 feet above the 1075 feet shortage trigger elevation. Secondly, Nevada's ability to withdraw water from current intakes is threatened if the drought persists and Lake Mead's water level continues to drop.	This statement should not have been bracketed as a comment.
34854-7	Given Nevada's dramatically smaller apportionment of Colorado River water relative to the other Colorado River Basin States, some have questioned why Nevada does not challenge the legally defined water allocations made among the Basin States in an attempt to increase Nevada's share. Taking such action, however, would require challenging almost a hundred years of federal agency decisions, Congressional action, a U.S. Supreme Court decision, an International Treaty and numerous multi-state compromises, all of which constitute the Law of the River.	Thank you for your comment. The subject of this comment is beyond the Draft EIS scope and does not require further agency response. However, your comment topic will be considered by the BLM during preparation of the Final EIS and Record of Decision.
34854-8	While everyone in the State of Nevada would agree that a greater allocation of Colorado River water would be the ideal solution to the water needs of the driest State in the nation, the realistic alternative is to work within the parameters of the 1922 Compact and the subsequent legal framework that have provided the foundation for the innovative solutions that we have developed to date.	Thank you for your comment. Information on this subject has been included in the background information in the Executive Summary.
34854-9	In this regard, the CRCN and the Southern Nevada Water Authority (SNWA) have actively pursued cooperative agreements among the seven Basin States for additional Colorado River supply. This work has resulted in innovative solutions to permit and encourage water conservation and augmentation such as water banking agreements with Arizona and California, conservation projects and augmentation strategies including the importation of the Virgin and Muddy Rivers and the construction of the Warren H. Brock Reservoir. These projects have resulted in additional short-term Colorado River supplies for Southern Nevada.	This statement should not have been bracketed as a comment.
34854-10	The legal framework permitting these new solutions was negotiated and agreed to by the seven Basin States and formally implemented by the Secretary of the Interior as part of the Colorado River Interim Guidelines for Lower Basin Shortages and the Coordinated Operations of Lake Powell and Lake Mead (2007), which has been incorporated into the Law of the River.	Thank you for your comment. This information is included in the EIS in Appendix A.
34854-11	As part of this cooperative process, however, the other Basin States expressed their view that Nevada must develop in-state resources before attempting to pursue additional alternatives related to the Colorado River.	Thank you for your comment. Information regarding this is included in Chapter 1 and the Executive Summary.
34854-12	The SNWA's Groundwater Development Project is one of the few available in-state resources that will allow Nevada to meet its obligations to the other Basin States.	Thank you for your comment. Information regarding this is included in Chapter 1 and the Executive Summary.
34854-13	Far more importantly, however, it will contribute to the stability of the entire State by providing Southern Nevada the long-term water supply it so desperately needs to remain a thriving community.	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.
34854-14	The realities of living in the Southwestern United States, where 30 million people depend on an over-allocated water resource, is that each Basin State must work tirelessly to diversify its water portfolio within its resources. In this regard, Nevada differs from the other Basin States only in the virtual absence of resources in its portfolio. This paucity of alternative resources, together with Nevada's meager allocation of Colorado River water, creates a daunting challenge for Nevada to develop a long-term supply of water to meet Southern Nevada's needs.	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.
34854-15	The development of the few in-state non-Colorado River resources that Nevada does have, such as the SNWA's Groundwater Development Project, are necessary for Southern Nevada to continue to drive the economy of the entire State of Nevada.	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.
34854-16	Accordingly, the CRCN endorses the SNWA's Groundwater Development Project.	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.

Comments and Responses - Non-governmental Organizations

ID	Comment	Response
38009-1	FRIENDS of Great Salt Lake has, as its mission, the preservation and protection of the Great Salt Lake ecosystem and seeks to increase public awareness and appreciation of the Lake through education, research, and advocacy. FRIENDS also seeks to preserve and protect aspects of regional ecosystems that are interconnected with the Great Salt Lake ecosystem, such as Snake Valley. Besides the possible direct impacts of the GWD Project to Great Salt Lake, this proposal has the potential to negatively affect wetland areas that provide stopover points for birds that use the Pacific Flyway of which Great Salt Lake is just one of many stops.	The purpose of the NEPA (EIS) process is to disclose potential project impacts. Please review updated sections 3.5 (vegetation) and 3.7 (aquatic biological resources) for a discussion these impacts.
38009-2	On behalf of its members, FRIENDS of Great Salt Lake frequently participates in agency processes related to the management of the Lake and on aspects of regional ecosystems that are interrelated to the Lake. FRIENDS considers this participation to be critical to its mission and to be valuable as a means of influencing the administration of critical public lands and of protecting and preserving the ecosystems associated with those lands.	Thank you for your comment.
38009-3	We recognize that there are still many unanswered questions regarding what the final proposal will look like, and that this uncertainly will not be resolved until completions of testing and modeling, governmental approval processes and agreements, and additional analysis under the National Environmental Policy Act (NEPA) process. However, because the Bureau of Land Management (BLM) has decided to go forward with a Tier 1 DEIS at this time, FRIENDS offers these comments subject to revision as the process continues to unfold.	Thank you for your comments.
38009-4	In general, we will focus our comments on the effects of the proposed groundwater pumping on Snake Valley. With that in mind, it is our position that the SNWA GWD Project, as well as any of the alternatives currently outlined in the DEIS, would cause irreparable and unacceptable damage to the resources in Snake Valley, including Great Basin National Park (GBNP).	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.
38009-5	While, among the alternatives outlined in the DEIS, Alternative D or E would cause the least impact to Snake Valley, those alternatives still allow for unacceptable negative impacts to the southern portion of the Valley.	Thank you for your comment.
38009-6	It is our position that the BLM must prepare and select an additional alternative that would avoid impact to Snake Valley altogether. Unless and until such an alternative is selected, the BLM should choose the No Action Alternative as its preferred alternative for this proposal.	Thank you for your comment. Alternatives D, E, and F would preclude groundwater development and pumping in Snake Valley.
38009-7	While the DEIS offers what it calls a 3M Plan designed to monitor and mitigate for the negative effects of the groundwater pumping, any possible benefit that could be derived from such a Plan will simply be too little and too late.	Please review standard resource responses Gen-1, Gen-2, and MM-1 for information responsive to this comment. Please also refer to the revised section 3.20 which explains in detail how the monitoring and mitigation process would be implemented throughout the project.
38009-8	The impacts of significant amounts of groundwater pumping on the outer fringes of the impacted area could take years to manifest themselves and cannot be instantly reversed.	Please see updated section 3.3 (water resources) for a discussion of potential impacts.
38009-9	Finally, beyond the confines of Snake Valley, the impacts that the GWD Project will have on the Salt Lake Valley – in terms of decreased water for Great Salt Lake, and increased particulate matter in the Salt Lake airshed – are unacceptable and cannot be allowed.	Please see updated section 3.3 (water resources) for a discussion of potential impacts. Please review standard resource responses Air-10 and Air-14 for information responsive to this comment.
38009-10	Under the Federal Land Policy and Management Act (FLPMA), in order to grant approval of the rights-of-way, the BLM must attach terms and conditions that both “minimize damage to scenic and esthetic values and fish and wildlife habitat and otherwise protect the environment,” 43 U.S.C. § 1765(a)(ii), and “protect federal property.” 43 U.S.C. § 1765(b)(i).	Thank you for your comment.
38009-11	In short, the GWD Project is likely to result in “lasting and irreversible effects on both the agriculture and native vegetation on the Snake Valley.” Stefan Kirby and Hugh Hurlow, Hydrogeologic Setting of the Snake Valley Hydrologic Basin, Millard County, Utah, and White Pine and Lincoln Counties, Nevada – Implications for Possible Effects of Proposed Water Wells, at 32 (Utah Geological Survey 2005).	Please see updated section 3.3 (water resources) for a discussion of potential impacts. Please review standard resource responses Air-10 and Air-14 for information responsive to this comment.
38009-12	As discussed below, based on BLM’s FLPMA obligations, the DEIS does not offer an alternative that allows for acceptable negative impacts on Snake Valley resources, especially given the potential impact to federal property.	BLM is a multiple use organization and reviews projects for their potential impacts based on NEPA. Decisions by the BLM will be based on all factors presented to the Authorized Officer.
38009-13	Although the DEIS briefly discusses the concept of Federal Reserved Water Rights, the analysis presented by the BLM on this issue is far from adequate. The reserved water rights associated with federal land in Snake Valley constitute federal property that are essential to fulfilling the fundamental purposes of those properties and that the BLM is obligated to protect.	Impacts to all potential water sources – whether or not those sources are the subject of federal reserved water rights, state appropriation-based water rights, or are unappropriated waters – have been summarized, evaluated, and considered in the EIS. Similarly, project mitigation measures apply to all water sources regardless of water rights status. By analyzing potential impacts to all identified water sources, the EIS analysis thus encompasses potential impacts to any federal reserved water rights that may later be identified in or adjudicated on these sources. Finally, the EIS describes the background for federal reserved water rights in Chapter 3, Section 3.3.1.7, Water Resources. There is no federal authority prohibiting the grant of a federal right of way on BLM land prior to the adjudication of federal reserved water rights. In this instance, Congress specifically mandated that certain portions of the right-of-way be granted by the BLM for the GWD Project. See Pub.L. No. 108-424, § 301. Please also see standard resource response WR-9.

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38009-14	The BLM must therefore properly account for these water rights and take whatever action is necessary to protect them. To the degree the agency fails to do that, it is acting contrary to the law.	Impacts to all potential water sources – whether or not those sources are the subject of federal reserved water rights, state appropriation-based water rights, or are unappropriated waters – have been summarized, evaluated, and considered in the EIS. Similarly, project mitigation measures apply to all water sources regardless of water rights status. By analyzing potential impacts to all identified water sources, the EIS analysis thus encompasses potential impacts to any federal reserved water rights that may later be identified in or adjudicated on these sources. Finally, the EIS describes the background for federal reserved water rights in Chapter 3, Section 3.3.1.7, Water Resources. There is no federal authority prohibiting the grant of a federal right of way on BLM land prior to the adjudication of federal reserved water rights. In this instance, Congress specifically mandated that certain portions of the right-of-way be granted by the BLM for the GWD Project. See Pub.L. No. 108-424, § 301.
38009-15	As noted in the DEIS, in <i>Winters v. United States</i> , 207 U.S. 564 (1908), the U.S. Supreme Court clarified that when the U.S. sets aside land for a specific purpose, it also sets aside a quantity of water rights necessary to fulfill that purpose. The concept was further clarified in <i>Arizona v. California</i> , 373 U.S. 546 (1963), when the Supreme Court held that before either state got to use its share of water under the Colorado River Compact, all overarching federal water rights had to be accounted for. Specifically, the Court noted that the various Indian reservations created by the United States along the Colorado River had potential claims of approximately 1 million acre-feet of annual river flow. <i>Id.</i> at 595. Additionally, the Court noted that “the principle underlying the reservation of water rights for Indian Reservations was equally applicable to other federal establishments such as National Recreation Areas and National Forests.” <i>Id.</i> at 601. Citing both the Commerce Clause and the Property Clause as the legal basis for the application of reserved water rights to these lands, the Court stated that “[w]e have no doubt about the power of the United States under these clauses to reserve water rights for its reservations and its property.” <i>Id.</i> at 597-98.	Please see discussion in section 3.3. Standard resource response WR-9 contains information relevant to this comment.
38009-16	Although the BLM notes that the Nevada State Engineer has yet to adjudicate the water rights associated with SNWA’s proposal, it is important to note that the United States’ position is that “state law may [only] control federal [water] rights and liabilities” as long as the state law does not “frustrate specific federal purposes or interests.” Department of Justice’s Office of Legal Counsel, Federal “Non-Reserved” Water Rights, 6 Op. Off. Legal Counsel, 328, 380 (1982). Where Congress specifically directs that federal interests control or where the primary purposes of the federal lands would be frustrated by the application of state law, Federal Reserved Water Rights should be asserted without regard to state law. <i>Id.</i> at 381.	Please see discussion in section 3.3. Impacts to all potential water sources – whether or not those sources are the subject of federal reserved water rights, state appropriation-based water rights, or are unappropriated waters – have been summarized, evaluated, and considered in the EIS. Similarly, project mitigation measures apply to all water sources regardless of water rights status. By analyzing potential impacts to all identified water sources, the EIS analysis thus encompasses potential impacts to any federal reserved water rights that may later be identified in or adjudicated on these sources. Finally, the EIS describes the background for federal reserved water rights in Chapter 3, Section 3.3.1.7, Water Resources. There is no federal authority prohibiting the grant of a federal right of way on BLM land prior to the adjudication of federal reserved water rights. In this instance, Congress specifically mandated that certain portions of the right-of-way be granted by the BLM for the GWD Project. See Pub.L. No. 108-424, § 301. Please also see standard resource response WR-9.
38009-17	When Congress’ intent is unclear regarding the amount of Federal Reserved Water Rights set aside for a particular segment of Federal land, the courts have devised a process which requires that the trier of fact: (1) examine the documents reserving the land and the underlying documentation authorizing the reservation; (2) determine the precise Federal purpose to be served by the legislation; (3) determine if water is essential for the primary purposes of the reservation; and, (4) determine the amount of water needed. See <i>United States v. City and County of Denver</i> , 656 P.2d 1, 20 (Colo. 1983).	The ROW application being considered by BLM does not involve an adjudication of federal reserved water rights. See discussion in section 3.3. Impacts to all potential water sources – whether or not those sources are the subject of federal reserved water rights, state appropriation-based water rights, or are unappropriated waters – have been summarized, evaluated, and considered in the EIS. Similarly, project mitigation measures apply to all water sources regardless of water rights status. By analyzing potential impacts to all identified water sources, the EIS analysis thus encompasses potential impacts to any federal reserved water rights that may later be identified in or adjudicated on these sources. Finally, the EIS describes the background for federal reserved water rights in Chapter 3, Section 3.3.1.7, Water Resources. There is no federal authority prohibiting the grant of a federal right of way on BLM land prior to the adjudication of federal reserved water rights. In this instance, Congress specifically mandated that certain portions of the right-of-way be granted by the BLM for the GWD Project. See Pub.L. No. 108-424, § 301. Please also see standard resource response WR-9.
38009-18	It the absence of adjudication of these rights for Snake Valley federal property, this process provides the BLM with a template that it could use to assess determine the appropriate amount of reserved water rights that must be protected.	Please note response to comment #17.
38009-19	The precise amount of reserved water rights that are appropriately allocated to federal land depends on the reason the land was set aside in the first place. The fundamental principle is that if land has been set aside for a specific purpose, a quantity of water sufficient to fulfill that purpose has also been reserved.	Thank you for your comment. General information about federal reserved water rights is provided in Chapter 3, Section 3.3.1.7. Please also see standard resource response WR-9.

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38009-20	In the DEIS, the BLM provides – at best – a cursory analysis of the Federal Reserved Water Rights impacted by the proposed action. See DEIS at 3.3-65. The agency merely conducted a brief analysis of water rights databases in Nevada and Utah and concluded that although these rights exist, they are unknown. They are not, however, unknowable and the BLM must take whatever action is necessary to ascertain the extent of those water rights.	Impacts to all potential water sources – whether or not those sources are the subject of federal reserved water rights, state appropriation-based water rights, or are unappropriated waters – have been summarized, evaluated, and considered in the EIS. Similarly, project mitigation measures apply to all water sources regardless of water rights status. By analyzing potential impacts to all identified water sources, the EIS analysis thus encompasses potential impacts to any federal reserved water rights that may later be identified in or adjudicated on these sources. Finally, the EIS describes the background for federal reserved water rights in Chapter 3, Section 3.3.1.7, Water Resources. There is no federal authority prohibiting the grant of a federal right of way on BLM land prior to the adjudication of federal reserved water rights. In this instance, Congress specifically mandated that certain portions of the right-of-way be granted by the BLM for the GWD Project. See Pub.L. No. 108-424, § 301. Please also see standard resource response WR-9.
38009-21	Without this knowledge, the agency cannot fulfill its obligations to provide a sufficient degree of protection to this federal property. As discussed below, the amount of water and the degree of protection that must be afforded to the water rights varies with the type of federal reservation.	See the discussion in section 3.3. Impacts to all potential water sources – whether or not those sources are the subject of federal reserved water rights, state appropriation-based water rights, or are unappropriated waters – have been summarized, evaluated, and considered in the EIS. Similarly, project mitigation measures apply to all water sources regardless of water rights status. By analyzing potential impacts to all identified water sources, the EIS analysis thus encompasses potential impacts to any federal reserved water rights that may later be identified in or adjudicated on these sources. Finally, the EIS describes the background for federal reserved water rights in Chapter 3, Section 3.3.1.7, Water Resources. There is no federal authority prohibiting the grant of a federal right of way on BLM land prior to the adjudication of federal reserved water rights. In this instance, Congress specifically mandated that certain portions of the right-of-way be granted by the BLM for the GWD Project. See Pub.L. No. 108-424, § 301. Please also see standard resource response WR-9.
38009-22	In order to help clarify the BLM’s obligation, what follows is a brief synopsis of the reserved water rights associated with the various types of federal property within Snake Valley beginning with the property that receives the most protection – Great Basin National Park.	Please review standard resource response WR-9 for information responsive to this comment.
38009-23	Courts have consistently given the reserved water rights associated with national parks the highest level of protection. <i>Cappaert v. United States</i> , 426 U.S. 128, 140-41 (1976) (distinguishing the protection of a national monument from the explicitly delineated protection that Congress intended for the national park lands); <i>United States v. New Mexico</i> , 438 U.S. 696, 709 (1978) (“Any doubt as to the relatively narrow purposes for which national forests were to be reserved is removed by comparing the broader language Congress used to authorize the establishment of national parks”); <i>City and County of Denver</i> , 656 P.2d at 28-30 (accepting the government’s arguments that National Parks are entitled to in-stream flows for such recreational purposes as river rafting, the same would not necessarily hold true for a national monument).	Thank you for your comment. General information about federal reserved water rights is provided in Chapter 3, Section 3.3.1.7.
38009-24	This is in line with the degree of protection of National Park resources provided by Congress in the National Park Service Organic Act of 1916. 16 U.S.C. § 1-18f. In fulfilling its obligations under the Organic Act, the Department of Interior (DOI) has outlined the various uses of national parks which carry with them reserved water rights. They are: - Ecosystem maintenance, including protection of forest growth and vegetative cover, watershed protection, and soil and erosion control; - Maintenance of water-related aesthetic conditions, including minimum stream flows and lake levels; - Wildlife conservation uses, such as protection, reproduction and management of migratory wildlife and birds, as well as fish and other aquatic life; - Sustained public uses, such as visitor accommodations and visitor enjoyment of the scenic, natural, historic and biotic park resources; and, - Water-borne public enjoyment and recreation. Department of Interior Solicitor, Federal Water Rights of the National Park Service, 86 Interior Decision 553, 596 (1979) (hereinafter Krulitz Opinion).	Thank you for your comment. BLM considered these and other purposes of the National Park system in the EIS as they relate to the Great Basin National Park .
38009-25	In order to determine the appropriate amount of reserved water rights necessary to support Congress’ intention when establishing Great Basin National Park (GBNP) and provide those water rights with the appropriate level of protection, we must first examine the Park’s enabling legislation and the provisions outlined in that legislation related to reserved water rights.	Thank you for your comment. General information about federal reserved water rights is provided in Chapter 3, Section 3.3.1.7.
38009-26	Great Basin National Park was established on October 27, 1986, and encompasses land that had been previously set aside as the Lehman Caves National Monument and the Humboldt National Forest’s Wheeler Peak Scenic Area. Great Basin National Park Act of 1986, 16 U.S.C. § 410mm-1(h). In the Park’s enabling act, Congress specified that “[n]othing in this Act shall be construed to establish a new express or implied reservation to the United States of any water or water-related right” and that “the United States shall be entitled to only that express or implied reserved water right which may have been associated with the establishment and withdrawal of Humboldt National Forest and the Lehman Caves National Monument.” Id.	Information and impacts to the Great Basin National Park is discussed in section 3.14.

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38009-27	In order to determine the amount of protection required for the Park's water resources, it is necessary to examine the degree of protection of the rights afforded for both the National Monument and the National Forest areas that existed prior to the Park's establishment, and to correlate that with the appropriate degree of protection for both the Park's water rights and for the fundamental purposes of the Park as whole.	Impacts to all potential water sources – whether or not those sources are the subject of federal reserved water rights, state appropriation-based water rights, or are unappropriated waters – have been summarized, evaluated, and considered in the EIS. Similarly, project mitigation measures apply to all water sources regardless of water rights status. In any event, to the extent GBNP's has federal reserved water rights, any such rights have not been asserted by the NPS in any judicial or administrative proceeding and an assertion of a federal reserved water right is not the only method by which the Park's water-based or water-dependent resources may be conserved. Please also see standard resource response WR-9.
38009-28	The amount of protection afforded reserved water rights for national monuments is specifically tied to the stated intention of a monument's reservation. For instance, in <i>Cappaert v. United States</i> , 426 U.S. 128 (1976), the Department of Interior (DOI) brought a challenge to counteract the degradation of water levels in Devil's Hole, a component of the Death Valley National Monument. Devil's Hole is a deep limestone cavern in Nevada that contains a "remarkable underground pool" that has a peculiar race of desert fish found nowhere else in the world. <i>Cappaert</i> , 426 U.S. at 132. As a result of ground water pumping on the nearby Cappaert ranch, water levels of the pool in Devil's Hole decreased, endangering the fish. In issuing an injunction limiting the amount of water that the Cappaerts were allowed to pump, the U.S. District Court held that when setting aside the Monument, the President had also reserved the water necessary to fulfill the purpose of the reservation. <i>Id.</i> at 135. The Ninth Circuit Court of Appeals affirmed the District Court's ruling and held that the implied water reservation applied to groundwater as well as surface water. <i>United States v. Cappaert</i> , 508 F.2d 313, 317-18 (9th Cir. 1974). The Supreme Court agreed with the Ninth Circuit that the United States could assert the reserved water rights associated with the Monument against any groundwater use that degraded the purpose of the reservation. <i>Cappaert</i> , 426 U.S. at 137. The Court stated, "when the federal government reserves land, by implication it reserves water rights sufficient to accomplish the purposes of that reservation." <i>Id.</i> On the issue of the distinction between groundwater and surface water, the Court noted that while it had not directly stated that there was a connection between the two, the connection clearly exists and any argument trying to make a distinction between them was futile. <i>Id.</i> at 141-42.	Thank you for your comment. Please also see standard resource response WR-9.
38009-29	In <i>United States v. New Mexico</i> , 438 U.S. 696 (1978), the Supreme Court referred back to the <i>Cappaert</i> decision for the proposition that within the national forests, the United States was entitled to the amount of water needed to fulfill the purpose of the reservation. <i>Id.</i> at 700. By examining the Creative Act of 1891, 16 U.S.C. § 471 (repealed in 1976), and the Organic Administration Act of 1897, 16 U.S.C. § 475, the Court interpreted Congress' intent to mean that national forest land were reserved for only two purposes: "to conserve the water flows, and to furnish a continuous supply of timber for the people." <i>New Mexico</i> , 438 U.S. at 707-08. Therefore, reserved water rights associated with national forests are limited to the water necessary to fulfill those purposes.	Thank you for your comment. General information about federal reserved water rights is provided in Chapter 3, Section 3.3.1.7.
38009-30	As noted in <i>Cappaert</i> , "ground water and surface water are physically interrelated as integral parts of the hydrologic cycle." <i>Cappaert</i> , 426 U.S. at 142 (quotations and citations omitted). The United States Geological Survey (USGS) agrees with that position and has found that "[n]early all surface-water features . . . interact with ground water . . . [and that] pumpage of ground water can deplete water in streams, lakes or wetlands." Thomas C. Winter, Judson W. Harvey, O. Lehn Franke & William M. Alley, <i>Ground Water and Surface Water: A Single Resource</i> , III (USGS 1998). Noting that "the importance of considering ground water and surface water as a single resource has become increasingly evident," the USGS went on to note that "[t]he interaction of ground water and surface water has been shown to be a significant concern." <i>Id.</i> at 1.	Impacts to all potential water sources – whether or not those sources are the subject of federal reserved water rights, state appropriation-based water rights, or are unappropriated waters – have been summarized, evaluated, and considered in the EIS. Similarly, project mitigation measures apply to all water sources regardless of water rights status. By analyzing potential impacts to all identified water sources, the EIS analysis thus encompasses potential impacts to any federal reserved water rights that may later be identified in or adjudicated on these sources. Finally, the EIS describes the background for federal reserved water rights in Chapter 3, Section 3.3.1.7, Water Resources.
38009-31	Although the question of whether Federal Reserved Water Rights attach to groundwater is "technically open," A. Dan Tarlock, <i>Law of Water Rights and Resources</i> , at 9-44 (Clark Boardman Callaghan 1988), statements by both federal and state water agencies, as well as federal courts have pointed to the physical connection between groundwater and surface water. Given that these water bodies are viewed as integrally connected, they should be considered a single unit, and dictates that the concept of Federal Reserved Water Rights be applied to the type of groundwater pumping proposed by SNWA in this DEIS.	Please review standard resource response WR-9 and revised section 3.3 (water resources) for a discussion of federal water rights and potential impacts from groundwater withdrawal.
38009-32	While Great Basin National Park's enabling act did not set aside additional water rights for the Park, it did preserve the reserved water rights for the Lehman Caves National Monument and the Humboldt National Forest's Wheeler Peak Scenic Area existing prior to the Park's establishment. The enabling act also gave the National Park Service (NPS) clear direction to manage the Park in a manner "generally applicable to units of the national park system." 16 U.S.C. § 410mm-1(a).	Impacts to all potential water sources – whether or not those sources are the subject of federal reserved water rights, state appropriation-based water rights, or are unappropriated waters – have been summarized, evaluated, and considered in the EIS. Similarly, project mitigation measures apply to all water sources regardless of water rights status. In any event, to the extent GBNP's has federal reserved water rights, any such rights have not been asserted by the NPS in any judicial or administrative proceeding and an assertion of a federal reserved water right is not the only method by which the Park's water-based or water-dependent resources may be conserved. Please also see standard resource response WR-9.

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ID	Comment	Response
38009-33	In line with that instruction, therefore, management of the Parks' resources – to include reserved water rights – must conform with the mandate in the Park Service Organic Act requiring the Secretary to “protect, manage, and administer the park in such manner as to conserve and protect the scenery, the natural, geologic, historic, and archaeological resources of the park, including fish and wildlife and to provide for the public use and enjoyment of the same in such a manner as to perpetuate these qualities for future generations.” 16 U.S.C. § 1	Please review standard resource response WR-9 for information responsive to this comment. Water rights assigned to the National Park Service are under their management and BLM does not have the authority to administer them. The NPS was part of the stipulated agreement with SNWA in the Spring and Delamar/Dry Lake/Cave valley rulings. At the current time, BLM is unaware of any reserved federal water rights possessed by Great Basin National Park.
38009-34	Contrary to those instructions, however, all of the proposed alternatives would – to varying degrees – infringe on the Park's reserved water rights and negatively impact Park resources.	Please review standard resource response WR-9 for information responsive to this comment. Water rights assigned to the National Park Service are under their management and BLM does not have the authority to administer them. The NPS was part of the stipulated agreement with SNWA in the Spring and Delamar/Dry Lake/Cave valley rulings. At the current time, BLM is unaware of any reserved federal water rights possessed by Great Basin National Park.
38009-35	A USGS survey conducted in cooperation with the NPS shows that the pumping proposed by SNWA directly threatens a number of streams, springs and seeps within the Park. See Tod Williams, Bio-Physical Resources of Concern Associated with Proposed Ground Water Withdrawal, at 1 (NPS 2006).	The EIS evaluates potential effects to water resources in GBNP and incorporates information from the USGS susceptibility studies that have been conducted for the park (See Section 3.3.2.8 under the minor heading Identification of Springs and Streams Susceptible to Drawdown Impacts within Great Basin National Park; and Figure 3.3.2-1; and GBNP impact descriptions provided in Sections 3.3.2.9 to 3.3.2.16.
38009-36	The study further concluded that any decreases in flow resulting from pumping from the SNWA wells could adversely affect water-dependent biological and geological resources within the Park, as well as the Park's water supply. Id. Specifically, the combined proposed groundwater pumping of both Spring and Snake valleys have the potential to affect 6,040 acres on the east side of the Park, including four stream systems totaling 9.25 miles, 18 wetlands totaling 137 acres, 25 or more perennial springs, 156 acres of riparian habitat, and 23 cave systems including Lehman Caves. Id.	Thank you for expressing your concerns regarding potential effects on NPS resources. Please review section 3.14 for more information on impacts to the Great Basin National Park.
38009-37	In addition to the USGS study presenting evidence that the SNWA proposal will pose a significant threat to Park resources in direct conflict with federal law, the DEIS confirms that these impacts are likely to occur. See generally DEIS Section 3.3.	The EIS evaluates potential effects to water resources in GBNP and incorporates information from the USGS susceptibility studies that have been conducted for the park (See Section 3.3.2.8 under the minor heading Identification of Springs and Streams Susceptible to Drawdown Impacts within Great Basin National Park; and Figure 3.3.2-1; and GBNP impact descriptions provided in Sections 3.3.2.9 to 3.3.2.16.
38009-38	The information available to Congress at the Park's inception indicated that the amount of water originating in and flowing from the Park in its normal precipitation cycle, along with the surface and subsurface manifestations of local aquifers under artesian pressure, would be sufficient to fully meet the Park's needs. The only reasonable conclusion is that Congress intended to protect against any unforeseen infringement on Park resources, and SNWA's GWD Project poses an unacceptable threat to that purpose and cannot be allowed by the BLM.	Please see Standard Comment Response Gen-8.
38009-39	The Wilderness Act of 1964 was designed to provide for the “preservation and protection [of wilderness areas] in their natural condition . . . [in order] to secure for the American people of present and future generations the benefits of an enduring resource of wilderness.” 16 U.S.C. § 1131-36 (2003).	Thank you for supplying this quotation from the Wilderness Act of 1964.
38009-40	As early as 1979, the DOI concluded that a formally designated wilderness area was entitled to the reserved water rights necessary to fulfill the purposes of the Wilderness Act. Krulitz Opinion at 609-10.	Impacts to all potential water sources – whether or not those sources are the subject of federal reserved water rights, state appropriation-based water rights, or are unappropriated waters – have been summarized, evaluated, and considered in the EIS. Similarly, project mitigation measures apply to all water sources regardless of water rights status. By analyzing potential impacts to all identified water sources, the EIS analysis thus encompasses potential impacts to any federal reserved water rights that may later be identified in or adjudicated on these sources. Finally, the EIS describes the background for federal reserved water rights in Chapter 3, Section 3.3.1.7, Water Resources.
38009-41	This protection included water for the maintenance of minimum stream flows and lake levels, as well as for ecological maintenance such as evapotranspiration for natural communities. Id.	Please refer to standard resource response MM-1 for information relevant to this comment.
38009-42	The federal courts that have decided the issue have held that there is a clear reservation of the amount of water necessary to maintain the viability of wilderness areas. See, e.g., Sierra Club v. Block, 622 F.Supp. 842, 862 (D. Colo. 1985).	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. Please refer to the response to your comment #40 above.
38009-43	(“[I]t is implied from the Wilderness Act that Congress reserved water rights in the wilderness areas to the extent necessary to accomplish the purposes specified in the act.”). To the extent that Congress intended that water be set aside for wilderness areas, those rights are entitled to the full protection of the law. As one commentator noted: [i]f wilderness reserved rights exist, the government vests them as federal property in constructive custody of the Secretary of Agriculture (or Interior) in much the same way that gold in the custody of the federal official commanding Fort Knox. No one would claim that the commander of Fort Knox lacked an enforceable duty to refrain from losing the gold by inaction or default. So too, no one should say that the Secretary can sit idly by and fail to prevent the destruction of vested federal property rights, especially when the rights sub judice are by definition ‘necessary’ to his mission of manager of wilderness. Robert H. Abrams, Water in the Western Wilderness: The Duty to Assert Reserved Water Rights, 1986 U. Ill. L. Rev. 387, 398 (1986).	Please refer to the response to your comment #40 above.

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38009-44	In addition to stating that provisions of the Wilderness Act govern the administration of the Mount Moriah Wilderness Area, section 8(a) of the Area's enabling act states that the quantity of water sufficient to fulfill the purpose of the Mount Moriah Wilderness Area was reserved with those rights having a priority date of December 5, 1989, the date of the Act. Nevada Wilderness Protection Act of 1989, Pub. L. No. 101-195, § 2, 103 Stat. 1784 (1989). The Act goes on to state that these rights will be in addition to any water rights that may have been previously reserved for the Area, such as those associated with the Humboldt National Forest. Id.	Impacts to all potential water sources – whether or not those sources are the subject of federal reserved water rights, state appropriation-based water rights, or are unappropriated waters – have been summarized, evaluated, and considered in the EIS. Similarly, project mitigation measures apply to all water sources regardless of water rights status. By analyzing potential impacts to all identified water sources, the EIS analysis thus encompasses potential impacts to any federal reserved water rights that may later be identified in or adjudicated on these sources. Finally, the EIS describes the background for federal reserved water rights in Chapter 3, Section 3.3.1.7, Water Resources. Please see standard resource response WR-9.
38009-45	Because Congress' clear intent was to protect the reserved water rights for Mount Moriah, to the degree that the SNWA groundwater pumping within Snake Valley negatively affects the Area, it must be disallowed.	Impacts to all potential water sources – whether or not those sources are the subject of federal reserved water rights, state appropriation-based water rights, or are unappropriated waters – have been summarized, evaluated, and considered in the EIS. Similarly, project mitigation measures apply to all water sources regardless of water rights status. By analyzing potential impacts to all identified water sources, the EIS analysis thus encompasses potential impacts to any federal reserved water rights that may later be identified in or adjudicated on these sources. Finally, the EIS describes the background for federal reserved water rights in Chapter 3, Section 3.3.1.7, Water Resources. Please see standard resource response WR-9.
38009-46	It should also be noted that several Wilderness Study Areas (WSA) are located within the Utah portion of Snake Valley. Specifically, the BLM has designated portions of Cougar Mountain, the Fish Springs Range and the Deep Creek Mountains as WSAs.	The Conger Mountain, Fish Springs, and Deep Creek Mountain WSA in Utah are included in Table 3.14-2 and shown on Figure F3.14-2 of the DEIS. Since there are no areas directly affected in Utah by proposed project infrastructure, the analysis of drawdown impacts is provided in the water resources analysis in Section 3.3 of the DEIS.
38009-47	Under the provisions of FLPMA, the BLM is required to manage the WSAs "in a manner so as not to impair the suitability of such areas for preservation as wilderness." 43 U.S.C. § 1782(c). This protection must be extended to the water necessary to preserve these lands as wilderness areas, and any possible negative effects of SNWA's proposal on these WSAs cannot be allowed.	Thank you for your comment. Please see the response to Gen-8.
38009-48	The Fish Springs National Wildlife Refuge was established in 1959 under the Migratory Bird Conservation Act. 16 U.S.C. § 715(d). The Refuge totals 17,992 acres and has over 10,000 acres of wetlands.	Thank you for your comment.
38009-49	In Arizona v. California, the U.S. Supreme Court specifically acknowledged that the United States could reserve water sufficient to fulfill the purposes of the national wildlife refuges. 373 U.S. at 601. Consisting of "all lands, waters, and interests therein administered by the Secretary for wildlife refuges," National Wildlife Refuge System Administration Act of 1966, 16 U.S.C. § 668dd(a)(1), the parcels that fall within the National Wildlife Refuge System are entitled to the reserved water rights "reasonably necessary to fulfill the purposes of the refuge." Krulitz Opinion, at 604. These purposes include all consumptive and non-consumptive water uses necessary for the conservation of migratory birds and other wildlife, as well as attendant personnel needs. Id.	Impacts to all potential water sources – whether or not those sources are the subject of federal reserved water rights, state appropriation-based water rights, or are unappropriated waters – have been summarized, evaluated, and considered in the EIS. Similarly, project mitigation measures apply to all water sources regardless of water rights status. By analyzing potential impacts to all identified water sources, the EIS analysis thus encompasses potential impacts to any federal reserved water rights that may later be identified in or adjudicated on these sources. Finally, the EIS describes the background for federal reserved water rights in Chapter 3, Section 3.3.1.7, Water Resources. Please see standard resource response WR-9.
38009-50	The Fish Springs Refuge was set aside as an inviolate sanctuary for migratory birds, and therefore the reserved water rights reasonably necessary to fulfill that purpose are entitled to protection under the law. Additionally, the Refuge has perfected water rights on file with the Utah Division of Water Rights totaling 32,000 afy.	Thank you for your comment.
38009-51	To the degree that the Snake Valley withdrawals would impact Fish Springs reserved water rights, they must be disallowed.	Please refer to updated section 3.3 (water resources) which discusses water rights and potential impacts. Please also refer to standard resource response WR-9 for further information responsive to this comment.
38009-52	In addition to water rights under Utah law, several of the springs within the Fish Springs Refuge were included in the 1912 Public Water Reserve designation and are entitled to Public Water Reserve # 107 protection. Public Water Reserve # 107 (PWR 107) is an Executive Order signed by President Coolidge in 1926.	Impacts to all potential water sources – whether or not those sources are the subject of federal reserved water rights, state appropriation-based water rights, or are unappropriated waters – have been summarized, evaluated, and considered in the EIS. Similarly, project mitigation measures apply to all water sources regardless of water rights status. By analyzing potential impacts to all identified water sources, the EIS analysis thus encompasses potential impacts to any federal reserved water rights that may later be identified in or adjudicated on these sources. Finally, the EIS describes the background for federal reserved water rights in Chapter 3, Section 3.3.1.7, Water Resources. Please see standard resource response WR-9.
38009-53	In that year, the Secretary of the Interior advised the President that protection of springs and water holes on federal land was necessary to protect grazing areas. Letter to the President from the DOI Secretary, April 17, 1926, as quoted in United States v. Idaho, 959 P.2d 449, 452 (Idaho 1998). Subsequent to receiving that letter, and under authority granted him by the Stock Raising Homestead Act, 43 U.S.C. 291, et seq., President Coolidge ordered that public lands containing a spring or water hole, and all land within one quarter mile of that spring or water hole, be withdrawn and reserved for public use. Idaho, 959 P.2d at 451.	Please see standard resource response WR-9 for a discussion of this topic. Finally, the EIS describes the background for federal reserved water rights in Chapter 3, Section 3.3.1.7, Water Resources.

Comments and Responses - Non-governmental Organizations

ID	Comment	Response
38009-54	While the courts have varied in the level of protection given to PWR 107 water rights, the Interior Board of Land Appeals considers the reservation to apply to those bodies of water needed or used by the public which are capable of providing enough water for general use. John V. Hyrup, 15 IBLA 412, 419-20 (1974). Under PWR 107, both the Fish Springs Public Water Reserve designations, as well as the numerous springs and water holes scattered throughout BLM land in Snake Valley that are being used for domestic and stock water needs, are to protection from SNWA ground water withdrawals. Therefore, to the extent that the GWD Project infringes on those water rights, the BLM must disapprove that Project.	Impacts to all potential water sources – whether or not those sources are the subject of federal reserved water rights, state appropriation-based water rights, or are unappropriated waters – have been summarized, evaluated, and considered in the EIS. Similarly, project mitigation measures apply to all water sources regardless of water rights status. By analyzing potential impacts to all identified water sources, the EIS analysis thus encompasses potential impacts to any federal reserved water rights that may later be identified in or adjudicated on these sources. Finally, the EIS describes the background for federal reserved water rights in Chapter 3, Section 3.3.1.7, Water Resources. Please see standard resource response WR-9.
38009-55	In the DEIS, the BLM completely failed in its obligation to account for the Federal Reserved Water Rights that could be impacted by SNWA's proposed action. Because the DEIS provides nothing more than a cursory discussion of the concept of these water rights, DEIS 3.3-65, the BLM does not have the information it needs to make a decision adequately protective of this federal property.	Impacts to all potential water sources – whether or not those sources are the subject of federal reserved water rights, state appropriation-based water rights, or are unappropriated waters – have been summarized, evaluated, and considered in the EIS. Similarly, project mitigation measures apply to all water sources regardless of water rights status. By analyzing potential impacts to all identified water sources, the EIS analysis thus encompasses potential impacts to any federal reserved water rights that may later be identified in or adjudicated on these sources. Finally, the EIS describes the background for federal reserved water rights in Chapter 3, Section 3.3.1.7, Water Resources. There is no federal authority prohibiting the grant of a federal right of way on BLM land prior to the adjudication of federal reserved water rights. In this instance, Congress specifically mandated that certain portions of the right-of-way be granted by the BLM for the GWD Project. See Pub.L. No. 108-424, § 301. Please see standard resource response WR-9.
38009-56	As a reason for this, the BLM states that the water rights have not been adjudicated at the state level and it therefore has nothing to go on. However, it is not enough for the agency to sit by and wait for the states to take action on this issue.	Impacts to all potential water sources – whether or not those sources are the subject of federal reserved water rights, state appropriation-based water rights, or are unappropriated waters – have been summarized, evaluated, and considered in the EIS. Similarly, project mitigation measures apply to all water sources regardless of water rights status. By analyzing potential impacts to all identified water sources, the EIS analysis thus encompasses potential impacts to any federal reserved water rights that may later be identified in or adjudicated on these sources. Finally, the EIS describes the background for federal reserved water rights in Chapter 3, Section 3.3.1.7, Water Resources. There is no federal authority prohibiting the grant of a federal right of way on BLM land prior to the adjudication of federal reserved water rights. In this instance, Congress specifically mandated that certain portions of the right-of-way be granted by the BLM for the GWD Project. See Pub.L. No. 108-424, § 301. Please see standard resource response WR-9.
38009-57	Rather, NEPA requires the agency to obtain the information it needs to make an informed decision if it can be done without exorbitant cost. See 40 C.F.R. § 1502.22(a). Alternately, if the information cannot be obtained because the overall cost of obtaining it is exorbitant or the means of obtaining it are not known, the agency must: (1) state that such information is incomplete or unavailable; (2) state the relevance of such information; (3) summarize the existing credible evidence relevant to evaluating impacts; and (4) evaluate such impacts upon theoretical approaches or generally accepted research methods. 40 C.F.R. § 1502.22(b).	This statement was bracketed in error and does not contain a comment that warrants a response.
38009-58	Because the BLM has not either determined that the cost to obtain the needed information is too expensive, or performed the alternative analysis, the DEIS is inadequate. This deficiency must be corrected.	Please review section 3.3.1.7 for a full discussion of federally reserved water rights. Please see standard resource response WR-9.
38009-59	An additional area of concern, because it is not well understood, is the connection of the carbonate aquifer from one basin to another and the connection between the basin-fill aquifer and the carbonate aquifer beneath it.	Sections 3.3 (water resources) discusses the relationship of interbasin flow. See also standard resource response WR-24.
38009-60	SNWA has identified nine “points of diversion” in Snake Valley, all within Nevada, and all bordering GBNP. Groundwater Application Points of Diversion Locations, http://water.nv.gov/hearings/spring%20valley%20hearings/SNWA/0.%20Overview/OV_POD_11502.pdf . As initially proposed by SWNA, these points of diversion consist of preliminary estimates of between 15 to 25 groundwater production wells. GWD Final Scoping Package, unnumbered 18, http://water.nv.gov/hearings/spring%20valley%20hearings/SNWA/0.%20Overview/final%20scoping%20package.pdf .	This comment was bracketed in error and warrants no response.
38009-61	SNWA has acknowledged that its Snake Valley pumping will affect springs and spring-dependent sensitive species, including Big Springs and Little Springs in Nevada and Tule Valley in Utah, as well as groundwater dependent communities, aquatic riparian areas and their associated sensitive species. Id.	Section 3.3 (water resources) and 3.7 (aquatics) for a discussion of pumping impacts.
38009-62	Specifically, what remains unanswered is the affect that the SNWA pumping will have on the basin-fill aquifer that supplies the residents of Snake Valley, and whether pumping large amounts of water over extended periods of time will lower the hydrologic head of the carbonate aquifer on the fringes of the valley.	The potential drawdown effects to Snake Valley and water rights in Snake Valley are provided in Section 3.3.2 and Appendix F3.3 of the EIS.
38009-63	Until these questions are resolved, it would be imprudent to move forward with approval of any alternative that allows groundwater pumping affecting Snake Valley.	Thank you for your comment.

Comments and Responses - Non-governmental Organizations

ID	Comment	Response
38009-64	The Monitoring, Mitigation and Management (3M) Plan outlined in the DEIS for Snake Valley, DEIS 3.3-118 and Appendix B, is inadequate because it does not account for the negative environmental effects of future groundwater development and long-term effects of groundwater production. The reason for this deficiency is because of the delayed effect of pumping at some distance from the site of pumping and the inability to immediately correct any negative impacts from the pumping.	Please see Standard Resource Responses MM-1 and MM-2.
38009-65	Specifically, the proposed action calls for between 39 and 48 separate wells in Snake Valley with a majority of this pumping taking place within the Valley's confined aquifer. This pumping will create what is referred to as a cone of depression around each well which will manifest itself in the form of a reduction in hydrologic head in the surrounding area. Although the impact will be more quickly seen in the area closest to the well, over time the cone-shaped depression will begin impacting an area some distance from the well.	Section 3.3 (water resources) discusses the potential impacts of groundwater withdrawals. Additional information is contained in appendix F3.3 (section F3.3.7).
38009-66	Of course, the greater the amount of water pumped in a given span of time, the further the cone of depression will spread. Because it could take many years – even up to a decade – before the effects of the pumping are seen in the outlying regions of the cone, a monitoring plan that identifies impacts in an area far removed from the well is likely to be too little and too late.	Please see Standard Resource Responses MM-1 and MM-3.
38009-67	Reversing the negative effects of this pumping is not as simple as turning off a light switch and expecting the problem to correct itself. Little is known about the rate at which water within the aquifers is replaced, but no models show that it will be replenished as quickly as it is withdrawn. Even assuming that water within the aquifers is replaced at the same rate that it was withdrawn, it could take years for any effect to be reversed; much too late to repair an ecosystem that has been fundamentally and irreversibly damaged.	See response MM-1 regarding monitoring; and Section 3.20 regarding BLM's proposed monitoring, management and mitigation plan for the GWD project.
38009-68	The fact of the matter is that because the timeframe within which the Snake Valley aquifer was charged is unknown, it is possible that a sufficient recharge of that aquifer – enough to offset negative effects of pumping for a given resource – will never occur.	Section 3.3 (water resources) discusses potential impacts of water withdrawals and water balance (discharge and recharge).
38009-69	While the DEIS states that there is not enough information to evaluate the possible impacts of climate change on the affected area, DEIS 3.5, it does acknowledge that the temperature in the area is likely to increase, DEIS 3-1.11, and the amount of water availability is likely to decrease. DEIS 3-1.12.	Thank you for your comment. 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.
38009-70	Without a sense of how long it would take for a sufficient recharge to occur to offset the impacts of a cone of depression from the pumping, it is impossible to state with any certainty that mitigation measures would be adequate to protect sensitive water-dependent features within Snake Valley. DEIS 3-12.	Please see Standard Resource Response MM-1.
38009-71	Therefore the proposed 3M Plan must be modified to take into account this phenomenon.	Please review standard resource responses MM-1 and MM-2 for information responsive to this comment.
38009-72	All of the alternatives contained within the DEIS show a reduction in the flow of water from Big Springs, resulting in reduced flows into Lake Creek, and then Pruess Lake.	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.
38009-73	The DEIS goes on to acknowledge that these riparian/wetland habitats will be destroyed, negatively impacting populations of wildlife and birds.	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.
38009-74	Currently, there are year round populations of golden eagle and winter populations of bald eagle that use this corridor for resting, foraging, and roosting (bald eagles in the winter). If water levels in these water bodies are reduced, there will be no open water habitats in the winter for waterfowl and no bald eagle foraging habitat in the region. Similar impacts to other migratory birds and raptors would occur during migratory and breeding seasons.	Please refer to standard resource response WL-1 for information relevant to this comment.
38009-75	At this time, the governmental agencies that manage populations of bald and golden eagles under the Bald and Golden Eagle Protection Act do not know the population trends of eagles in this area.	Please refer to standard resource response WL-1 for information relevant to this comment.
38009-76	Snake Valley is already heavily degraded from livestock grazing and agricultural practices, and the cumulative impacts of these land uses along with the proposed project would destroy existing habitat for eagles and other wildlife in the region.	Please refer to standard resource response WL-1 for information relevant to this comment. Cumulative impacts are covered under each resource section in chapter 3.
38009-77	Water is precious throughout the West, but no more so than in the area surrounding Great Salt Lake and the Great Salt Lake Desert. As has been noted, Great Salt Lake is of significant importance locally, nationally and internationally. R. 586-603; Robert W. Adler, Toward Comprehensive Watershed-Based Restoration and Protection for Great Salt Lake, 1999 Utah L. Rev 99, 109-114 (1999).	Comments noted.
38009-78	For example, annual waterfowl use exceeds five million birds and between two and five million shorebirds rely on the Lake each year. The Lake provides essential habitat to at least 257 species of birds, almost half of which nest there. Most of the remaining species stop over at the Lake seasonally each year to feed and rest on their migration routes. In recognition of its critical role in these long flights, Great Salt Lake has been designated as one of only nineteen sites in the Western Hemisphere Shorebird Reserve Network.	Your comments on the Draft EIS have been considered.

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ID	Comment	Response
38009-79	The critical importance of the Lake to birds is borne out by the sheer numbers of particular species that depend on it. For example, the Lake supports 80 percent of all Wilson's phalaropes, the most American avocets and black neck stilts found in any wetland along the Pacific Flyway, the largest staging concentration of eared grebes in North America, the largest breeding populations of white-faced ibis and California gulls, over half of the entire breeding population of snowy plovers west of the Rocky Mountains, more than three quarters of the entire western population of tundra swan, what is perhaps the largest breeding colony of American white pelicans, the only staging area for marbled godwits in the interior United States and one of the ten largest wintering populations of bald eagle in the lower 48 states.	Your comments on the Draft EIS have been considered.
38009-80	The DEIS notes that the proposed action threatens an inter-basin transfer of water from Snake Valley into the Great Salt Lake Desert basin of 24,000 afy. DEIS 3-3.56.	See section 3.3 (water resources) for potential impacts from groundwater pumping.
38009-81	The DEIS also notes that flows from the Snake Valley aquifer terminate at Great Salt Lake, with an intermediate discharge at Fish Springs. DEIS 3.3-3.	See section 3.3 (water resources) for potential impacts from groundwater pumping.
38009-82	Continued growth along the Wasatch Front has significantly affected water flows into Great Salt Lake, and growth forecasts show a doubling of population in the area over the next 50 years.	See section 3.3 (water resources) for potential impacts from groundwater pumping.
38009-83	Because of its importance, all sources of water into the Lake must be protected, and any additional groundwater withdrawals which have the potential to impact the Lake, such as those proposed by the SNWA pumping, should not be approved.	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.
38009-84	The DEIS also notes several negative impacts to air quality due to wind erosion of surfaces disturbed by pumping. As the DEIS notes, GBNP has some of the best level of visibility in the nation, a critical asset that could be adversely affected by the proposed action.	Please see common response Air-5.
38009-85	So too, the amount of particulate matter generated by the proposed action, 34,700 tons per year of PM10 and 3,470 tons per year of PM2.5, is significant.	Please see common response Air-5.
38009-86	DEIS 3.1-36. The DEIS does not adequately account for the impact of that generation on the Utah County and Salt Lake County airsheds, and this deficiency must be corrected. Both of these airsheds have been significantly impacted by particulate matter blowing in from the south, and both would be negatively affected by the proposed action.	Please see standard resource responses Air-8 and Air-14.
38009-87	It is insufficient for the BLM to assume that "only a very small fraction" of that particulate matter would be transported north into the Salt Lake Valley. DEIS 3.1-60.	Please see common response Air-8.
38009-88	The agency must properly model and account for this impact and it must deny approval of any action that would contribute to an already worsening situation.	Please see common response Air-8 and Air-14.
38009-89	FRIENDS appreciates this opportunity to comment on the DEIS for the SNWA GWD Project and we look forward to BLM's responses to the concerns we have expressed and the agency's continued efforts to determine the possible impacts associated with this proposal.	Thank you for your comment.

Glen Canyon Institute

34798-1	Please classify GCI as a commenter and keep us on your list for future updates and opportunities for comment on this project. Thank you for the opportunity to comment on the draft EIS.	Thank you for your comment.
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Great Basin Group, Sierra Club

34374-1	Executive Summary Table ES-13, pp. ES-72 to ES-74. Some of the figures for the No Action alternative are difficult to accept. For instance, how can the No Action alternative cause nearly as many acres of private land to be in the drawdown area as the proposed action ("Land Use" item). Again, how can the No Action alternative cause about 6 times as many acres of public lands identified for disposal to fall into the drawdown area as the proposed action ("Socioeconomics" item).	Regarding the land use item noted, there are current uses and other projects contributing to groundwater pumping without the proposed project under the No Action Alternative, and the overall area included in the water resources analysis includes lands subject to disposal located outside the affected basins.
34374-2	Executive Summary, p. ES-75. The BLM has no Preferred Alternative. Surely the FEIS will contain a Preferred Alternative?	The BLM has presented its Preferred Alternative in this Final EIS.
34374-3	Chapter 1, Sec. 1.6, p. 1-12. The graph of population growth is mere speculation. We are virtually certain that Clark County population has leveled or decreased since 2008. The underlying bases for growth have been literally mined out, and it is just as reasonable to claim that Clark County will have zero growth in the 2010-2020 decade as the projected growth in the graph. This graph should be replaced by a more realistic assessment of growth.	Thank you for your comment. Standard Resource Responses Gen-3 and SocEcon-2 address aspects of this comment. As noted in Sections 1.1 and 1.6, SNWA is acting within its statutory obligations and responsibilities in the development of its water plan, recognizing the long lead-times and uncertainties associated with securing additional water resources and major capital facility development. Consequently, the specifics of SNWA's projected water demand, the projected population change that drives that demand, and alternative sources of water are outside the scope of this EIS.
34374-4	To retain this projection as a basis for justifying the enormous impacts that will result from the proposed action is simply not acceptable, and the final EIS should adjust this according to the best and most current data.	Please refer to standard resource response SocEcon-2 for information relevant to this comment.

Comments and Responses - Non-governmental Organizations

ID	Comment	Response
34374-5	It is imperative that SNWA provide figures on total annual water delivery between 1999 and 2010. The GPCD figure uses the variables of annual delivery and of population.	Please refer to standard resource response SocEcon-2 for information relevant to this comment.
34374-6	What are the separate numbers they used for these two variables over the years?	Please refer to the response to your comment #5.
34374-7	We cannot make a sensible assessment of the need without these separate figures.	Please refer to the responses to your comments #5 and #6.
34374-8	Chapter 1, Sec. 1.7.1, p. 1-16. Although it is stated that BLM has no "regulatory authority over SNWA's demand projections", it does have sufficient authority to dismiss projects which have no substantive basis, especially when the impacts to land and water are great.	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. Please refer to Chapter 1 where BLM's legal and regulatory mandates, including those under the Lincoln County Conservation Recreation and Development Act, are described.
34374-9	There is a record of case law which would support the BLM in not granting, willy-nilly, ROW's on public land to projects that cannot be shown to be necessary.	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.
34374-10	Why has SNWA not presented an alternative plan for power generation which takes into account the new economics of renewable energy? Is it the need for baseload power? If so, then emergent technology such as battery storage, flywheel storage, salt storage, and gravity storage need to be examined. I suspect that such a plan would significantly lower the number of impacted acres needed for power generation in the proposed action. This really makes sense for outlying water wells where power line impacts greatly outweigh those of a small solar installation near the wellhead.	Please refer to standard resource response Gen-9 for information relevant to this comment. Power generation has not been analyzed by BLM as part of this project.
34374-11	Such an alternative plan would also present a very different footprint, wherein contiguous, more or less square, areas for solar power generation and storage replace long, continuous transmission line corridors and corridors for feeder wells. Such long disturbance corridors are a path for invasive vegetation, an attraction for illegal OHV usage, and a barrier for wildlife. Moreover, solar generation does not have the visual impact of high power lines.	Please note response to your comment #10 above.
34374-12	I am sure a plan using solar energy would significantly reduce many of the impacts described in this DEIS and have also have a beneficial impact on the long-term costs for SNWA to utilize this facility.	Please note response to your comment #10 above.
34374-13	It is noteworthy and laudable that SNWA proposes to use some hydropower; but SNWA should be asked to go back to the drawing board and produce an alternative power plan using solar and, perhaps, wind installations in addition. This should be part of the final EIS. In such a large project involving many facets, it seems reasonable to ask for alternative analysis on various facets where appropriate, even beyond the alternatives for the entire project, as listed in Sec. 2.7.	Please note response to your comment #10 above.
34374-14	Chapter 3, Sec. 3.1.1.2, p. 3.1-5 "Prevention of Significant Deterioration". It is stated that "The visibility at the GBNP is one of the best in the nation." It is further stated that "The GBNP is a Class II area, based on the Congressional legislation that brought the park into existence." It seems that GBNP has de facto been in a Class I area since its inception. Clearly an act of Congress to acknowledge that reality is worth pursuing; but, for purposes of this EIS, it makes sense to consider GBNP as a Class I area and to measure any impact relative to standards for Class I, not to those of Class II.	The analysis correctly evaluates the impacts to the GBNP as a Class II area, as based on Congressional legislation.
34374-15	Chapter 3, Sec. 3.1.2.8, p. 3.1-39 "Greenhouse Gas Emissions from Groundwater Pumping". There is something wrong in the math for the CDE here. "less than 0.0005 percent of the CDE ... emitted by the U. S. and less than 0.5 percent ... emitted in Nevada" does not make sense. This implies a factor of $0.5/0.0005 = 1000$ greater CDE for U. S. compared to Nevada. I believe that we can generally assume that CDE ~ population. The U.S. to Nevada population ratio, by the 2010 census, is $308.7/2.7$ (in millions) ~ 114. The CDE ratio is probably off by an order of magnitude -- either 0.0005 or 0.5 is wrong (maybe just a typo). These numbers should be checked in the sections for the other alternatives.	Based on your comment the FEIS has been edited to clarify. Thank you.
34374-16	Chapter 3, Sec. 3.2.2.9, p. 3.3-102. Map of 200-yr drawdown under proposed action. This map clearly implies a huge change in the ecosystem of the basins surrounding GBNP due to 50+ feet of drawdown. GBNP was originally envisioned to be larger so as to include significant portions of basins and thereby be more representative of the Great Basin than just the mountain range. The proposed action will preclude GBNP from ever expanding under this vision. The GBNP, being Nevada's only national park, should not have its destiny be circumscribed by vast groundwater drawdowns in the adjacent basins. This will not happen under the No Action alternative. Moreover, even the area within the park is threatened with 50+ feet of drawdown. This would be a loss to the park that has real consequences and an impact to all potential visitors. I am not aware of any other comparable proposed impacts to our National Park system.	Please see standard resource response MM-1 for information relevant to this comment. See section 3.3 (water resources) for potential impacts to resources based on groundwater withdrawal. Also see section 3.14 (special designations) which discuss potential impacts to GBNP.

Comments and Responses - Non-governmental Organizations

ID	Comment	Response
34374-17	Chapter 3, Sec. 3.14.2.9, p. 3.14-19 to 3.14-22. The impact of the project with respect to several of the ACEC's is very troublesome (best seen in Tables 3.14-23, -24, and -25). Although much of the construction can be purportedly mitigated, the long-term water withdrawal will bring obvious and detrimental changes to the ACEC areas for which no on-site mitigation is really possible. This will partially to wholly destroy the ACEC's. These ACEC's were set up to protect special areas from adverse human impacts and to preserve the biological character of the Great Basin, especially within riparian, wetland, and phreatophytic areas. While arguments might be made for pipeline and road construction within the ACEC's, water withdrawal on the scale of the proposed action is inherently at odds with the nature of these designations and should not be allowed.	Please see standard resource response MM-1 for information relevant to this comment. See section 3.3 (water resources) for potential impacts to resources based on groundwater withdrawal. Also see section 3.14 (special designations) which discuss potential impacts to GBNP.
34374-18	Chapter 3, Sec. 3.14.2.9, p. 3.14-21. It is stated that "The NPS has noted that the statute that established the GBNP specifies that the purpose of the GBNP is to conserve the natural resources within the GBNP and provide for the enjoyment of those resources in a way that leaves them unimpaired for future generations." NPS states that this mandate requires that there can be no impact to GBNP resources from the proposed project." Clearly, this DEIS shows that the Proposed Action will have significant impacts on GBNP. This statement implies that the Proposed Action, and Alternatives A, B, and C, are clearly unacceptable.	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.
34374-19	1) Air and Atmospheric Values -- Groundwater Pumping. The conclusion here is stated far too mildly and does not capture the summary of the full analysis of Sec. 3.1. Table 3.1-23, for instance, shows a 5-fold increase in PM10 at build-out + 75 years. It is acknowledged in Sec. 3.1 that visibility in GBNP will probably be impaired due to this. The most visible effect of the Owens Valley, California drawdown by LAPWD is the barren expanse of former Owens Lake and the fugitive dust from the now dry lake bed.	Please see common responses Air-9 and Air-10.
34374-20	2) Vegetation -- Groundwater Pumping. Chapter 3, Table 3.5-14 identifies approximately 8,000 acres of "wetland/meadow" area to have a 10+ drawdown in full-buildout + 200 yrs and approximately 191,000 acres of "basin shrubland" for the same. The summary paragraph here should incorporate these numbers as they imply a very large loss of natural vegetation in these regimes.	Information presented in the table is used as support for the impact summary.
34374-21	3) Visual Resources -- Surface Disturbance. The number of miles of transmission lines in the Proposed Action should be repeated here.	The FEIS has been revised to incorporate this information
34374-22	For a federal document such as an EIS, it seems compelling that US census figures be used rather than the figures of the applicant, which appear skewed to support their claims. The document in Appendix A is simply out-of-date, and current numbers would undermine SNWA's claim for future water demand. Again, SNWA must be directed to return to these figures, update them for the FEIS, and modify their proposed action accordingly.	Thank you for your comment regarding the long-term population projections. The most recent population projections for states produced by the U.S. Census Bureau were released in 2005, considerably more dated than those from the Nevada State Demographer. Moreover, as noted in Sections 1.1 and 1.6, SNWA is acting within its statutory obligations and responsibilities in the development of its water plan, recognizing the long lead-times and uncertainties associated with securing additional water resources and major capital facility development. Consequently, the specifics of SNWA's projected water demand, the population projections that help drive that demand, and alternative sources of water are outside the scope of this EIS.

Great Basin Heritage Area Partnership

35102-1	The Great Basin Heritage Area Partnership (GBHAP) is the designated cooperating (managing) entity for the Great Basin National Heritage Area (GBNHA). The Heritage Area was created by Congress in 2006 in recognition of its significant heritage features emblematic of the entire Great Basin region. The GBNHA encompasses White Pine County in Nevada. Millard County in Utah and adjacent tribal lands in Nye County Nevada. Juab and Tooele County in Utah. The mission of the GBHAP is derived from the enabling legislation for the GBNHA. Its mission is: To develop and enable partnerships to help identify, research and evaluate, conserve, protect, interpret and promote the archaeological, historical, cultural, natural, scenic and recreational resources of the Great Basin National Heritage Area in a way that enhances economic opportunity without managing or regulating land use.	This statement was bracketed in error and does not contain a comment that warrants a response.
35102-2	The last phrase in the mission is not to imply that the GBHAP is disinterested in the way lands within and impinging upon its area are in fact managed or used. Clearly the way lands are managed or used can have potential effects on the heritage features that the GBHAP is bound to preserve and protect and promote for stimulating regional economic vitality- particularly for tourism. In fact one of the programs that the GBHAP pursues is practicing vigilance with respect to proposed plans for change within the region and commenting as necessary with respect to potential impacts of proposed change on the heritage resources of the GBNHA. The proposed Clark, Lincoln, and White Pine Counties Groundwater Development Project has become one such project.	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.
35102-3	We have carefully read the sections of the Draft EIS that most particularly impinge on the heritage features within the GBNHA- specifically the chapters on air, Vegetation, wildlife, aquatic biological resources, recreation, transportation, special designations, visual resources and cultural resources.	<div></div> This text was bracketed in error and does not contain a comment that warrants a response.

Comments and Responses - Non-governmental Organizations

ID	Comment	Response
35102-4	The review was held to assure that the EIS: 1. Identified and addressed all project facilities and effects; 2. Provided sufficient information about how the project would be constructed and construction scheduled so that related environmental impacts may be identified; 3. Used sufficient methods to assess potential environmental effects; 4. Suggested effective mitigation of potential short and long-term environmental effects; 5. Recognizes all relevant environmental impacts on with heritage features and on impacts on potential to stimulate local economic vitality associated with implementing the project relative to the t11ree main pipeline alignments; 6. Recognizes how effects differ with each of the four alignment options (as much as these alignments are relevant within t11e GBNHA); and 7. Addresses t11e relative environmental effects of implementing future facilities.	This text was bracketed in error and does not contain a comment that warrants a response.
35102-5	We find that the EIS has done an adequate and acceptable job of meeting the objectives outlined above.	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.
35102-6	However, we wish to point out that identifying all impacts and suggesting mitigating steps will not eliminate impacts. While mitigation may reduce impacts in some categories of impact to technically acceptable levels according to NPS, BLM or NFS standards, in other categories of impact there are no standards. The attached list of acknowledged impacts "as excerpted from various portions of the EIS. We need provide no additional data or impact conclusions.	The EIS acknowledges in the mitigation effectiveness statements that effects are expected to be reduced but not eliminated for many of the impact issues. Please see Standard Resource Response MM-1 for information regarding proposed mitigation.
35102-7	When the impacts of all t11c area of our concern are considered cumulatively we find the project to be unacceptable.	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.
35102-8	We know that despite all the data and statements of impact the ultimate decision whether to provide a FONSI or approve the project may be a subjective one.	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. The decision document for an EIS is a record of decision (ROD).
35102-9	So ultimately the argument may be a philosophical one. The proposed project only takes from the GBNHA. It provides nothing in return. The benefits and liabilities are unequal.	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. Please refer to standard resource responses MM-1 and MM-3 for information relevant to this comment.
35102-10	What it takes for use outside the region is water. Water may be scarce in the Las Vegas Area but it is not unique in the world.	Comment noted.
35102-11	What will be taken away locally as a result of this project is local uniqueness--a small portion of the native vegetative character, the ubiquity of wildlife and aquatic life. It will diminish the unique recreational, visual and cultural resource. Bit by bit the GBNHA will be changed-made more like all other (and less unique) man dominated places on earth.	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.
35102-12	And for what? So that the current residents in Vegas have more water? No, they can find enough through current proven conservation techniques. Any additional water is for growth because recently much of the local economy has been based on growth. But infinite growth anywhere is unsustainable.	Your comment has been provided to SNWA for future water pumping.
35102-13	Ultimately our society must look for an economic model that provides modest stable prosperity based on stability rather than a growth economy based on growth. That search can begin when this project is rejected.	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. Please review updated section 3.18 (socioeconomics and environmental justice) for information on this topic. Please also refer to standard resource response SocEcon-2 for additional information relevant to this comment.
35102-14	The following is a sampling of impacts of concern to the GBNHA acknowledged by the EIS: They are direct excerpts from the document with no intent to provide an alternate meaning as a result of removing them from context.	This should not have been bracketed as a comment.
35102-15	Conclusion. Localized air quality emissions due to construction activities are expected to be short term (5 years or less). Conservative assumptions were used to estimate tailpipe emissions from construction and maintenance vehicles. Based on these assumptions, the potential annual emissions vary from less than 1 ton per year of SO2, to approximately 24,000 metric tons of CDE. Emissions from construction are not expected to cause or contribute to exceedences of any AAQS nor impair visibility conditions at GBNP because the construction equipment would be operated in accordance with required permits on an as-needed-basis over a large project area.	This should not have been bracketed as a comment.
35102-16	Conclusion. Localized fugitive dust emissions due to construction activities are expected to be short term (5 years or less). Conservative assumptions were used to estimate fugitive dust emissions from construction activities. Based on these assumptions, it is estimated that 1,172 pounds per day of PM10 of (176 tons per year) and 117 lbs/day of PM2.5 (18 tons per year) will be emitted in the project area.	This should not have been bracketed as a comment.

Comments and Responses - Non-governmental Organizations

ID	Comment	Response
35102-17	Localized fugitive dust emissions due to maintenance activities are expected to continue for the life of the project. It is estimated that 0.1 ton per year of PM10 and 0.1 ton per year of PM2.5 will be emitted in the project area due to fugitive dust associated with maintenance vehicles. At these low levels, fugitive dust emissions from maintenance vehicles are not expected to impair visibility conditions at the GBNP.	This should not have been bracketed as a comment.
35102-18	Localized fugitive dust emissions due to maintenance activities are expected to continue for the life of the project. It is estimated that 0.1 ton per year of PM10 and 0.1 ton per year of PM2.5 will be emitted in the project area due to fugitive dust associated with maintenance vehicles. At these low levels, fugitive dust emissions from maintenance vehicles are not expected to impair visibility conditions at the GBNP.	This should not have been bracketed as a comment.
35102-19	Conclusion [from any alternative though amounts may differ-emphasis added] *It is predicted from model simulations that pumping drawdown of to-feet and greater would potentially lead to changes in vegetation that could increase windblown dust emissions. The level and extent of these impacts are highly uncertain and the following estimated impacts should be used for comparison purposes only. It is estimated that an additional 1, 700 tons of PM10 would be emitted per year after full build out, 24,000 tons of PM10 would be emitted per year for full build out plus 75 years, and 34,700 tons of PM10 would be emitted per year for full build out plus 200 years. Also, it is estimated that an additional 170 tons of PM2.5 would be emitted per year after full build out. 2,400 tons of PM2.5 would be emitted per year for full build out plus 75 years, and 3,470 tons of PM2.5 would be emitted per year for full build out plus 200 years. At these levels, it is possible that windblown dust emissions from groundwater drawdown could impair visibility conditions at GBNP. The extent of possible visibility impairment is highly uncertain.	This should not have been bracketed as a comment.
35102-20	Conclusion. Approximately 12,208 acres of native shrublands and woodlands removed or disturbed by construction would require 20 to more than 200 years for recovery to similar species composition and vertical structure as adjacent undisturbed areas. Approximately 64 acres of annual and perennial grassland and marshland cover types would require from 2 to 15 years for recovery. Approximately 1,004 acres of natural land cover types would be permanently converted to aboveground industrial uses. Operational maintenance activities are expected to disturb small areas, primarily within the permanent ROW. The area of vegetation communities affected by construction surface disturbance would represent less than 1 percent of the surface area of these cover types within the hydrologic basins occupied by the Proposed Action.	This should not have been bracketed as a comment.
35102-21	ACMs include measures to salvage and preserve soil and during construction, to follow best practices for revegetation seeding and erosion control, to follow a long-term restoration monitoring program, and to obtain a written release of restoration success from the BLM. These measures provide the framework for meeting the desired conditions for vegetation community types specified in the Ely District RMP within the time frames expected for natural recovery of these communities.	This should not have been bracketed as a comment.
35102-22	3.5.2.2 Proposed Action, Alternatives A through C Construction and Facility Maintenance Vegetation Community Surface Disturbance and Restoration Conclusion. The proposed ROWs for 306 miles of buried water pipelines and 323 miles of overhead power lines arc at high risk for invasion by noxious and non-native weed species. Construction and operational maintenance equipment traveling from weed-infested areas into weed-free areas could disperse weed seeds and propagules, resulting in new weed establishment. SNWA would implement a variety of measures to be included in an integrated weed management plan. These measures include management of weed contaminated topsoil, pre-construction weed treatments, and equipment wash stations to prevent the transport of weed plants and seeds along the ROW into the new areas. SNWA would continue to monitor and control weeds within the ROW in accordance with overall restoration responsibilities.	This should not have been bracketed as a comment.
35102-23	Construction and Facility Maintenance Vegetation Community Surface Disturbance and Restoration Conclusion. Approximately 8,764 acres of native shrublands and woodlands removed or disturbed by construction would require 20 to more than 200 years for recovery to similar species composition and vertical structure as adjacent undisturbed areas. Approximately 10 acres of annual and perennial grassland and marshland cover types would require from 2to 20 years for recovery. Approximately 800 acres of natural land cover types would be permanently converted to aboveground industrial uses. ACMs include measures to salvage and preserve soil during construction: to follow BMPs for re-vegetation seeding and erosion control; to follow a long term restoration monitoring program; and to obtain a written release of restoration success from the BLM. Implementation of these measures would insure that vegetation species cover and composition would recover within time frames similar to natural recovery rates, or potentially more quickly over the majority of the surface disturbance areas.	This should not have been bracketed as a comment.
35102-24	Proposed mitigation measures: None.	This should not have been bracketed as a comment.

Comments and Responses - Non-governmental Organizations

ID	Comment	Response
35102-25	Residual impacts include: • The long (20- to 200-years) restoration periods for shrublands and woodlands on 8, 764 acres of disturbed ROWs because of sparse and uncertain precipitation, and soil-induced growth constraints (salinity, alkalinity, shallow soil depths); • The permanent removal of shrubland (primarily sagebrush shrubland, greasewood/salt desert shrub land. Mojave mixed desert scrub) from 800 acres required for aboveground facilities; and An unknown fraction of some disturbed communities would not recover to previous composition and density because of specialized soil requirements (e.g., winterfat on hardpan/caliche soils within the greasewood/salt desert shrubland type).	This should not have been bracketed as a comment.
35102-26	• Groundwater drawdowns from pumping (index of 10 feet or greater) would likely result a long-term changes in plant species composition in the Wetland/Meadow ET area from wetland species such as rushes, sedges, and grasses, to upland species of grasses and shrubs. • Groundwater drawdowns from pumping (index of 10 feet or greater) would likely result in lower densities of phreatophytic shrubs such as greasewood and an increase in upland species of grasses and shrubs that are not completely, or partially dependent on reliable sources of groundwater. • Groundwater drawdowns from pumping (index of 10 feet or greater) and changes in spring flows would likely increase stress on spring-fed aquatic vegetation and riparian shrubs. If these water sources dried up over a long period of time (5 years or more), it is likely these communities would not recover and vegetation community composition would change to upland species. • Successional changes in spring-dependent wetlands and meadows could reduce the availability of Tribal traditional usc wetland and riparian plants in Spring, Snake, and Lake valleys. The Ute Ladies'-tresses orchid has not been identified in any of the hydrologic basins potentially affected by drawdown. If populations of this species were found in the future, evaluations of groundwater drawdown risk to this species would be conducted.	This should not have been bracketed as a comment.
35102-27	[Cumulative effects on vegetation:] • Spring Valley - The Proposed Action would potentially cause substantial drawdown effects to both basin shrubland and wetland/meadow communities. The adverse effects on these communities would occur in all three model periods. The impact parameters indicate that the Proposed Action would contribute most of the incremental cumulative effects on basin shrubland and wetland/meadow communities in this basin. In total, the Proposed Action would affect a maximum of 103,798 acres of basin shrubland and 4,252 acres of wetland/meadow over the three model periods. • Snake Valley- The Proposed Action would potentially cause substantial drawdown effects to both basin shrubland and wetland/meadow communities. The adverse effects on these communities would occur in all three model periods, though the greatest potential impacts would occur during the full build out plus 75 years and full build out plus 200 years model time frames. The impact parameters indicate that that Proposed Action would contribute to all of the incremental cumulative effects on basin shrub land and wetland/meadow communities in this basin. In total, the Proposed Action would affect 49,068 acres of basin shrubland and 1,927 acres of wetland/meadow for the three model periods.	This should not have been bracketed as a comment.
35102-28	Construction Water Use Conclusion. Construction water use could adversely affect water sources for wildlife, if surface water is located within the drawdown area and connected to groundwater sources.	This should not have been bracketed as a comment.
35102-29	Conclusion: Habitat for big game species would be temporarily disturbed by construction and a portion would be permanently converted to industrial uses.	This should not have been bracketed as a comment.
35102-30	Conclusion: [thousands of] 12,208 acres of native shrubland and woodland habitat would be removed or disturbed by construction and would require 20 to more titan 200 years for recovery to similar species composition and vertical structure as adjacent undisturbed areas. Sixty-four acres of annual and perennial grassland and marshland habitats would require from 2 to 0 years for recovery.	This should not have been bracketed as a comment.
35102-31	3.6.2.2 Pro1Josed Action, Alternatives A through C Right-of-way Areas Construction and Facility MaintenanceConclusion: Compliance with the ESA would require implementation of measures to reduce the effects of anticipated take of desert tortoise, including through habitat loss or degradation. Potential impacts would be reduced based on compliance with recovery plans and RMPs and adherence to ACMs.	This should not have been bracketed as a comment.
35102-32	Conclusion: Habitat for greater sage-grouse would be temporarily disturbed by construction and a portion would be permanently converted to industrial uses as identified in Tables 3.6-6 through 3.6-8. Nine active leks fall within 2 miles of project ROWs. Eight of the nine active leks are within 2 miles of power line ROWs. Construction and facility maintenance impacts could include loss of nests, eggs, or young, nest or lek abandonment, and increased potential for disruption of seasonal movements, collisions with power lines and vehicles, and predation or harassment. ACM would reduce potential impacts to greater sage-grouse.	This should not have been bracketed as a comment.
35102-33	Conclusion: Habitat for bats would be temporarily disturbed by construction and a portion would be permanently converted to industrial uses as identified above. ACMs and the protections afforded in the RMPs would reduce potential ROW construction and facility maintenance impacts to bats.	This should not have been bracketed as a comment.

Comments and Responses - Non-governmental Organizations

ID	Comment	Response
35102-34	Residual impacts include: • The long-term (20 to 200 years) restoration periods for woodland habitats disturbed by ROW construction make this habitat unavailable for forage and roosting for bats; and • An unknown portion of habitats may be degraded because recovery may not fully occur or proximity to permanent facilities makes the habitat less suitable.	This should not have been bracketed as a comment.
35102-35	[And what about loss of insets upon which they feed resulting from a change in vegetation?]	Section 3.6.2.9, Pumping Effects General Terrestrial Wildlife Discussion of the FEIS, describes the general impacts of groundwater pumping including impacts on prey availability.
35102-36	Conclusion: Construction would result in the incremental, long-term reduction of up to approximately 2.590 to 6.231 acres of habitat within four of the groundwater development basins (Cave, Dry Lake, Snake, and Spring valleys). Of this disturbance, approximately 1,747 to 4, 180 acres of habitat would be permanently converted to industrial uses. Other impacts would include animal displacement (short and long term), habitat fragmentation (long term), increased potential mortalities from vehicle traffic (short and long-term), potential loss of nests, eggs or young, and potential for increased collisions and predation given additional perching sites on power lines. There arc 13 active leks within proposed groundwater development areas and 18 active leks within 2 miles. Six of the seven active leks in southern Cave Valley are within 2 miles of groundwater development areas. All 10 of the active leks in Spring/Snake population management unit fall within groundwater development areas in Spring and Snake valleys and an additional two active leks in southern Spring Valley are also within proposed Spring Valley groundwater development areas. Protections provided by the RMP and the ACMs would reduce impacts. But potential for long term impacts to local greater sagegrouse populations exists. See ACMs listed above and the corresponding section under ROW areas for relevant RMP protections and ACM numbers.	This should not have been bracketed as a comment.
35102-37	At the full build out time frame and within nesting brooding or summer range for greater sage-grouse, ET wetland/meadow and basin shrub land as well as springs and perennial streams are in areas that may be impacted by drawdown in Spring Valley. In the full build out plus 75 years time frame, three basins have ET vegetation types. springs or perennial stream segments in areas at potential risk within these two habitat ranges. By full build out plus 200 years, six basins contain these potentially affected habitats based on groundwater model results. Potential pumping impacts, when combined with potential groundwater development surface impacts, could result in the reduction or even loss of some local sage-grouse populations in Cave, Snake and Spring valleys.	This should not have been bracketed as a comment.
35102-38	Conclusion. If construction occurs in the fall months, instream disturbance at the Snake Creek Crossing in Snake Valley could disturb spawning activity and alter spawning habitat for brown trout. No RMP management, direction BMPs, or ACMs arc available to reduce impacts on trout spawning in Snake Creek.	This should not have been bracketed as a comment.
35102-39	Conclusion. Construction activities at streams with standing or flowing water would result in short-term erosion and sedimentation. One perennial stream (Snake Creek in Snake Valley) would be crossed by the pipeline ROW. Soil disturbance within the ROW also could affect three unnamed springs and one named spring (Big Springs) in Snake Valley due to their location within 500 feet of the ROW boundary. Vehicle and equipment use within the ROWs also pose a short-term risk of fuel spills to aquatic habitat and species. These activities could alter water quality and cause physiological stress or mortalities. BMP management direction restricts vehicle fueling within 100 feet of waterbodies. BMPs and numerous ACMs would be implemented to reduce erosion effects on waterbodies. These measures would result in low level impacts to aquatic habitat and species.	This should not have been bracketed as a comment.
35102-40	Conclusion. Construction water use could adversely affect aquatic habitat and species, if surface water is located within the drawdown area and connected to groundwater sources.	This should not have been bracketed as a comment.
35102-41	Conclusion. Vehicle traffic within 431 miles of access roads could result in alteration of amphibian habitats (Snake Creek, Steptoe creek, and temporary waterbodies) and potential mortalities during breeding movements to waterbodies in the spring or summer and movement to upland areas in late summer and fall. Risk of mortalities would be highest near waterbodies.	This should not have been bracketed as a comment.

Comments and Responses - Non-governmental Organizations

ID	Comment	Response
35102-42	<p>Summary of Aquatic Biological Resource Impacts, Applicant-committed Protection Measures, and Monitoring and Mitigation Recommendations for Proposed Action Pumping Effects/Conclusions • Flow reductions would modify habitat by decreasing depths, water velocities, and wetted area in spring/pond/lake and stream habitats. A total of 30 springs/ponds/lakes and 33 streams are at risk when considering the longest model time frame. • Effects would be most pronounced in riffle habitats in streams and spring inflow and outflow areas. Effects on pool habitats would depend on the magnitude of the flow change and size of the pools. Reduced flows could adversely affect aquatic habitat by altering thermal regimes, increasing sedimentation, and reducing riparian cover. A complete loss of habitat could occur in small springs and larger springs such as Big Springs in Snake Valley. • Flow reductions could adversely affect aquatic species by reducing abundance and diversity, altering composition, reducing food sources, limiting spawning and early life stage development, and decreasing individual health condition • Flow reductions in 9 springs in Spring Valley and 1 spring in Lake Valley could result in habitat reductions and adverse effects on the special status amphibian, northern Leopard frog. • Flow reductions in Big Springs Creek and Lake Creek in Snake Valley could result in substantial loss of habitat and aquatic species. • Flow reductions in 4 springs in Snake Valley could result in loss of bifid duct and longitudinal gland pyrg populations at these locations. • Substantial flow reductions in Butterfield, Flag, and Wambolt springs could result in the loss of Butterfield, Flag, and Lake Valley pyrg populations due to their limited occurrence (one spring/one basin). • Conflicts with recovery or conservation management objectives could occur for four species: Pahrump poolfish (Shoshone Ponds), White River springfish (Flag Springs), Bonneville cutthroat trout (2 streams in Spring Valley and 4 streams in Snake Valley), and northern leopard frog (10 springs). • Game fish species considered to be traditional values to regional Tribes could be affected in Snake, Spring, Lake, and Lower Meadow Valley Wash.</p>	<p>This should not have been bracketed as a comment.</p>
35102-43	<p>Table 3. 7-7 Summary of Aquatic Biological Resource Impacts, ACMs, and Monitoring and Mitigation Recommendations for Alternative A Groundwater Development Effects • Construction could alter aquatic habitat on a short-term basis in 17 perennial streams and 5 springs with aquatic biological resources. Riparian vegetation near waterbodies could be affected on a long-term basis. Surface disturbance and vehicle/equipment could affect water quality from sediment input and risks from fuel spills on a short-term basis. • Instream activities in the spring or fall could affect trout spawning on a short-term basis. • Vehicle traffic near waterbodies could cause mortalities to amphibians during movement periods especially during the spring and summer breeding periods. • Special status Bonneville cutthroat trout could be affected in one stream within the groundwater development areas (Big Wash in Snake Valley). • Special status amphibian species could be affected in three springs within the groundwater development areas. • Springsnail species could be affected in spring habitats within two of the groundwater development areas (one unnamed spring in Spring Valley and one spring in Snake Valley). • Conflicts with conservation management objectives could occur for two species: Bonneville cutthroat trout (Big Wash) and northern leopard frog (three springs). • Game fish species considered to be traditional values to regional Tribes could be affected in Snake and Spring valleys.</p>	<p>This should not have been bracketed as a comment.</p>
35102-44	<p>Pioche SRP area (1,148 acres) Chief Mountain SRMA (178 acres), Las Vegas Valley SRMA (184 acres). Loneliest Highway SRMA (695 acres), and Steptoe Valley WMA (4 acres). The surface disturbance anticipated in the recreation areas would comprise<1 percent of any recreation area and impacts would be localized. Surface disturbance, noise, and sights and sounds of other people during construction in these areas would detract from the natural character of the area and diminish the recreation experience in the shortterm. Minimal long-term adverse impacts to recreation in these areas would result from alteration of the recreation setting in areas with aboveground structures and vegetation alteration. Any increase in traffic associated with operations and maintenance, even in remote areas of the ROW would likely be unnoticeable by recreationists in the</p>	<p>This should not have been bracketed as a comment.</p>
35102-45	<p>Conclusion. Short-term effects to the scenic quality and viewer sensitivity of the study area would result from the construction of the pipeline, aboveground facilities and power lines; project surface disturbance (ROW); increased vehicle traffic and increased human presence; and construction-generated dust. Project surface disturbance areas would require vegetation clearing, grading, occupancy, and restoration activities. Facility operation and maintenance would locally change the long-term character of the landscape in most of the study area, which contains only minor human modification north of Apex. Long-term impacts to visual resources would consist of moderate to strong form, line, color, and texture contrasts of the revegetated pipeline ROW, access roads, transmission lines, and non-linear project components with the existing predominantly natural setting. Periodic vehicle and worker activity associated with options and maintenance would be periodically visible.</p>	<p>This should not have been bracketed as a comment.</p>

Comments and Responses - Non-governmental Organizations

ID	Comment	Response
35102-46	<p>Conclusion. Short-term effects to the scenic quality and viewer sensitivity of the study area would result from the construction of the pipeline, aboveground facilities and power lines; project surface disturbance (ROW); increased vehicle traffic and increased human presence; and construction-generated dust. Project surface disturbance areas would require vegetation clearing, grading, occupancy, and restoration activities. Facility operation and maintenance would locally change the long-term character of the landscape in most of the study area, which contains only minor human modification north of Apex. Long-term impacts to visual resources would consist of moderate to strong form, line, color, and texture contrasts of the revegetated pipeline ROW, access roads, transmission lines, and non-linear project components with the existing predominantly natural setting. Periodic vehicle and worker activity associated with operations and maintenance would be periodically visible.</p>	<p>This should not have been bracketed as a comment.</p>
35102-47	<p>Conclusion. Draw down of groundwater would potentially dry out the soil moisture profile of ET area vegetation (wetland/meadow, basin shrubland), and vegetation dependent on spring flows. Drawdown induced root zone stress may result in broad scale vegetation composition changes at various locations across the landscape. It is expected that the overall pattern and form of native vegetation communities within the landscape would remain similar over time. Because these vegetation composition changes would proceed slowly, it is unlikely that most public viewers (primarily highway travelers and dispersed recreational users) would recognize a change in vegetation community appearance as a distinct contrast relative to the surrounding landscape. On a more site specific scale, valley residents (ranchers and farmers), and tribal members who visit traditional use areas may recognize changes in vegetation communities over time because of long term familiarity with specific landscape features such as springs, and frequent visits to these types of sites.</p>	<p>This should not have been bracketed as a comment.</p>
35102-48	<p>Conclusion. Cumulative effects to visual resources would occur from aboveground facilities and surface disturbance, which include large scale facilities such as high-voltage power lines, wind energy projects, as well as ancillary facilities such as substations and roads within the viewsheds of the Proposed Action. The Proposed Action's contribution to the development within the desert landscape would contribute cumulative visual impacts when considered with existing and future foreseeable projects within the immediate viewsheds of Spring Valley, Dry Lake Valley, Lake Valley, Coyote Spring Valley, Delamar Valley, and Steptoe Valley.</p>	<p>This should not have been bracketed as a comment.</p>
35102-49	<p>Conclusion. The Proposed Action when considered with existing and future foreseeable projects would meet USFS and GBNP visual quality objectives for land administered by USFS and NPS, but would not meet the intent of GBNP viewshed preservation objectives outside of NPS boundaries.</p>	<p>This should not have been bracketed as a comment.</p>
35102-50	<p>Conclusion. Approximately 12,300 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. At this time, the number of historic properties that could be affected by the proposed Project is unknown. Intensive Class III inventories of all proposed disturbance areas would be conducted prior to project construction and with enough lead time to allow for evaluation of sites located during the inventories, assessment of impacts, and mitigation, if necessary. Unavoidable adverse effects to historic properties located within proposed disturbance areas or within the viewshed of proposed aboveground facilities would be mitigated in compliance with the PA. Any previously unknown archaeological sites discovered during construction activities would be handled as detailed in the PA.</p>	<p>This should not have been bracketed as a comment.</p>
35102-51	<p>Residual impacts include: Project construction would result in the loss of cultural resources that are ineligible for the NRHP and located in proposed disturbance areas. Although these sites would be recorded to BLM standards and the information integrated into local and statewide databases, the sites ultimately would be destroyed by project construction. How many historic properties would be adversely affected by the proposed Project is currently unknown. If historic properties are identified within proposed disturbance areas, impacts would be avoided where possible by means such as project redesign or rerouting; if avoidance is not feasible, the impacts would be mitigated in compliance with the PA. Because some of the cultural value that is associated with these sites cannot be fully mitigated, residual impacts to these resources most likely would occur.</p>	<p>This should not have been bracketed as a comment.</p>
35102-52	<p>Accidental disturbance, vandalism, and illegal collecting most likely would occur where the proposed Project may result in increased public access.</p>	<p>This should not have been bracketed as a comment.</p>
35102-53	<p>Impacts to historic properties as a result of a rupture and subsequent flooding would be immediate. Reactive mitigation may not be sufficient to restore the damage. Damage to or loss of these resources would occur prior to their recordation and evaluation, thereby complicating mitigation procedures.</p>	<p>This should not have been bracketed as a comment.</p>
<p>Great Basin Water Network</p>		
35361-1	<p>In October 2010, Ceres issued a study on water risks that may affect the valuation and performance of long-term bonds issued by public water authorities to build and maintain their capital assets. The report, The Ripple Effect: Water Risk in the Municipal Bond Market, can be found at www.ceres.org/resources/reports/waterbonds/view.</p>	<p>Please review standard resource response SocEcon-1 for information on this topic.</p>

Comments and Responses - Non-governmental Organizations

ID	Comment	Response
35361-2	SNWA is developing its long-term plan to diversify supplies driven by awareness of these risks within its own portfolio and within the portfolios of water utilities drawing from the same water resources. Yet it is worth considering whether the Importation Project proposed by SNWA is resilient or vulnerable to these very risks.	This information will be provided to SNWA for their use in future water resource planning.
35361-3	The Alliance will make freely available a database for users to assess water availability in stressed river basins, including the Colorado River.	Thank you for your comment. The subject of this comment is beyond the Draft EIS scope and does not require further agency response. However, your comment topic will be considered by the BLM during preparation of the Final EIS and Record of Decision.
35361-4	Transporting water from water-rich to water-poor regions is an energy intensive practice that makes regional economies vulnerable to energy price volatility. Beyond the high construction costs that accompany conveyance projects like the Importation Project, these systems frequently have significant operating costs through their exposure to volatile energy prices.	This information will be provided to SNWA for their use in future water resource planning. Refer also to Standard Resource Response SocEcon-1.
35361-5	Supply projects with high marginal costs can limit a utility's financial flexibility, leaving it unable to adjust to future changes in supply, demand, or governance structure. If this forces water rates past a certain point, regional economic competitiveness may be compromised.	This information will be provided to SNWA for their use in future water resource planning. Refer also to Standard Resource Response SocEcon-1.
35361-6	Differences between projected and actual consumption growth can result in lower debt service coverage unless utilities increase rates. In Southern Nevada, as in other areas of the country, rates and water-related charges have had to adjust upward significantly to make up for unrealized growth stymied by the economic downturn.	This information will be provided to SNWA for their use in future water resource planning. Refer also to Standard Resource Response SocEcon-1.
35361-7	If the debt obligations incurred by the Importation Project are high enough, the pressure on water rates and charges can compromise the affordability of water, along with regional economic competitiveness.	This information will be provided to SNWA for their use in future water resource planning. Refer also to Standard Resource Response SocEcon-1.
35361-8	As the State Engineer considers the feasibility of the Importation Project, several questions should be considered: Is the project adaptive? - If climate variability and climate change intensify pressure on other users or endangered species, is the project adaptive to legal barriers?	The commenter's question about legal barriers is unclear. However, Section 3.20 contains information on all mitigation, management and monitoring associated with the EIS and the project. Please refer to Standard Comment Response MM-1.
35361-9	As the preceding discussion indicates, the assumptions behind SNWA's financial analysis should not be taken as representing the most likely economic or market conditions. The sensitivity of the Importation Project's cash flows to water demand, refinancing conditions and the other dynamics discussed herein should be assessed in order to ensure the continued financial strength of the parties involved and the enhanced flexibility and security of Nevada's water infrastructure.	This information will be provided to SNWA for their use in future water resource planning. Refer also to Standard Resource Response SocEcon-1.
35361-10	Given recent economic and demographic trends, the population projections used for the water demand projections now appear too high, thereby further overestimating future demand.	Please see general comment response SocEcon-2
35361-11	Las Vegas could significantly expand efforts to reduce inefficient and wasteful water use.	This information will be provided to SNWA for their use in future water resource planning.
35361-12	Cost-effective water conservation and efficiency improvements in Las Vegas can defer or eliminate the need for new water supply facilities and investments.	This information will be provided to SNWA for their use in future water resource planning.
35361-13	Increased indoor and outdoor water-use efficiency improves the reliability of the existing supply and does not result in so-called "demand hardening."	This information will be provided to SNWA for their use in future water resource planning.
35361-14	More recent analyses suggest that the population assumptions in the 2009 Water Resource Plan are significantly higher than are likely to materialize and that this assumption alone has a large influence on future water demand projections. Newer population projections released by CBER in June 2009 and again in June 2010 project that the Clark County population will reach 3.13 million people by 2035, about half a million fewer people than was the basis of the 2009 Water Resource Plan. ^{13,14} If we assume that per capita demand in 2035 is 199 gallons per person per day and that about 97 percent of the population in Clark County is served by SNW A and its member agencies, then 500,000 fewer people in the region would reduce water demand within SNWA's service area by about 100,000 acre-feet per year. This dramatic result alone strongly suggests the need for a re-evaluation with another, more realistic population projection .	Standard Comment Responses Gen-3 and SocEcon-2 each address aspects of this comment. Furthermore, as noted in Sections 1.1 and 1.6, SNWA is acting within its statutory obligations and responsibilities in the development of its water plan, recognizing the long lead times and uncertainties associated with securing additional water resources and major capital facility development. Consequently, the specifics of SNWA's projected water demand and alternative sources of water are outside the scope of this EIS.
35361-15	Furthermore, combining reductions in both projected population and per capita demand may completely eliminate the need for the new supplies. If SNW A reduced per capita demand to about 166 gpcd- higher than Los Angeles's current rate, and comparable to the current delivery rates of Albuquerque and Phoenix- by the year 2035, and population within Clark County grows to 3.13 million people instead of 3.65 million, ¹⁵ total water demand in SNW A's service area would be about the same as it is now.	The specifics of SNWA's projected water demand, the population growth projections embedded therein, and its consideration of alternative sources of water are outside the scope of this EIS. As noted in Sections 1.1 and 1.6, SNWA is acting within its statutory obligations and responsibilities in the development of its water plan, recognizing the long lead-times and uncertainties associated with securing additional water resources and major capital facility development. Gen-3 and SocEcon-2 provide additional response to this comment.

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35361-16	The recent economic downturn has resulted in a significant reduction in future population, and thus water demand. When and how the region will recover is not known. Rising temperatures and changes in precipitation patterns resulting from climate change will also affect water supplies and demand. Given this uncertainty, it is wise to consider pursuing water supplies or demand management options that can be expanded incrementally. Unlike most other water supply options, water conservation and efficiency can be expanded when water demand pressures are high and relaxed when demand pressures subside.	Appendix A contains information relevant to this comment, including a discussion of water conservation practices and plans in the Las Vegas Valley.
35361-17	An end-use analysis, which evaluates the potential savings for every water use within a given region, provides a means to evaluate the conservation potential. A 2007 analysis by the Pacific Institute found that water demand in Las Vegas is substantially higher than in many other western communities. While data limitations prevented a full end-use analysis of all water users in the Las Vegas Valley, our review of single-family residential customers, hotels, and casinos indicates that installing water-efficient fixtures and appliances could reduce current indoor water demand by 40 percent in single-family homes and nearly 30 percent in hotels and casinos. Installing water-efficient landscapes could further reduce current outdoor demand by 40 percent in single-family homes. In total, water conservation and efficiency improvements for just these three sectors could reduce current water diversions by more than 86,000 acre-feet per year. While behavioral changes and efforts in other water-using sectors can produce even greater reductions, these were not included in the 2007 Pacific Institute analysis, but they are often included in the conservation portfolios of western municipal water agencies and should be evaluated for SNWA.	<div>The subject of this comment is beyond the Draft EIS scope and does not require further agency response. However, your comment topic will be considered by the BLM during preparation of the Final EIS and Record of Decision.</div> This information will be provided to SNWA for their use in future water resource planning.
35361-18	While behavioral changes and efforts in other water-using sectors can produce even greater reductions, these were not included in the 2007 Pacific Institute analysis, but they are often included in the conservation portfolios of western municipal water agencies and should be evaluated for SNWA.	<div>The subject of this comment is beyond the Draft EIS scope and does not require further agency response. However, your comment topic will be considered by the BLM during preparation of the Final EIS and Record of Decision.</div> This information will be provided to SNWA for their use in future water resource planning.
35361-19	Our analysis concludes that there are a number of flaws with current water planning efforts in the SNW A service area that overestimate future water demand and underestimate the importance of conservation and efficiency, including the failure to incorporate cost-effective conservation improvements, the use of outdated population projections, and the concern about "demand hardening."	Please refer to Standard Comment Response SocEcon-2.
35361-20	This approach would delay or even eliminate the need for new water supplies, with substantially lower economic and political risks. These factors deserve equal consideration in any long-term water planning strategy.	Please note the response to Comment #19 above.
35361-21	The groundwater model used by BLM estimates impacts over a smaller geographic area than is estimated by other models that have been used to examine this problem (Elliott et al. 2006, Myers 2006, 2007, 2011a,b, Schaefer and Harrill1995). This suggests that the very serious impacts to Aquatic Biological Resources described in the DEIS may be considerably understated. The EIS should address the issue of underestimating the geographic area over which impacts may occur.	See response WR-6 regarding establishment of the model boundary. The EIS (Section 3.3) evaluates potential effects to resources Pine Valley and Fish Springs located outside the model boundary.
35361-22	The EIS should evaluate the consequences (i.e. construction delays, increased costs) of this kind of litigation. In addition, the EIS should evaluate the high probability that the proposed action and all the alternatives (including Alternative A) are likely to result in violations of Federal law (Endangered Species Act).	NEPA does not require, nor would BLM have the data available to provide an analysis on the effects of potential litigation. Compliance with the Endangered Species Act is a component of BLM's review of the ROW application. BLM anticipates that the FWS will issue a Biological Opinion that will be available for review when the Record of Decision is published.
35361-23	The MMM (Monitoring, Management, and Mitigation) program is structured so that an Executive Committee comprised of one manager from SNWA and one from each of the DOI (Department of Interior) Bureaus will have final decision-making authority.	Please see Standard Resource Responses MM-1 and MM-3.
35361-24	The EIS must propose a different final decision-making system for the MMM program, or explain how this inherent structural bias toward delivering water to Las Vegas is to be balanced in a way that will not lead to increased jeopardy for Special Status species, or increased probability that federal (ESA) and state (water law) laws and regulations will not be violated.	Please see Standard Resource Responses MM-1, MM-2 and MM-3.
35361-25	In the present political climate, funding from public sources is under extreme pressure. Long-term survival of the MMM program is therefore highly unlikely. The program as contemplated will make Aquatic Biological Resources in the area of impact increasingly dependent on continuation of the MMM program as the MMM program itself becomes increasingly unlikely to exist. The EIS must acknowledge that fact and explain how it is to be overcome.	Please see Standard Resource Response MM-1 and section 3.20.
35361-26	The MMM program, because of problems described as "Aquifer Response Time" (Walton 2011) or "time to full capture" (Bredehoeft and Durbin 2007), is capable of identifying groundwater supply problems that will get worse downstream in the groundwater flow system. It is not capable of preventing those problems from getting worse. The EIS must explain how the MMM program can overcome this inherent problem stemming from the physics of how groundwater flow systems function.	The BLM has developed a project wide monitoring, management and mitigation program for the project. This document is provided in Section 3.20 of the FEIS. The success of any mitigation or adaptive management approach depends on site specific conditions and monitoring and mitigation measures selected by the decision makers in the future. Dr. Bredehoeft report is based on a simple hypothetical example that does not reflect the hydrologic conditions present in the pumping basins or the actual monitoring network that would be used to provide early detection of effects (NDWR 2012a, p. 110). Please see standard resource responses MM-1 and MM-2.

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35361-27	The Aquatic Biology MMM program focuses on Special Status Species and game species. This approach overlooks the numerous recently described species whose status has yet to be evaluated, as well as the numerous as yet undescribed species occurring in the area of impact. Because numerous new species have recently been described from the area of impact, and biodiversity in the area is poorly known, the EIS must explain how the MMM program will deal with species yet to be evaluated or even discovered.	See standard resource responses MM-1 and MM-2.
35361-28	Mitigation measures include the possibility of creating alternative or substitute aquatic habitats intended to replace those unavoidably lost. While such a strategy could conceivably be considered appropriate for Shoshone Ponds (an artificial habitat intended to help maintain one or more specific Special Status species), it cannot be considered appropriate for Big Springs. This is because Big Springs is a natural habitat presently supporting a rich biodiversity which includes Special Status species and probably includes some species as yet unrecognized, undescribed, or whose status has yet to be evaluated. The interactions and interdependencies helping to support those Special Status species and influencing the evolutionary trajectory of all species within that habitat are only incompletely known. At present it is inconceivable to even contemplate developing sufficient knowledge to permit construction of an artificial habitat that would come close to duplicating ecological conditions capable of supporting the biodiversity of any natural habitat/ecosystem. The EIS must recognize this distinction between mitigation for artificial habitats and natural habitats, including recognition of the fact that replacement of natural habitats cannot be accomplished.	The EIS does disclose high estimated flow reductions for Big Springs. The Spring Valley Stipulated Agreement would include Big Springs in monitoring and mitigation planning to reduce effects to this spring. However, an ACM and additional mitigation measure GW-WR-4 would involve the use of alternative withdrawals points or water sources to avoid water level reductions in Shoshone Ponds.
35361-29	It is my expert opinion that these potential impacts be fully investigated prior to any decision to withdraw any water from desert valleys, and if as I suspect such problems will occur, withdrawals can not be tolerated without violations of federal air quality statues. Sevier Lake, in particular, causes me concern.	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. Please see standard resource response Air-14.
35361-30	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.	Please see general comment response WR-1.
35361-31	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 DE IS must consider the impacts of pumping until equilibrium is reached. Based on the Myers model simulations, equilibrium requires at least 10,000 years.	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.
35361-32	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.	As discussed in Section 3.3.2.8 in the EIS, the CCRP groundwater flow model is a reasonable tool for estimating probable regional scale drawdown patterns and trends over time for a programmatic evaluation in a NEPA analysis. The groundwater model is based on the well-known, well-documented MODFLOW platform, utilizes the most up-to-date hydrologic information and groundwater flow data, was approved by the USGS which acted as a technical advisor to BLM's Hydrological Technical Review Team, and peer-reviewed by third-party expert hydrologists. The EIS identifies the limitations on the regional groundwater model, including that the model is not intended to and does not have the accuracy to predict absolute values for specific springs at specific points in time. Also, see general response WR-1.
35361-33	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.	The seven different alternatives (Proposed Action and A-F) would deliver five different water volumes ranging from 12,000 afy to 176,665 afy. Alternative A, C, D, E, and F all offer options that would exercise pumping at reduced quantities.
35361-34	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.	Upper limits on drawdown were presented in Section 5 of the scenario simulation report SNWA (2010b). Figure 5-2 of that report shows the predicted 10-foot drawdown contour surrounded by brown areas representing the 10-foot contour for a high diffusivity model that did not match the field data as well as the calibrated model. It was decided that including the lower confidence interval would make the map more difficult to digest and would not be of interest.
35361-35	The DE IS fails to disclose the impacts to those resources that have a significant natural variability.	Please refer to standard resource response Air-15 and WR-19 for further information on this topic.
35361-36	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.	See response WR-1 regarding the use of the 10-foot drawdown contour for the programmatic impact analysis.
35361-37	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	The source of water for wetlands is dependant on site specific conditions. The source could be surface water runoff or groundwater discharge, or come combination. Impacts to wetlands are not likely to occur if the source of water for the wetlands is surface water that is not connected to the regional groundwater flow system. Impact to wetlands could occur if their source of water is groundwater discharge from the regional groundwater flow system that is affected by drawdown induced by groundwater withdrawal for the proposed project. See response WR-1 regarding the use of the 10-foot drawdown contour for the programmatic impact analysis.

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35361-38	Less than 10 feet of drawdown can affect wells with a productive zone near the top of the screens.	Potential impacts to wells are discussed in Section 3.3.2 of the DEIS (and FEIS). See response WR-1 regarding the use of the 10-foot drawdown contour for the programmatic impact analysis.
35361-39	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.	See response WR-2 regarding the future time frames considered for the programmatic analysis of potential effects to water dependant resources; and explanation regarding why the analysis was not extended for 1,000 of years until the model reached equilibrium
35361-40	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.	See response WR-2 regarding the future time frames considered for the programmatic analysis of potential effects to water dependant resources.
35361-41	The BLM should develop a No Action alternative that includes only existing pumping. The other options should be considered reasonably foreseeable future actions.	Thank you for expressing your concerns related to the Draft EIS. Your suggestions have been carefully considered by the BLM, but have not resulted in changes to the analyses presented in this document. Please refer to standard resource response Gen-3 and Gen-5 for further information.
35361-42	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.	Please refer to standard resource response Gen-10 for further information.
35361-43	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.	Comment noted. An explanation and justification for the RFFAs used in the cumulative effects analysis for groundwater pumping is provided in Section 2 of the EIS.
35361-44	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.	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).
35361-45	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.	Please refer to standard resource responses MM-1 and MM-3 for information relevant to this comment.
35361-46	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.	Thank you for your comment. Please see Standard Resource Responses MM-1 and MM-3.
35361-47	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.	The impacts have been disclosed to the extent possible with the available information. No mitigation measures have been identified that would be adequate to minimize groundwater drawdown, but monitoring of impacts and adaptive management to identify possible future mitigation measures would be required. Please see Standard Resource Response MM-1.
35361-48	Adaptive management must assure that new monitoring sites be established prior to pumping by a sufficient time period to establish a baseline.	Please see Standard Resource Responses MM-1 and MM-2.
35361-49	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" (DE IS, p. A-49). This is simply not correct because they should use the DEIS model to establish thresholds.	The COM Plan will develop the process for the additional baseline data gathering (if needed) and early warning thresholds. BLM has developed a COM Plan to protect federal resources that may be impacted by construction, operation, maintenance and abandonment of the project related facilities, see changes to section 3.20. Please also refer to standard resource responses MM-1 and MM-2.
35361-50	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.	Please refer to standard resource responses MM-1, 2 and 3 for information relevant to this comment.

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35361-51	The DEIS should specify an 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: Identify resources to protect. Define what it means to protect them. Use existing modeling to establish monitoring sites. Use existing modeling to establish triggers or early-warning thresholds. 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. 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. Use updated model and repeat# 3, 4, and 5. Continue through the life of the project	Please see Standard Resource Response MM-1.
35361-52	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.	Please see Standard Resource Response MM-1.
35361-53	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.	See response WR-1 regarding the use of the CCRP model for the programmatic impact analysis.
35361-54	The maps throughout the DEIS should show Indian reservations along with the FWS, NPS, and state lands.	Figure 3.8-1 in the DEIS shows all land ownership crossed by the proposed GWD Project. No Indian reservations would be crossed by the project.
35361-55	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.	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
35361-56	The DEIS considers the risks to springs based on being within a ten-foot drawdown cone and on their susceptibility. The DEIS inappropriately down plays 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.	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). See comment WR-1 regarding the use of the 10-foot drawdown contour to identify the drawdown area used in the programmatic evaluation; and discussion of request for additional site specific data
35361-57	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.	Please refer to standard resource response WR-3.
35361-58	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)	The map (Figure 9-3) discussed on page 9-10 of the conceptual model report only represents water available for recharge. The recharge applied to the CCRP model includes analysis of not only where the precipitation occurs within the flow system but also accounts for geologic units that the precipitation falls on. Section 4 of the numerical model report (SNWA, 2009b) contains a complete description of how recharge was determined for the model referring to three figures (Figures 4-35, 4-36, and 4-37) that show how geology was considered in redistributing the recharge.
35361-59	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.	Discharge estimates are included as a standard practice in designing groundwater models. As described in the conceptual model report (SNWA, 2009a) recharge estimates are based on consideration of all previous estimates of groundwater discharge. A detailed analysis was performed that is documented in Sections 7, 8, 9 and Appendices E, F, H, and I of the conceptual model report that shows how the range of estimates were used along with Monte Carlo model simulations to obtain estimates for discharge and then further how these discharge rates as well as inter-basin flow volumes were used in the calculation of recharge. While there is uncertainty in these estimates, that uncertainty was quantified and considered during model construction. See also responses WR-19, WR-23 and WR-24.
35361-60	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.	The conceptual model used the most sophisticated analysis techniques for estimating evapotranspiration rates and included the best available data including field observations acquired by the Southern Nevada Water Authority, United States Geological Survey, Desert Research Institute, and University of Nevada Las Vegas along with multi-year satellite observation data. As with all data there are uncertainties thus these values were also analyzed as described in sections of the conceptual model report.

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ID	Comment	Response
35361-61	<p>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. 	<p>The method applied to estimate groundwater ET within the model domain is the typical method used by the USGS; whereby, groundwater ET within a groundwater discharge area is estimated by reducing the total ET estimate by the precipitation that falls on the area. This general approach was used for the BARCASS (Welch et al., 2007), the most recent USGS study of the Project area (Heilweil et al., 2011), and the Death Valley Regional Groundwater Flow System model (Belcher et al., 2004). The components commented on here are not included and are considered to have insignificant effect on predicted drawdown as described in response WR-19.</p>
35361-62	<p>Nothing in SNWA's basinwide recharge estimate accounts for the proportion of precipitation that runs off and 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.</p>	<p>The method applied to estimate groundwater ET within the model domain is the typical method used by the USGS; whereby, groundwater ET within a groundwater discharge area is estimated by reducing the total ET estimate by the precipitation that falls on the area. This general approach was used for the BARCASS (Welch et al., 2007), the most recent USGS study of the Project area (Heilweil et al., 2011), and the Death Valley Regional Groundwater Flow System model (Belcher et al., 2004). The component commented on here are not included and are considered to have insignificant effect on predicted drawdown as described in response WR-19.</p>
35361-63	<p>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).</p>	<p>See responses WR-22 and WR-19.</p>
35361-64	<p>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>	<p>See responses WR-22 and WR-19.</p>
35361-65	<p>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).</p>	<p>The conceptual model uses hydraulic-head data from drilled wells completed in the basin fill to characterize the potentiometric surface of the carbonate aquifer. There is ample evidence throughout the region of study that the carbonate and alluvial aquifers are connected where precipitation recharge occurs within the carbonate-rock mountain blocks, and subsequently discharges from the basin fill within regional groundwater discharge areas. While the BARCASS "bedrock contours" could have been used to estimate the hydraulic gradient; the control data used to derive the bedrock contours were water-level data collected from wells completed in the basin fill (Wilson, 2007). As such, it was determined that using the water-level data from wells in basin fill provided a more representative estimate of the hydraulic gradient than an interpretive work product based on the same data and represented by 100-ft contour intervals.</p>
35361-66	<p>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.</p>	<p>SNWA evaluated the conductivity/depth relationship to determine if a relationship occurred. See response WR-12.</p>
35361-67	<p>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>See Section 3.2 in the EIS for a discussion of potentiometric maps and interconnection between the basin fill and carbonate rock aquifers.</p>
35361-68	<p>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.</p>	<p>The model was calibrated to transient conditions as described in Section 3.3.2.8 in the EIS and the transient calibration report (SNWA 2009b).</p>
35361-69	<p>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. DAgnese (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.</p>	<p>See comment response WR-1 regarding the use of the regional scale of the CCRP model for use in the programmatic assessment of potential effects to water resources.</p>

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35361-70	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 984ft 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.	The model layers were designed to represent the hydrogeologic complexity found within the 20,000 square mile regional model domain while maintaining reasonable computation times. Given the available data, the choice of layers and their thicknesses is appropriate, and is described in the numerical model report section 4.1.1 (SNWA, 2009b). Use of more layers would allow a finer resolution of the calculated drawdowns at the cost of additional computing power and simulation time, but the finer discretization would not improve the usefulness of the model.
35361-71	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.	See response WR-25.
35361-72	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.	See response WR-20.
35361-73	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.	The model was designed to represent the hydrogeologic complexity found within the 20,000 square mile regional model domain while maintaining reasonable computation times. Given the available data, the choice of grid is appropriate, and is described in the numerical model report section 4.1.1 (SNWA, 2009b). Use of smaller cells would allow a finer resolution of the calculated drawdowns at the cost of additional computing power and simulation time, but the finer discretization would not improve the usefulness of the model.
35361-74	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	Weighted residuals are used for model calibration because they de-emphasize less accurate measurements, eliminate differences resulting from observations having different units of measurement (e.g. feet versus cubic feet per second), and de-emphasize measurements reflecting features that are not represented in the numerical model. Weighted residuals are shown in Figure 6-10 of the numerical model report (SNWA, 2009b). The report documents the residuals by presenting both the weighted and unweighted residuals for hydraulic heads, drawdowns, and flows. As is typical of groundwater models there are areas where model fit is exceptional and areas where model fit is poor. Areas of poor model fit can occur for observations that are right next to one another as a result of natural phenomena that cannot be represented by the model or errors in observations. For example, when viewing Figure 6-9 it is apparent that the model has a generally good fit in valley bottoms and not as good in upland areas. This is expected with a regional groundwater model with 1 kilometer by 1 kilometer grid spacing where large changes in elevation and water table occur over short distances. This also occurred and was documented in the Death Valley Regional Flow System Model (Belcher and Sweetkind, 2010).
35361-75	SNWA's numerical model report addresses the residual problem between Patterson and Dry lake Valley (SNWA, 2009, p S-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.	Figure 6-55 of the numerical model report (SNWA, 2009b) shows how the model is within both the target and the literature range of recharge estimates for each Hydrographic Area. This figure shows that the model accurately simulates the target recharge for the valley and that both the simulated value and target value for recharge are on the low end of the literature range.
35361-76	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.	"Weighting observations" refers to the process of defining the relative importance of observations due to uncertainty in the measurements, differences in units, or representation of the observed item in a model construct. This methodology is appropriate because it is widely used and accepted modeling practice (Hill & Tiedeman, 2007). The numerical model report (SNWA, 2009b) describes the observations in both a weighted and unweighted manner so that both can be considered.

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35361-77	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.	Weighted residuals are used for model calibration because they de-emphasize less accurate measurements, eliminate differences resulting from observations having different units of measurement (e.g. feet versus cubic feet per second), and de-emphasize measurements reflecting features that are not represented in the numerical model. Weighted residuals are shown in Figure 6-10 of the numerical model report (SNWA, 2009b). The report documents the residuals by presenting both the weighted and unweighted residuals for hydraulic heads, drawdowns, and flows. As is typical of groundwater models there are areas where model fit is exceptional and areas where model fit is poor. Areas of poor model fit can occur for observations that are right next to one another as a result of natural phenomena that cannot be represented by the model or errors in observations. For example, when viewing Figure 6-9 it is apparent that the model has a generally good fit in valley bottoms and not as good in upland areas. This is expected with a regional groundwater model with 1 kilometer by 1 kilometer grid spacing where large changes in elevation and water table occur over short distances. This also occurred and was documented in the Death Valley Regional Flow System Model (Belcher and Sweetkind, 2010).
35361-78	The Pahrnagat 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 Pahrnagat 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.	<p>The observed head drop between Pahrnagat valley and Coyote Springs Valley is substantial.</p> <p>For example, a representative up-gradient well (USGS 371640115072001) http://nwis.waterdata.usgs.gov/usa/nwis/gwlevels/?site_no=371640115072001 in round numbers has a head on the order of 2990 feet amsl. While the down-gradient wells have much lower heads and head differences between wells located down-gradient of the shear zone are relatively small. For example, the Kane Springs well has a head on the order of 1880 feet amsl http://water.nv.gov/data/waterlevel/site.cfm?ID=4112 and USGS well 365227114554401 http://nwis.waterdata.usgs.gov/usa/nwis/gwlevels/?site_no=365227114554401 has a head on the order of 1857 feet amsl.</p> <p>The hydraulic properties in the shear zone are complex. Regardless of how the shear zone is represented in specific cells in the model, the overall bulk properties, simulated head drop, and simulated flow across the shear zone are reasonable. The transmissivity of the Pahrnagat shear zone represented in the model is consistent with data at Well MX-5 in southern Coyote Spring Valley with measured transmissivities upwards of 1.4 million square feet per day indicating flow in this area is through highly fractured carbonate rocks.</p> <p>Also see general response WR-10 regarding model construction.</p>
35361-79	The source of the Pahrnagat springs in SNWA's model is a highly conductive fault running down the middle of Pahrnagat 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 Pahrnagat 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 Pahrnagat 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 Pahrnagat Springs with an HFB that has not been proven on the ground.	The inclusion of HFBs in this area is supported by the geology of the region as described in response WR-21. HFBs are used to impede flow to match observed data, and are not used to stop the flow. Also see response WR-10 regarding model construction.
35361-80	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.	The hydraulic properties in the shear zone, simulated head drop, and simulated flow across the shear zone were reasonable. Geologic evidence supports the presence of major faults controlling groundwater flow in this region. Also see response WR-10 regarding model construction.
35361-81	SNWA should use different storage coefficients for the high K zones. Clearly, highly fractured areas would have different storage properties than unfractured media.	Sensitivity analysis of the model indicated that, except in the upper valley fill, storage coefficient was the least sensitive of the model parameters, thus use of different relative storage coefficients would not result in different simulated drawdowns. The storage coefficient values used in the model fall within the range of reasonable values.

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35361-82	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" 18 (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.	The recharge rate is not important to the predictions as discussed by Leake (2011). Also see response WR-19 regarding recharge and WR-10 regarding model construction. The details of individual hydrologic features have potential to be improved in future model. However the overall hydraulic diffusivity distribution is adequate for estimating potential regional-scale effects of groundwater development and comparing alternative pumping scenarios.
35361-83	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.	See general responses WR-3 regarding the representation of faults in the model and WR-10 regarding model construction.
35361-84	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.	See general responses WR-3 regarding the representation of faults in the model and WR-10 regarding model construction.
35361-85	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 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.	See response WR-20.
35361-86	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 model shows flows from Steptoe Valley to Spring Valley while the hydrogeologic data are inconclusive. Standard practice in modeling includes adjusting the initial conceptual model during development of the numerical model. Some HFBs were initially included in the model and their properties were adjusted during calibration in order to match observed data. Because the model accurately simulated actual observed data in this area, assuming faults in this area was not required. Also see response WR-10 regarding model construction.
35361-87	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)	Available information supports the conclusion that Gandy Warm Springs is not a regional spring, including isotopic analysis. The temperature of the springs is believed not to be a result of having its source in the carbonate aquifer, but from a heat source in the Kern Mountains (Acheampong et al. 2009). Further, as presented in Section 3.3 of the EIS, the model simulations show that drawdowns never approach Gandy Warm Springs for any of the alternative pumping scenarios, and simulated spring flow reductions are 1% or less for all alternatives indicating measurable flow reductions are not anticipated. Also see response WR-10 regarding model construction.
35361-88	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 S-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.	Available information supports the conclusion that Gandy Warm Springs is not a regional spring, including isotopic analysis. The temperature of the springs is believed not to be a result of having its source in the carbonate aquifer, but from a heat source in the Kern Mountains (Acheampong et al. 2009). Further, as presented in Section 3.3 of the EIS, the model simulations show that drawdowns never approach Gandy Warm Springs for any of the alternative pumping scenarios, and simulated spring flow reductions are 1% or less for all alternatives indicating measurable flow reductions are not anticipated. Also see response WR-10 regarding model construction.
35361-89	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.	Differences in recharge between the conceptual model and the numerical model are expected due to the calibration process. Recharge in each valley is within the range of previous estimates after calibration of the numerical model to correspond to observed data. See Section 6 and Figure 6-55 of the numerical model report (SNWA, 2009b). Also note the lack of importance of recharge (Leake, 2011; and see WR-19).
35361-90	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.	PRISM overestimates precipitation and the recharge rate was reduced in Southern Hamlin Valley as described in the numerical model report (SNWA, 2009b) Section 3.1.1.3, pages 3-3 and 3-4.

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35361-91	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.	The geology in the Cave Valley area on Plate 2 of the numerical model report (SNWA, 2009b) shows 17,100 afy of inter-basin flow from Cave to White River Valley north of the Shingle Pass Fault Zone. Some of this water may support spring flows in White River Valley. Also see response WR-10 regarding model construction.
35361-92	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.	HUF2 is the MODFLOW modeling package that allows the vertical geometry of the flow system to be different from the model layers, enabling construction of more complex models. Because this is a regional model with 1 kilometer by 1 kilometer grid spacing and 11 layers, it is not possible to have the layers follow the geology at all locations. As stated within the DEIS Section 3.3.2.8, "Although there are inherent uncertainties and limitations associated with results of a regional groundwater flow model over a broad region with complex hydrogeologic conditions, the calibrated CCRP model is a reasonable tool for estimating probable regional-scale drawdown patterns and trends over time. The BLM recognizes that refinements, such as the collection of additional site-specific hydrologic information and model refinement (such as the development of embedded models in specific areas of interest) would be necessary to improve the ability to predict drawdown impacts at a more localized scale." Refinements to the model will occur based on additional data compiled at the time of tiered future analysis of applications of proposed groundwater pumping. The end result of using the HUF2 package was clearly reported in the final cross sections of the model as presented on the DVD associated with the numerical model report (SNWA, 2009b) a pdf file entitled "xs_rmu_rows-rev2-7o-map-hd-kh-s-11lay-ucth814-1-474B.pdf" in the folder labeled "4-Numerical-Model Cross_Sections". Also see response WR-10 regarding model construction.
35361-93	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.	The HUF2 package is a means of simplifying the hydrogeology to fit the model grid. The combination of materials with differing hydraulic conductivity of an order of magnitude or more into one grid cell is reasonable in a regional scale model.
35361-94	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 IVF where it supplies SNWA's wells, in the model, and may significantly bias the model to underestimate drawdown in these locations.	The model does not force flow. The model has been calibrated to match observed heads, drawdowns, and flows. The HUF2 package is a means of simplifying the hydrogeology to fit the model grid. The combination of materials with differing hydraulic conductivity of an order of magnitude or more into one grid cell is reasonable in a regional scale model. Drawdown from pumping in the shallow layers propagates to deep layers except in areas close to the wells, see WR-17. Also see response WR-10 regarding model construction.
35361-95	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..	The heads along the Fish Springs Flat boundary in the model were greater than those in Snake Valley thus the model simulated less than 1,000 acre-ft/yr of flow which is a minor amount through a boundary that is thought to have near zero flow. Potential effects to flows at Fish Springs resulting from the GWD pumping scenarios are evaluated in Section 3.3.2 of the EIS.
35361-96	SNWA did not do any verification modeling for this model, although they have data to do so with. They should use 2005-2Ch0 data to verify for a model and DEIS being released now, in 2011.	This model will be improved continuously through time and the limited additional data from 2005 to 2011 are unlikely to have provided any additional insight to model performance. Also such an exercise does not provide for model validation (Konikow and Bredehoeft, 1992).

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ID	Comment	Response
35361-97	<p>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>	<ol style="list-style-type: none"> 1. The groundwater model is a reasonable tool for estimating the probable regional-scale drawdown patterns and trends over time for a programmatic NEPA analysis. The groundwater model is based on the well-known, well-documented MODFLOW platform, utilizes the most up-to-date hydrologic information and groundwater flow data, was approved by the USGS which acted as a technical advisor to BLM's Hydrological Technical Review Team, and peer-reviewed by third-party expert hydrologists. The EIS identifies the limitations of the regional groundwater model, including that the model is not intended to and does not have the accuracy to predict absolute values for specific springs at specific points in time. DEIS, Section 3.3.2.8. 2. The model layers were designed to represent the hydrogeologic complexity found within the 20,000 square mile regional model domain while maintaining reasonable computation times. Given the available data, the choice of layers and their thicknesses is appropriate, and is described in the numerical model report section 4.1.1 (SNWA, 2009b). Use of more layers would allow a finer resolution of the calculated drawdowns at the cost of additional computing power and simulation time, but the finer discretization would not improve the usefulness of the model. 3. See response WR-25. 4. The conceptual model for the DEIS was used to construct the numerical model for the DEIS. In practice the initial conceptual model is adjusted during the process of calibrating the numerical model. That was the case for some items in the SNWA model. 5. The regional scale represented by the numerical flow model encompasses an area of over 20,000 square miles and approximately 35 hydrographic basins, thus a moderate level of complexity was required. 6. All available data were used to calibrate the model. See general Response WR-3 regarding the representation of faults in the groundwater flow model, WR-15 regarding sparsity of data, and WR-10 regarding multiple representations of a system. 7. The model's uncertainties and limitations are extensively addressed in the DEIS Section 3.3.2.8 and in the numerical model report in section 7.0 (SNWA, 2009b).
35361-98	<p>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 DE IS 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 DE IS to better bracket the impacts and to determine whether the drawdown extent differs substantially even for much reduced pumping.</p>	<p>The EIS used the CCRP model developed specifically for the analysis as described in Section 3.3.2.8 of the EIS. The BLM's technical review team determined that the CCRP model was the best available tool for evaluating potential drawdown related effects associated with the project.</p>
35361-99	<p>Simulations were run exactly as in Myers (2011b). Three stress periods, 7S, 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.</p>	<p>The EIS used the CCRP model developed specifically for the analysis as described in Section 3.3.2.8 of the EIS. The BLM's technical review team determined that the CCRP model was the best available tool for evaluating potential drawdown related effects associated with the project.</p>
35361-100	<p>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.</p>	<p>The timing used in the analysis reflects the projected time frame to construct the pipeline ROW and well field development areas, and initiate operation of the well fields in each basin based on estimates provided by the proponent as described in Section 2 of the EIS.</p>
35361-101	<p>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.</p>	<p>The numerical model does not distinguish screen length or the location of pumping within a cell. In a numerical model the withdrawal of water is distributed over the entire volume of the cell. Thus, unless screen length causes pumping to be distributed over multiple layers, it is irrelevant to drawdown predictions.</p> <p>See response WR-25 regarding use of confined layers.</p> <p>Specific storage was calibrated within reasonable ranges as illustrated by Figure 6-52 page 6-61 of the numerical model report (SNWA, 2009b).</p>
35361-102	<p>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 DE IS 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).</p>	<p>The effects associated with the Myers model for drawdown in Spring Valley were described in D'Agnese (2011). Dr. D'Agnese found that Myers had created a very low transmissivity zone that bisected Spring Valley into distinct north and south regions and that this anomalous feature would simulate significantly more drawdown than would naturally occur. The Myers model was only calibrated to hydraulic heads and had a poor fit to phreatophytic evapotranspiration. This would also tend to exaggerate the drawdowns in valley bottom evapotranspiration areas. Despite these differences, the results between the Myers model and the CCRP model were similar.</p>

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ID	Comment	Response
35361-103	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 DE IS 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.	Your comments on the Draft EIS have been considered. Updated section 3.3 (water resources) discusses the potential impacts of groundwater pumping. Please see standard resource response WR-1.
35361-104	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 DE IS 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.	Section 3.3 (water resources) discusses potential impacts for groundwater pumping.
35361-105	The Proposed Action, as well as Alternative A (or any alternative other than "no action") will produce a host of adverse environmental consequences that will be borne disproportionately by residents of the area directly affected (Eastern and Central Nevada and western Utah). Residents of the area into which water importation is proposed will, in general, be less adversely impacted. The environmental consequences borne disproportionately by residents of Eastern and Central Nevada, and western Utah, include substantial increases in atmospheric dust, vegetation change, land subsidence, spring, stream, and wetland failure, and the innumerable changes in lifestyle forced by these avoidable environmental changes. The EIS must acknowledge this disproportionate adverse impact.	The proposed pipeline routes, as submitted by the applicant, have been analyzed in this EIS and the impacts associated with the proposed alignment have been presented therein. 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.
35361-106	A major failing of the DE IS lies in its assertion that permanent damage to aquatic biological resources as a consequence of proposed groundwater development can be prevented or mitigated by the proposed MMM program. In fact, removal of the quantities of water from the groundwater system as described by the Proposed Action or any of the action Alternatives (including Alternative A) will result in an unacceptable and irretrievable loss of biodiversity.	See Standard Resource Response MM-1. The COM Plan will include protection for resources including aquatic species.
35361-107	In fact, because "perennial yield" is really an estimate of the quantity of water in a groundwater flow system that is discharged from springs, streams, evapotranspiration, and interbasin flow, groundwater pumping in any amount reduces those discharges. This physical reality means that any mitigation proposal depending on groundwater pumping from deeper in the aquifer can, over the long term, only serve to exacerbate the problem allegedly being mitigated. The EIS must acknowledge this physical reality specifically as it applies to proposed mitigation for the Shoshone ponds, and generally as it applies to other proposed mitigation activities. Pumping from deeper in the aquifer, over the long term, will exacerbate surface water supply problems in the aquifer! In other words, the proposed solution (mitigation) will make the problem worse!	Please see Standard Resource Response MM-1.
35361-108	The area of impact is defined by a regional groundwater model used for analysis of the project. The groundwater model used by BLM estimates impacts over a smaller geographic area than is estimated by other models that have been used to examine this problem (Elliott et al. 2006, Myers 2006, 2007, 2011 a,b, Schaefer and Harrill 1995, and others). This suggests that the very serious impacts to Aquatic Biological Resources described in the DEIS may be considerably understated. The EIS should address the issue of underestimating the geographic area over which impacts may occur.	See response WR-6 regarding establishment of the model boundary. The EIS (Section 3.3) evaluates potential effects to resources Pine Valley and Fish Springs located outside the model boundary.
35361-109	The effects of the project on Aquatic Biological Resources are controversial enough, and uncertain enough to anticipate a relatively high probability of litigation under provisions of the Endangered Species Act as a consequence of the proposed action. The EIS should evaluate the consequences (i.e. construction delays, increased costs) of this kind of litigation, as well as the high probability that the proposed action and all the alternatives (including Alternative A) are likely to result in violations of Federal law (Endangered Species Act).	Under NEPA, the federal agency is not required to analyze potential impacts from possible litigation. BLM will not issue a record of decision (ROD) until the Biological Opinion has been received under section 7 of the Endangered Species Act.
35361-110	To even approach objectivity, the EIS must propose a different final decision-making system for the MMM program, or explain how this inherent structural bias toward delivering water to Las Vegas is to be balanced in a way that will not lead to increased jeopardy for Special Status species, increased probability that federal (ESA) and state (water law) laws and regulations will not be violated.	Section 3.20 contains new information on the monitoring, management and mitigation process associated with this project. FWS is currently conducting the ESA consultation and their reasonable and prudent measures and/or conservation measures will be incorporated into the Record of Decision. The Nevada State Engineer's decision issued in March 2012 included compliance with Nevada Revised Statutes.
35361-111	Long-term survival of the MMM program is therefore highly unlikely. The MMM program as described will, over the long term, make Aquatic Biological Resources in the area of impact increasingly dependent on continuation of the program, while the program itself becomes increasingly unlikely to exist. The EIS must acknowledge that fact and explain how it is to be overcome.	Please see Standard Resource Response MM-1.
35361-112	The MMM program, because of problems described as "Aquifer Response Time" (Walton 2011) or "time to full capture" (Bredenhoft and Durbin 2007), is capable of identifying groundwater supply problems that will get worse downstream in the groundwater flow system. It is not capable of preventing those problems from getting worse. The EIS must explain how the MMM program can overcome this inherent problem stemming from the physics of how groundwater flow systems function.	The BLM has developed a project wide monitoring, management and mitigation program for the project. This document is provided in Section 3.20 of the FEIS. The success of any mitigation or adaptive management approach depends on site specific conditions and monitoring and mitigation measures selected by the decision makers in the future. Dr. Bredenhoft report is based on a simple hypothetical example that does not reflect the hydrologic conditions present in the pumping basins or the actual monitoring network that would be used to provide early detection of effects (NDWR 2012a, p. 110). Please see standard resource responses MM-1 and MM-2.

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ID	Comment	Response
35361-113	Because numerous new species have recently been described from the area of impact, and biodiversity in the area is poorly known, the EIS must explain how the MMM program proposes to avoid loss of biodiversity of this large group of undescribed or uncategorized species.	Please see Standard Resource Response MM-1.
35361-114	At present it is inconceivable to even contemplate developing sufficient knowledge to permit construction of an artificial habitat that would come close to duplicating ecological conditions capable of supporting the biodiversity of any natural habitat/ecosystem. The EIS must recognize this distinction between mitigation for artificial habitats and natural habitats, including recognition of the fact that replacement of natural habitats cannot be accomplished.	The creation of artificial habitat is an applicant-committed measure. The ACMs are measures that are committed to by the applicant and considered part of the Plan of Development. The BLM recognizes that it is difficult to create artificial habitats as a means of replacing natural habitats. Please see Standard Resource Response MM-1 and Section 3.20 for more information regarding proposed mitigation.
35361-115	The regional groundwater model used in the analysis of probable impacts suggests adverse impacts over a smaller geographical area than is indicated by several other recent, credible groundwater models. Yet that fact is not acknowledged in the DEIS.	The comment does not specify the "other credible models". Other models reviewed during the EIS process are described in Section 3.3.2.8 of the EIS.
35361-116	Total project costs and sources of funding are not described	Please see SocEcon-1, SocEcon-3 and SocEcon-6 regarding the inclusion of project cost information in the FEIS.
35361-117	The effect of a reduction in precipitation over the next hundred years as a consequence of climate change is not evaluated.	Please see standard resource responses Air-15 and Air-17.
35361-118	Effects of a decline in the water table of less than 10 feet, while potentially substantial, are largely ignored.	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.
35361-119	The timeframe analyzed extends only 200 years into the future, while the effects will be felt throughout the life of the project -- which may extend much longer than 200 years.	Please see standard resource response WR-2.
35361-120	The environmental analysis that the Bureau of Land Management has conducted on the Groundwater Development Program of the Southern Nevada Water Authority predicts environmental impacts so widespread, long-term and severe that the federal agency – in order to fulfill its mission and public trust duty – has only two choices: Deny the requested right of way by selecting the No Action Alternative, or find that the analysis is so flawed and inadequate that the BLM must withdraw and reissue the Draft Environmental Impact Statement or produce a Supplemental EIS in order to allow for informed decision-making.	Please see standard resource responses Gen-1 and Gen-2.
35361-121	Note that the success in conservation similarly makes the financial model for the Groundwater Development Program out of date, and it needs to be recalculated in light of the new demographic and conservation information. Simply put, the demographic trends which fueled the rationale for the SNWA pipeline no longer exist. The end of rapid population growth combined with the conservation measures in place give Southern Nevada a healthy margin to respond to drought or other needs. Once again, consumers have proved that conservation is the cheapest, safest and best mechanism to respond to resource management.	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.
35361-122	BLM should condition the Right of Way permits to ensure that BLM has authority to set triggers and enforce pumping cessation in order to limit effects on its resources.	Please refer to standard resource responses MM-1 and MM-2 for information on this topic. Please review section 3.20 which has been updated and revised with commentor's suggestions.
35361-123	It is inappropriate to use agreements forged in secret prior to the release of the DEIS to address impacts disclosed for the first time in the DEIS.	Please refer to standard resource responses MM-1 and MM-3.
35361-124	The Statement of Purpose and Need reflects only the BLM's need to take action on a specific application. There is nothing in the Statement of Purpose and Need to provide guidance for the reader on why the project is needed, a reasonable range of alternatives, and why the land and environmental impacts of the project are ultimately justified. There is nothing that helps the reader evaluate the costs and benefits of the project.	Based on this comment and others, Chapter 1 has been revised to include revisions to the purpose and need section and capital cost information. Please refer to standard resource responses Gen-1, Gen-2 , Gen-3 and Gen-9 for additional information relevant to this comment.
35361-125	The wells, collector lines, and distribution power lines are essential to using the main pipeline, transmission system, and pump stations to achieve the purpose of providing water resources from Central Nevada to the Las Vegas Valley. Wouldn't these facilities fall under the definition of Connected Actions since it would be unwise or not feasible to construct the pipeline without the wells to provide the water? If the wells are truly connected actions, there is a requirement to analyze them within the same NEPA document as the main pipeline.	The wells, collector pipelines and individual well powerlines have been analyzed at a programmatic level within this EIS as future facilities. The ROW requested by this EIS would not include these facilities. Additional tiered NEPA would be necessary to authorize these future facilities. See Standard Resource Response Gen-1 for additional information on programmatic analysis and subsequent NEPA.
35361-126	The discussion of the tiering process indicates that this will be a fluid process with new information and analysis taken into account as they go along. How will the new information be related to a ROD on Tier 1?	See comment response Gen-1 and Gen-2.

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ID	Comment	Response
35361-127	The requirement for initial construction on each ROW within 5 years of its issuance would be within a reasonable period for a ROW for Dry Lake, Delamar, and Cave Valleys assuming a ROD is issued in 2012 and construction on the groundwater development in that area takes place from 2016 to 2019. As the project moves further north, the groundwater development would not occur for up to 37 years from the date of the initial ROD on the pipeline and the ROD for Snake Valley would not be issued for over 30 years to be in compliance with the five year requirement. On an administrative level, how will the BLM track the tiered process over this period of time? Is there any precedent for use of the tiered process over a period of decades? How will the public be assured that all of the mitigation measures identified in the Tier 1 EIS will be maintained in future actions?	See standard resource responses Gen-1 and MM-1.
35361-128	All other suggested alternatives for other means to develop water resources to serve the needs of the Las Vegas Valley are discounted. The statement of Purpose and Need unduly limits the consideration of a reasonable range of reasonable alternatives to allow adequate evaluation of the irreversible and irretrievable commitment of resources that, according to Table 3.18.49, could have potentially significant adverse effects on the region's potential for economic activity.	Based on this comment and others, Chapter 1 has been revised.
35361-129	The projects identified for the cumulative analysis are limited to those that are known today and have taken steps within the EIS process to move forward. The actions identified in the Project Description are not anticipated for a period of up to 35 years and the impacts of groundwater pumping are analyzed for a period of 200 years. The document needs to state that there is no way to do an adequate analysis of cumulative impacts because of the unknown and incomplete information that is not available on potential projects within the time frame outlined.	A cumulative analysis has been performed for the action before the BLM and includes an analysis of the projects currently known or planned to occur in the foreseeable future within a timeframe that overlaps with proposed project development. In addition, a programmatic cumulative analysis has been performed for future project tiers. See Standard Resource Responses Gen 1 and Gen-2 for a discussion of programmatic analysis and subsequent tiering under NEPA.
35361-130	There are no cost estimates in the Project Description. SNWA provided a cost estimate of \$2 billion during the State Engineer's hearings on the Spring Valley applications in 2006 and the estimate was criticized at that time for being out of date. The most recent estimates, from independent third party analysts working for the SNWA, put the cost at more than \$15 billion. ¹⁶ The DEIS includes estimates of tax revenue that would be generated by purchases made by construction contractors. SNWA would have to develop construction cost estimates in order to develop the estimates of tax revenue. Why isn't the cost estimates included in the document? To allow the public to make a fair assessment of the project, there needs to be an 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, and the estimated cost per rate payer to support the project.	The underlying concerns in your comment are outside the scope of the EIS (see Gen-3). However, because of comments received to the EIS, information project cost are included in the FEIS - see 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
35361-131	To put this into perspective, the EIS is asked to make an effective analysis of development that may not be started for 37 years and will have impacts beyond 2212. Can the EIS process anticipate growth patterns and economic activity based on policy, world markets, and technology for that time period?	The lengthy time horizon associated with the development of the proposed project and timing and duration of groundwater pumping and the subsequent environmental effects do result in inherent and substantial uncertainty with respect to socioeconomic impacts, as well as future conditions under No Action. That uncertainty is acknowledged, per NEPA.
35361-132	A review of the socio-economic analysis must conclude that there is no way the socio-economic analysis can adequately address the issues and potential impacts for the time period defined by the DEIS.	The lengthy time horizon associated with the development of the proposed project and timing and duration of groundwater pumping and the subsequent environmental effects do result in inherent and substantial uncertainty with respect to socioeconomic impacts, as well as future conditions under No Action. That uncertainty is acknowledged, per NEPA.
35361-133	The division of direct from indirect impacts is flawed in the DEIS . Direct impacts should include pipeline construction impacts, well site drilling impacts, facilities impacts and pumping drawdown impacts. Indirect impacts are those related to additional water deliveries to the basins receiving the water. Defining pumping drawdowns as "indirect" does not relieve BLM of its obligation under NEPA of studying all direct and indirect impacts. The confusion and misdirection in this section is based on the piecemealing of NEPA into tiers of known and unknown project elements. In this case, the applicant has no approved water rights or well sites from which to pump water and is prematurely applying for a pipeline ROW with a huge host of unknowns. If SNWA's applications are ever approved by the NSE and if its applications to change the place of use are ever approved by the NSE, then it will have some water to put into its pipeline. But pumping effects in the DEIS "study area" are all direct impacts of the project. We note that on page 3-7, the DEIS admits "direct and indirect effects are difficult to differentiate..." and that "a specific differentiation in the EIS text has not been made," a failures to comply with NEPA	NEPA requires that BLM define what is meant by direct and indirect effects. This has been laid out in Chapter 3 of the EIS.

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ID	Comment	Response
35361-134	<p>On page 3-1, the DEIS states that this chapter 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 information to some future process not subject to NEPA prevents the public and the BLM from making informed comments and decisions on the DEIS . What is the definition of "acceptable level of intensity" of impacts? How and who defines what is "acceptable?" For instance, are water drawdowns to 200 feet acceptable? to the BLM? to the SNWA? If not, are drawdowns to 100 feet acceptable? Is subsidence over 575 square miles acceptable? If not, then is subsidence over 300 or 100 square miles acceptable? For whom would these impacts be acceptable? We can see that there may be substantial differences of opinion among whoever is making the decision on acceptable or nonacceptable levels of impact intensities. How are differences to be resolved? Who resolves them? This critical missing information undermines the impacts analysis in the EIS. Great Basin Water Network argues that this missing information also violates the National Environmental Policy Act.</p>	<p>Please see Standard Resource Responses MM-1 and MM-2.</p>
35361-135	<p>"Section 101 of NEPA declares a broad national commitment to protecting and promoting environmental quality." Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 348 (1989), citing 83 Stat. 852, 42 U.S.C. § 4331. "The sweeping policy goals announced in § 101 of NEPA are . . . realized through a set of 'action-forcing' procedures that require that agencies take a 'hard look' at environmental consequences." Id. at 350, citing Kleppe v. Sierra Club, 427 U.S. 390, 410 n.21 (1976). NEPA's main "actionforcing" procedure comes in the form an environmental impact statement ("EIS"), a detailed statement on environmental impacts that must be prepared before an agency undertakes any "major Federal action[] significantly affecting the quality of the human environment." NEPA § 102(2)(C), 42 U.S.C. § 4332(2)(C). Thus, NEPA "ensures that the agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts." Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 349 (1989). See also Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, 435 U.S. 519, 553 (1978) ("NEPA places upon an agency the obligation to consider every significant aspect of the environmental impact of a proposed action"). "These procedural provisions of NEPA 'are designed to see that all federal agencies do in fact exercise the substantive discretion given them. These provisions are not highly flexible. Indeed, they establish a strict standard of compliance.'" Sierra Club v. Watkins, 808 F. Supp. 852, 859 (D.D.C. 1991), quoting Calvert Cliffs' Coordinating Comm., Inc. v. United States Atomic Energy Comm'n, 449 F.2d 1109, 1112 (D.C. Cir. 1971). The Council on Environmental Quality ("CEQ") has promulgated regulations implementing NEPA that are binding on all federal agencies. 40 C.F.R. § 1500.3; Robertson v. Methow Valley Citizens Council, 490 U.S. at 354. 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 decisionmakers of the full range of responsible scientific opinion on the environmental effects of the proposed action. Friends of the Earth v. Hall, 693 F.Supp. 904, 926, 934 (W.D. Wash 1988). Also, federal agencies are responsible for overseeing and ensuring the accuracy of environmental impact statements produced by contractors. 40 C.F.R. § 1506.5(c).</p>	<p>Your comments on the Draft EIS have been considered. The FEIS follows regulatory guidance established under NEPA by CEQ and BLM's NEPA handbook. See chapter 1 for procedures and section 3.0.3 for a discussion of incomplete and unavailable information.</p>
35361-136	<p>In light of the listed incomplete or unavailable information, Great Basin Water Network asserts that this DEIS is premature. The known and unknown unknowns confirm that this DEIS is premature and should be updated and resubmitted for full public review after the information described in this section is obtained. Note that key Visual Resource Information was omitted, and that the Visual Resource section (3.15) suffers from the lack of simulations of visual resources at 75 and 200 years of pumping.</p>	<p>The visual resources analysis evaluates the impacts to Groundwater Development and Groundwater Pumping in Section 3.15.2.8. This section provides sufficient information to compare project alternatives and their impacts. The section also discloses that future site-specific impact assessments will assess visual impacts for specific project facilities in detail as the locations of facilities become better defined. Photographic simulations were prepared for project's Proposed Facilities as described in Section 2.5 using the methods described in Section 3.15.2.1 where sufficient locational and design information was provided to prepare an artistic rendering of the potential impacts at a given location. Further, the known extent and degree of potential transitions from wetland/meadow, spring-fed communities, and basin shrubland communities to more drought-adapted and shallow rooted vegetation species is insufficient to prepare artistic renderings. Please also see Standard Resource Response Gen-1 for a discussion of future facility tiering.</p>
35361-137	<p>Using "groundwater development areas" in the DEIS for impacts analysis purposes leaves out of the NEPA analysis the large areas with SNWA water rights applications. If approved, these additional water resources would be transported through the SNWA pipeline on BLM ROW. Ignoring their impact is part of the piece-mealing of NEPA in this DEIS .</p>	<p>No permanent groundwater (based on NSE water rights) will be transported through the pipeline based on this EIS. The groundwater development areas have been defined in order to put the future facilities (wells, collector pipelines and powerlines, individual access roads) into context and to provide a means for analysis of the impacts of these future facilities.</p>
35361-138	<p>Critically missing information on springs, streams, seeps, and wetlands in the "large" regional study area which may be directly affected by pumping drawdowns is a significant flaw of the DEIS . This is a massive project with massive impacts over a huge area of eastern Nevada and Utah's West Desert. However, the size of the area is not 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.</p>	<p>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.</p>

Comments and Responses - Non-governmental Organizations

ID	Comment	Response
35361-139	The DEIS provides no information on how tracking of what missing information would be collected and who would collect it, and how the public would know this. The DEIS also fails to disclose the costs of collecting future information and the timeframe for collecting 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? 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.	See Standard Resource Responses Gen-1 and MM-1 for additional information on programmatic analysis and subsequent NEPA.
35361-140	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 drawdown 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, for this project this BLM decision is inappropriate since areas affected with less than a 10 foot drawdown may cover hundreds of square miles. Potentially affected by a less than 10 foot drawdown are springs, wetlands, sub-irrigated meadows, and wells, as well as vegetation. Unanalyzed climate change impacts to the study area could also be affecting water-dependent resources. Pumping impacts could dry up already stressed water sources and vegetation.	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.
35361-141	Likewise, limiting the timeframes of impacts analysis in the DEIS to only 200 years is 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.	Please see mitigation measure WR-2.
35361-142	The DEIS does not disclose when equilibrium would be reached with various pumping amounts in the Proposed Action and scenarios 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 show pumping will cause a large amount of undue and unnecessary damages to public lands and resources.	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.
35361-143	Unfortunately, contrary to BLM laws and regulations (and Secretarial Order 3226) on considering climate change impacts when making major decisions affecting BLM's environmental resources, the DEIS dismisses all potential climate change impacts from its impacts analysis in Chapter 3 (pages 3-5): "since the current state of climate change science prevents the association of specific actions with specific climate-related effects, the BLM can neither: (a) analyze the climate-related effects of BLM actions nor (b) ascribe any significance to these potential effects." Despite difficulties and uncertainties in predicting the exact effects of climate change, these impacts should be a part of the impacts analysis for all resources, not just air and atmospheric resources.	Please see common response Air-17.
35361-144	Unfortunately, the DEIS makes no attempt to quantify any of these critically important climate change-related impacts. This is a major flaw that greatly increases the range of uncertainties of all the impacts identified or predicted – and quantified - throughout the DEIS. Almost certainly, and almost 100% across the board, climate change will worsen those effects.	Please see common response Air-15.
35361-145	The BLM ducks the question of how much worse will climate change make the impacts of the Proposed Action, and evades the express policy outlined in Secretarial Order 3226, and kicks the can down the road by stating that “future NEPA documents will follow DOI and BLM policies related to climate change.”	Discussions of climate change within the Air Quality Section (3.1) have been updated in response to this comment.
35361-146	BLM argues that “since the current state of climate change science prevents the association of specific actions with specific climate-related effects, the BLM can neither: a) analyze the climate related effects of BLM actions nor(b) ascribe any significance to these potential effects. For these reasons, climate change impacts could not be evaluated for the proposed action”... (3-5). But the assertion that the impacts are uncertain and non-specific should not give license to pass over the subject for another day. This “Incomplete and Unavailable Information” is just too critical to ignore for purposes of decision-making now, within the context of the granting or denying of the ROW.	Climate change is discussed in terms of the types of changes that could occur and combine with project-related pumping effects as an introduction section to cumulative impacts. However, it is not possible to descibe alternative-specific for climate change.
35361-147	The EIS should use the H-T Report and the best available science for a model analysis of reduced precipitation to assess the effects of various scenarios of recharge on future water supply availability and reliability. The DEIS model could also assess the cumulative impacts of the GWD project, especially the pumping drawdowns with, for example, a 10, 20, and 30 percent reduction of recharge in the study area. Other studies are doing this for the Lower Colorado River Basin.15	Please see common response Air-16. Refer to the Cumulative Impact section in each resource.

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ID	Comment	Response
35361-148	On page 3.1-34, the DEIS states in regard to native vegetation dried up in pumping drawdown areas (40 basins): "It is expected that annual species would continuously bind the soil surface with living or dead root systems, even though the individual annual plants would not act as long-term barriers to wind." In addition, the conclusion from this "fact" is equally counterintuitive: "Therefore, 10% of the surface area composed of this ET unit and affected by groundwater drawdown would be affected." What science supports these questionable statements? What is the total surface area of this ET unit which will be affected by pumping drawdowns? To how many of the 40 basins in the project study area would this "conclusion" apply?	Concerns raised in this comment are addressed in Standard Resource Response VEG-5.
35361-149	On page 3.1-36, the DEIS estimates that "...up to 40 percent of the project's power requirements can be offset by the installation of hydro-turbines at the three pressure reducing stations." Please explain how this calculation was made. Does this statement imply that hydroturbine use will reduce the 327,000 tonnes of CDE per year, the estimate of total emissions, by 40 percent?	The addition of three hydroturbines may generate 40 MW of power, which is approximately 40% of the power requirements for the project, depending on the alternative. More information regarding the project's power requirements may be found in Appendix E.
35361-150	On page 3.1-37, the DEIS refers to C.2.5 as a mitigation measure to "conduct large-scale seeding to assist with vegetation transition from phreatophytic communities in Spring and Snake Valley to benefit wildlife and reduce potential air resource impacts." What plants would be seeded? How much water would be needed for this large-scale seeding? What are the sources of this water? When would the impacts of acquiring, developing, and using water for this purpose be analyzed in a NEPA review? What are the costs of this "mitigation" measure?	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.
35361-151	On page 3.1-38 the DEIS states: "the level and extent of these impacts (of groundwater drawdowns 10 feet or greater on windblown dust emissions) are highly uncertain." How uncertain? What is the relevance of this uncertainty? The DEIS goes on to estimate the tons of PM2.5 each year for 200 years, but these amounts still lead to this vague impact estimate: "At these levels it is possible that windblown dust emissions from groundwater drawdown could impair visibility conditions at Great Basin National Park." How much would GBNP visibility be impaired? At full build out, 75 years, and 200 years? How can the DEIS be so certain of emission estimates but so uncertain of air quality impacts on GBNP?	Please see common response Air-9.
35361-152	On pages 3.1-52 and 53, the DEIS states: "As the seasonal variability (from climate change) increases, and the amount and form of precipitation changes, could affect aquatic biological resources in the Project Area by modification or alternation of aquatic habitats due to changes in precipitation; potential changes in water temperature and other water quality parameters such as dissolved oxygen, and; potential changes in aquatic species abundance, distribution, phenology, and community composition in response to habitat and water quality changes." How can the adverse effects of climate change on aquatic species be separated out from the adverse effects of groundwater drawdowns? Without this knowledge, we do not see how any "mitigation" plan would be effective. Instead, "mitigation" discussions with no required timeframes by BLM and SNWA to reach consensus on the attributability (SNWA pumping, drought, climate change, or others' pumping) of adverse pumping impacts, while pumping continues unabated, will inevitably lead to the failures of both proposed required and voluntary mitigation measures to protect aquatic species habitat, including that of TES species.	Thank you for your comment. The subject of this comment is beyond the Draft EIS scope and does not require further agency response. However, your comment topic will be considered by the BLM during preparation of the Final EIS and Record of Decision. Please refer to standard resource responses Air-15, Air-17, MM-1 and MM-2 for information on these issues.
35361-153	On page 3.1-60 in the cumulative effects discussion, the DEIS states: "It is predicted from model simulations that pumping drawdowns of 10 feet or greater would potentially lead to changes in vegetation that would increase windblown dust emissions. The level and extent of these impacts is highly uncertain." How uncertain? Could windblown dust be far worse than the predictions in the DEIS ? What is the relevance of this uncertain and missing information?	Changes have been made in the FEIS text to address the central concern that underlies this comment; however, due to its overarching nature, specifics regarding the placement of changes in the FEIS are not provided in this response. Please see standard resource responses Air-7 and Air-10.
35361-154	The DEIS dismisses any impacts on cave resources, including at the GBNP, with this statement on page 3.2-21: "Data do not exist to provide a connection of area caves to groundwater: therefore, caves are not anticipated to be affected by groundwater pumping." Isn't it also true that data does not exist to prove that there are no connections between area caves and groundwater? The Prudic and Glancy 2009 report suggest no connection, but with what certainty? BLM will be in violation of its legal mandates, including the Federal Cave Resources Protection Act of 1988 if it approves a project which destroys cave resources, because the applicant has not provided sufficient information to assure that pumping will not destroy caves.	The GWD Project complies with the Federal Cave Resources Protection Act of 1988, as amended. The Federal Cave Resources Protection Act is discussed and considered at EIS Section 3.2.1.2. BLM has considered the import of the Act and concluded that it is in compliance with the Act and its implementing regulations which provide the basis for identification and management of significant caves on federal lands. Significant caves are nominated, evaluated, and designated according to criteria in the Act and its implementing regulations. All caves in GBNP would be considered significant caves. Significant caves and cave resources may be subject to varying types and degrees of protection determined by agency resource management planning and public participation. Protections can include restrictions on use of significant caves, maintaining the confidentiality of certain significant caves, prohibitions on removal of cave resources from significant caves, and prohibitions on vandalism to significant caves, among others. The Act's savings clause specifically provides that the Act does not address appropriation of water by any Federal, State, or local agency, Indian tribe, or any other entity or individual, or alter or establish the respective rights of States, the United States, Indian tribes, or any person with respect to any water or water-related right.

Comments and Responses - Non-governmental Organizations

ID	Comment	Response
35361-155	The DEIS provides no support for its rejection (on page 3.2-23) of incorporating climate change estimates into its impacts analysis on potential changes to future groundwater availability because specific long-term effects of climate change are not known. The draft often EIS discloses that specific long-term effects of pumping on water table drawdowns, subsidence, water sources, air quality, soils, water resources, wildlife, recreation, and socioeconomics are also "not known" because of a host of incomplete and uncertain information. BLM is arbitrary and capricious in not analyzing some impacts, while purporting to analyze other impacts, all of which are based on uncertain and incomplete information.	Please see Standard Resource Response Air-15
35361-156	On page 3.2-30, the DEIS presents totals of ground subsidence from pumping in the Proposed Action at full buildout plus 200 years by basin in Table 3.2-6. Totals include drawdowns by 10-20 feet to over 200 feet, with subsidence ranging from <1 to 1 foot to > 10 feet. A statement on the same page says: "As can be seen on Table 3.2-6, about 525 square miles may be at risk for 5 feet of subsidence or greater." The totals of square miles affected in the table range from 60 square miles of >200 foot drawdowns to 1,071 square miles of 50-00 feet of drawdowns. However, in Table 3.2-18 on page 3.2-48, totals of subsidence compared by alternatives states that the Proposed Action at full build out plus 200 years would total 525 square miles. How was the 525 square mile calculated? Please explain this inconsistency.	The estimated subsidence areas were calculated based on the assumption that subsidence magnitude would be consistent with drawdown magnitude. The areas shown on Table 3.2-6 and other subsidence summary tables are essentially the areas of predicted drawdown. There is no inconsistency between Tables 2.2-6 and 3.2 -18.
35361-157	On page 3.2-52, the DEIS states: "It is possible that subsidence caused by groundwater pumping could damage roadways and structures and could cause local alterations in drainage flow patterns. Because of the long time frames, there would be a long-term opportunity to monitor subsidence as it begins to appear, and to potentially alter pumping regimes to reduce the rate of subsidence...any subsidence measured at the soil surface is probably irretrievable." This may imply that the DEIS requires no mitigation for subsidence, including damages to public and private structures such as buildings and roadways. If so, then we disagree with BLM's decision. Does the statement "there would be a longterm opportunity to monitor subsidence as it begins to appear" mean that BLM is not actually requiring long-term monitoring of subsidence? Is this a suggestion for academic research to document the adverse impacts of the GWD project on 525 square miles of public lands? What is the potential for "altering regimes to reduce the rate of subsidence" and how would this potential be realized by BLM decisions? If insurance is available to cover such damages, what is the cost of the insurance to property owners?	Please see Standard Resource Responses Gen -7 and MM-1.
35361-158	The DEIS fails to provide sufficient information on what is a "reasonable" drawdown of the water table. Is a greater-than 200 foot drawdown reasonable? Why or why not?	The potential effects to water resources are addressed in Section 3.3 of the EIS. The EIS analysis describes potential impacts to water resources and water dependant resources associated with the projected drawdown. The NEPA analysis is not required to speculate as to where or not the projected drawdowns associated with GWD pumping activity are "reasonable" or not. In Nevada, the State Engineer is responsible for evaluation the effects to senior water rights prior to ruling on water appropriations.
35361-159	The Executive Summary, page 5, states that "five basins are the primary source of groundwater that would be conveyed by the pipeline." What are the secondary sources? When are the impacts of groundwater development and pumping of "secondary" sources in other basins going to be analyzed?	The source of groundwater for the projects is pumping in 5 project basins as described in Section 2 of the EIS.
35361-160	The DEIS fails to discuss the potential reliability of rural groundwater in the face of climate change induced changes in amounts and timing of precipitation, decreases in recharge to aquifers, higher temperatures and evatransporation and more extreme weather events. This missing information is critical, since water sources intended for municipal and industrial uses should be reliable.	The analyses of pumping effects evaluates impacts to water resources (including springs, streams, ET discharge areas, and water rights) and water dependant resources. Perennial yield or sustainable yield is evaluated by the Nevada State Engineer through the water rights adjudication process. Additional discussion of climate effects was added to Section 3.3.3 of the water resources impact evaluation.
35361-161	Does Figure 3.3.1-2 "conceptual groundwater flow system" show the interconnections between surface and groundwater?	Figure 3.3.1-2 is an illustration of the conceptual flow system and shows different groundwater flow paths (blue lines with arrowheads) some of which intersect the surface at a spring.
35361-162	The DEIS fails to provide adequate information on existing and future water quality in the study area. Will pumping drawdowns exacerbate water quality problems? Will arsenic and other elements exceeding EPA drinking water standards require water treatment by SNWA? How much will the water treatment cost annually and over the life of the proposed project?	See response WR-8 regarding the request to add more detailed descriptions of the potential impacts to water resources.
35361-163	Table 11 of the Executive Summary discloses substantial impacts of the GWD project on senior water rights, but the DEIS fails to provide any information on what administrative or legal remedies senior water rights owners have when faced with pumping impacts. That information should be included in the EIS.	State water rights are regulated by the State and enforcement of water rights priorities is outside of BLM's jurisdiction. This is discussed in Chapter 3.3.

Comments and Responses - Non-governmental Organizations

ID	Comment	Response
35361-164	<p>The DEIS fails to disclose the amount and location of all federal reserved water rights in the project study area. On page 3.3-65, the DEIS states: "The unknown nature of unadjudicated federal reserved water rights, regarding both locations and quantities of water, limit the ability to further describe water use of this type in the hydrologic study area." How can an analysis of GWD project impacts on federal water rights be conducted in this EIS without the complete identification of these water rights? How can the BLM protect its water rights if it cannot identify these rights? The DEIS fails to disclose the relevance of this incomplete and missing data. Are all federal reserved water rights listed with the NSE's office? Are these all adjudicated? If federal reserved water rights are not listed on the NSE's website, does this mean that they are not valid? The DEIS also fails to disclose the location and amounts of all Public Water Reserves (PWRs) in the project study area.</p>	<p>Please refer to standard resource response WR-9 for a discussion of federally reserved water rights.</p>
35361-165	<p>Does BLM have sufficient federal reserved water rights, PWRs, or other water rights to administer water-dependent BLM programs? If not, how is BLM going to secure adequate water necessary for it to comply with federal laws and mandates in protecting and managing public lands and resources, considering SNWA's proposal which would, in effect, monopolize all remaining unallocated water in five basins as well as considering the scale of the severe negative impacts of GWD project pumping on up to 12.5 million acres or 19,586 square miles of mostly public lands in eastern Nevada and Utah's West Desert? Federal reserved water rights are usually determined in adjudication or through court actions. Asserting its reserved rights is necessary now to ensure enough groundwater remains in the five basins and the affected study area to maintain BLM programs dependent on water availability on public lands, including but not limited to: wildlife, grazing, wild horses, air quality, recreation, federally protected species, soils, and vegetation.</p>	<p>See response WR-9 regarding federal reserve water rights.</p>
35361-166	<p>The analysis of pumping impacts on soils in the DEIS is weakened by incomplete and missing data. From Table 3.4-1, we found a footnote that states: "Portions of Coyote Spring, Las Vegas, Pahrnatagat, Spring (184), and Steptoe Valleys have no soils data or are limited to the more general STATSGO (State Soil Geographic) data. STATSGO are included in the table when more specific data are not available." GBWN is concerned that using less specific data provides a less than fully reliable analysis of soil impacts. The DEIS should disclose the significance or relevance of the missing soil data on the impacts analysis. Does this less specific data affect the data presented in Table 3.4-6 comparing important soils parameters across alternatives, specifically revegetation potential and erodible soils disturbed? If so, then the missing data is highly relevant.</p>	<p>As noted in the assumptions for analysis in Section 3.4.2.1, the SSURGO data (detailed soils data) were assumed to represent those areas that are currently without detailed soil mapping. In keeping with CEQ Regulations for Implementing NEPA, Section 1502.22, the incomplete data were disclosed and assumptions were made to address the impacts using a theoretical approach. In some cases, the missing SSURGO data is not in the area to be affected. For example, 100% of the area within Pahrnatagat Valley affected by ROWs and groundwater development construction have SSURGO data available, although not all of Pahrnatagat Valley has been surveyed. Future NEPA analysis, site-specific soils investigations prior to revegetation, and monitoring of reseeded areas post-construction will be required to ensure stabilization success.</p>
35361-167	<p>Missing from the DEIS is information on how much groundwater BLM needs to sustain vegetation on public lands affected by groundwater pumping. Vegetation is the basis for BLM's programs including livestock grazing, maintenance of wild horse and burro populations and wildlife habitat, air and water quality protection, recreational programs, and protection of scenic values, to name some. This missing information should be presented in the EIS by categories, such as the cover types in tables for lands affected by the ROW and in groundwater development areas or "evatranspiration areas" listed in Table 3.5-7 from which groundwater would be withdrawn by SNWA pumping. In addition, this information should be presented by basin, so that the public can understand vegetation water needs in areas smaller than the total study area. Also missing is any information on how BLM will secure needed water for sustaining its vegetation resources considering the GWD project's huge water exportation targets in the five basins and also the direct impacts of pumping drawdowns in all the basins in the study area. How will the BLM retain enough water to sustain its vegetation resources?</p>	<p>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. Please also see Standard Resource Response Gen 8.</p>
35361-168	<p>We also are concerned that the loss of groundwater, including less than the 10-foot drawdown outside the BLM's study, would lead to a corresponding increase in wildfires. Would the BLM require SNWA to cover the increased costs for state, local and federal land managers? We additionally are concerned that the water drawdown could foster conditions amenable for the spread of invasive weeds. Again, would SNWA be financially responsible for the control of such invaders?</p>	<p>Thank you for your comment. An alteration of the natural fire regime could result from the presence of annual weed species. ACMs, BMPs, and Mitigation measures provided in Section 3.5 (Vegetation Resources) and Appendix D are designed to reduce the spread and establishment of invasive species. For cost considerations associated with mitigation, see Standard Comment Response SocEcon-3.</p>
35361-169	<p>The DEIS drastically underestimated the impacts of SNWA's groundwater pumping not only on wildlife but also on the small subset of terrestrial wildlife which are dependent on surface water. We found that there are no quantified impacts for SNWA groundwater pumping on terrestrial wildlife, similar to those listed in Table 3.6-11 which, upon further review, only apply to impacts in groundwater development areas.</p>	<p>Please see the response to comment N-34284-91-323.</p>
35361-170	<p>Tables and figures in Appendix F3.6 do not supply acreages of habitat potentially affected by pumping drawdowns and the reader is left to guess what the impacts may or may not be. The DEIS fails to disclose specific quantified pumping impacts on acres of winter and summer habitat of pronghorn, Rocky Mountain elk and mule deer, Greater Sage Grouse, special status species, migratory and resident birds, and all other wildlife. The DEIS fails to disclose any information about pumping drawdown impacts on predators or their prey (a critical part of ecosystem health) or to any wildlife other than a subset of animals living in the targeted basins. The DEIS also fails to disclose the relevance and significance of these incomplete and missing data.</p>	<p>Please see the response to comment N-34284-91-323. The methodology section (3.6.2.8) describes how the pumping impact analysis is conducted. See also the response to comment F-35028-121-43. The FEIS has been updated to include additional discussion on predator-prey interactions.</p>

Comments and Responses - Non-governmental Organizations

ID	Comment	Response
35361-171	<p>By not clearly disclosing potential pumping impacts over 200 years over a specific number of acres on specific wildlife and wildlife habitat resources, the DEIS fails to comply with explicit Congressional mandates in LCCRDA, Section 301 (b)(3) regarding wildlife: "(3) COMPLIANCE WITH NEPA.—Before granting a right-of-way under paragraph (1), the Secretary shall comply with the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.), including the identification and consideration of potential impacts to fish and wildlife resources and habitat." By specifically mentioning potential impacts to fish and wildlife resources and habitat, we believe that Congress intends BLM to specifically protect these resources from adverse environmental impacts of the GWD project pumping.</p>	<p>NEPA is not a substantive statute, rather it is a disclosure statute. It does not require an agency to adopt the most environmentally friendly course of action. NEPA requires a federal agency to consider every significant aspect of the environmental impact of a proposed action and to ensure the agency has informed the public that it has indeed considered the environmental concerns in its decisionmaking process. The EIS discloses the level of potential impact to the identified affected resources in the project area. BLM will make its decision regarding this ROW application based on the analysis in the EIS and applicable law.</p>
35361-172	<p>The DEIS also fails to disclose any information on how much groundwater and connected surface water BLM needs to sustain wildlife and wildlife habitat on public lands that would be affected by groundwater pumping. Also missing is any information on how BLM will secure water needed for wildlife and wildlife habitat considering the GWD project's huge water exportation targets in the five basins and also the direct impacts of pumping drawdowns in all the basins in the study area. Since SNWA's GWD project would effectively monopolize any non-appropriated water over a huge area of eastern Nevada and western Utah, we want to understand how BLM will retain enough water to sustain its wildlife resources.</p>	<p>The Draft EIS identified areas where BLM resources may be at risk due to impacts from groundwater pumping. The BLM does hold water rights for uses on public lands such as stockwatering, recreation and wildlife beneficial uses. In areas where the BLM holds a senior water right to the SNWA applications, these sources will be protected by Nevada Water Law since Nevada is a prior appropriation state (NRS 533). In areas where the Draft EIS identified potential impacts to resources and the BLM does not currently hold a water right, these resources may be at risk to some level of loss. BLM would have to obtain new water rights through the Nevada Water Law process, and any new rights granted to the BLM would be junior to SNWA's water rights. The BLM could not, therefore, rely on securing water rights as a means of protecting wildlife habitat. Please also refer to standard resource responses MM-1, MM-2 and MM-3 for information relevant to this comment.</p>
35361-173	<p>We note that the BLM has a statutory obligation to protect rare species, including those protected by the federal Endangered Species Act. The DEIS fails to consider in detail the pumping impacts on such terrestrial species as the threatened Desert Tortoise and sensitive Greater Sage Grouse. Please note that the federally endangered Southwestern Flycatcher and Yuma Clapper Rail, and candidate species Yellow-billed Cuckoo, use riparian habitats especially in Lower Meadow Valley Wash and Pahranaagat Valley which would be impacted by pumping drawdowns. Other species listed on pages 3.6-73 to 75, including pygmy rabbits, bats, gila monsters, terrestrial invertebrates and Great Basin National Park cave species (listed in Table 3.6-16) will be impacted by pumping drawdowns.</p>	<p>Please refer to general comment response WL-3 with regard to NEPA, ESA, and BLM's obligations.</p>
35361-174	<p>All of the alternatives in the DEIS show significant impacts to aquatic biological resources on public lands in eastern Nevada and Utah's west desert, but the DEIS fails to assess pumping impacts to aquatic biological resources over the entire area potentially affected. The groundwater model used by BLM estimates impacts over a smaller geographic area than is estimated by other models that have been used to examine this problem. 18, 19, 20 This suggests that the very serious impacts to Aquatic Biological Resources described in the DEIS may be considerably understated. The EIS should address the issue of underestimating the geographic area over which impacts may occur.</p>	<p>See refer to standard resource response WR-6.</p>
35361-175	<p>The effects of the project on Aquatic Biological Resources are controversial enough, and uncertain enough to anticipate a relatively high probability of litigation under provisions of the Endangered Species Act as a consequence of the proposed action. The EIS should evaluate the consequences (i.e. construction delays, increased costs) of this kind of litigation. In addition, the EIS should evaluate the high probability that the proposed action and all the alternatives (including Alternative A) are likely to result in violations of Federal law (Endangered Species Act). The DEIS recommends using Alternative A (including the mitigation and monitoring identified in Chapter 3) as a starting point in reviewing the draft EIS. Alternative A proposes somewhat reduced groundwater pumping and a Monitoring, Management, and Mitigation process representing extensive and comprehensive efforts by SNWA and federal agencies to minimize environmental effects of the groundwater project. The DEIS and numerous other studies, analyses, and scientific papers (e.g. Bredehoeft and Durbin 2009, Deacon et al. 2007, Mayer and Congdon 2007, Patten et al. 2007, Walton 2011, and others) make it obvious that there will be far-reaching, permanent and extensive adverse effects to the Aquatic Biological Resources of the region. While the mitigation effort is commendable and may temporarily reduce some impacts to the Aquatic Biological Resources of the region, it is clearly incapable of avoiding or mitigating unacceptable environmental consequences to these Resources.</p>	<p>The subject of this comment is beyond the Draft EIS scope and does not require further agency response. However, your comment topic will be considered by the BLM during preparation of the Final EIS and Record of Decision. Under NEPA, the federal agency is not required to analyze potential impacts from possible litigation. BLM will not issue a record of decision (ROD) until the Biological Opinion has been received under section 7 of the Endangered Species Act.</p>
35361-176	<p>The DEIS proposes a Monitoring, Management, and Mitigation (3M) process to avoid, minimize and mitigate groundwater pumping impacts to aquatic biological resources and special status species. However, this process is fundamentally flawed. An independent third party should be substituted for the current awkward, non-partial and non-scientific committee structure to assess monitoring results showing impacts and their intensity, what is causing the impacts, and the "mitigation" required. Triggers or thresholds for stopping pumping within short timeframes should be added to any 3M agreement, since any other "mitigation" than restoring the natural water regime would be ineffective to protect aquatic biological resources. Since the 3M agreements are all dependent on sufficient annual budgets, the DEIS should consider a lack of future funding (over 200 years) when it purports to assess the effectiveness of 3M. The over-reliance on ineffective proposed and voluntary mitigation (which may or may not be funded) in the DEIS will lead to significant violations of the Endangered Species Act.</p>	<p>See Standard Resource Responses MM-1, MM-2 and MM-3.</p>

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ID	Comment	Response
35361-177	Other failings of the DEIS include the failure of inflexible mitigation "agreements" to expand their obligations to address pumping impacts on recently described species and species yet to be discovered. In addition, we know of no science-based support for the feasibility and effectiveness of the mitigation proposal by the proponent to create artificial water sources for aquatic species whose habitat is significantly impacted by SNWA pumping drawdowns.	An applicant-committed protection measure listed under Adaptive Management Measures would be an option for reducing or ceasing groundwater withdrawals. This measure would determine a reduction or cessation of pumping on a case-by-case basis for individual production wells or well fields using technical and consultation process identified in the stipulated agreements. Also see standard resource responses MM-1, MM-2 and MM-3.
35361-178	The EIS must propose a different final decision-making system for the 3M program, or explain how this inherent structural bias toward delivering water to Las Vegas is to be balanced in a way that will not lead to increased jeopardy for Special Status species, or increased probability that federal (ESA) and state (water law) laws and regulations will not be violated.	Please see Standard Resource Responses MM-1, MM-2 and MM-3.
35361-179	In the present political climate, funding from public sources is under extreme pressure. Long-term survival of the 3M program is therefore highly unlikely. The program as contemplated will make Aquatic Biological Resources in the area of impact increasingly dependent on continuation of the 3M program as the 3M program itself becomes increasingly unlikely to exist. The EIS must acknowledge that fact and explain how it is to be overcome.	Please see Standard Resource Responses MM-1, MM-2 and MM-3.
35361-180	The 3M program, because of problems described as "Aquifer Response Time" (Walton 2011) or "time to full capture" (Bredehoeft and Durbin 2007), is capable of identifying groundwater supply problems that will get worse downstream in the groundwater flow system. It is not capable of preventing those problems from getting worse. The EIS must explain how the 3M program can overcome this inherent problem stemming from the physics of how groundwater flow systems function.	Your comments on the Draft EIS have been considered. See standard resource responses MM-1 and MM-2.
35361-181	The Aquatic Biology 3M program focuses on Special Status Species and game species. This approach overlooks the numerous recently described species whose status has yet to be evaluated, as well as the numerous as yet undescribed species occurring in the area of impact. Because numerous new species have recently been described from the area of impact, and biodiversity in the area is poorly known, the EIS must explain how the 3M program will deal with species yet to be evaluated or even discovered.	The COM Plan will establish a network of groundwater and surface water monitoring sites to collect baseline data, monitor the effects of groundwater development on water resources, biological resources, and air resources. The intent of the COM Plan is to provide early warning of potential adverse impacts to water rights and water-dependent sensitive resources, and provide time and flexibility to implement management measures and gage their effectiveness. The focus is not solely on special status species, but rather on early indicators. By using these early indicators and implementing management measures as quickly as possible, impacts to sensitive water-dependent resources, including but not limited to special status species, can be reduced or avoided. See revised Section 3.20.
35361-182	Shoshone Ponds in Spring Valley and Big Springs in Snake Valley are two habitats specifically identified as aquatic habitats likely to disappear as a consequence of the proposed action. Alternative A will not change that outcome. Mitigation measures include the possibility of creating alternative or substitute aquatic habitats intended to replace those unavoidably lost. While such a strategy could conceivably be considered appropriate for Shoshone Ponds (an artificial habitat intended to help maintain one or more specific Special Status species), it cannot be considered appropriate for Big Springs. This is because Big Springs is a natural habitat presently supporting a rich biodiversity which includes Special Status species and probably includes some species as yet unrecognized, undescribed, or whose status has yet to be evaluated. The interactions and interdependencies helping to support those Special Status species and influencing the evolutionary trajectory of all species within that habitat are only incompletely known. At present it is inconceivable to even contemplate developing sufficient knowledge to permit construction of an artificial habitat that would come close to duplicating ecological conditions capable of supporting the biodiversity of any natural habitat/ecosystem. The EIS must recognize this distinction between mitigation for artificial habitats and natural habitats, including recognition of the fact that replacement of natural habitats cannot be accomplished.	The EIS does disclose high estimated flow reductions for Big Springs. The Spring Valley Stipulated Agreement would include Big Springs in monitoring and mitigation planning to reduce effects to this spring. However, an ACM and additional mitigation measure GW-WR-4 would involve the use of alternative withdrawals points or water sources to avoid water level reductions in Shoshone Ponds.
35361-183	The Shoshone Ponds and Big Springs concerns are emblematic of a larger deficiency in the DEIS. Missing from the DEIS is any information on how much groundwater (and connected surface water) BLM needs to sustain aquatic biological resources on public lands that would be affected by groundwater pumping. Also missing is any information on how BLM will secure needed water for sustaining its aquatic biological resources considering the GWD project's huge water exportation targets in the five basins and also the direct impacts of pumping drawdowns in all the basins in the study area. Since SNWA's GWD project would effectively monopolize any non-appropriated water over a huge area of eastern Nevada and western Utah, we want to understand how BLM will retain enough water to sustain its aquatic biological resources.	Sections 3.7.2.9 through 3.6.7.16 of the Draft EIS describes potential impacts to aquatic species due to potential reduction of groundwater-dependent habitat (such as the miles of perennial streams potentially impacted by each alternative, number of springs/ponds/lakes potentially impacted by each alternative, etc). Shoshone Ponds (in relation to Pahrump Poolfish) and Big Springs are discussed extensively throughout these sections, providing estimated flow reductions and potential effects. The Final EIS has been updated to also include this analysis for Alternative F. The Draft EIS identified areas where BLM resources may be at risk due to impacts from groundwater pumping. The BLM does hold water rights for uses on public lands such as stockwatering, recreation and wildlife beneficial uses. In areas where the BLM holds a senior water right to the SNWA applications, these sources will be protected by Nevada Water Law since Nevada is a prior appropriation state (NRS 533). In areas where the Draft EIS identified potential impacts to resources and the BLM does not currently hold a water right, these resources may be at risk to some level of loss. BLM would be to obtain new water rights through the Nevada Water Law process, and any new rights granted to the BLM would be junior to SNWA's water rights. The BLM could not, therefore, rely on securing water rights as a means of protecting wildlife habitat. Please also refer to standard resource response MM-1 for information relevant to this comment.
35361-184	Conversely, the DEIS fails to adequately assess the environmental impacts of the GWD project, including additional water deliveries of 78,755 afa to 177,655 afa on land uses in the Coyote Springs and Las Vegas Valley basins receiving the exported water.	The action before the BLM relates to granting a right-of-way for groundwater conveyance. Please see the response to Standard Resource Response Gen-8. Changes in land uses resulting from the project are discussed in section 3.8.

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ID	Comment	Response
35361-185	The DEIS fails to address GWD project drawdown impacts on state parks and state wildlife management areas. The only information we could locate on drawdowns were two springs in one state park in the moderate to high risk category in the appendices in a table F3.3.1-1A "inventoried spring list." In a search for information on drawdown threats or estimates of declining spring flows in springs in wildlife management areas, we could find no information. These springs provide recreational fishing as well as habitat for federally protected species. The DEIS fails to address the human loss of the special places within the more than 20,000 square miles of Nevada and Utah which would be affected by the pumping of groundwater by SNWA.	Impacts to state WMAs and state parks from groundwater pumping is discussed in Section 3.9.2.9 under "Groundwater Pumping". The only anticipated recreation areas with springs or streams affected are summarized in Table 3.9-16 and 3.9-17. As indicated in these tables, the only WMA or state park anticipated to be affected is Cave Lake State Park under Alternative B 200 years after full build out (3 miles of perennial streams). The cumulative effects section (3.9.3) also notes the potential for cumulative effects to springs and streams in recreation areas, which include Kershaw-Ryan State Park, Cave Lake State Park, and Overton WMA.
35361-186	Missing from the DEIS is any information on how much groundwater (and connected surface water) BLM needs to sustain recreational resources on public lands that would be affected by groundwater pumping. Also missing is any information on how BLM will secure needed water for sustaining its recreational resources considering the GWD project's huge water exportation targets in the five basins and also the direct impacts of pumping drawdowns in all the basins in the study area. Since SNWA's GWD project would effectively monopolize any non-appropriated water over a huge area of eastern Nevada and western Utah, we want to understand how BLM will retain enough water to sustain its recreation programs and resources.	Please see Standard Resource Response Gen-8.
35361-187	The DEIS fails to adequately assess the impacts of increased short-term construction traffic on rural roads and highways and in urban areas receiving exported groundwater. It also fails to assess long-term unmitigated damages to rural roads from estimated subsidence over 525 square miles in eastern Nevada and western Utah.	Section 3.10.2 provides an estimate of worker trips during construction as well as anticipated roads that would be affected, with disclosure of associated impacts. The section also states that "During operation and maintenance of the ROWs and facilities, only minimal traffic that coincides with the current levels of traffic would be anticipated." The section further explains the ACMs in proposed to address construction-related transportation effects, including development of a construction traffic management plan. Mitigation measure ROW-T-1 elaborates on the components of the traffic management plan, which includes "A commitment to monitor and repair federal, state, and county roads that are used for delivering construction materials." Impacts to transportation infrastructure from subsidence is addressed in Section 3.2, a cross-reference has been added in the transportation section.
35361-188	The DEIS fails to assess impacts of the GWD project's on availability of water for future mining exploration, development, and ore processing. All mining operations require some amount of water, yet water availability will be decreased for future mining operations. In effect, the DEIS fails to disclose that the GWD project will effectively preclude any future mining in the five targeted basins and in many of the other impacted basins in the project study area. The DEIS also fails to analyze the similar effects of the GWD project on precluding future alternative energy development, especially in Dry Lake and Delamar Valleys.	Please see Standard Resource Response Gen -8.
35361-189	The DEIS fails to adequately assess the impacts of GWD project pumping on public land as native plants used for forage dry up and are replaced by invasive annuals and weeds in an area covering as many as 19,586 square miles.	For the purpose of this EIS, groundwater drawdown impacts are being analyzed on a programmatic level. A more specific analysis will be conducted in future NEPA when well and other facility locations are known.
35361-190	The DEIS fails to analyze impacts of pumping drawdowns of less than 10 feet. If adequately analyzed, these impacts could cover many hundreds of thousands more acres than disclosed in the DEIS, affecting the availability and quality of livestock forage on public lands. The DEIS should disclose how much carrying capacity would be reduced on each allotment affected by pumping drawdowns in the 40 basins in the project study area.	Please see General Comment Response WR-1 in regards to issues related to the 10 foot or greater drawdown contour. 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 will be analyzed in future NEPA.
35361-191	Missing from the DEIS is any information on how much groundwater and connected surface water BLM needs to sustain vegetation on public lands which is currently the basis for livestock grazing permits that would be affected by groundwater pumping. We prefer this information to be broken down by basin, so that the public can understand vegetation water needs in areas smaller than the total study area. Also missing is any information on how BLM will secure needed water for sustaining its vegetation resources considering the GWD project's huge water exportation targets in the five basins and also the direct impacts of pumping drawdowns in all the basins in the study area. Since SNWA's GWD project would effectively monopolize any non-appropriated water over a huge area of eastern Nevada and western Utah, we want to understand how BLM will retain enough water to sustain its vegetation resources.	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.
35361-192	The DEIS fails to adequately describe the summer and winter ranges and water holes which wild horses and burros use on public lands in the project study area. It also fails to disclose the extent of the impacts to wild horse and burros habitat needs by the GWD project pumping drawdown's effects on both native vegetation and water holes and springs.	For more detailed information on the Antelope, Eagle, and Silver King HMA's (these three incur right-of-way and/or groundwater development and drawdown impacts) please see sections 3.8 and 4.8 of the Ely RMP and FEIS as referenced in Section 3.13.1.1. Drawdown impacts to vegetation, springs, and streams are discussed in sections 3.13.2.8 through 3.13.3.11; however 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.
35361-193	It fails to describe current federal water rights used for wild horse water sources.	See response WR-9 regarding federal reserve water rights. In addition, there are no Federal Reserve water rights allocated for wild horse use.

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ID	Comment	Response
35361-194	A problem with the DEIS analysis of project impacts on wild horses is that no data is given on springs potentially affected by pumping in HMAs in Utah – Choke Cherry, Confusion, Conger, Kingtop, and Sulphur HMAs. There is no information provided on the number of springs in those areas, nor any data/analysis of the impacts upon horses if those springs are compromised by pumping. The Sulphur herd exhibits some traits and bloodlines thought to be descendent from the Spanish Barb horses brought to America by Spanish explorers in the 1600s (BLM 2009). The DEIS should consider additional measures to assure protection and continued viability of this special herd.	No HMAs in Utah contain springs that fall within the 10 foot or greater drawdown area; therefore, no data/analysis is presented for springs in those HMAs. The unique qualities of the Sulphur herd are discussed in Section 3.13.1.1; however, right-of-way and drawdown impacts do not affect this HMA and warrant no further discussion.
35361-195	The DEIS notes serious impacts upon wetland/meadows areas that are typically subirrigated or spring-fed (8,000 acres in Siver King HMA). The forage available in these areas is important for herds. Mitigations proposed appear inadequate to address reduction or loss of this food source.	The 8,000 acres of wetland/meadow vegetation mentioned in the Silver King HMA refer to the total and do not reflect the quantification of an impact. The purpose of this EIS is to analyze impacts related to the rights-of-way, access roads and ancillary facilities. Impacts and mitigation related to well locations, pumping, and groundwater drawdown will be analyzed and discussed in future NEPA. Also, please see Standard Resource Response MM-1.
35361-196	Missing from the DEIS is any information on how much groundwater and connected surface water BLM needs to sustain vegetation on public lands which is currently the forage basis for wild horses and burros that would be affected by groundwater pumping. We prefer this information to be broken down by basin, so that the public can understand vegetation water needs in areas smaller than the total study area. Also missing is any information on how BLM will secure needed water for sustaining its vegetation resources considering the GWD project's huge water exportation targets in the five basins and also the direct impacts of pumping drawdowns in all the basins in the study area. Since SNWA's GWD project would effectively monopolize any nonappropriated water over a huge area of eastern Nevada and western Utah, we want to understand how BLM will retain enough water to sustain its vegetation resources, and its wild horse and burro resources.	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.
35361-197	The DEIS fails to identify all lands with special designations in the project study area, including state parks and wildlife management areas. The DEIS fails to include adequate information on lands with special designations in eastern Nevada and Utah's west desert and to adequately disclose the impacts of GWD project construction and pumping on these lands and their resources, including recreation and wildlife.	State parks and wildlife management areas are addressed in Section 3.9 of the FEIS. Special management areas that occur within the region of study are listed in Table 3-14.2 and shown on Figure F3.14-2 of the FEIS, and those areas crossed by the ROWs or Ancillary Facilities or occur within the groundwater development areas are discussed in the impact analysis in Section 3.14. An analysis of drawdown impacts is included in the water resources analysis in Section 3.3 of the FEIS. Impacts to specific resources contained within special designations, such as recreation, wildlife, or visual resources, are included in those respective sections as discussed in the Section 3.14.2 analysis introduction.
35361-198	Nothing in BLM laws and regulations would allow the BLM to sacrifice the values and management of Areas of Critical Environmental Concern to GWD project impacts. The Proposed Action and all of the scenarios in the DEIS , except the No Action Alternative, fail to comply with the mission and management of designated wildernesses and ACECs, Desert and Pahrnagat NWRs, Great Basin National Park and Lake Mead NRA.	The information that is responsive to this comment, including rationale, is contained in Section 3.14, Special Designations. BLM ACEC's are identified as ROW avoidance areas, except within designated utility corridors (such as LCCRDA). This section has been updated to more accurately describe where the facilities are located with respect to the LCCRDA corridor. Language has been added to this portion of Chapter 2 referring the reader to Section 3.14 for more information.
35361-199	What are the costs of the mitigation proposed for the Shoshone Ponds ACEC (page 3.3- 121) including "improving" the existing well, drilling a new well and installing a pump to maintain flow to the ponds for the foreseeable future regardless of groundwater drawdown? What are the maintenance costs, the replacement costs, and the energy costs to run the pump for up to 200 years or more? This proposed "mitigation" appears futile since the DEIS shows significant GWD project pumping impacts on the lands and woodlands surrounding Shoshone Ponds which will eventually be surrounded only by invasive weeds and annual plants.	See section 2.3.8 for a discussion of Capital costs. See Section 3.20 for a discussion related to monitoring, management, and mitigation. Please see Standard Resource Response Gen-1 which discusses programmatic analysis and subsequent NEPA. The detai
35361-200	Missing from the DEIS is any information on how much groundwater and connected surface water BLM needs to sustain water-dependent resources, vegetation, scenery, wildlife, recreation in designated areas on public lands. We prefer this information to be broken down by basin, so that the public can understand vegetation water needs in areas smaller than the total study area. Also missing is any information on how BLM will secure needed water for sustaining its vegetation and water-dependent resources in specially designated areas considering the GWD project's huge water exportation targets in the five basins and also the direct impacts of pumping in all the basins in the study area. We want to understand how BLM will retain enough water to sustain its vegetation and water-dependent resources in designated areas.	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. Please see Standard Resource Response Gen-2 for a discussion on programmatic analysis and tiering under the NEPA.

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ID	Comment	Response
35361-201	<p>The Proposed Action and all the scenarios except the No Action Alternative in the DEIS will result in a vastly changed landscape in the five basins targeted by the GWD project and many of the 35 other basins in the project study area. The DEIS fails to assess the significance of these changes. The changes violate visual resource management objectives in its Resource Management Plans as well as BLM's underlying laws and regulations regarding conserving visual resources. For example, how would (Table ES- 12) an 86 percent reduction in evapotranspiration affect Snake Valley's visual resources? The visual resources analysis is deficient. The section of text and related Appendix only address the visual impacts of the right of way, roads and power lines. In order to fully and accurately disclose the impacts of the proposed action and alternatives, the EIS should provide visual simulations at 75 and 200 years of the various alternatives from Key Observation Points (KOP). Visual resources are the lifeblood of tourism in the Pony Express Territory, at Great Basin National Park, and in the region. The lack of KOPs depicting the die-off of vegetation, presence of dust, and the extent of subsidence make it appear that BLM does not want the public to see the extent of destruction (comparable to Owens Valley.)</p>	<p>The visual resources analysis evaluates the impacts to Groundwater Development and Groundwater Pumping in Section 3.15.2.8. This section provides sufficient information to compare project alternatives and their impacts. The section also discloses that future site-specific impact assessments will assess visual impacts for specific project facilities in detail as the locations of facilities become better defined. Photographic simulations were prepared for project's Proposed Facilities as described in Section 2.5 using the methods described in Section 3.15.2.1 where sufficient locational and design information was provided to prepare an artistic rendering of the potential impacts at a given location. Further, the known extent and degree of potential transitions from wetland/meadow, spring-fed communities, and basin shrubland communities to more drought-adapted and shallow rooted vegetation species is insufficient to prepare artistic renderings.</p>
35361-202	<p>For example, the DEIS should contain a KOP visual simulation from the Wheeler Peak road over Snake Valley after 200 years of pumping for each alternative. The same approach should be taken for a view from east Snake Valley and from Garrison. Special attention should be given to views from the Great Basin National Park into Spring Valley. Similar KOP simulations should be done for the other valleys. Full disclosure in the DEIS should include what the public and the Department of Interior needs to see and consider – the treasured valley and mountain vistas after 200 years of pumping and air quality impacts.</p>	<p>The visual resources analysis evaluates the impacts to Groundwater Development and Groundwater Pumping in Section 3.15.2.8. This section provides sufficient information to compare project alternatives and their impacts. The section also discloses that future site-specific impact assessments will assess visual impacts for specific project facilities in detail as the locations of facilities become better defined. Photographic simulations were prepared for project's Proposed Facilities as described in Section 2.5 using the methods described in Section 3.15.2.1 where sufficient locational and design information was provided to prepare an artistic rendering of the potential impacts at a given location. Further, the known extent and degree of potential transitions from wetland/meadow, spring-fed communities, and basin shrubland communities to more drought-adapted and shallow rooted vegetation species is insufficient to prepare artistic renderings. Please also see Standard Resource Response Gen-1 for a discussion of future facility tiering.</p>
35361-203	<p>Because the visual simulations of the drying up of the project area were not done and disclosed to the public during the DEIS review, we call upon BLM to complete the simulations and including them in a new DEIS or SEIS which will be subject to full public review and hearings.</p>	<p>Photographic simulations were prepared for project's Proposed Facilities as described in Section 2.5 using the methods described in Section 3.15.2.1 where sufficient locational and design information was provided to prepare an artistic rendering of the potential impacts at a given location. Further, the known extent and degree of potential transitions from wetland/meadow, spring-fed communities, and basin shrubland communities to more drought-adapted and shallow rooted vegetation species is insufficient to prepare artistic renderings.</p>
35361-204	<p>The DEIS fails to adequately describe cultural resources in the project study area and to disclose the significance of GWD project impacts to cultural resources. The DEIS fails to disclose the impacts of groundwater drawdowns and the resulting widespread subsidence and loss of vegetative cover to prevent erosion and dust storms. The DEIS fails to require effective mitigation for these impacts on cultural resources. We do not believe that the trust responsibility of the federal government to the tribes adversely impacted by the proposed GWD project can be abandoned. The DEIS shows that Proposed Action and all the scenarios, except the No Action Alternative, would result in unacceptable impacts on cultural resources. BLM cannot approve a proposed project with this level of unmitigated and undue and unnecessary impacts to cultural resources on public lands.</p>	<p>As stated in section 3.16.2.1, Class III inventories would be conducted within the APE for direct effects and any located sites would be evaluated for the NRHP. Therefore, only a qualitative assessment of impacts can be done at this time. Section 3.16 discloses the risks of subsidence and how subsidence could affect historic properties. Table 3.2-6 in Section 3.2, Geologic Resources, discloses those areas at risk for subsidence. Section 3.5, Vegetation Resources, discloses effects of groundwater pumping on vegetation. Mitigation of adverse effects to historic properties is required under Section 106 of the NHPA and BLM directives. These regulations and legislation are discussed at length in Section 3.16.</p>
35361-205	<p>The DEIS fails to provide any mitigation, required or voluntary, for systemic changes to native vegetation caused by the GWD project's pumping and desiccation of extensive public lands in the targeted area. How will tribes who are dependent on the listed native plants carry out their traditions as the native plants are replaced by invasive annuals and weeds? The DEIS fails to identify how many potential Traditional Cultural Properties (TCPs) are located within the five targeted basins and the other 35 basins affected by pumping drawdowns. We strongly believe that BLM cannot select the Proposed Action or any of the scenarios in the DEIS which would destroy TCPs before they are designated by the federal government.</p>	<p>Section 3.5, Vegetation Resources, provides information on groundwater pumping effects to vegetation resources. As stated in Section 3.17.1.2, as a result of literature searches, tribal interviews, meetings, consultation, and field trips, 75 locations were identified as possible places of cultural and religious importance to Native Americans. Consultation between the BLM and interested tribes currently is ongoing. Additional places of tribal importance may be identified as a result of the continued consultation efforts.</p>
35361-206	<p>Missing from the DEIS is any information on how much groundwater and connected surface water BLM needs to sustain vegetation on public lands that would be affected by groundwater pumping. Vegetation is the basis for Native American traditional uses, both of plants and also of the animals which depend on native plants. We prefer this information to be broken down by basin, so that tribal communities and the public can understand vegetation water needs in areas smaller than the total study area.</p>	<p>Impacts to plants and animals are discussed in sections 3.5 and 3.6 of the DEIS.</p>
35361-207	<p>The DEIS ignores the traditional Native Americans ties to the land, the plants, and the animals in their historic homelands. Once lost because of GWD project impacts, traditional values will be forever compromised.</p>	<p>The ethnographic overview in Section 3.17.1 provides information on traditional subsistence practices of tribal groups in the analysis area. Also included in Section 3.17.1 are excerpts from tribal resolutions explaining the importance of the land, animals, and plants to these tribal groups. The impact assessment in Section 3.17.2.9, emphasizes the importance of these resources to traditional practices of the Great Basin tribes. The FEIS will expand on these discussions.</p>

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ID	Comment	Response
35361-208	The Socioeconomics section fails to comply with the CEQ requirement to “take a hard look” at the factors under review. (In E.I. DuPont de Nemours & Co. v. Train, the court interpreted “hard look” to mean that “assumptions must be spelled out, inconsistencies explained, methodologies disclosed, contradictory evidence rebuffed, record references solidly grounded, guesswork eliminated and conclusions supported in a manner capable of judicial understanding.” The courts have further defined the information required for a “hard look” to mean that it does not require perfection, but should be based on information that is available and not at an exorbitant cost.	In Section 3.18, the DEIS sought to summarize the wide range of economic and social conditions and attitudes and opinions regarding the project across a large region. Although the comment suggests the desire for additional information and detail, it does not contradict or refute the conclusions in this EIS: (1) short-term, temporary beneficial and adverse effects on communities across the region during construction of the main pipeline and ancillary facilities -- the primary focus of this EIS, or (2) long-term, mostly irreversible social and economic effects related to groundwater production, individual and community assessments of which would range from significantly adverse to significantly beneficial. Furthermore, the potential long-term socioeconomic effects, addressed programmatically in this EIS, are subject to further study in subsequent, tiered NEPA.
35361-209	The DEIS fails to adequately analyze the impacts of the GWD project on socioeconomics and environmental justice, especially the pumping drawdowns on the rural and urban communities potentially losing water and gaining water. White Pine County basins would supply 75 percent of groundwater targeted by SNWA, yet the socioeconomic impacts analysis is minimal, quite perfunctory.	The primary purpose of this EIS is to disclose potential project impacts related to the right-of-way, access roads and ancillary facilities. The proposed pipeline routes, as submitted by the applicant, have been analyzed in this EIS and the impacts associated with the proposed alignment have been presented therein. Impacts related to well locations, pumping, and groundwater drawdown, including those cited in this comment, are analyzed on a programmatic level in Section 3.18 and would be analyzed in further detail in future NEPA. With respect to the impacts on growth resulting from drawdowns, the EIS concludes that groundwater production could result in population loss in rural areas if declining groundwater levels resulted in reductions in farm and ranch profitability and adverse effects to vegetation, wildlife, and natural features that support tourism and recreation visitation. See Standard Resource Responses Gen-1 and Gen-2 for more information on tiering. As stated several times throughout the EIS, the responsibility for administration of public water in Nevada lies with the Nevada State Engineer, not the BLM.
35361-210	The DEIS has failed to supply a reasonable cost estimate of the project, even a perfunctory analysis of ability for the SNWA to pay for the cost of the project, many of the long-term costs (noted in more detail in the environmental consequences part of our response), and the impact of those costs on residential and business ratepayers in Clark County. That information was provided by the SNWA’s analysts to the Nevada State Engineer in June 2011 (Hobbs, Ong 2011), and put the cost at more than \$15 billion, including more than \$8 billion simply to pay to finance the project. The total is notable in that previous cost estimates supplied by the SNWA to federal and state oversight agencies was in the \$1 billion to \$3.6 billion range.	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. The underlying concerns in your comment are outside the scope of the EIS. However, because of comments received to the EIS, summary information regarding SNWA’s estimated project cost are included in the FEIS. See also Standard Resource Responses SocEcon-1, SocEcon-3 and SocEcon-6.
35361-211	Among the conclusions of the analysts was that residential ratepayers would face a near tripling of water rates, while businesses would see their rates more than double. For an urban economy with among the highest rates of unemployment and economic distress in the country, metropolitan Las Vegas would be severely stressed by this additional costs – especially for a project that may not be necessary.	Thank you for your comment. The subject of this comment is beyond the Draft EIS scope and does not require further agency response. However, your comment topic will be considered by the BLM during preparation of the Final EIS and Record of Decision. Please refer to standard resource responses SocEcon-2, SocEcon-3, and SocEcon-6 for further information on these issues.
35361-212	The DEIS also has failed to take a hard look at the existing socioeconomic conditions and GWD project impacts in the five targeted basins as well as in many of the additional 35 basins in the project study area by not incorporating significant information that is readily available.	Examples of factors considered when developing the description of existing socioeconomic conditions include the regional scale of the proposed project, size of workforce, and anticipated results from other disciplines that would factor into the assessment. In this instance, Section 3.18.2.1 addresses the effects associated with construction and operation of the main pipeline and facilities; the actions tied to decisions to be made by the BLM on this EIS. Characteristics of linear utility infrastructure, most of those effects would be temporary and the level of detail regarding current conditions is adequate to support the assessment of such impact.
35361-213	The size and scope of the project does not negate the need for BLM to take a hard look at existing conditions and potential impacts. For instance, baseline information on recreation and tourism fails to include NDOW information on hunter days by hunt unit and species as well as angler days. The BLM and USFS provide information on recreation visitor days and local counties can provide lodging tax revenue by month land by property. Other missing available information is on agricultural impacts on local economies, published in reports and studies by the University of Nevada, Reno Agricultural Economics Department and Cooperative Extension Service. Missing is consideration of White Pine County’s planning documents or Annual Comprehensive Economic Development Strategy.	Examples of factors considered when developing the description of existing socioeconomic conditions include the regional scale of the proposed project, size of workforce, and anticipated results from other disciplines that would factor into the assessment. In this instance, Section 3.18.2.1 addresses the effects associated with construction and operation of the main pipeline and facilities; the actions tied to decisions to be made by the BLM on this EIS. Characteristics of linear utility infrastructure, most of those effects would be temporary and the level of detail regarding current conditions is adequate to support the assessment of such impact. Information on hunting and fish activity, as well as other outdoor recreation use is discussed in Section 3.9 Recreation.
35361-214	The DEIS also fails to disclose the effects that SNWA’s water rights applications in 1989 have had on suppressing growth and development in White Pine and Lincoln Counties from 1989 to 2011.	Section 3.18 acknowledges the identified concerns on the part of some residents and officials of White Pine and Lincoln counties. It is our understanding that previously approved water rights remained available for economic development. Furthermore, applications for additional water to support local economic development could have been, and can continue to be filed with the NSE, which would then be processed in consideration of local economic development needs. Finally, as noted, water is but one factor necessary to support growth and development. Consequently, there are no assurances that growth and development would have occurred in the proposed groundwater production basins absent SNWA’s applications.

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ID	Comment	Response
35361-215	Table 3.3.2-6 discloses substantial adverse impacts to water resources of the Proposed Action. What are the economic impacts to residents and rural communities of either totally losing water rights, both surface and groundwater, because of pumping impacts? What are the estimated costs of having to deepen wells to adapt to "reasonable lowering" of groundwater tables? What are the estimated costs of senior water rights holders to legally challenge SNWA's taking of their water rights and seeking redress in the courts? How many senior water rights holders will lose their livelihoods as a result of GWD project pumping drawdowns? What are the effects on rural communities of the loss of water-dependent livelihoods? How much loss over how much time would lead to the collapse of rural communities?	The primary purpose of this EIS is to disclose potential project impacts related to the right-of-way, access roads and ancillary facilities. The proposed pipeline routes, as submitted by the applicant, have been analyzed in this EIS and the impacts associated with the proposed alignment have been presented therein. Impacts related to well locations, pumping, and groundwater drawdown, including those cited in this comment, are analyzed on a programmatic level in Section 3.18 and would be analyzed in further detail in future NEPA. See Standard Resource Responses Gen-1 and Gen-2 for more information on tiering. The characterization of the potential effects of the GWD on water availability contained in the comment is inconsistent with the water analysis in Section 3.3 which portrays the areal and vertical extents, and the general time horizon of long-term drawdown given the assumed pumping regimes. Furthermore, the COM Plan would be put in place (see Section 3.20), and Nevada water law recognizes and offers protections for senior water rights, including municipal water sources. Text has added to Section 3.18.2.8 describing the long-term drawdown, including reference to Figures 3.3.2.-7 and 3.3.2-8.
35361-216	The DEIS fails to analyze the direct and indirect impacts to areas in Southern Nevada which may gain up to 176,655 afa of groundwater as a result of NSE and BLM actions on applications for water rights and requests for ROW permits. These include "growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems " (40 CFR 1508.7).	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 Standard Resource Response SocEcon-4). Any impacts relating specifically to the Nevada State Engineer's processing of water rights applications is independent of this ROW action considered here and is thus beyond the scope of the NEPA process.
35361-217	Conversely, whether one uses the varying population estimates in the SNWA Water Resources Plan cited in the DEIS, or the 2011 Hobbs, Ong Financial Feasibility Report, or the lower population growth estimates in the State Demographer's 2010 forecast, the DEIS does not disclose the costs (financial, environmental and sociocultural) associated with Southern Nevada accommodating population increases which would be supported by rural groundwater. These would include (but not be limited to): how many or much more freeways and roads, traffic and traffic accidents, schools, policy and fire protection, hospitals, parks, sewer systems, additional pollution of Lake Mead would occur as a result of the proposed GWD project?	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 Standard Resource Response SocEcon-4). 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 3.18.2.9.
35361-218	In addition, there is no information in the DEIS on either the costs of the project or the impacts of funding the project on the public, either as rate-payers or taxpayers.	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. The underlying concerns in your comment are outside the scope of the EIS. However, because of comments received to the EIS, summary information regarding SNWA's estimated 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
35361-219	The DEIS fails to disclose impacts of the GWD project pumping drawdowns on agricultural, recreation and tourism, essential parts of the economies of Nevada and Utah counties and communities, including Lund, Preston, and Sunnyside in White River Valley. What mitigation is proposed for adverse impacts of the GWD project on the socioeconomics of the targeted basins?.	Examples of factors considered when developing the description of existing socioeconomic conditions include the regional scale of the proposed project, size of workforce, and anticipated results from other disciplines that would factor into the assessment. In this instance, Section 3.18.2.1 addresses the effects associated with construction and operation of the main pipeline and facilities; the actions tied to decisions to be made by the BLM on this EIS. Characteristics of linear utility infrastructure, most of those effects would be temporary and the level of detail regarding current conditions is adequate to support the assessment of such impact. Information on hunting and fish activity, as well as other outdoor recreation use is discussed in Section 3.9 Recreation. Most of the effects cited in the comment are related to drawdown associated with future facilities and pumping. Those effects are addressed programatically in this EIS, and would be subject to further analysis in subsequent, tiered NEPA analysis to be done in conjunction with future facilities. See Standard Resource Responses Gen-2 and Gen-8, as well as Section 2.5 of the Executive Summary and Section 2.1.2 of the main document for additional information on tiering.

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ID	Comment	Response
35361-220	<p>The DEIS fails to disclose the impacts of housing and other needs of GWD project construction workers. There is very limited housing available in rural communities along the proposed ROW corridor. How much temporary and permanent housing would be needed? How long would it be needed? What are the impacts of a large, but temporary housing demand on local housing availability and pricing? Will SNWA provide food for the workers, or will they be dependent on local markets? What is the capacity for local markets to handle this demand? What are the impacts of worker demands or needs for other services, such as medical care and emergency medical service, police and fire, county health and road departments, the court system and other county and city agencies? What are the costs of the GWD project demands on these local services and how will they be paid?</p>	<p>Temporary housing demands, the limited availability of housing in the rural communities, possibility of a contractor-sponsored temporary construction worker facility, and indirect effects on communities and public services are addressed in Section 3.18.2.2. Text has been added noting that some providers may seek to add staff to meet short-term increases in demand and to address the uncertainties regarding funding. Text changes were also made to correct erroneous statement that SNWA was "tax exempt" with respect to sales tax. Consequently, sales and use tax revenues will be generated on the materials portions of facility construction.</p>
35361-221	<p>The Socioeconomic analysis is weak because the data used to describe social and economic conditions in each area are limited. The DEIS relies heavily on readily available published data regarding the affected counties without exploring further to understand what the data mean, and the DEIS contains several errors and omissions of information.</p>	<p>Examples of factors considered when developing the description of existing socioeconomic conditions include the regional scale of the proposed project, size of workforce, and anticipated results from other disciplines that would factor into the assessment. In this instance, Section 3.18.2.1 addresses the effects associated with construction and operation of the main pipeline and facilities; the actions tied to decisions to be made by the BLM on this EIS. Characteristic of linear utility infrastructure, most of those effects would be temporary and the level of detail regarding current conditions is adequate to support the assessment of such impact. Information on hunting and fish activity, as well as other outdoor recreation use is discussed in Section 3.9 Recreation. Most of the effects cited in the comment are related to drawdown associated with future facilities and pumping. Those effects are addressed programatically in this EIS, and would be subject to further analysis in subsequent, tiered NEPA analysis to be done in conjunction with future facilities. See Standard Resource Responses Gen-1 and Gen-8, as well as Section 2.5 of the Executive Summary and Section 2.1.2 of the main document for additional information on tiering.</p>
35361-222	<p>1. The discussion does not provide an adequate baseline of existing economic conditions and contributions for White Pine County or for the Spring and Snake Valley areas. The information needed to comply with CEQ requirements is available. For example, the discussion on Tourism and Recreation uses the Nevada Department of Wildlife statistics on hunting and fishing license sales, Great Basin National Park visitation records, and a national survey to define daily expenditures. The Nevada Department of Wildlife has substantial information readily available on hunter days by hunt unit and species as well as angler days. The BLM and Forest Service provide information on recreation visitor days, and the White Pine County Tourism and Recreation Board can provide lodging tax revenue by month and by property. All of these sources are available without cost and most are available online. In the discussion about agriculture's economic contribution, the primary source of information is the White Pine and Lincoln County tables from the 2007 Census of Agriculture. The University of Nevada Reno, and Cooperative Extension Service publish reports and studies detailing the economic contribution of agriculture by County and in-depth analysis of economic impacts of agriculture. Both outdoor recreation and agriculture were identified as key elements of the economic base for White Pine County in general and Spring and Snake Valleys yet none of the information was used to try to develop a better picture of the existing economic conditions as a baseline for analyzing the potential socioeconomic impacts of the proposed project. 2. A review of Chapter 6 and the references cited for Appendix F 3.18 shows that only two references are cited for White Pine County, an interview with the County's Economic Diversification Coordinator in 2009 and the Tourism and Recreation Board/Chamber of Commerce List of Accommodations. The Draft does not cite White Pine County's planning documents or Annual Comprehensive Economic Development Strategy which include discussions about economic history, current economic conditions, population projections, economic trends, needs and priorities, and future development. 3. The document cites published data and draws conclusions about employment, personal wealth and poverty levels, housing, and public services that do not necessarily reflect actual conditions in each of the rural counties. Follow up contacts with County personnel and community leaders could have helped to explain what the data actually mean. 4. The document omits important areas of socioeconomic discussion including impacts on traffic during construction and impacts on court systems if law enforcement activity increases. Information on these topics is readily available. 5. The Socioeconomic section makes statements and draws conclusions without citing references. 6. In some instances the document attempts to offer one explanation for factors for rural areas. Each of the areas has its own economic and social setting. What may be true for one may not help to explain conditions in another area. An example is the explanation that lower average personal wealth in rural areas is manifested in higher levels of poverty. In Lincoln County, 16.5 percent of the population is at or below poverty level. In White Pine County, wage and wealth averages are lower but the County has historically been at or below state and national poverty levels. The breakdown by income category shows the lower average wage levels indicate that the County has fewer wage earners at the highest salary levels.</p>	<p>Examples of factors considered when developing the description of existing socioeconomic conditions include the regional scale of the proposed project, size of workforce, and anticipated results from other disciplines that would factor into the assessment. In this instance, Section 3.18.2.1 addresses the effects associated with construction and operation of the main pipeline and facilities; the actions tied to decisions to be made by the BLM on this EIS. Characteristic of linear utility infrastructure, most of those effects would be temporary and the level of detail regarding current conditions is adequate to support the assessment of such impact. Information on hunting and fishing activities, as well as other outdoor recreation use is discussed in Section 3.9 Recreation.</p>

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ID	Comment	Response
35361-223	<p>The Socioeconomics discussion does not adequately address unknown factors essential for analysis of potential impacts. 1. No where in the socioeconomic section is there an acknowledgement that there are unknown or incomplete data that is essential to fully understand and analyze impacts of groundwater development projects and long term ground water pumping on the socio-economic conditions in the affected areas. The time frames for the proposed project are too long and there are too many unknowns to allow adequate analysis of potential impacts. The proposed project is not “ripe for analysis.” 2. The application for the Right-of-Way was received in 2004 and the Draft was released to the public in June 2011. The time period to develop the Draft includes one of the most severe economic declines in the country’s history and Clark County has been one of the hardest hit areas in the nation. The socioeconomics discussion shows inconsistency in how to address the updated information available during the time it has taken to develop the draft and uncertainty in how to interpret the impact the recession will have on future growth of the Las Vegas Valley. There needs to be a stated and consistent approach to new information available since this section of the Draft was written and there needs to be an independent review of the impacts of the recession on the growth anticipated for Las Vegas Valley that is stated in the document and subject to public review and comment. 3. The NEPA process does not require speculation but it is required to make an informed judgment on estimated future impacts based on trends and the probably effect of potential decisions. The analysis of potential long term socioeconomic impacts and cumulative impacts is inconsistent between urban and rural areas. Potential rural development is limited to projects that have begun the NEPA process. The Draft does not include all probable or potential development in White Pine County. The BLM has applications for initial stages of research on wind energy projects in the Spring and Snake Valley areas and there have been a number of inquiries and applications for other types of renewable energy production throughout White Pine County including solar and pumped storage indicating further development of renewable energy development is probable; during the past two years, the White Pine County Commission received an application for a zone change to accommodate recreational development in Spring Valley, and the Spring and Snake Valley area have supported a wide range of agricultural activity in the past including orchards, livestock, and alfalfa cube production. The Draft accepts the projection of continued growth in the Las Vegas Valley based on previous population figures in spite of the impact of recent economic decline, reports of excess housing, and the fact that new industrial development, construction, and casinos, needed to support that growth have not yet been proposed. The discussions of social conditions and attitudes are subjective and not properly referenced</p>	<p>The lengthy time horizon associated with the development of the proposed project and timing and duration of groundwater pumping and the subsequent environmental effects do result in inherent and substantial uncertainty with respect to socioeconomic impacts, as well as future conditons under No Action. That uncertainty is acknowledged, per the NEPA.</p>
35361-224	<p>If community attitudes are important to understand the project impacts, it would be beneficial to conduct an independent study of attitudes about the project to be included in the appendix material. The methodology for such a study is available. While it might represent an additional cost, it would be minimal compared to the costs of water modeling and other studies conducted for the State Engineer’s hearings and EIS processes.</p>	<p>The BLM appreciates your comment. A review of information from scoping, field research by project staff, media articles and reports, comments to the DEIS during public hearings, and the written comments indicate that attitudes towards the project characterized in Section 3.18 reflects a cross-section of attitudes towards the project.</p>
35361-225	<p>The discussion regarding population projections needs further explanation of the methodology and limits of the statistical techniques used for the projections. The document uses the State Demographer’s population projections which are the official projections for all Nevada Counties. In addition, it cites the CBER population projections for 2009.and notes the 2010 census does not agree with the projections of the State Demographer. There are several projections of population growth available for Clark County as an urban area. There is disagreement among the studies in whether the growth rate experienced by Clark County during the past decade would have continued at that rate for an extended period in the future independent of the impacts of the recession since 2008 or access to water resources from Central Nevada. The document needs to include a discussion about the methodology for the development of the projections. In the State Demographer’s case, a regression analysis is used looking at the past to predict the future. The technique will predict growth for Clark County because Clark County was growing during the historical period used as the baseline. The technique will predict losses for an area like White Pine County because the County experienced a mine closure during the baseline period. The projections cannot predict emerging economic activity and changes in economic base. In White Pine County’s case, for example, the projections predicted a steady decline during the period the Ely State Prison opened, there was new mining activity, and the County was growing. In recent years the State Demographer has worked to overcome this deficiency by requesting information about anticipated projects or potential changes in the County’s economy and population. These have been factored in to the projections. The County worked closely with the State Demographer while doing its 2006 Water Resource Plan based on a 50 year planning period. During those discussions he acknowledged that the process used for the projections was not well suited to long term analysis. An explanation of the techniques and the limits of population projections could be included in the appendix material and would help the reader understand the figures used. In addition, the document would benefit from an independent and comprehensive review of population growth and projections not only in Nevada but in the Southwest. As previously noted, the DEIS inadequacies should make a ROD impossible. GBWN has identified numerous deficiencies and errors that need to be addressed.</p>	<p>The specifics of population growth projections and their tie to SNWA’s projected water demand are outside the scope of this EIS. As noted in Sections 1.1 and 1.6, SNWA is acting within its statutory obligations and responsibilities in the development of its water plan, recognizing the long lead-times and uncertainties associated with securing additional water resources and major capital facility development. Standard Resource Response Gen-3 and SocEcon-2 provide additional response to this comment.</p>

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ID	Comment	Response
35361-226	Page 3.18.2: Discussion on communities and settlements in the study area lists “the emerging Coyote Springs development on southern Lincoln/northern Clark counties.” There needs to be an explanation of what Coyote Springs is, its history, what is there now, and what is proposed. The role of Coyote Springs and its dependence on the SNWA groundwater program to supply water has been discussed to a limited degree in the media, but SNWA has never explained how its proposed pipeline project and the plans to develop a new city of 159,000 homes are related.	The text in the DEIS described Coyote Springs at a level commensurate with other communities and settlements. However, the text has been revised in response to the first half of this comment. Questions regarding the linkages between the SNWA GWD and the water supply for Coyote Springs are outside the scope of the EIS.
35361-227	Page 3.18.3: “Lincoln, Juab, and Millard counties all experienced long term population growth while White Pine County experienced a pattern of cyclic contraction and expansion tied to mining and the opening of a state prison.” The fluctuations in the mining industry caused fluctuations in population. The opening of the Ely State Prison in 1989 increased population and that has remained constant.	The statement has been revised.
35361-228	Page 3.18.5 (first paragraph): Discussion regarding Clark County population declines due to the recession. The statement notes that the State Demographer anticipated a decline in population of 50,000 that was not reported in the 2010 Census but other statistics suggest that a substantial out-migration occurred. The statement should cite the other statistics it is referring to. As noted above, there is a need for an independent and comprehensive review of population trends and projections in light of the impacts of the economic recession on Las Vegas.	The statement regarding migration has been revised. SocEcon-2 responds to the comment regarding the need for a review of population projections,
35361-229	Page 3.18.9, Table 3.18.6, White Pine County population projections change from 2008 to 2010: The change from growth to population decline is due to the fact that the State Demographer was including the population projections for both White Pine Energy Station and Ely Energy Center in the 2008 projections and subtracted them when the projects were put on hold and factored in the potential closure of the Robinson mine when Quadra published information on the projected mine life.	Thank you for the clarification regarding factors affecting the population projections for White Pine County. The information underscores the local concern regarding the economic uncertainty facing White Pine described in Section 3.18.
35361-230	Page 3.18.13 and 14, 2007 Census of Agriculture: The discussion doesn’t indicate if the data for the 2007 Census of Agriculture reflect the purchases and operation of ranches in Spring Valley by SNWA.	The Census of Agriculture seeks to include all operating farms and ranches regardless of ownership. Since the ranches continued to operate, the purchase/sale would be directly apparent in data differentiating corporate and non-corporate ownerships, and indirectly in terms of capital investment, changes in cropping patterns, and other operational changes implemented by SNWA, and perhaps in the number of jobs reported in conjunction with the ranching operations.
35361-231	Page 3.18.14, Last bullet point: “Although farming and ranching are not major income generators on an accounting basis, agriculture is an important element of the economic base of the four counties.” There are reports published by UNR and the Cooperative Extension Service on the value of agriculture by county as well as studies on various segments of the agricultural industry in Nevada that provide additional understanding and documentation of the economic benefits of agriculture. The document emphasizes the reliance of the rural areas and especially Spring and Snake valleys on agriculture. It would be a stronger discussion if it included a more in-depth review of the information and analysis that is available rather than just including the White Pine and Lincoln County tables from the 2007 Census of Agriculture.	Thank you for expressing your concerns related to the Draft EIS. Your comment has been carefully considered by the BLM, but have not resulted in changes to the analyses presented in this document. Furthermore, it is noted that the remainder of the cited paragraph acknowledges the important economic and social roles of agriculture in supporting the local economy, including “Farming and ranching provide livelihoods for many households, contribute to the tax base supporting local government and public education....” and “...the farm-based population tends to be connected to the land in ways that anchors it to the area....”
35361-232	Page 3.18.16: The concerns listed regarding SNWA’s ownership and operation of the ranches in Spring Valley do not include the concerns that the management of the ranches is not based on production but preservation of the groundwater for other uses and the concern that SNWA is unfairly competing with local ranchers. These concerns have been raised in a number of public meetings that were attended by SNWA staff and have been documented in minutes.	The listing of concerns was not intended to be exhaustive, but rather illustrative. The text has been revised to include the two concerns identified in this comment.
35361-233	Pages 3.18.6, 17, and 18 Tourism and Recreation: The discussion on tourism and recreation in rural areas is not comprehensive. The information used includes a national survey, reports of hunting and fishing licenses sold, and visitation at Great Basin National Park. Additional information available through Nevada Department of Wildlife includes reports of hunter days per species and by Hunt Unit, fishing creel census data that can identify angler days by specific location (including the creeks in Spring and Snake Valleys) and hunting activity per County by species including upland game birds, waterfowl, small game, and trapping activity. By working with the Department for access to individual results from big game hunter report cards submitted by tag recipients each year, hunter days could probably be identified for specific areas rather than hunt units. The Department enjoys a very high response rate on the report cards because hunters must pay \$50 to apply for a tag the following year if they do not turn in their report card. The discussion of the seasonality of rural tourism does not acknowledge that big game hunting seasons in White Pine County span a period from early August through December. This discussion also omits revenue generating activity related to wildlife in the Spring and Snake Valley areas including hunting guide revenue, taxidermy business, and land owner tags. Historical data would probably show the revenue lost from land owner tags when SNWA purchased the ranches in Spring Valley because they are not eligible for the tags. Both the Forest Service and BLM maintain records and professional estimates of recreation visitor days and the State Parks Division has information on visitorship at its parks by county of origin. Both the NDOW and State Parks data show that the vast majority of recreation use of White Pine County facilities comes from Clark County visitors.	Text has been added to Section 3.18.1.3 noting the seasonal importance of big game hunting, outfitting/guiding, and related activity to the rural areas. With respect to the other information, Section 3.18.2.1 addresses the effects associated with construction and operation of the main pipeline and facilities; the actions tied to decisions to be made by the BLM on this EIS. Characteristic of linear utility infrastructure, most of those effects would be temporary, such that the discussion of tourism and outdoor recreation in the region provides adequate support the assessment of related socio-economic impacts. The other information may be more germane to an assessment of the potential implications of long-term effects of drawdown. Such effects are addressed programatically in this EIS, and would be subject to further analysis in subsequent, tiered NEPA analysis to be done in conjunction with future facilities. See Standard Resource Responses Gen-2 and Gen-8, as well as Section 2.5 of the Executive Summary and Section 2.1.2 of the main document for additional information on tiering. The BLM will consider this suggestion when supplemental NEPA is undertaken.

Comments and Responses - Non-governmental Organizations

ID	Comment	Response
35361-234	The discussion in Section 3.18 does not include lodging tax data or attendance at special events from the Tourism and Recreation Board. Although it requires some assumptions including average room occupancy and average room rates, the lodging tax revenue can be used to determine the number of visitors per month. The discussion does not include business travel. According to the White Pine County Tourism Master Plan completed by Tom Harris at University of Nevada-Reno, business travel accounts for a substantial portion (35 to 45 percent) of the room rentals in the County and it is year round rather than seasonal.	Thank you for your information regarding lodging data and special event attendance. The primary purpose of the description of temporary lodging was to address the capacity and location of capacity to support construction activities and to identify the potential need for temporary construction worker housing. The potential competition with other market segments represent by project-related needs is noted in Section 3.18.1.5. That text has been revised to note the seasonality of some demands, including summer tourism and hunting.
35361-235	Spring and Snake Valleys play a vital role in the White Pine County's tourism and outdoor recreation and with minimal effort, many of their contributions could be quantified. This was done for Spring Valley in the report of socioeconomic activity submitted for the State Engineer's hearings in 2006 and it could be updated and expanded to improve the DEIS . Without the additional information, the economic benefit of tourism in the rural areas is understated in comparison to the wealth of information available on Clark County tourism.	Section 3.18.2.1 addresses the effects associated with construction and operation of the main pipeline and facilities; the actions tied to decisions to be made by the BLM on this EIS. Charactersitic of linear utility infrastructure, most of those effects would be temporary and the level of detail regarding current conditions is adequate to support the assessment of such impact. Contrary to the impression presented in the comment, most of the discussion in the cited section does not focus on Clark County, but rather discusses such activity in the rural areas. Nonetheless, the introductory paragraph in the section on tourism and recreation has been revised to recognize the importance of such activity throughout the region.
35361-236	Page 3.18.19 Personal Income and Poverty: "The consistently lower incomes in the rural counties manifest themselves in a higher incidence of poverty and low income as measured by individual or family income relative to a defined threshold." This blanket statement about the variations in personal income and poverty levels from urban to rural areas appears to try to offer one explanation for the unique economic conditions in the various rural areas included in the study area. In fact, White Pine and Lincoln County have very different economic conditions and population characteristics that determine personal income levels. White Pine County's average weekly wage has historically been 80 to 85 percent of the statewide average and at the same time, the percentage of households living at or below the poverty level has been equal to or slightly below the state and national average. Income data from the Census includes the prison population and the impact of the low income status of inmates can be derived from isolating institutionalized populations (which also includes the residents of the White Pine Care Center) and comparing household to family data. Even with the prison population included in poverty level data, White Pine County (10.8 percent) is relatively close to Clark County (11.0 percent) and below the state and national averages while Lincoln County is much higher at 16.5 percent. White Pine has a relatively small transient population which is usually explained by the colder climate. Some Lincoln County officials (economic development and CDBG contacts) have complained in the past that part of their low income population is migrating from Clark County because of the lower cost of living. White Pine County's income data reflect a larger moderate income population with fewer in the highest and lowest income brackets reported while Lincoln County may reflect a larger incidence of low income households. Page 3.18.34, Discussion on poverty levels in rural areas: Same concerns as the discussion on poverty on page 3.18.19.	Thank you for the additional perspective regarding personal income and poverty in White Pine County. The information provided has been reviewed and a determination made that it doesn't affect the overall assessment of socioeconomic effects associated with proposed GWD project.
35361-237	Pages 3.18.20 and 21, Housing data: The discussion on vacancy rates acknowledges that the vacancy rate in 2000 reflects the recent BHP closure at Robinson mine. This figure needs to be updated to reflect the current tight housing market, lack of rental housing, and housing prices. The statement on Page 3.18.21, "The limited scale of new residential development in White Pine County suggested by the net change in housing units masks population growth as many incoming households were able to find existing, affordably priced housing," needs to be documented and a reference cited since it is inconsistent with the understanding of the County's housing market based on the information from the County Assessor and reports from area employers. Property sales were tracked by the County's economic development program from 2005 through 2010. Based on the County Assessor's records, the single family home market was very active and prices were increasing from 2005 through 2010 and experienced a slight decline in selling price in 2010. In tracking number of housing units, the economic development program staff discussed the Annual Report of Housing Units with the County Assessor and found that the small net increase is misleading. In recent years, some previously reported housing units were taken off of the report because they were substandard and considered uninhabitable. There were actually more new housing starts than the net increase reflects because of the loss of the substandard units. In several public discussions with employers including the annual Comprehensive Economic Development Strategy (CEDS) and the Workforce Housing Assessment completed by Tom Harris, UNR, area employers including the school district, BLM, Ely State Prison and the Robinson mine reported that their recruitment of new employees was hindered by inadequate affordable housing in the area. The problem prompted Quadra to finance extension of infrastructure and a housing development in Ruth to meet the needs for their employees.	Thank you for the additional perspective regarding housing conditions in White Pine County. The information provided has been reviewed and a determination made that it doesn't alter the overall assessment of socioeconomic effects associated with proposed GWD project. However, text has been added noting the lack of affordable housing that could help meet temporary housing demand.
35361-238	Table 3.18.13: Shows a vacancy rate of 15 percent in Clark County in 2010. According to the Las Vegas Housing Market Conditions report from CBER, there were 31,674 vacant units listed for sale in the Greater Las Vegas area during the first quarter of 2011 reflecting an excess supply of 10,203 housing units above the estimated normal vacancy rate for the area. The number new housing starts in the area may reflect real estate speculation.	Please refer to standard resource response SocEcon-2 for further information.

Comments and Responses - Non-governmental Organizations

ID	Comment	Response
35361-239	Page 3.18.21, Temporary Housing: "Project related needs could compete with the traditional uses and markets for those units...and in Ely due to the community's efforts to promote its tourism and convention trade." This is a documented impact of large construction projects including the prison and construction of the mill at Robinson mine. It impacts general tourism and convention trade but is most severe when it impacts special events. The community spends years and thousands of dollars creating special events and building the clientele for them. When participants can not get motel rooms for the events because they are full of construction workers, they tend to stop going to the event. If the impact continues for a period of years, they may not come back at all. The other issue identified with previous large construction projects is that the community does not want construction workers' RV's scattered all over public land near the construction site. This was a significant problem with the construction of the prison with the prime contractor from Utah and workers commuting on a weekly basis. This issue has been identified several times but was not addressed in the discussion. Page 3.18.41, Alternatives A-C: Same concerns with temporary housing as noted for 3.18.21.	Thank you for your comment noting local concern regarding potential competition for temporary housing between project-related demand and other tourism and recreation related demand and the potential implications for tourism. As stated in the EIS, such competition may be seen as having both positive and negative implications for innkeepers, other businesses, as well as public sector revenues. Furthermore, weekend scheduling options for events can reduce conflicts, and local innkeepers have the option to block out rooms for special events should they be inclined to do so. Text has been added to note the potential for camping in unapproved locations during construction and a suggested additional mitigation measure has been added.
35361-240	Page 3.18.22, Section 3.18.6, Public Facilities and Services, Local Government: Third paragraph on water providers omits the McGill Ruth GID. McGill and Ruth are part of the Ely population center and will be impacted. The McGill Ruth GID is also omitted on Table 3.18.15 (page 3.18.23).	The McGill Ruth GID has been added to Table 3.18.15. Text has been added noting the proximity of these communities to Ely, but that impacts would likely be short-term and limited in scope due to the distance and lack of temporary housing and other trade and services in those communities.
35361-241	Page 3.18.23, Table 3.18.16, Public Service Providers: White Pine County entry should note that White Pine County now has full time fire and emergency medical service personnel supplemented by volunteer services. This also needs to be updated in the narrative discussion on Page 3.18.24.	The text has been revised.
35361-242	Page 3.18.26: "Lincoln and White Pine Counties are more dependent on intergovernmental transfers than are the other three counties. The intergovernmental transfers should be identified. Part of the dependence comes from federal PILT and SRS funding due to the high percentage of federal land in the rural counties, part of it comes from the state's system of CTX tax distribution and guaranteed county status to provide a base of sales tax revenue for rural counties, and part of it is from SNWA's PILT agreement on the ranches in Spring Valley.	Thank you for your comment elaborating on the fiscal structures of Lincoln and White Pine counties. Because the cited text was a simple comparative statement, no changes were made for the FEIS.
35361-243	The introductory paragraph references Appendix F 3.18, however, the Appendix offers little additional information or documentation of the summary statements in the narrative.	Your comments on the Draft EIS have been considered. Please refer to standard resource responses SocEcon-2 and SocEcon-3 for information on this issue.
35361-244	The section identifies Baker and Ely as the two communities that may be impacted by the ROW construction. The impacts will be County-wide and the list should include Ruth and McGill as part of the Ely population center as well as Lund and Preston. The entire County will feel impacts on public services and the commercial center in Ely. The White River Valley is an important element in the County's agricultural industry to the extent that the livestock and ranching interests are impacted in the County, the White River area including Lund and Preston will be impacted. The research done for the State Engineer's hearings on Cave Valley showed that White River produces winter feed used by ranchers throughout the County.	Section 3.18.1.7 identifies Baker and Ely as the two White Pine communities most likely to be affected; that assessment being based on their location, relative to anticipated construction activity, and the availability of temporary housing, and commercial trade and services. The other communities are all more distant and offer few temporary housing opportunities. The text has been revised to recognize these other communities and indicate they may host some temporary population during construction.
35361-245	Snake Valley (page 28) Lehman Caves is misspelled.	Thank you for pointing out the error. The spelling has been corrected.
35361-246	Coyote Springs (page 29) there needs to be further description of what Coyote Springs is, its history, the extent of development and population there now, and the anticipated population at full development.	The text has been revised to provide additional information regarding Coyote Springs.
35361-247	Las Vegas Valley: The discussion focuses on the benefit of tax revenues generated in Las Vegas Valley for the state as a whole and links it to the need for other areas of the state to support growth in the Las Vegas area to generate tax revenue. This discussion may be misplaced because it is not consistent with the format and information offered in the discussion of other communities in the study area. The discussion does not relate the revenue generated to the state expenditures in the Las Vegas Valley nor does it include the concerns of Las Vegas Valley residents with the negative impacts of continued growth.	The cited text was included in its current location as it relates in part to some attitudes toward the project in Las Vegas. That perspective is evident in comments received to the DEIS. The text has been revised to more clearly portray the attitudinal element of the topic. In addition, part of the discussion has been moved to 3.18.1.6. The EIS analysis identified the concerns of both urban and rural residents regarding the costs associated with the project and continued loss of rural lifestyle. Moreover, while some Las Vegas residents have expressed concerns regarding the negative impacts of continued growth which the proposed action may enable, other residents believe that the project will provide a measure of assurance that water will be available in the future. See EIS Table 3.18-38.
35361-248	Pages 3.18.30-31: The introductory paragraph for Social Conditions references the Socioeconomic Technical Report of Appendix F 3.18. The Appendix offers little additional documentation of citizen input on the project and does not itemize sources for summary statements in the section.	Your comments on the Draft EIS have been considered. Please refer to standard resource responses SocEcon-2 and SocEcon-3 for information on this issue.
35361-249	Pages 3.18.31, Social Conditions, item 2: The discussion of perceived risks does not include concerns of Las Vegas residents about negative impacts of continued growth. Item 4 discounts the comparison to Owens Valley because of the differences between the two projects but does not explain what those differences are, and Item 6 states that the risk of water shortages and curtailment of growth is unacceptable but does not identify the interest groups.	The cited text has been revised to address the points made in this comment.

Comments and Responses - Non-governmental Organizations

ID	Comment	Response
35361-250	Page 3.18.37, Facility maintenance The fact that a staffing plan for maintenance and operation is not available at this time makes it difficult to determine the economic benefit of Alternatives A through C for rural areas. Local governments may receive some tax benefit from the maintenance and operations activity but without sites identified and a staffing plan in place the benefit cannot be determined. Without an agreement in place, there is no guarantee that local governments will receive tax benefits or that contractors will be required to purchase and hire locally or have deliveries made in the affected counties to provide tax benefits for local governments. The tax benefit is uncertain if SNWA uses its Municipal status and purchasing power to ensure it has minimum operating costs. Local governments will be called upon to meet short term and long term impacts but without agreements in place, it is uncertain whether the tax revenues received will cover the cost of additional services.	Because the ROW and main pipeline system for Alternatives A through C are the same as that for the Proposed Action, it is assumed that the operational staffing levels also would be comparable. The importance of having SNWA implement a policy for contractors to ensure proper geographic attribution of materials and equipment to the appropriate local counties, including materials timing and distribution of tax receipts for local governments, is valid. Suggested mitigation measure SE-11 has been added.
35361-251	Page 3.18.42, Table 3.18.24: Point 5, summarizes the potential benefits of some of the workforce spending money in the area strengthening local business, adding jobs, and pressuring employers for higher wages. White Pine County's experience with large construction workforces that commute home each weekend is that expenditures locally are limited. Workers stock up on groceries, etc. when they are home for the weekend and bring it back with them. In addition, as new mining activity and other construction projects (SWIP North, wind energy projects, and other renewable energy activity) becomes a factor, additional service sector jobs may be difficult to fill and increased housing demand will increase rent and purchase prices.	Table 3.18.24 includes many of the effects noted. Text has been added to include others. The potential for cumulative effects are addressed in Section 3.18.3, but are contingent upon development and operations occurring concurrently. The potentially lengthy development schedule for the project contributes to the uncertainties associated with assessing the potential for such effects.
35361-252	Page 3.18.43, Table 3.18.24 continued: Point 2. Impacts on general government services such as the County Clerk and municipal utilities would be modest. This does not account for the fact that increased law enforcement activity also increases occupancy and services needed in the jail and court activity which in turn impacts the County Clerk because in White Pine County, the Clerk's office provides the Court Clerk services. Point 6, Law enforcement, needs discussion on the impact on county jails, court systems, and court clerks. Points 7 and 8, Emergency Services: Makes the statement that Baker EMT's are not over taxed with current demands. This needs to be verified and documented. The demands on emergency services are understated. Demands can not be evaluated just on the basis of the number of potential calls but must include the costs of being prepared for an emergency at the construction site. A commuting workforce and an increase in oversized load truck shipments will add to the potential for traffic accidents that require emergency services. White Pine County has recently been involved in detailed discussions with Spring Valley Wind and Great Basin Transmission (north) to determine the needs for emergency services during their construction projects. The resulting Development Agreements can help provide an understanding of the needs for emergency services during construction. Similar discussions with county emergency services personnel are required to determine the full level of potential impacts.	Additional text describing the potential short-term effects on the jails, courts and court services, and emergency management planning has been added. SNWA also has committed to develop an Emergency Response plan for construction activities. Presumably, the plan would include ongoing coordination of the type described.
35361-253	Page 3.18.44, Table 3.18.24 Continued Point 2, Tax revenue for local governments. How will vendors be required to establish business licenses and points of delivery within rural counties? Who will ensure that this happens? How is this consistent with the mitigation identified in the Transportation Resources section (3.10) that local deliveries of materials will be minimized to improve highway safety?	The importance of having SNWA implement a policy for contractors to ensure proper geographic attribution of materials and equipment to the appropriate local counties, including materials timing and distribution of tax receipts for local governments, is valid. Suggested mitigation measure SE-11 has been added.
35361-254	ACM 12.2, SNWA's PILT agreement with White Pine County excludes the state portion of property tax and real property transfer tax. The \$10,000 annual payment was an estimate by SNWA and White Pine provided documentation showing that the \$10,000 did not cover the lost revenue. SNWA refused to reconsider the amount. The PILT agreement depends on approval by the SNWA board and is not guaranteed.	See ACM A.12.2 regarding these PILTs. Text has been added in Section 3.18.
35361-255	ACM 12.1, 3, and 4: Clark County prevailing wage rates are generally higher than prevailing wage rates for White Pine County and this would benefit White Pine residents employed on the construction project. The statement could be stronger if it added Clark County prevailing wage rates and zone rates for all portions of the construction project.	Thank you for expressing your concerns related to the Draft EIS. Your suggestions have been carefully considered by the BLM, and a statement regarding the ACMs and prevailing wage rates has been added to 3.18.2..
35361-256	SE-1 should include operation of the jail, court system, and court clerk costs. SE-3 should note that the PILT agreement excludes the state portion of taxes. SE-5 should include a provision that rural counties have input in the socio-economic monitoring report to identify and monitor impacts to local communities.	The text of these measures has been revised to address this and other comments.
35361-257	Page 3.18.58, Table 3.18.34, Alignment Options: Alignment Option 1 parallels the line from North Spring Valley to Gondor Substation. Is SNWA's transmission is going to use Gondor substation? If so, what impact would that have on the available transmission capacity at Gondor and its capacity to help support renewable energy projects in White Pine?	As described in Section 2.5.1.3 and SNWA's Conceptual Plan of Development (Appendix E), SNWA is proposing a tie-in to the Gondor substation to improve reliability. The concern regarding the potential effect on the available capacity at the substation is beyond the scope of this EIS as it would involve a contractual arrangement between two entities that presumably would not impinge on Mount Wheeler Power's existing service commitments.
35361-258	Page 3.18.61, Section 3.18.2.8, Groundwater Development/Pumping: Identification of wells, collector pipelines, power lines, and future facilities to be studied under the tiered process. These are actually Connected Actions that need to be analyzed in the same document as the ROW. The discussion does not include potential impacts for future renewable energy, and recreation development which could occur in White Pine County including Spring and/or Snake Valleys. These projects are not speculation but are documented in applications submitted to the BLM, an application for a zone change for recreational development in Spring Valley, and historical agricultural activity.	The purpose of this EIS is to analyze impacts related to the right-of-way, access roads and ancillary facilities. The proposed pipeline routes, as submitted by the applicant, have been analyzed in this EIS and the impacts associated with the proposed alignment have been presented therein. Impacts related to well locations, pumping, and groundwater drawdown are analyzed on a programmatic level and may be analyzed in further detail in future NEPA. See Standard Resource Responses Gen-1 and Gen-2 for more information on tiering. Text has been added to the discussion noting the concerns regarding impacts to renewable energy, recreation development, and other development.

Comments and Responses - Non-governmental Organizations

ID	Comment	Response
35361-259	Page 3.18.63: "Potential project-related social and economic effects of groundwater drawdown are assessed based on review of projected drawdown areas and range of drawdown for each alternative considering existing land use and economic activities within those areas" The project is based on projected future growth of the Las Vegas Valley including the potential for new commercial, residential, and industrial development that has not yet been proposed. The analysis should include the potential for new commercial, residential, and industrial development within rural areas that may not have been proposed to date. The discussion should provide a chart of the actual local and non-local job generation for each phase of construction. Short Term construction for development will generate 125 jobs for each of the two 3-year phases for Spring Valley, 35 percent anticipated from rural areas and 30 percent by non-locals relocating to the area, approximately 44 jobs for rural residents for each phase and 37 for non-locals relocating during construction. Of the 105 jobs for Snake Valley, 37 jobs for rural residents and 31.5 for non-locals relocating. County and community service providers should be asked to comment on how these figures might impact their ability to deliver services.	The decisions to be made by the BLM based on the ROD for this EIS are for a ROW grant. As noted in Sections 1.1 and 1.6, SNWA is acting within its statutory obligations and responsibilities in the development of its water plan, recognizing the long lead-times and uncertainties associated with securing additional water resources and major capital facility development. Consequently, the specifics of SNWA's projected water demand, the population projections that help drive that demand, and alternative sources of water are outside the scope of this EIS. The potential implications of future water availability from Spring and Snake Valley in limiting the opportunity for major scale new development has been added in Section 3.18.2. Short-term economic effects related to construction of the future facilities would be subject to additional NEPA -- see Standard Resource Responses Gen-1 and Gen-2 regarding tiering. The suggestion for local review and comment on those estimates is noted.
35361-260	Page 3.18.65, Table 3.18.37: Point 2, Demand on general government services, modest: This does not acknowledge that increased demand on law enforcement will also impact the Court system, District Attorney's office, and County Clerk's Office. Point 7, Competing demands on the local business community would create conflicts: Based on the employment figures on page 62, the additional impacts would result in 30 to 32 non-local workers relocating to the area for the construction. This statement should be reviewed with Baker area business owners to determine how the added workforce might impact them and their customers.	Text noting short-term increases on court system has been added Section 3.18.2. Short-term economic effects related to construction of the future facilities in the Snake Valley would be subject to additional NEPA -- see Standard Resource Responses Gen-1 and Gen-2 regarding tiering. Although such effects are likely to be perceived as beneficial, the suggestion for local review and comment on those estimates with local business owners is noted.
35361-261	Page 3.18.66 Table 3.18.37 continued: Point 1, impacts on law enforcement and emergency services is likely to be modest—one large incident could create a hardship for the law enforcement and emergency services personnel, equipment, and budgets. Part of the impact on law enforcement and emergency services is the need to be prepared for a major incident. Point 2, How will construction agreements be developed with contractors to ensure that maximum tax benefits go to the state and to the local governments within the project area? Point 5, Should be Snake Valley, not Snake River Valley	SNWA would prepare a construction traffic management and emergency response plans prior to project initiation (ACMs A.1.1 and A.1.5) and proposed mitigation ROW-T-1 and SE-1 and SE-2 also address these issues. A new proposed mitigation measure, SE-7 (renumbered), addressing sale tax agreements, has been added.
35361-262	3.18.67, Introduction to Groundwater Pumping effects: The statement shows that the impacts will be long term, even after pumping ceases and at large distance from the pumping areas, that they are not reversible and that they cannot be predicted. If the impacts could be severe with no means to correct them, the statement is in conflict with SNWA's continued reassurance that if negative impacts are observed in one area, they will stop pumping and shift to another well to minimize impacts.	Updated section 3.3 (water resources) discusses the potential impacts from groundwater pumping. Please also review standard resource responses MM-1 and MM-2.
35361-263	Table 3.18.37: Point 1: Disincentives for future economic development in some rural areas, including development on public lands identified for potential disposal in the Ely RMP: This statement should read curtailment of future economic development potential including renewable energy projects that require water resources, recreational development, and value added agricultural development in Spring and Snake Valleys. The public land identified for disposal in the Ely RMP is supplemented by the 45,000 acres of land for disposal identified in the White Pine Conservation, Recreation, and Development Act of 2006, The 45,000 acres exceeds the total for disposal in the Ely RMP and will require an amendment to the RMP. The additional land has not yet been identified and could include land in Spring and Snake Valleys. Point 4: Effects on air quality, the level of impact should be quantified and not subjectively labeled as Minor.	Thank you for your suggestions. The cited sentence has been revised. The underlying concern of the next comment relates to the allocation of water resources in the state (see Standard Resource Response Gen-8). As noted in the Executive Summary (paragraph 2.7 and 2.8), Section 1.4 and elsewhere in the EIS, the responsibility for administering water in Nevada rests with the Nevada State Engineer, and consideration of public interest is one of the factors to be considered in the water rights appropriation. Given the state's authority in this matter, the subject is beyond the scope of the EIS and does not require further agency response. In addition, to the extent that lands to be transferred under the WPCCRDA lie outside Spring and Snake Valleys, local officials can participate in future hearings before the NSE seeking water rights for local economic development from the appropriate hydrographic basins.
35361-264	Page 3.18.68: 1. Negative impacts to the majority of agricultural land in Spring and Snake Valleys will have a significant negative impact on the economic contributions of agriculture in White Pine County. The socioeconomic report done for the State Engineer's hearings on Spring Valley in 2006 showed that Spring Valley accounts for approximately 25 percent of the County's economic output from agriculture. 2. The potential for negative impacts on BLM land for disposal could be more than the 4,918 acres identified in the RMP, it could include additional acres as identified in the 2006 White Pine County Conservation, Recreation, and Development Act. 3. The current transfer fee is based on \$6 per acre foot. In the past, there have been attempts through the State Legislature to increase the fee. The statement should reflect the potential for a change in the fee based on actions of the State legislature. 4. The 8,000 afy of water from the Spring Valley Ranches will require action by the State Engineer before it can be used for the Groundwater Development Project.	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. The comment regarding the interbasin transfer fee is incorrect: the current fee is \$10 per acre foot - NRS 533.438.
35361-265	Page 3.18.69 (Table 3.18.38 continued): 1. Transfer fees are based on the water pumped from the basin for inter-county, inter-basin transfers and without being able to predict pumping schedules, local governments can not count on the revenue for on-going expenses. 2. The potential revenue losses based on curtailment of agricultural activity and reduced property values would potentially exceed any increased revenue due to project activity. 3. White Pine County's current agreement with SNWA for the PILT payments includes any future purchases of private property. This is not a guarantee and requires approval from the SNWA Board putting White Pine County at risk. 4. Long term impacts of subsidence on economic development could also include damage to private facilities, increased insurance costs, and could cause lack of development due to concerns about structural integrity. 5. Potential for and impacts of major accidents or structural failures of the pipeline or transmission system and required actions to minimize the potential needs to be discussed in more detail than bullet point in Table 3.18.38.	Thank you for the comment regarding interbasin transfer fees. Local governments would have knowledge of the onset of pumping based on the development of the future facilities and future NEPA analysis. As stated in the EIS, the uses of such revenues is defined by state statute. The comment regarding potential losses is valid. However, the magnitude and timing of net change is unclear. ACM 1.22.2 addresses the issue of PILT payments. A statement regarding potential long-term risks associated with subsidence has been added. SNWA would prepare emergency response plans prior to initiating project construction.

Comments and Responses - Non-governmental Organizations

ID	Comment	Response
35361-266	<p>Pages 3.18.70-71, Discussion of indirect effects: The project would result in loss of future development potential and population gains in Spring and Snake Valleys and White Pine County as well as declines in current population and economic activity. The groundwater pumping is not anticipated in Spring and Snake Valleys until mid-century. This is too far in the future to adequately analyze the direct, indirect, and cumulative impacts of the project. The proposed project development and implementation in northern Spring and Snake Valleys is not “ripe for analysis.” If this analysis is to follow with the future tiered EIS process for well development in Spring and Snake Valley, it is too late. It would be not be feasible or wise to construct the pipeline and transmission system for Spring and Snake Valleys and then not develop the wells to use it.</p>	<p>Please review standard resource response SocEcon-5 for information on this topic.</p>
35361-267	<p>Page 3.18.72: If the water is used to replace the Colorado River water used by Las Vegas Valley, then it would not support growth and the arguments about additional tax revenues for support of the state would not be valid. Additionally, the review of southern Nevada’s planning documents shows that the assumptions for the need for additional water to support growth and avoid slowing the pace of growth are based on a variety of conditions nationally and globally for over decades in the future. At the same time, the City of Las Vegas, using the Clark County REMI population forecast for 2008-2050 and Census data projected that population growth in Clark County would slow considerably and predicted, “a return to more realistic, consistent rates of growth than that which occurred in the 1990’s and continued through 2007.” There needs to be an independent and comprehensive review of population data and projections for Las Vegas and the Southwest before to fully understand potential growth and water needs.</p>	<p>Thank you for your comment regarding underlying challenges in developed long-term economic and demographic projections, and the potential for unforeseen events to result in actual changes that vary from those projections. As noted in Sections 1.1 and 1.6, SNWA is acting within its statutory obligations and responsibilities in the development of its water plan, recognizing the long lead-times and uncertainties associated with securing additional water resources and major capital facility development. Consequently, the specifics of SNWA’s projected water demand, the population projections that help drive that demand, and alternative sources of water are outside the scope of this EIS.</p>
35361-268	<p>Page 3.18.73: Key findings of LUTAQ modeling include increased growth, development, and transportation as they are currently occurring in the Las Vegas Valley will result in increased traffic congestion, air pollution, and deterioration of air quality. There is information available about the negative impacts of continued growth and development in the Las Vegas Valley that should be included in the analysis of the proposed project.</p>	<p>Thank you for your comment. The findings of the LUTAQ cited represents foreseeable changes in the Las Vegas Valley. Those changes also represent a framework for community planning to address potential negative consequences. Furthermore, not all individuals would see all consequences of growth and development as negative. 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>
35361-269	<p>Page 3.18.72-75: Review of Clark and Lincoln County planning documents and codes: White Pine County’s planning documents should be included. The White Pine County Water Resource Plan (2006), Land Use Plan (2008), and Public Land Use Policy (2008) have all been adopted by the Regional Planning Commission and White Pine County Commission and included as components of the County’s Comprehensive Master Plan by resolution. They all include long term planning direction, predictions, and guidelines. White Pine County’s annual CEDS document contains a detailed analysis of socio-economic changes during the past year, development activity, and an in-depth review of needs and priorities. The full document is done every 5 years (2006, most recent) and provides a full overview of the County’s economic history, current situation, and potential for the future. There is no reference to the County’s planning documents or CEDS documents in the Socioeconomics section.</p>	<p>Thank you for your comment. The BLM has reviewed the White Pine County planning documents and included additional material in Section 3.18.</p>
35361-270	<p>Page 3.18.76: Foreseeable economic impacts should include the recognition that impacts began when the applications were filed in 1989 Mitigation Measures: Who will monitor and ensure that the mitigation measures are implemented? Rural local governments need an equal “seat at the table” to ensure that rural needs are adequately addressed. The CEQ requires that the NEPA analysis addresses the probability and effectiveness of proposed mitigation strategies.</p>	<p>See Standard Resource Responses MM-1 and MM-2.</p>

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ID	Comment	Response
35361-271	<p>Page 3.18.77, Residual effects: Residual effects are assumed for 200 years of pumping and beyond. How can the DEIS begin to predict the residual effects? How can the conditions and needs be identified given the changes in technology, policy, and global conditions for that period of time? There is no mention of unavailable or incomplete data that prevents complete analysis of the residual effects at this time. Under the discussion of the tiered process (Chapter 1) it implies that the effects of groundwater pumping will be considered through the Tier 1 EIS and that the subsequent EIS processes will be directed at the location of the wells and connector pipelines and power lines. At the same time the discussion says that new information will be considered and analyzed during subsequent EIS processes. Does this include the long term impacts of groundwater pumping? The CEQ says that NEPA analysis can not be done on a piecemeal basis. The Tier 1 DEIS should be held to a standard of full analysis of the long term, residual effects of the groundwater pumping. Point 3: The statement that residual social and economic changes in Lincoln County and the Las Vegas Valley could arise in conjunction with growth enabled but not caused by the water conveyed via the pipeline is “splitting hairs”. It still needs to be analyzed.</p>	<p>Please see standard resource responses Gen-1 and Gen-2 for a discussion of tiering and the programmatic level NEPA process. The purpose of this EIS is to fully assess the impacts related to the right-of-way, access roads and ancillary facilities. The proposed pipeline routes, as submitted by the applicant, have been analyzed in this EIS and the impacts associated with the proposed alignment have been presented therein. Potential impacts related to well locations, pumping, and groundwater drawdown are analyzed on a programmatic level based on available information and necessary assumptions. Site specific effects related to well locations, numbers of wells, and impacts of groundwater pumping would be analyzed in further detail in future NEPA. 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>
35361-272	<p>Pages 3.18.88-92, Alternative D: The discussion on Alternative D includes the same concerns on data and methodology as listed above. The proposal for Alternative D would be consistent with the SNPLMA and LCCRDA requirements to issue the ROW in Clark and Lincoln Counties. If selected, there would still need to be monitoring and mitigation of impacts in White Pine County due to the drawdown in south Spring Valley.</p>	<p>Please review Section 3.20 which has been revised. Please also see standard resource responses MM-1 and MM-2.</p>
35361-273	<p>Page 3.18.97, Table 3.18.49, comparison of alternatives, Socioeconomic Long Term adverse effects in the rural area: “Yes and Potentially Significant” does not seem to be consistent with the socio-economic statements on Table 4.0-1. The statements on 4.0-1 are limited to the increased costs for irrigation. Page 3.18.98, No Action: The introductory paragraph implies that BLM cannot select the No Action Alternative because of Congressional Action. If so, the additional discussion that denial of the ROW could result in a second ROW application from SNWA and starting over seems to be speculation. Page 3.18.100: The quote regarding power projects is not reported accurately. The discussion was about two coal fired power projects, not several and the reasons they were put on hold did not include slowed demand due to the recession. The long term development potential for White Pine may include the closure of the Robinson mine based on the published mine life, but it should also show the expansion of Bald Mountain Mine, and other mining and renewable energy projects that have applications in varying stages of consideration by the BLM. Page 3.18.101: The discussion that with the No Action alternative, SNWA would have to look at other alternatives for water resources to allow the Las Vegas Valley to grow is inconsistent with the previous discussions that the water made available from the project might enable growth but not cause it so there is no need to analyze the Impacts of the growth. Long term economic development is based on current economic activity in all of the study areas even though the time frame is identified for over 200 years and is beyond the definition of reasonably foreseeable. Economic development activity in White Pine County is limited to mining, outdoor recreation, and agriculture and excludes renewable energy projects and other potential industrial activity.</p>	<p>Revisions have been made in 3.18.2.7 No Action and in Section 4 to address these comments.</p>
35361-274	<p>Page 3.18.103-104, Cumulative Impacts: Page 104, two major US Highways, need to add State Route 318 which would have some increase in traffic. The statement that unemployment rates in rural areas have been higher than those in Clark County is no longer true. During the recession, unemployment in White Pine County has been much lower than the unemployment rate in Clark County.</p>	<p>The text has been revised. Please see Appendix A for a full disclosure of SNWA's activities and plans on developing water resources for the benefit of southern Nevada, as defined by their Nevada state chartered mission and goals. Please see chapter 2 for a discussion of options, should this ROW not be approved.</p>
35361-275	<p>Page 3.18.108: The document acknowledges that the long term time frames for the project exceed a time period of effective cumulative analysis. The cumulative analysis is limited to Spring and Snake Valley. If the entire County will be impacted, the cumulative analysis should include projects in the entire County. There is no mention of the BARCAS study conclusions that it is likely larger amounts of water flow eastward from Steptoe to Spring and Snake Valleys than previously thought. With that finding in mind, the cumulative analysis should be extended to Steptoe Valley as well.</p>	<p>The cumulative assessment is based on the actions and activities described in Section 2.9. The list of actions has been revised for the FEIS, and the assessment updated.</p>

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ID	Comment	Response
35361-276	<p>The Socio-Economic and Environmental Justice Section, 3.18, makes statements and draws conclusions that are not quantified, thresholds for making statements are not identified, and statements are not documented as to the information, source, and reasons for the conclusions.</p>	<p>Socioeconomic assessment includes a variety of topics including economic conditions such as economic activity, employment and income, population conditions and demographics, housing conditions, community infrastructure and service conditions, fiscal conditions and social conditions, which are shaped by the foregoing categories as well as by social organization and structure, and by attitudes and opinions as they are held by specific populations and groups. The socioeconomic assessment relies on quantitative data for many elements of the assessment, such as employment, income, population and demographics, housing and fiscal data. There are external sources for these data and they are appropriately referenced in the DEIS. As discussed in Section 3.18.1.1 of the DEIS, the socioeconomic assessment covers 5 counties in 2 states and numerous communities ranging in size from hundreds to millions of residents. The setting for these communities ranges from metropolitan to very rural and somewhat isolated. The history of the GDP and its antecedents stretches over decades. The public record of comments on and attitudes and opinions about the GDP and its antecedents in formal procedures, informal forums and in the press is voluminous. As the socioeconomic assessment progresses from the presentation and analysis of published data, the assessment team integrates and summarizes information from a variety of sources and relies on local experience, experience from other areas and professional judgment to draw conclusions from the data. The summaries of these data do not in all cases lend themselves to specific documentation, but they are drawn from all of the foregoing sources. This method of integration and summarization of data based on professional judgment is common for socioeconomic assessment. It should be noted that a relatively small number of statements and conclusions in the socioeconomic and environmental justice section have been questioned in comments to the DEIS and those that have been questioned have received responses or the text has been changed to provide more clarity.</p>
35361-277	<p>Page 3.18.1, Introduction: “ A number of hydrographic basins included in the groundwater model extend outside these five counties; small portions of these basins, such as western Beaver County are at risk for long-term drawdown. However, those areas are excluded from the socioeconomic study area due to their remoteness, sparse population, and limited areal extent of the affected areas, which together limit the potential for appreciable socioeconomic impacts.” If the basins are included in the groundwater model and may be impacted by the groundwater pumping and drawdown, what are the thresholds used to determine that there was no need to include them in the socioeconomic analysis?</p>	<p>The definition of the groundwater modeling domain reflected many factors, including the groundwater flow systems (see Section 3.3.1.2) Areas for assessment of potential socioeconomic effects were identified on professional judgement based on the proposed areas of groundwater production, the communities likely to be affected by housing demand, demands on public services, commuting associated with the construction workforces, and the residential population living in an area. Highway transportation access was also considered.</p>
35361-278	<p>Page 3.18.8, Section 3.18. 1.2, Population and Demographics: Projected Long-Term Population Growth in the Study Area: “The projections for the two rural Nevada counties, which portray little or no growth, are viewed with skepticism locally, particularly in Lincoln County where public land sales have created an expectation of long-term growth. The statement needs to cite the resource, who reported skepticism in White Pine and Lincoln counties?</p>	<p>The cited statement reflects a characterization by the authors based on conversations with Ms. Rajala and Commissioner Perea; reviews of planning documents, and printed media. Similar sentiments were expressed in public scoping and public comments on the DEIS.</p>
35361-279	<p>Page 3.18.10, Section 3.18.1.2, Population and Demographics: Projections in Lincoln County do not include allowances for any substantial level of future development in Coyote Springs or Toquop—“Lincoln County estimates that these developments could ultimately increase local population by 250,000 (Lincoln County, no date). If this statement is going to be included, it needs further explanation. Is this a reputable source? What other Lincoln County document support it? Why doesn't the State Demographer include the potential for the projects in the state population projections? Both projects fit the definition identified for cumulative impacts. If the two projects could result in substantial population growth, they need to be included in the analysis of impacts and cumulative impacts. There is a brief paragraph on general potential impacts if construction on Coyote Springs moves forward but no mention of potential construction of Toquop in the Cumulative Impacts portion of 3.18.</p>	<p>The estimates cited reflect documents obtained from Lincoln County. Questions regarding a decision by the State Demographer to include or exclude future projects from long-term economic or demographic projects should be directed to the Demographer. The criteria for including projects in the cumulative scenario are addressed in Section 2.9 -- with "evidence of continued development activity" being the primary differentiation between the two projects listed.</p>
35361-280	<p>Page 3.18.12, Section 3.18.3, Economic Overview: “An adjunct of the relatively small size of the rural economies is a lesser degree of diversity, which makes them more susceptible to economic distress and less resilient to adverse changes affecting one or more elements of their economic base. The lack of economic diversification and associated recognition of the limited options for expansion facing the rural counties raised concerns regarding fiscal distress from potential future cutbacks or the loss of existing employers such as the Nevada Test Site and Robinson Mine.” This statement needs to be supported with historical data regarding the economic resiliency of both urban and rural areas in the study. The statements regarding the potential closure of the Robinson Mine need to be documented. The projected mine life has been published several times and it would not be difficult to include a specific time frame for potential closure and reference for this statement. The discussion should also include current expansion and development of new mining projects which may offset the loss of the Robinson mine if and when that happened.</p>	<p>The statements cited are not a direct quote, but represent the characterization by the authors based on extensive experience and personal observations in rural western states including Nevada. In fact, such concerns are evident in the comments submitted by the same commenter in other parts of their submission. The closure of the Robinson mine, given current prices and reserves, could coincide with the timing of construction of the main pipeline and ancillary facilities in White Pine County. A statement to that affect has been included in the FEIS. Note that the 2010 White Pine Community Assessment references community concern regarding close of the Robinson Mine and community reliance on the mine for its economic base. Concern for loss of net proceeds was also mentioned.</p>
35361-281	<p>Page 3.18.16, Section 3.18.3, Economic Overview: (Sales of ranches to other development interests including SNWA) “Such sales raise economic and social concerns within the local communities including the effects of potential exportation of appropriated water rights,...” How was this determined? The concerns about the purchase of ranches by both SNWA and NV Energy have been reported locally several times. This statement should be documented and the specific concerns identified.</p>	<p>Such concerns have been among the common themes in public scoping, local media reporting on the project, discussions with local residents and officials, and public comments on the DEIS. The concerns related to exportation are those associated with the potential long-term effects of drawdown, e.g., risks to existing agriculture, constrained economic opportunities, and risks to quality of life.</p>

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ID	Comment	Response
35361-282	Page 3.18.18, Section 3.18.3, Economic Overview (Discussion on Tourism): “As noted above a sense of tenuousness exists across the rural counties regarding their economic future..” This statement needs to be quantified and documented. If this is taken from one or more interviews with residents of the area, the interviews should be cited.	The statement is inherently qualitative and not subject to quantification. At the same time, the statement as written didn't accurantly convey the intent of the author, so it has been revised. The basis for the statement is a distillation of perspectives gained by the authors from a variety of sources -- see the intro paragraph to Section 3.18.1.7.
35361-283	Page 3.18.29, Section 3.18.7, Social Organization and Conditions: (Discussion on Las Vegas Valley) “as goes [Clark County/Las Vegas/the Valley] so goes Nevada.” Although reaction to this perspective ranges from disdain to pride, informed observers describe it as a fundamental recognition of Nevada’s economic and fiscal realities.” This statement needs to be documented. Who are the informed observers and how has the reaction from disdain to pride be identified?	The statement represents the characterization by the authors, rather than direct quotes attributable to specific individuals. The statement has been revised.
35361-284	Page 3.18.31 and 32, Section 3.18.7, Social Organization and Conditions, Item 2: (Attitudes and opinions in rural areas and in the Las Vegas Valley regarding perceived risks of the project and perceived risks of inadequate water supplies in Las Vegas) the discussion in Section 3.18 references Appendix F. The discussion is a general narrative about perceived risks and concerns. The discussion in Appendix F notes that the study reviewed a number of sources including the State Engineer’s hearing records, the scoping meetings, public meeting records, newspaper articles, and interviews. Appendix F notes that “There has been no widespread public referendum on the proposed water development project in general or any proposed public funding for the project. Such a referendum promotes public dialogue about a project, identifies issues, interest groups, and stakeholders supporting and opposing a project, and produces a result that can be viewed as an affirmation or denial of a project. Given the lack of such a referendum, the only indication of attitudes and opinions about the proposed project among the general Las Vegas Valley population is limited to newspaper polls, the most recent of which indicates that slightly over half of the Clark County population supports the proposed project. The SNWA board of directors, which represents local government and water purveyors, also reaffirmed its support for the project in 2009.” (Appendix F, 3.18.53.) The newspaper poll does not seem to be cited in the references for Appendix F. A review of the public comment at the Spring Valley hearings would show that most of the public comment made from Las Vegas in support of the project was from public officials and the real estate development and construction industries. If it is important to include social attitudes in the discussion in Section 3.18, to be accurate, there should be an independent study of community attitude about the project to support the conclusions.	The statements cited are not a direct quote, but represent the characterization by the authors based on extensive experience and personal observations in rural western states including Nevada. In fact, such concerns are evident in the comments submitted by the same commenter in other parts of their submission. The closure of the Robinson mine, given current prices and reserves, could coincide with the timing of construction of the main pipeline and ancillary facilities in White Pine County. A statement to that affect has been included in the FEIS. Note that the 2010 White Pine Community Assessment references community concern regarding close of the Robinson Mine and community reliance on the mine for its economic base. Concern for loss of net proceeds was also mentioned.
35361-285	Page 3.18.43, Table 3.18.24: “The Baker community responds to emergency services needs associated with tourists, park visitors, and other highway travelers but such needs currently do not overtax capabilities.” This needs to be documented. Who determined this?	Thank you for your comment. The general statement is based on a discussion involving a number of Baker area residents. The statement has been revised to more closely address the concern raised in the comment.
35361-286	Page 3.18.69, Table 3.18.38: last three items regarding community attitudes in Lincoln County and Las Vegas Valley, need to be documented somewhere in the document.	Thank you for your comment. The statement reflects the conclusion of the authors drawn from public scoping comments, numerous media articles regarding the project, reports prepared by other parties, and public comments to the DEIS. Furthermore, it is noted that comment seeks additional information regarding the basis for the conclusion, that neither this comment or any other received on this section of the EIS challenges the conclusion.
35361-287	Page 3.18.82: “The effects on population, employment, labor force, and economic structure would result in many corollary effects on social organization and conditions in the affect communities. In the rural communities these would include continuation and potential elevation of existing project related attitudes, opinions, and associated social effects including political conflict, social dissension, community discord, and personal distress.” The statements regarding community attitude need to be documented either in Section 3.18 or Appendix F. How has this been determined?	Thank you for your comment. The statement reflects the conclusion of the authors drawn from public scoping comments, numerous media articles regarding the project, reports prepared by other parties, and public comments to the DEIS. Furthermore, it is noted that comment seeks additional information regarding the basis for the conclusion, that neither this comment or any other received on this section of the EIS challenges the conclusion.
35361-288	Page 3.18.90: “Not all residents of the rural areas oppose the project. For these stakeholders, implementation of Alternative D may generate mixed reactions. On the one hand it could be seen in an unfavorable light in that it provides for substantially less conveyance capacity which potentially could limit intra-county water transfers. At the same time the fact that implementation of Alternative D provides some conveyance capacity for any future intra-county water transfers could be viewed favorable....” This statement is footnoted but the footnote does not pertain to the statements about community attitude. The statement on Page 3.18.90 should specify that it is talking about Lincoln County residents.	Thank you for the clarification. The cited text has been revised.

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ID	Comment	Response
35361-289	<p>White Pine County Infrastructure and Community Capacity Limitations Other impacts to White Pine County have been noted by GBWN associates, specifically pertaining to the county's infrastructure and community capacity. The DEIS discussion of infrastructure available in White Pine County to support the impacts of the proposed Groundwater Development Project is minimal. Section 3.18 and Appendix F regarding Socioeconomic Impacts are focused on potential impacts on law enforcement and emergency services, potential demand for classroom space within the School District, local government revenue from the project, whether the Ely area can provide the utilities and housing for construction crews, and potential impacts on the Baker water and sewer system; the transportation section devotes minimal attention to impacts to County roads; and the Public Health and Safety section is devoted to hazardous materials issues. Specific areas omitted from the Draft are discussions about solid waste disposal during the construction and operation phases of the project and adequate discussion about County roads. The DEIS relies heavily on published data and the references cited shows a lack of effort to collect information from local sources to gain a full understanding of existing conditions and potential impacts. Appendix E, Conceptual Plan of Development defers discussion of construction and operation practices to future planning documents including the Construction Plan, Traffic Management Plan, Dust Control Plan, and Emergency Response Plan (listed in Appendix A of the Conceptual Plan of Development, Page A-2). There is no assurance that the future planning documents will adequately address the concerns with County Roads, Solid Waste Disposal, and the community's capacity to absorb the impacts of the project. Without adequate detail in the Draft EIS and Conceptual Plan of Development (Appendix E), it is not possible to determine if the existing conditions and project impact have been adequately analyzed. A review of the availability of County infrastructure supports the overall conclusions of the socioeconomic review that the Draft and appendix material do not meet the requirement to "Take a Hard Look" at the existing conditions and potential impacts and that there is so much incomplete and unavailable information that the project in its entirety cannot be fully analyzed in a single EIS document and is not Ripe for Analysis. It should be noted that the review of White Pine County's infrastructure as it might be impacted by the SNWA Groundwater Development Project is based on the existing conditions as of 2011 not the conditions that may exist at the time of construction. Construction, Operation, and Long Term Groundwater Pumping may not occur in White Pine County for several years and there is no way to predict what the conditions may be at the time the project is initiated in White Pine. White Pine County, the City of Ely, and the McGill Ruth GID do not have staff and financial resources needed to monitor and respond to impacts of long term groundwater pumping.</p>	<p>Thank you for your description of current facility conditions, needs, and efforts and plans to address those needs in White Pine County. Language describing the short-term, incremental contribution of project-related demand to the existing demand and needs has been added in Section 3.18.2</p>

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ID	Comment	Response
35361-290	<p>A short review indicates that the impacts of the construction and operation of the GWD would place severe strain on the White Pine County infrastructure: The Baker water and sewer systems have the potential for the most direct impact from the project during construction as well as from long term groundwater pumping. The system is relatively new compared to the other systems in the County and has sufficient capacity to meet the current demands plus increased demand in Baker. The proposed project has already impacted the system's capacity to grow because applications for water rights submitted by the Baker GID water rights applications were junior to the SNWA applications in Snake Valley. The GID has since been gifted senior water rights to secure the water source for the system. The GID has devoted substantial effort to expand the system's service area. This expansion would require additional wells. The primary concerns noted by the GID are: 1) the springs identified as a backup water source are vulnerable if SNWA proceeds with the project in Snake Valley and 2) the GID's well is not deep and is susceptible to the impact of the long term ground water pumping proposed by the project. The Draft EIS acknowledges the potential negative impact on the Baker system due to long term ground water pumping, and the GID would have to hire someone to help monitor and respond to the impacts. The impacts of long term groundwater pumping and the additional costs of monitoring the GID's water supplies could result in increased costs for the system's rate payers. The Ely Municipal Utilities System and McGill-Ruth, GID may see impacts in increased use during construction when motels and RV parks may be filled to capacity. Based on the current systems and their existing use, Ely Municipal Water System and the McGill Ruth GID have the capacity to absorb the additional temporary population during construction. The capacity of existing systems, especially the Ely systems, could be reduced due to system failures and inadequate funding for repairs. A Regional Water and Sewer Preliminary Engineering Report (PER) for Ely, Ruth, and McGill was completed in 2009. The study evaluated the existing water and sewer systems and provides a detailed accounting of the system deficiencies, needed repairs and improvements to meet current standards, and cost estimates. Due to the age of the Ely systems and lack of adequate revenue to implement consistent maintenance, repair, and improvement schedules, the Ely water and sewer systems are out of date and in need of repair. The City has had to rely heavily on grant funding to repair and upgrade small sections of the system each year and it does not have the resources available to make major improvements to the system as a whole. Two of the most critical issues for the Ely system are under-sized water lines and inadequate fire hydrants in portions of the city. The PER (2009) shows that the McGill-Ruth GID systems are in relatively good condition due to an aggressive program of upgrading both water and sewer systems as well as collection, and distribution lines. With the conclusions reached in the BARCAS study, there is reason to believe that Steptoe Valley could be impacted. The residents of the Lund/Preston area testified in the Nevada State Engineer's hearing that they had concerns that White River Valley could be impacted by pumping in Cave Valley. The water supplies for Ely, McGill-Ruth, Cherry Creek, and the Lund-Preston area need to be monitored to determine if there are impacts from long term groundwater pumping. The Draft EIS and the PER were both written during the time the City of Ely was negotiating with the Robinson Mine regarding the dewatering program, loss of Murry Springs as a primary water source for the City, and conversion to wells. Potential impacts to water supply need to be evaluated based on potential impacts to the well system, the dewatering program and its impact on water resources in the vicinity, and the recovery period following completion of the dewatering program. Historically, Ruth's water system relied on the Ward Mountain Springs, there was no back up water source, water supply was limited and subject to fluctuations in the springs, and residents were restricted in water use during the summer. The GID has worked diligently to provide adequate water supplies for Ruth with the construction of a water line from Ely to Ruth to provide a back up water source. In recent years Ely faced water supply issues with Murry Springs and was not able to provide water to Ruth. The GID coordinated with the Robinson mine for assistance with back up water sources. McGill originally drew its water from Duck Creek Basin via a pipeline owned and operated by Kennecott. With the Kennecott closure of the smelter in McGill, the GID converted the water system to wells. McGill has sufficient water supply at this time to meet the needs of the community and the GID is exploring the potential of a pipeline from McGill to Ruth that could provide a back up water for that community. The pipeline could potentially serve residential needs in the area north of Ely. If that pipeline was developed, negative impact from long term groundwater pumping on water supplies in McGill could be detrimental to the GID system as a whole. The Lund and Preston areas currently operate on private wells and septic systems. A negative impact to the water supplies due to long term groundwater pumping could impact the private wells, irrigation, and fire protection resources for the two communities. The community of Cherry Creek relies on a private water system that could be vulnerable if there is a negative impact to the water supply in Steptoe Valley due to long term groundwater pumping. The system is small with relatively few rate payers and the owner is not eligible to apply for federal or state grants and loans to help finance improvements and develop new water sources.</p>	<p>Thank you for your description of current facility conditions, needs, and efforts and plans to address those needs in White Pine County. Language describing the short-term, incremental contribution of project-related demand to the existing demand and needs has been added in Section 3.18.2</p>

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ID	Comment	Response
35361-291	<p>GBWN and particularly the organization's associates in White Pine County are concerned that the DEIS does not address other significant issues that will arise during construction or operation. These concerns include Solid Waste, Communications, Transportation Solid Waste: A review of Chapter 2 and Section 3.18 shows no mention of solid waste disposal during construction or operation. Appendix E, Conceptual Plan of Development, Table 1.2, (Page 1-10) does not include state permits for Class III Landfills for construction waste. The Conceptual Plan of Development indicates that: 1) waste will be properly disposed of off-site in a state approved sanitary landfill, A 1.40, and that construction crews will be provided with portable sanitation units that will be maintained by a private sanitary service, A 1.41. (Page A-9) White Pine County is served by a regional landfill operated by the City of Ely Municipal Utilities System and it has a franchise ordinance in place for garbage collection. The City of Ely has agreed to operate the landfill until it reaches its capacity and then development of a new landfill site and operation of the landfill will be the County's responsibility. Landfill capacity and volume has been a concern for some time and the City has taken several measures including recycling and permitting of a new Class III segment of the landfill to extend capacity. Based on current estimates the existing landfill will approach full capacity and a new site will need to be developed within the time period prior to potential construction in Spring and Snake Valleys. The Draft should address solid waste disposal for the project during both construction and operation. The general ACM's related to waste disposal are vague and do not provide enough information to allow analysis of potential impacts. Does SNWA plan to use the County's regional landfill, permit and operate Class III landfill sites for construction waste adjacent to the construction sites, or will it be collecting and transporting the construction waste out of those areas? What is the anticipated volume of construction and operations solid waste and will it exceed the capacity of the existing regional landfill? If SNWA is going to permit and build new landfill sites for construction waste, there needs to be a plan in place for proper operation and closure of those sites. If SNWA is going to truck the waste out of the area, will the construction waste be transported as backhaul by trucks delivering materials or will there be additional traffic due to garbage trucks that needs to be included in the transportation analysis and plan. Where will the waste be taken and how will the additional construction waste impact the capacity of the eventual landfill site? Portable Sanitation Units: For construction of linear and remote portions of the project relying on portable sanitation units, does SNWA envision using a Las Vegas based sanitation company or a local company close to the construction site? Where will the sanitation company take its trucks to dispose of the waste? If this is going into the local landfill, it will impact the capacity of the landfill. If it is going to be trucked somewhere else or back to Las Vegas, the additional traffic needs to be included in the transportation analysis. Communications: The draft refers to several methods of communications including radio, cell phone, and internet. It should be noted that currently there is minimal cell coverage in portions of Spring and Snake Valleys. Transportation: The only mention in the Draft of use of County Roads in White Pine County is the use of the Cave Valley Road from Ely into Cave Valley and there is discussion about construction of new, unimproved roads access roads. It should be noted that streets in Baker are the responsibility of the County Road Department and increased traffic in Baker will impact the County. Table 4-1, Page 4-10 of the Appendix E indicates that construction may occur in Cave Valley in 2016-2017. The Cave Valley road is gravel through south Steptoe Valley until the intersection with the road to Ward Charcoal Ovens and then it is a dirt road over Bullwhack Summit and through Cave Valley. There has been residential development of 5-acre lots south of Ely in the area served by the northern portion of Cave Valley Road and there are several parceled 5-acre residential lots that could be developed prior to construction activity. With the existing traffic there is significant dust on the gravel portion of the road. If there is increased traffic due to construction vehicles on the road, there needs to be a thorough discussion of dust control. The soil conditions on the unimproved southern portion of the road lead to extremely dusty conditions that reduce visibility during the summer. The road becomes muddy and road conditions deteriorate due to rain any time of the year and especially during the winter and spring. The Draft needs to address road conditions and the fact that increased construction traffic will encounter and create additional problems for the use of the road from November to June. The County has County road specifications and an ordinance requiring a road agreement for maintenance and repair due to use of heavy equipment on County roads. (Title 7, County Code). There is no mention of coordination with County road requirements in the Draft. Appendix E, Table 1.2 does not include any mention of a permit or agreement with the County for use of heavy equipment on County roads. While the construction plan may be limited to the Cave Valley Road, there is potential for increased traffic on County Roads throughout the County for incidental use by construction crews, access to materials and supplies, and use by construction workers. This additional impact is not included in the Draft discussion of transportation. The County maintains over 2,000 miles of streets and roads, its budget is inadequate to provide maintenance to all of the roads in its system, and under the current formula, the tax revenue from motor vehicle fuels tax will not increase. With increasing costs and demands for services in the outlying areas, the County does not have resources to absorb increased demands for maintenance due to the use of County roads during construction. Speed Limits. Title 11 of the County Code addresses speed limits within White Pine County. Appendix E refers to construction vehicles complying with County ordinances for posted speed limits (A 1.29) and establishing a 25 mph speed limit for its vehicles on unposted, unimproved roads within the construction site (A 1.36), both on Page A-7. There are several unposted, unimproved roads throughout the County including County roads, BLM, and Forest Service roads. Title 11 identifies a maximum speed of 50 mph on unimproved roads. The Draft EIS and Conceptual Plan of</p>	<p>The BLM will require SNWA to provide a revised POD prior to the issuance of a Notice to Proceed for construction. The concerns regarding the need to address solid waste disposal and sanitation and road maintenance in the POD will be noted.</p>

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ID	Comment	Response
	<p>Development need to address coordination speed limits and requirements for construction vehicles with County ordinances. Appendix E refers to construction of 12 foot wide unimproved roads and 20 to 26 foot wide improved roads. Emergency response vehicles require adequate width, road surface, and turning radius to get into and out of a construction site for fire and emergency medical services. The Draft, Conceptual Plan of Development, and future planning documents need to address the ability of emergency vehicles to respond safely to emergencies that could occur anywhere within the construction sites and the requirement to coordinate road construction with the County Fire Chief and in compliance with state adopted fire codes.</p>	
35361-292	<p>Emergency Housing/Social Services: White Pine County does not maintain any facilities for housing transient or homeless populations. It provides services through a voucher system to use area motel rooms for emergency housing needs. If the motel rooms are full with construction workers, it will impact the County's ability to address emergency housing needs through its Social Services Department. This concern is compounded by the fact that in the County's experience with previous large construction projects and when mines have been hiring, the County has increased unemployment rates due to the influx of people from other areas seeking jobs. Many do not have the required skills and are not able to secure jobs, but remain in the County placing an increased burden on state and local public services. This indirect impact has not been addressed in the Draft.</p>	<p>Thank you for your comment regarding potential indirect impacts on community facilities and services, including social services, during the pipeline construction period. Language regarding this potential has been added in Section 3.18.2.</p>
35361-293	<p>Land Use/Zoning: Although not specifically infrastructure, it should be noted that nowhere in the Draft EIS or the appendix information is there any mention of the County required permits under the County's zoning ordinance. Under Land Use, Section 3.8, the Draft notes that the White Pine County zoning information was not available electronically (page 3.8-1). Throughout the section it concludes that there are no conflicts between the proposed use and existing zoning regulations. Title 17 of the County Code is devoted to the County Zoning Ordinance. The Code requires a Special Use Permit for construction of public utilities, substations, and transmission lines in the Open Space (O-5) zones, even if the project is on federal land. In addition, with the exception of transmission lines, the Code requires a variance for any structures over 35 feet tall.</p>	<p>A list of all federal, state, and local permits required for the project is provided in Chapter 1, Table 1.5-1. The table has been edited to include the "Special Use Permit" noted for White Pine County.</p>

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ID	Comment	Response
35361-294	<p>General Concerns with Community Resources: The lack of local resources cited in the references indicates that the Draft was compiled with a reliance on published data. The analysis does not include in-depth discussion about the local communities and their abilities to absorb increased demands without substantial increased revenue to offset the costs. The analysis does not include adequate discussion about the capacity of County facilities, financial stability, and administrative capacity to meet current standards and needs and it does not adequately address the County's to accommodate direct and indirect demands of a construction workforce through its public facilities. Public Facilities: White Pine County has operated for decades with minimal budgets that barely cover on-gong operating expenses and leave little for capital improvements. The County has had little capacity to invest in new public facilities and facilities in outlying areas are minimal. Most of White Pine County's public facilities are aging, inadequate for current use, have high costs of maintenance and operation, and are prone to major repair and maintenance needs. The electrical systems are not adequate for modern computer equipment, ADA access is difficult, and the buildings are not arranged for efficient operation. The County Courthouse and Public Safety Building both have security problems due to location and the age and design of the facilities. The U.S. Marshal's report on the Courthouse concludes that the facility presents such a security risk to judges, court and other county personnel, and the public that the County needs to build a new, secure facility for court activity. The jail is housed in the Public Safety Building presents major security risks. The Public Safety Building is inadequate for current operation of the Sheriff's Office and county-wide dispatch services. The Courthouse and Courthouse Annex house majority of County offices and both present significant challenges for efficient operation. The County has initiated a Facilities Master Plan to document these needs but the study has not been completed to date. County facilities in outlying communities have been funded through grants and include fire and ambulance sheds and community centers in Ruth, McGill, and Baker and fire and ambulance facilities in Lund. Equipment: Several County offices have outdated and inadequate computer equipment. The County does not have a parcel based GIS program in place which impacts the efficiency of a number of County functions including building and planning, County Assessor, and emergency services. The County has been able to equip its fire and emergency medical services through grants, tax over-rides, and the establishment of a County Fire District budget to help with local matching requirements for grants and the purchase of used equipment. Financial Stability: In 2005, the State Tax Commission placed White Pine County under the supervision of the Nevada Department of Taxation because it was at risk of insolvency and in a severe financial emergency. After four years of work with Department of Taxation, the County was released from direct supervision by Department of Taxation but must still report to the Tax Commission on its financial status for a five year period. Controls put in place during the severe financial emergency include a Net Proceeds of Mines Mitigation Fund and a policy that Net Proceeds revenue will not be used to support on-going expenses. The current level of Net Proceeds revenue is substantial and reflects the activity in the mining industry in White Pine County. It provides a source of funding for one-time expenses including repairs and maintenance on county facilities, improvements to county facilities, and purchase of equipment. The Net Proceeds Mitigation Fund provides a "rainy day" fund in case the mines close and there is a substantial decline in County revenues. If either of the two policies is modified or eliminated in the future and if there is a mine closure, the County could be in a precarious financial position. Administrative Capacity: The County's capacity to accommodate the construction, operation, and long term groundwater pumping of the proposed project is dependent on its administrative capacity. The County does not have a County Manager. The Chairman and the five member County Commission frequently act as the County Manager for administrative direction. The County is dependent on the knowledge and dedication of its elected and appointed officials, staff, and volunteers to supervise full range of County services. The outlying areas are served by Town Councils and Citizen Advisory Boards. Decision making and support for outlying areas can be a slow process working through Advisory Boards to the County Commission through open public meetings. The County does not have a County Planner, the County Building and Planning Department is currently housed in the Economic Development Program, and functions with a volunteer Planning Commission, allowing minimal staff attention to maintaining up-to-date planning documents, development codes, policies and procedures. The County does not have a Natural Resources Department or Director. The Water Advisory Committee and Public Land Users Advisory Committee are both housed in the Economic Development Department, allowing minimal staff time and attention to natural resource issues. The County and its General Improvement Districts have limited budgets and staff to carry out on-going operations and lack staff and financial resources to track long term impacts of the groundwater pumping. White Pine County's resources for on-going operation are stretched to meet current needs and it has minimal capacity to accommodate the increased demands due to the impacts of the proposed project.</p>	<p>Thank you for your description of current facility conditions, needs, and efforts and plans to address those needs in White Pine County. Language describing the short-term, incremental contribution of project-related demand to the existing demand and needs has been added in Section 3.18.2</p>

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ID	Comment	Response
35361-295	<p>Missing from this section of the DEIS is information on and a hard look at the potential for the GWD project construction and pumping impacts to release particles of dust as small as 2.5 microns which are potentially contaminated by nuclear testing conducted at the Nevada Test Site for decades. The downwind area for nuclear tests extends east to the study area in Nevada and Utah. A non-nuclear bomb blast test, called the Divine Strake, proposed in 2007 by the Bush Administration at the Nevada Test Site, was eventually cancelled in large part due to concerns about the proposed project disturbance and re-mobilization of radioactive dust. The federal government admitted the soils contain radioactivity and that they could become airborne. This unanalyzed impact could affect the health and safety of both construction workers and also of residents who live in areas downwind of construction activities and basins impacted by GWD project pumping drawdowns which would expose soils to wind erosion. Thomas Cahill, professor of Physics and Atmospheric Sciences at the University of California-Davis, is particularly concerned about the impacts of the water drawdown, based on his extensive experience studying the Owens Lake, Mono Lake and similar lakebeds. (See Appendix E: Cahill Memo on Air Quality.) "It is my expert opinion that these potential impacts be fully investigated prior to any decision to withdraw any water from desert valleys, and if, as I suspect, such problems will occur, withdrawals cannot be tolerated without violations of federal air quality statues. Sevier Lake, in particular, causes me concern." The DEIS also fails to disclose impacts on public safety of roads, buildings, and other infrastructure damaged by subsidence caused by GWD project pumping drawdowns, or the costs associated with necessary repair and restoration, and who would be liable for these costs.</p>	<p>Please see Standard Resource Response Air-1 and Air-9. A discussion of subsidence potential is contained in Section 3.2.</p>

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ID	Comment	Response
35361-296	<p>The monitoring, management and mitigation (3M) plans proposed will not protect BLM's public water reserves or the other water rights in the valleys; they will only document their destruction. GBWN strongly believes that in any process involving mitigation and monitoring, local governments with the ability to act independently must have an oversight role. Furthermore, they must have the funding ability to perform that oversight. Putting the SNWA and federal and state agencies, which in the view of the GBWN may have had their independence compromised by political and financial pressures, in an exclusive oversight role is tantamount to not having oversight at all. BLM is using the stipulated agreements it forged with SNWA to protect its water rights in Spring and Cave, Dry Lake and Delamar Valleys as the 3M plans for this EIS. This is inappropriate and unacceptable. BLM has two primary responsibilities in this instance. One is to manage the federal lands under its jurisdiction. Separately, BLM has water rights for some of its activities on the public lands in the above mentioned valleys. By entering into stipulated agreements with SNWA prior to the first State Engineer hearings on Spring Valley and on Cave, Dry Lake and Delamar Valleys, BLM gave up its right to protest SNWA's applications for groundwater in exchange for an agreement with SNWA to monitor in an effort to "protect" those water rights, including public water reserves and other rights and claims. Now, years later, BLM's own DEIS provides much more information, insight, and data on the extent and severity of impacts on the lands BLM is supposed to be preserving for present and future generations. Nonetheless, the real impacts are expected only after widespread pumping has begun and affected the Great Basin. Additionally, mitigation efforts presumably would be designed and implemented after these impacts become apparent. This is fundamentally unacceptable and contrary to federal law. The postponement of gathering essential information for an evaluation of the project's potential adverse impacts thwarts public review and also violates NEPA's fundamental commitment to "prevent or eliminate damage to the environment by focusing government and public attention of the environmental effects of proposed agency action." <i>Marsh v. Oregon Natural Resources Council</i>, 490 U.S. 360, 371 (1989). NEPA requires the federal agency to "consider every significant aspect of the environmental impact of a proposed action" <i>Vermont Yankee Power Corp. v. Natural Resources Defense Council</i>, 435 U.S. 519, 553 (1978), and to ensure "that the agency will inform the public that it has indeed considered environmental concerns in its decision making process." <i>Baltimore Gas and Electric Company v. NRDC</i>, 462 U.S. 87, 97 (1983). NEPA requires that mitigation measures be reviewed in the NEPA process -- not in some future decision shielded from public scrutiny. "[O]mission of a reasonably complete discussion of possible mitigation measures would undermine the 'action-forcing' function of NEPA. Without such a discussion, neither the agency nor other interested groups and individuals can properly evaluate the severity of the adverse effects." <i>Robertson v. Methow Valley Citizens Council</i>, 490 U.S. 332, 353 (1989). Appellate Courts have explicitly struck down EISs that rely on unspecified future actions to mitigate or avoid environmental impacts. <i>Oregon Nat. Resources Council v. Marsh</i>, 52 F.3d 1485 (9th Cir. 1995) (Elk Creek Dam III); <i>Oregon Nat. Resources Council v. Marsh</i>, 832 F.2d 1489, 1493 (9th Cir. 1987) (Elk Creek Dam I), rev'd on other grounds, 490 U.S. 360 (1989); <i>California v. Block</i>, 690 F.2d 753 (9th Cir. 1982). BLM's stipulated agreement with SNWA cannot and must not be used to abrogate BLM's responsibilities as a land manager. These responsibilities include but are not limited to water, air, habitat, wildlife, aquatic life, and recreation. BLM has a commitment to public involvement at the local level but there is little evidence of it in the plans attached to the EIS for monitoring, management and mitigation. The Snake Valley draft includes representation from the States of Nevada and Utah, but no involvement at the local level. We strenuously object to this top down process which excludes local involvement and participation. The 3M process should be open rather than a secret cabal of federal agencies and the applicant, SNWA. At a minimum, the management committee and technical working group should have representation from County government officials and their technical experts from the basins of origin, and should also include representation of other affected parties including local water rights holders and representation from local agriculture. The 3Ms for Spring and Cave Dry Lake and Delamar were forged in secret. By endorsing them as done deals, BLM is endorsing a secret process – a back room deal with SNWA – that did not have the advantage of public involvement or scrutiny. 3M plans for this project must stand the test of time, and be inclusive. If BLM does not require local representation from Counties and other affected parties in the 3M agreements for the EIS process and the Record of Decision, BLM is complicit in imposing a feudalistic structure where decisions that affect local communities are made at a distance by parties not affected by the outcome, to the detriment of local interests. We call on BLM to reopen the 3M process to including public involvement in drafting of the documents and participation in 3M. This is one of the many areas where a new DEIS or a Supplemental EIS with full public involvement will be necessary. Additionally, GBWN is very concerned that the 3M processes described in the DEIS and elsewhere appear to apply only to public lands. Who would protect the water resources used and needed by private property owners? Again, those property owners may not have the financial ability to protest or stop to go to court to stop the destruction of their livelihoods – a fact of which, again, the SNWA is well aware.</p>	<p>The BLM is looking at two separate processes for the development of the monitoring and mitigation plans for this project. Current stipulation agreements (to which the BLM is a signatory) have been developed through the Nevada State Engineer. BLM manages surface and mineral resources for federal lands it administers under FLPMA. The BLM has developed a project-wide monitoring and mitigation plan to protect federal resources that may be impacted by construction, operation, maintenance and abandonment of the project related facilities. This plan is now a component of section 3.20 of the FEIS and outlines the process that the BLM will follow for mitigation for this project now and in the future. Please see standard resource responses MM-1 and MM-2.</p>

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ID	Comment	Response
35361-297	<p>The DEIS includes the stipulated agreements for four of the targeted basins between federal agencies and SNWA in the appendices, apparently for public review in the NEPA process. These agreements are critically flawed, both in the process in which they were negotiated and in the actual content. The process was a secret one, with no public input or review permitted. Besides the public, local counties and residents who depend on the use of public lands and resources and who will directly be impacted by the short and long-term effects of the GWD project were prohibited from participating in negotiations. Local tribes were also excluded, apparently with federal trust responsibilities exercised on their behalf, but with no tribal consultation, input or consent. Although the stipulated agreements could be considered major federal actions significantly affecting the environment, including private lands, because they are among the only measures in the DEIS proposed by BLM to "mitigate" the devastating effects of this groundwater mining project, no NEPA process was initiated. Because it was a secret process, the public does not know what the parameters were or whether they were political or scientific. What is known is that the stipulated agreements were developed before the USGS BARCAS and other studies of the carbonate aquifer flow system were published and before hydrological model used by BLM in the DEIS was developed and used to estimate the widespread and devastating effects of proposed pumping drawdowns on public lands and resources. Even though the two agreements were completed in 2006 and in 2008, the process remains a secret one, with no public notification of what work has been accomplished by the parties, what public funds have been spent, whether baseline information has been collected and its reliability, whether changes have been made in the agreements. The public cannot find out if the Spring Valley stipulated agreement will be extended to SNWA water right applications filed since 2006, including the 11,788.8 afa of surface water applications filed in 2011 to date. in Spring Valley. Other procedural problems in the stipulated agreements include (but are not limited to): 1. The agreements may limit BLM's ability to require and enforce mitigation for GWD project impacts, especially drawdown impacts, to only those explicitly a part of the agreements, and only for the four basins. BLM may not be able to require mitigation for impacts in the other 35 basins in the project study area and for all impacts to private lands and water rights. 2. The agreements may represent a conflict of interest for BLM as a party to the agreements and also the agency conducting the NEPA analysis of the GWD project. 3. Since the DEIS does not provide any information on BLM monitoring of GWD project impacts, especially pumping drawdowns on public lands and resources in the entire study area, nor on any required mitigation for those impacts, we are left with the conclusion that BLM has delegated its monitoring and mitigation obligations to SNWA to monitor changes in the quantity and quality of natural resources on the BLM-administered public lands in the four basins, and also for other public lands affected by the GWD project. If so, BLM has greatly exceeded its authority. 4. The agreements may also limit BLM's ability to protect federal reserved water rights, PWRs, and other federal water rights from GWD project impacts. If so, then BLM has effectively disposed of federal property, without Congressional authority or consent. Other serious concerns with the stipulated agreements include: 1. The agreements set up 3 levels of "committees" to talk and achieve consensus about whether monitoring shows pumping impacts and the severity of impacts, whether SNWA's pumping is causing the impacts, and whether and what mitigation should be done by SNWA. 2. There are no explicit thresholds for what constitutes impacts or "unreasonable" impacts, what "proof" is needed to establish SNWA's pumping is responsible for impacts, nor what mitigation or its timing and duration would be for specific levels of impacts. 3. There are no triggers or thresholds in the Spring Valley stipulated agreement to stop SNWA pumping or otherwise "mitigate" pumping impacts (SNWA has not offered to restrict or stop its pumping to protect public lands and resources in Spring Valley). In the Cave, Delamar and Dry Lake Valley stipulated agreement, there is only a process to develop these critical triggers. 4. There is no time-frame for discussing and coming to consensus by any of the three committees. 5. There is no requirement for SNWA pumping to stop while discussions continue; therefore, public lands and resources will continue to be damaged by SNWA pumping. 6. The NSE has explicitly declared that the NSE is not a party to the stipulated agreements, yet he is designated as the arbitrator of unresolved disagreements on mitigation required. The other alternative mentioned is some unnamed arbitrator to be selected by the parties. 7. There is a caveat that implementation of the stipulated agreement is dependent on sufficient annual budgets by Congress and by the SNWA board of directors. 8. There is no timeframe for how long the agreement is in effect and no mention of its implementation for 200 years or longer while pumping impacts continue to occur. 9. There is no process for evaluating the effectiveness of monitoring or mitigation in the stipulated agreements. 10. There is no process or way to track the implementation of the stipulated agreement annually or for over 200 years. 11. Only the lands and resources of the Great Basin National Park were explicitly protected from GWD project impacts with a "no effects" provision, while the protection of all other public lands and resources was limited to an undefined standard of "unreasonable" impacts. 12. There is no explicit goal to prohibit groundwater mining. 13. Monitoring wells proposed in the stipulated agreements at specific sites may or may not be adequate since the DEIS states that production wells may be located anywhere in the groundwater development areas of the five basins. 14. Proposed "mitigation" measures of augmentation and artificial recharge, both of which require additional water, merely transfer unacceptable pumping impacts from one location to elsewhere in the valleys. 15. The stipulated agreements do not require third party independent collection of data, both baseline and monitoring, nor the assessment and handling of monitoring data. 16. The DEIS makes no commitment that the stipulated agreements will be a part of the Record of Decision or required as conditions of ROW permits. 17. The DEIS does not disclose the costs of</p>	Thank you for your comment. Please see Standard Resource Responses MM-1 and MM-2..

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ID	Comment	Response
	<p>developing and implementing the stipulated agreements, nor who is responsible for these costs. On page 3.3-121 and 122 of the DEIS is the statement: "however, considering the regional scale of the predicted drawdown and number of perennial water sources identified that could be affected, it may not be feasible to effectively mitigate impacts to all the potentially affected water sources." The DEIS fails to disclose how many of impacts to potentially affected water sources would be "feasible" to effectively mitigate. The public cannot make informed comments on decisions on the DEIS when this critical information is missing, nor can policy makers make informed decisions that protect the public and natural resources without that information. The DEIS fails to clearly state what monitoring of GWD project impacts on public lands and resources will be required, who will conduct the monitoring, the costs of monitoring, public disclosure of monitoring results, or how monitoring results will be used. The DEIS fails to clearly state what mitigation of GWD project impacts on public lands and resources will be required, who is responsible for implementing mitigation, the costs of mitigation and who is financially responsible for mitigation, how the effectiveness of mitigation will be determined, and what will be required if mitigation fails. This missing cost information for mitigation is very critical for the public and the BLM to make informed comments and decisions on the DEIS . The DEIS fails to distinguish between required and voluntary monitoring and mitigation and how BLM will even know whether voluntary monitoring and mitigation has been implemented, how mitigation effectiveness has been evaluated, and how failed mitigation is to be corrected. The only potentially effective way to stop pumping drawdown effects is for SNWA pumping to be stopped. However, even stopping pumping won't necessarily stop adverse effects immediately or a very long timeframe may be required to reverse damages. We refer BLM to two research papers which address this problem: Ground Water Capture - The Time to Full Capture Problem, J. Bredehoeft and T. Durbin, 2009, and Aquifer System Response Time and Groundwater Supply Management, William Walton, 2010. To assist the BLM in providing missing critical information on the long-term costs of proposed monitoring and mitigation, we are providing information from the history of LADWP mitigation in Owens Valley by LADWP. Greg James, former Director of the Inyo County, Calif., Water Department estimates that LADWP has spent from \$1.5 billion to \$2 billion since 1980 for environmental mitigation for the impacts of its water export project in the eastern Sierra, including: c. \$1 billion on the Owens Dry Lake dust abatement over the last decade; \$3 million/year for the last 25 years to Inyo County for mitigation; unknown costs of replacing "mitigation" water; unknown costs of restoring Rush Creek, a tributary to Mono Lake and restoring a flow in the Owens Gorge; rewatering the Lower Owens River cost c. \$25 million. 21 In addition, LADWP has lost over one half of its water exports from the Owens Valley since 1980. 22 Owens Valley also provides an example of the difficulties local residents encountered due to the LADWP's reluctance to comply with and implement stipulated agreements on water withdrawals and aquifer management. Officials with the LADWP stated that "litigation is cheaper than water," a position that mirrors the SNWA's past and possibly future positions. 23 It is worth noting that for these water agencies, the cost of litigation is essentially irrelevant, since a vast pool of ratepayers eventually finances their legal work. For the affected communities with far fewer financial resources, such litigation may be impossible, a fact of which the SNWA is undoubtedly aware. In the contentious history of the relationship between Inyo County and the LADWP, it is worth noting that courts issued an order to prevent to groundwater mining in 1991.24 Similar protections are not in place in the SNWA groundwater program, notes Dr. Robert Harrington, director of the Inyo County Water Department. Harrington finds that the hydrologic monitoring and mitigation plans for Spring Valley and for Cave, Delamar, and Dry Lake Valleys fail to provide a process to implement mitigation measures. Specific process necessary for successful managing and mitigating impacts from groundwater pumping are: sufficient technical resources, a clear process for identifying whether mitigation is necessary, quantifiable goals for mitigation measures, dispute resolution and pumping management.25</p>	
35361-298	<p>As discussed throughout this document, the DEIS identifies numerous direct consequences. Among the impacts identified as "irreversible and irretrievable": Fugitive dust impairing air quality, visual impacts at Great Basin National Park, ground subsidence affecting structures in an area of up to 781 square miles, drying up or reductions in stream flows, substantial changes to the compositions of wetlands and wet meadows, loss of cultural resources and Native American spiritual experiences, and other significant impacts. Even if the deficiencies in the DEIS are addressed, the BLM and other federal agencies have a responsibility to protect the public lands targeted for massive groundwater extraction by the SNWA.</p>	<p>Please review chapter 4 which has been revised.</p>

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ID	Comment	Response
35361-299	<p>As documented in this response to the DEIS, the discussion on socioeconomic conditions and impacts is inadequate to allow the BLM or public to make an informed decision. A full and accurate understanding of the social and economic structures and conditions is necessary before all impacts can be assessed. The information needed on agriculture, outdoor recreation, traffic impacts, local government impacts, and potential economic activity is readily available and fits within the definitions of “taking a hard look,” which as previously noted is a requirement for the EIS process. The socioeconomic section should be supplemented with additional information on population projection methodology and limits as well as a comprehensive review of population projections in the Southwest. It should be supplemented with an independent study of public awareness and attitude toward the project in the Las Vegas Valley to fulfill the need for a public referendum. The study requires cost estimates of the full range of previous expenditures as well as construction, operations, financing, and compliance costs of the project and the anticipated cost to individual rate payers before the public in the Las Vegas Valley can respond with an informed opinion on the project. Also, the relationship of the SNWA pipeline project to Coyote Springs development project, and the impacts that the development of 159,000 homes on the Lincoln-Clark County line would have, needs to be fully explained and assessed. Other sections of the DEIS should be reviewed for additional information required to fulfill the requirement for a hard look before a Record of Decision is issued. The DEIS should be reissued with the new information and the public review process should be repeated so that the public has a full review of the study of conditions and impacts and an opportunity to respond to the new document. The DEIS uses the existing framework for NEPA analysis that does not anticipate a project of such size and scope in geographic area, potential impacts, and time frames. The DEIS is inadequate in its statement of Purpose and Need, range of alternatives, lack of adequate project description, the use of the tiering process to avoid addressing unavailable and incomplete information and analysis of Connected Actions, and the fact that the project in its entirety is not ripe for analysis. The DEIS also fails to analyze all indirect effects. By selecting the Proposed Action of any of the scenarios in the DEIS, BLM would fail to prevent undue and unnecessary degradation to public lands from the unanalyzed and unmitigated indirect impacts of the GWD project. The DEIS suggests that SNWA is committed to providing or augmenting water as mitigation for groundwater pumping impacts, but what are the sources of this water? If “mitigation” requires water in targeted and affected basins, SNWA will have to purchase existing water rights or apply for new water rights in specific basins, for specific mitigation purposes. Obtaining water from additional sources in the area already experiencing adverse impacts from SNWA groundwater withdrawals on both ground and surface water sources will exacerbate those problems. When will these environmental impacts on public lands and resources be analyzed in the NEPA process? What monitoring and mitigation would be required? What are the costs of the monitoring and mitigation – and will the affected regions effectively have to pay to watchdog the SNWA? However, the available evidence from independent hydrological, biological and economic analysts shows that there will be “irreversible and irretrievable” negative impacts on a enormous area of Nevada and Utah if the pumping proposal goes forward. In her recent submission to the Nevada State Engineer, Dr. Maureen Kilkenny notes that while the issue of Las Vegas versus rural Nevada and Utah is usually presented as a zero-sum game – one side loses if the other wins – the economic and environmental futures of the two are bound together: “Society has created habitable cities in deserts. But we must not create uninhabitable deserts in an attempt to grow cities. It would be a futile attempt in any case. Groundwater mining is unsustainable and ultimately both the city as well as the rest of the state would lose.”²⁶</p>	<p>Many of these comments are answered in response to where they were brought up first in your comment letter. Please review Standard Resource Responses SocEcon-1 and SocEcon-6. Chapter 1 of the FEIS contains a complete discussion of BLM's mandate under NEPA. A full and complete analysis of tier 1 of the project, including the indirect effects from future actions (i.e. groundwater pumping) is contained in Chapter 3 of the FEIS. See Standard Resource Response Gen-1 for a discussion of programmatic analysis and subsequent tiering under NEPA. The FEIS has been revised to include a compilation of all mitigation associated with the project. This is contained in Section 3.20. Please see standard resource responses MM-1 and MM-2.</p>

Great Old Broads for Wilderness

35738-1	How will climate change affect these areas in time much less with the depletion of this critical aquifer.	Please see common response Air-15.
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Great Salt Lake Audubon

34502-1	Based GLSA's mission, we have provided several comments to the DEIS. Western Resource Advocates, on behalf of FRIENDS of Great Salt Lake, submitted comments on the DEIS and GSLA supports these comments. The following comment is in addition to the comments provided by Western Resource Advocates.	Thank you for your comment.
34502-2	Overall, GSLA is concerned with impacts to wildlife and wildlife habitat from the proposed action and alternatives posed in the DEIS. We are concerned with Utah's populations of migratory birds and raptors that depend on the water resources in the proposed project area and, specifically, the Snake and Hamblin Valleys. Birds, in particular, that depend on these habitats in the proposed project also use the Great Salt Lake basin for breeding and migration.	Please review the updated section 3.6 (wildlife) and standard resource response WL-1.
34502-3	GLSA is concerned that the dEIS does not address the loss of birds protected by the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act (BGEPA) as a result of the reduction of water flows in the limited riparian and aquatic habitats outside of the Right-of-Way (ROW).	Please see Standard Resource Response WL-1 with regard to compliance with BGEPA and MBTA,

Comments and Responses - Non-governmental Organizations

ID	Comment	Response
34502-4	All of the affected desert valleys documented as being impacted by the proposed project have a limited area of aquatic and/or wetland habitat and these habitats are extremely important to preserve. These desert valleys encompass valuable wildlife habitat such as Important Bird Areas and Great Basin National Park. Specifically, we are concerned that water flows to Big Springs will be impacted and therefore reduce the flow to Lake Creek and Pruess Lake. This riparian corridor is extremely important to a variety of wildlife including migratory birds, raptors, and bald and golden eagles. This area is part of the Intermountain Flyway and tens of thousands of birds, including raptors, pass through this desert valley during migration. Riparian and wetland corridors such as Lake Creek provide vital feeding and resting areas for migratory birds and raptors. Golden eagles use this habitat year round and a number of bald eagles winter in this area and feed on wintering waterfowl. This region is already heavily degraded by livestock grazing and agricultural practices and the cumulative impact of additionally reducing water flows would be disastrous to the wildlife habitat in this and other desert riparian areas and wetlands. Importantly, we understand the U.S. Fish and Wildlife Service manages eagles under the BGEPA for stable and increasing populations. GSLA is concerned that the proposed project does not meet the management obligations of BGEPA.	Thank you for providing information in regard to the importance of these areas to migratory birds and eagles. Please see Standard Resource Response WL-1 with regard to compliance with BGEPA and MBTA.
Indian Springs Civic Association		
35190-1	What happens in the target areas while the Southern Nevada Water Authority (SNWA) pipeline project is waiting? Will options be developed?	Your comments on the Draft EIS have been considered.
35190-2	Will we lose our small communities and their more sustainable contributions to agriculture and wildlife?	Please refer to standard resource response SocEcon-5 for information on this topic.
35190-3	This DEIS is premature; hearings on the first SNWA applications in four basins are still in progress at present. SNWA does not have the water to put in the pipeline. We must have a supplemental DEIS if any water rights are allowed for the SNWA pipeline project, and firm proposals as to time lines and conditions. All existing stipulations must be voided and renegotiated, in public.	The NSE process is separate from the NEPA process. Please see Standard Resource Response Gen-2 for a discussion of programmatic analysis and subsequent NEPA.
35190-4	The DEIS fails to address the full pipeline cost. The recently released figure of \$15 billion needs full and impartial explanation. Citing a single sum, rather than a range of values is not valid.	Thank you for your comment. Please see SocEcon-1, SocEcon-3 and SocEcon-6 regarding the inclusion of project cost information in the FEIS and lack of authority or need for the BLM to independently analyze project costs in conjunction with the ROW application.
35190-5	How much will monitoring, mitigation, operation, maintenance, utilities, etc. each cost? How much is needed for different scenarios? How much for inflation?	The costs of monitoring and mitigation is not known at this time. SNWA has committed to a number of ACMs addressing monitoring and mitigation, and the COM Plan, which outlines conditions for any ROW permit to be issued under the ROD for this EIS, also addresses monitoring and mitigation. The estimated costs of operations and maintenance area are also not known at this time, but those costs would be taken on by ratepayers. However, an analysis of the financial feasibility or effects on ratepayers is outside the scope of the EIS. Please see standard resource response SocEcon-3.
35190-6	What do different construction materials and methods cost? How much will have to be imported? How many local people will this project employ and for how long?	Thank you for your comment. The subject of this comment is beyond the Draft EIS scope and does not require further agency response. However, your comment topic will be considered by the BLM during preparation of the Final EIS and Record of Decision. Please refer to standard resource response SocEcon-1 for information on this topic.
35190-7	Will engineering be outsourced to offshore companies?	Thank you for your comment. The subject of this comment is beyond the Draft EIS scope and does not require further agency response. However, your comment topic will be considered by the BLM during preparation of the Final EIS and Record of Decision.
35190-8	There is no detailed DEIS explanation of funding options, and who will pay. Will SNWA pre---pay its obligations, or shift them to future generations?	Thank you for your comment. The underlying concerns in your comment are outside the scope of the EIS. The BLM lacks authority and a need to independently analyze project costs, or the potential long-term implications on ratepayers, in conjunction with the ROW application. However, because of comments received to the EIS, information regarding project costs 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
35190-9	SNWA defaults, who will pay? Who audits SNWA?	Thank you for your comment. Please see Standard Resource Responses SocEcon-1, SocEcon-3, and SocEcon-6 for additional information regarding the inclusion of project cost information in the FEIS
35190-10	Where is the cost---benefit analysis for this project? How would funding cope with future economic difficulties, such as: internet poker, internet gambling, rise in fuel prices, California legalizing gambling, gaming corporations moving offshore, etc.	Thank you for your comment. The subject of this comment is beyond the Draft EIS scope and does not require further agency response. However, your comment topic will be considered by the BLM during preparation of the Final EIS and Record of Decision.
35190-11	The pipeline would add to the tremendous concentration of power over a vital resource that is only partially renewable. Such power requires complete transparency to reinforce responsible behavior.	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.
35190-12	The groundwater resource will be deleted over the life of this proposed project.	Comment noted.

Comments and Responses - Non-governmental Organizations

ID	Comment	Response
35190-13	Once funded, would a pipeline place the entire state on a downward economic spiral? When will the taxpayers/rate payers be represented in this process?	Please refer to standard resource responses SocEcon-1 and SocEcon-2 for information on this topic.
35190-14	At what point will negative environmental impacts require that pumping be shut down? Could it be shut down?	Please refer to standard resource responses MM-1 and MM-2 for information on this topic.
35190-15	Growth has been the driving force behind the bubble that burst. The SNWA has actively supported the growth paradigm, even knowing that all growth is terminal. Will SNWA be constrained from promoting growth?	Please refer to standard resource response SocEcon-2 for information on this topic.
35190-16	Would there be any incentives to discover and deploy new water technologies and conservation during the wait for pipeline?	Thank you for your comment. The subject of this comment is beyond the Draft EIS scope and does not require further agency response. However, your comment topic will be considered by the BLM during preparation of the Final EIS and Record of Decision. This information will be provided to SNWA for their use in future water resource planning. Refer also to Standard Resource Response Gen-9.
Las Vegas Chamber of Commerce		
34000-1	As the President and Chief Executive Officer of an organization that represents thousands of small, medium and large companies that employ more than 200,000 Nevadans, please consider the extent and scope of the negative economic impact that would take place if the residents and businesses in Clark County do not have reliable access to water.	Thank you for your comment regarding the potential implications for Clark County should the GWDP not proceed. The concern is acknowledged in Section 3.18. Standard Comment Response SocEcon-4 also addresses this issue, noting 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. Finally, the proposed project does not affect Nevada's current allocation of rights from the Colorado River.
League of Women Voters of Northern Nevada		
34207-1	The process for evaluating the suitability of new proposed interbasin water transfers should include ... Evaluation of economic, social and environmental impacts in the basin of origin, the receiving area and any area through which the diversion must pass, so that decision makers and the public have adequate information on which to base a decision;	Changes have been made in the FEIS text to address the central concern that underlies this comment; however, due to its overarching nature, specifics regarding the placement of changes in the FEIS are not provided in this response. Please review updated section 3.18 (socioeconomics and environmental justice) which discusses potential impacts from groundwater pumping.
34207-2	Examination of all short- and long-term economic costs including, but not limited to, construction, delivery, maintenance and market interest rate;	See standard resource responses Gen-3, SocEcon-1 and SocEcon-2.
34207-3	Examination of alternative supply options, such as water conservation, water pricing, and reclamation;	See standard resource responses Gen-3, SocEcon-1 and SocEcon-2.
34207-4	Provisions to ensure that responsibility for funding is borne primarily by the user with no federal subsidy, loan guarantees or use of the borrowing authority of the federal government, unless the proposal is determined by all affected levels of the League to be in the national interest."	See standard resource response SocEcon-3.
34207-5	Also, the question of air quality from the resulting dust particles that would impact the health of the people in Utah to the east of the development has not been addressed.	Please see common response Air-14.
34207-6	Evaluation of the environmental and social impacts to all areas of the project, including the receiving end in Las Vegas have not been adequately studied. The public there has not had the information in order to make public comments on the affects of the construction in their area.	See standard resource response SocEcon-2.
34207-7	The economic feasibility of the entire project has not been analyzed and presented adequately for review. Funding is uncertain and unstable at this point and the Nevada taxpayer or the United States taxpayer may be asked to help pay for this project in the future.	Thank you for your comment. 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. The underlying concerns in your comment are outside the scope of the EIS. However, because of comments received to the EIS, summary information regarding SNWA's estimated project cost 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
34207-8	Lastly, we believe that Las Vegas should work towards becoming a sustainable community that lives within its available resources. When its water allocations are limited, it should stop the sprawl. Also, other conservation methods should be implemented.	This information will be provided to SNWA for their use in future water resource planning.
34207-9	Therefore, since monitoring, management, and mitigation measures proposed are inadequate to reduce, avoid, or offset the extreme adverse consequences or the proposed project, we are opposed to its construction.	Please refer to standard resource responses MM-1 and MM-2 for information on this topic.

Lincoln County Farm Bureau

Comments and Responses - Non-governmental Organizations

ID	Comment	Response
35195-1	As we are sure you have heard many times, there simply has not been enough time allowed for full review of the Draft Environmental Impact Statement for the Nevada Groundwater Projects Right of Way (Draft). It is unreasonable to ask for comments on something that there is not time for review. Additional time is necessary to review the entire Draft and make sensible comment. A closing date sometime in 2013 would probably give the average individual time to read, digest, and research the volume of information provided.	Thank you for your comment. Please see general comment response Gen-4.
35195-2	The opening page should include a disclosure that the Environmental Review process for the Lincoln County part of the Right of Way was overridden by Mr. Harry Reid. The fact that the Right of Way is created by law regardless of the NEPA process is essential information for all interested public. The amount of money wasted on the Lincoln County part of this analysis is an important piece of information.	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.
35195-3	Also missing is the full Economic Analysis. There is no mention of the ties between the pipeline and the relatives, business associates and large donors of Mr. Harry Reid. The analysis of the Economic impacts that a \$15 Billion project has on these people is essential for understanding of the project.	Thank you for your comment. The subject of this comment is beyond the Draft EIS scope and does not require further agency response. However, your comment topic will be considered by the BLM during preparation of the Final EIS and Record of Decision.
35195-4	There is no discussion of the potential long term economic impacts to the entire region once pumping begins. How much will it cost domestic well owners to deepen their wells, and when will this cost occur? How much will pumping from deeper levels affect current agricultural producers? How much will deeper wells and deeper pumping depths affect our local communities and rate payers?	Thank you for your comment. Examples of factors considered when developing the description of existing socioeconomic conditions include the regional scale of the proposed project, size of workforce, and anticipated results from other disciplines that would factor into the assessment. In this instance, Section 3.18.2.1 addresses the effects associated with construction and operation of the main pipeline and facilities; the actions tied to decisions to be made by the BLM on this EIS. Characteristic of linear utility infrastructure, most of those effects would be temporary and the level of detail regarding current conditions is adequate to support the assessment of such impact. Most of the effects cited in the comment are related to drawdown associated with future facilities and pumping. Those effects are addressed programatically in this EIS, and would be subject to further analysis in subsequent, tiered NEPA analysis to be done in conjunction with future facilities. See Gen-1 and Gen-8, as well as Section 2.5 of the Executive Summary and 2.1.2 of the main document for additional information on tiering.
35195-5	Another missing component is the cumulative impacts of the whole project including well sites, pumping stations, power generation stations, branch pipelines, etc.	The groundwater development components have been added to the ROW to estimate a total surface estimate for the project by alternative.
35195-6	How will pipeline construction and maintenance impact grazing operators?	The following is a list of potential impacts that would occur in allotments that are intersected by the ROW or project facilities: Temporary or permanent displacement of forage vegetation Spread or invasion of noxious weeds Effects of dust deposition including reduction in forage production and/or palatability Livestock injuries or fatalities due to open trenches or livestock-vehicle collisions. Interference with livestock movement patterns

LiUNA -- Laborers Union, Local #872

35895-1	The DEIS does not include, however, a detailed evaluation of the potential impacts to Clark County should the project not be constructed.	Thank you for your comment regarding the potential implications for Clark County should the GWDP not proceed. The concern is identified in Section 3.18. See also 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.
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National Parks Conservation Association

34782-1	NPCA maintains that the DEIS does not adequately address "special designations".	Please review the updated section 3.14 (special designations).
34782-2	With limited knowledge of the quantity of groundwater does not assure that groundwater pumping will leave Great Basin "unimpaired and for the enjoyment of future generations."	Your comments on the Draft EIS have been considered. Please refer to standard resource responses MM-1 and MM-2 for information on this topic.
34782-3	Great Basin National Park has limited federal water rights. This is a point that the DEIS has not addressed.	Comments noted. The Nevada State Engineer is responsible for the allocation of water rights and protection of senior water rights. Potential impacts to water resources in GBNP are addressed in Section 3.3 of the EIS.
34782-4	NPCA points out that the DEIS does not address adequately address the fact that the park was not, when it was established, given appropriate water rights and.	The Nevada State Engineer is responsible for the allocation of water rights and protection of senior water rights. Potential impacts to water resources in GBNP are addressed in Section 3.3 of the EIS.
34782-5	DEIS has not fully examined, nor can current groundwater modeling, establish at what level the national park's cave system may be irreparably harmed or at what level cave species may be threatened and or endangered.	Potential effects to cave resulting from drawdown is provided in Section 3.3.
34782-6	NPCA maintains that modeling does not adequately address varied levels of phreatic zones and the cumulative impact of reduced vegetation, soil erosion and subsequent air pollution.	Comment noted.

Comments and Responses - Non-governmental Organizations

ID	Comment	Response
34782-7	NPCA maintains that the DEIS has not addressed eco-tourism benefits in the area fully, as it regards current travel patterns and anticipated and increasing travel inspired by dark night skies.	Thank you for your comment. Section 3.18.2.1 addresses the effects associated with construction and operation of the main pipeline and facilities; the actions tied to decisions to be made by the BLM on this EIS. Few impacts to tourism are expected from those activities. Long-term risks to tourism 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, have been added in the latter section and further assessments could occur as part of subsequent tiered NEPA to be done in conjunction with future facilities (see Gen-1 and Gen-2). ACM A.11.2 and A.11.3 address lighting during construction and at pumping stations and other facilities during operations. These measures would be partially effective in limiting effects on night skies - see Section 3.15.
34782-8	NPCA also requests that Visual Resource Inventory, as outlined in the DEIS, should be expanded to include impact on night sky viewing, and also comments that additional modeling and research should be undertaken to better evaluate the visual degradation of pumps surrounding the national park, on approach and from within the park boundaries.	The Visual Resource Inventory process is independent of the EIS, and is incorporated into the analysis to provide a baseline description of the visual resources of the analysis area. The Visual Resource Inventory provides BLM managers with a means for determining visual values. The inventory consists of a scenic quality evaluation, sensitivity level analysis, and a delineation of distance zones. A discussion of the impacts of the project to previous Visual Resource Inventories, including night sky viewing, is included in Section 3.15.2.2. Future site-specific impact assessments will assess visual impacts for specific project facilities in detail as the locations of facilities become better defined. Please also see Standard Comment Response Gen-1.
34782-9	NPCA notes that the BLM has produced exhaustive analysis of the impact of SNWA's proposal and asks that the following be reviewed, considered and, in some cases, bolstered with additional research in the environmental review process: - Proximity to the federally protected national park, cross-referenced against the mission outlined under the National Park Organic Act;	A general description of GBNP and reference to the Park Management Plan is provided in Section 3.14.1.3. Along with the description that "While project ROW facilities and groundwater development are not planned in these areas, other special management areas within or near the water resources region of study are considered in this analysis. These areas include a National Park, Wildlife Management Areas, and NWRs. "
34782-10	NPCA notes that the BLM has produced exhaustive analysis of the impact of SNWA's proposal and asks that the following be reviewed, considered and, in some cases, bolstered with additional research in the environmental review process: - Proximity to nearby endangered wildlife and plant species, cross-referenced against the Endangered Species Act, Supreme Court rulings, and management plans within and outside the boundaries of the national park;	The EIS, in sections 3.5, 3.6, and 3.7, addresses proximity of the project to special status species and their habitats, which includes threatened and endangered species. The EIS discusses compliance with the Endangered Species Act through the section 7 consultation, as well as conformance with land use plans.
34782-11	NPCA notes that the BLM has produced exhaustive analysis of the impact of SNWA's proposal and asks that the following be reviewed, considered and, in some cases, bolstered with additional research in the environmental review process: - Visual distractions related to groundwater pumps on approach, from the east or west, to the park and from within the national park boundaries;	Section 3.15.2.2 has been revised to include the potential visual effect of pumping stations, production wells, and substations as viewed from within the GBNP and from roadways that provide access to the park.

Nevada Farm Bureau Federation

34251-1	From the standpoint of an overall comment, we would urge that the Bureau of Land Management postpone further processing of this planning, National Environmental Policy Act (NEPA) evaluation until the Nevada State Water Engineer has completed the decision process, required under Nevada law, for granting water rights to the Southern Nevada Water Authority and until necessary bi-state agreements have been completed with Nevada and Utah, as stipulated under federal law.	Please review the revised chapter 1 which provides updated information on the Nevada State Engineer's March rulings on Spring, Delamar, Dry Lake and Cave valleys.
34251-2	The pending action of this proposed Draft Environmental Impact Statement is premature and lacking in a number of elements which could be more appropriately dealt with in an expanded time-frame for completing a worthwhile Draft Environmental Impact Statement.	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.
34251-3	Based on the sketchy and scattered information offered in the Draft Environmental Impact Statement, the public cannot surmise the actual scope and purpose of the project.	Based on your comments, text has been added to Chapter 1.
34251-4	At its core of shortcomings, this Draft Environmental Impact Statement does not clarify and consistently present a purpose and need of the project being contemplated. Whether the purpose of the ground water development project is for drought protection or to cover growth needs (and the two purposes can't be met with the same water), this process has not brought forward the justification for authorizing a ground water development project which allows for such significant negative effects on the resources from the areas where the water will be taken.	Based on your comments, text has been added to Chapter 1.
34251-5	If the purpose of this Draft Environmental Impact Statement is to only grant a right-of-way for a massive water pipeline, this purpose and information presented is inconsistent with the project description.	Based on your comments, text has been added to Chapter 1.
34251-6	The project description and a majority of information presented in the Draft Environmental Impact Statement is segmented and is offered in a confusing, piecemeal and not complete manner. Data presented doesn't demonstrate that the ground water development project is needed and the materials presented or left out seem to be based on arbitrary conjecture of what predisposes the decision outcome to be an automatic approval.	Thank you for expressing your concerns related to the Draft EIS. Your suggestions have been carefully considered by the BLM, but have not resulted in changes to the analyses presented in this document.

Comments and Responses - Non-governmental Organizations

ID	Comment	Response
34251-7	Alternatives don't take into account the various options that are available for not having the groundwater development project occur. Details of how much water is used now as well as various sources for other supplies and overall need for additional water resources is not definitively documented or presented as an essential description for the purpose of the project. Alternatives should also contemplate the outcome of increasing Southern Nevada Water Authority rates and results of decreasing water use.	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. Please see standard resource response Gen-3 for additional information on this topic.
34251-8	Although the Draft Environmental Impact Statement explains the "tiering" approach used in this application, we are troubled that this piecemeal technique will result in an incomplete evaluation of the consequences.	Please refer to standard resource response Gen-2 for information on this topic.
34251-9	We disagree with this Draft Environmental Impact Statement taking a programmatic approach for the specifics of where individual well sites will be located and the still to be determined details of pipeline delivery requirements to incorporate water movement to the central pipeline system. We believe it would be more appropriate to delay the decision process for this Draft Environmental Impact Statement until those specifics are established and presented in a comprehensive amended proposed plan.	Please refer to standard resource response Gen-2 for information on this topic.
34251-10	From our review and analysis, this approach mischaracterizes the actual Congressional directive of the Lincoln County Lands Act, which stipulates that the decision process is "subject to NEPA". That doesn't authorize a rubber stamp pass for consideration of the portions of the project outside of White Pine County. BLM and this Draft Environmental Impact Statement have failed to provide due diligence to the responsibilities embodied in "subject to NEPA".	As discussed in the EIS, BLM has appropriately analyzed the ROW application under FLPMA and LCCRDA.
34251-11	We also note that the Draft Environmental Impact Statement doesn't properly account for the federal requirement of Utah and Nevada signing an agreement pertaining to "shared water". Again, the concept of waiting with this process and bringing forward another, more comprehensive and improved Draft Environmental Impact Statement, after the contingent decisions are finalized and complete, would be a much better approach.	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.
34251-12	In evaluating the nature and consequences of this ground water development project, this Draft Environmental Impact Statement fails to offer necessary information on how much water BLM requires for legal and authorized uses of lands intertwined with this ground water development project. Assessing the authorization decision for granting this ground water development to take place on BLM managed lands should include a studied and detailed listing of these water requirements as well as the manner obligations will be met when those amounts of water have been diminished.	The Draft EIS identified areas where BLM resources may be at risk due to impacts from groundwater pumping. The BLM does hold water rights, both appropriated and Federally reserved, for uses on public lands for beneficial uses such as stockwatering, recreation and wildlife. In areas where the BLM holds a senior water right to the SNWA permits, these sources will be protected by Nevada Water Law since Nevada is a prior appropriation state (NRS Chapters 533 and 534). If the BLM requires additional water rights for future needs, these would need to be applied for and would be junior to the SNWA rights. In areas where the Draft EIS identified potential impacts to resources and the BLM does not currently hold a water right, these resources may be at risk to some level of loss. However, the NSE determined that the GWD project was environmentally sound and impacts could be managed through monitoring and adaptive management. Future NEPA analyses will analyze the potential and extent at a more refined scale and may be able to further mitigate these impacts.
34251-13	In evaluation of the effects of the ground water development project, this Draft Environmental Impact Statement should more completely assess and report the ramifications of how the scope and scale of the project will diminish the capability of the resource base to meet the needs of other users. There is a cumulative effect that this Draft Environmental Impact Statement fails to take into account or handle. Whether this lack of analysis is attributable to the nature of this type of Draft Environmental Impact Statement or other factors, the results are noteworthy in being as incomplete as they are.	"Scope and scale" are encompassed in the individual alternatives. The consequences of implementing alternatives in terms of surface disturbance, and potential reduction in resources are described. The consequences of groundwater drawdown on resources (and users dependent on these resources) have been addressed in the socioeconomic section. An example is effects on agricultural users as the result of increased pumping costs from drawdown (see Socioeconomics).
34251-14	The Draft Environmental Impact Statement observes that dewatering will damage the environmental quality of the affected lands. Connected to this assertion, we also conclude that vegetation changes will cause impacts to rangeland health circumstances and that wildlife habitat will be damaged. These consequences don't appear to be addressed, in spite of the responsibilities of federal land managers to respond and work to avoid such outcomes.	The methodology for analysis for rangelands/livestock grazing, wildlife, water, and vegetation resources was focused on groundwater drawdown (10 foot or greater) that would effect springs, streams, and phreatophytic vegetation communities. For further analysis the reader was directed to specific portions of the Water and Vegetation sections.
34251-15	If the counter assertion is that these significant and negative outcomes will be addressed through mitigation or other requirements on those developing the project, we maintain the agency will have failed in its obligation. Without being aware of the stipulated agreements and plans, which aren't included in this Draft Environmental Impact Statement, we are highly unconvinced that there is the degree of certainty that the implementation will take place. We further maintain that there is not adequate assurance that funding will be sufficient to achieve the necessary actions.	Thank you for your comment. Please see Standard Resource Response MM-1.
34251-16	In addition to providing the background information for possible stipulated agreements and mitigation plans for resolving the serious impacts of the ground water development project, doing so with a full and complete report on pre-construction, construction and post construction/operations, we also believe that it would be in compliance with the National Environmental Protection Act, to document the back-up plans that address what happens if the Best Management Practices and Mitigation Measures don't work.	Thank you for your comment. Please see Standard Resource Response MM-1.
34251-17	Without the proper identification of well sites, we don't have insight into the specific treatment of laterals and other infrastructure used to gather the dispersed water pumping to the centralized pipeline system. The details we've requested to be included in a more complete Draft Environmental Impact Statement should also provide detailed information on these aspects.	See Response Gen-1.

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ID	Comment	Response
34251-18	The Draft Environmental Impact Statement fails to provide economic analysis for the receiving areas of the ground water development project too. How capable is the consumer base in Southern Nevada to cover the costs associated with development and operations of the project? Further, how capable is this same group to provide the essential funding to cover mitigation and restoration activities beyond the already expensive operations and development? Along with not adequately substantiating the need for the water at the end-point of the project, the analysis and various options fails to present a base of detail for how much water is required to make the project cost effective or financially feasible. What if more water is necessary to achieve the quantities for critical mass?	Thank you for your comment. The underlying concerns regarding financing, effects on ratepayers, and financial feasibility are outside the scope of the EIS. Nonetheless, because of comments received to the EIS, summary information on project cost is included in the FEIS. See also general comment response SocEcon-1 and SocEcon-3. 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 . 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.
34251-19	We are especially concerned over the consequences for livestock grazing. In those areas where forage and plant communities will be impacted by dewatering, livestock grazing will not only be negatively affected, it is likely that land managers will unduly place blame on plant community changes and an inability to achieve resource standards on livestock grazing.	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. Please refer to standard resource response GR-1 for information on this topic.
34251-20	There is not any mention of mitigation or compensation for loss of forage during these impact periods or the possibility of restricting access to water. How will those who depend on these critical areas in their grazing cycle be compensated for the loss that will be imposed on them?	ACM A.8.1 states that "pre-construction coordination with the BLM and grazing permit holders would be conducted to allow for advanced planning of grazing practices and ensure the best use of available rangeland." This should reduce the need for supplemental forage and allow the opportunity for permit holders to request compensation if needed. ACM A.8.4 states that "alternative water sources (water troughs or similar) will be made available if access to water sources is restricted." This could be arranged during the pre-construction coordination that is part of ACM A.8.1.
34251-21	We urge that a disclosure be offered on the criteria for evaluation. What is or won't be acceptable for impacts to landscapes, ecosystems and specific areas?	Impacts were evaluated using parameters such as stream miles affected by pumping. Decisions on what are acceptable impacts are not required under NEPA.
<u>Nevada Resort Association</u>		
34001-1	Although the Draft Environmental Impact Statement addresses the potential economic impacts to Lincoln and White Pine counties if the groundwater project is constructed, it does little to address the ramifications to Clark County and the state's economy should the project not go forward.	Thank you for your comment regarding the potential implications for Clark County should the GWDP not proceed. The concern is identified in Section 3.18. See also 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.
<u>Nevada Wilderness Project</u>		
34802-1	The BLM does not analyze other viable alternatives to the project – such as desalination or improved conservation or use of recycled water in Las Vegas – claiming it is restricted by the Lincoln County Recreation and Development Act to examine only alternative alignments of the ROW and not the devastating impacts of the entire project.	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.
34802-2	We believe that it is premature for the BLM to choose an alternative since actual well sites have not been approved and the Nevada State Engineer has yet to determine how much water SNWA can actually withdraw.	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.
34802-3	Probably the biggest problem with the DEIS is the scope and nature of Chapter 4. The chapter is wholly inadequate in addressing specific effects to species and habitats. Instead Table 4.01 lists effects in a generalized manner. This is completely inadequate considering the scale of the proposed project and its potentially devastating effects on the landscapes of eastern Nevada. Chapter 4 should address effect in a similar manner as presented in Chapter 3.	Chapter 4 follows the NEPA requirements for irreversible and irretrievable commitment of resources.
34802-4	These include a long-term increase in fugitive dust from pumping basins where pumping drawdown may result in a decrease in vegetation cover and density. The cumulative effects of these air quality changes may limit any other future use for resource development, recreation, and habitat.	Please refer to standard resource responses Air-7, Air-9, and Veg-5 for information on this topic.

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34802-5	Among the most important of these from a conservation perspective is the greater sage-grouse. The US Fish and Wildlife Service (USFWS) have determined that the greater sage-grouse is warranted for listing, but precluded, under the Endangered Species Act (ESA), but precluded due to higher priorities. One of the major factors contributing to the decline of the sage-grouse is loss of habitat. The DEIS points out irreversible effects to vegetation communities in impacted valleys from drawdown. These impacts are in direct conflict with the BLMs efforts to provide regulatory frameworks that would stabilize and increase sage-grouse populations.	Please see Standard Resource Response WL-2 regarding greater sage-grouse updates to the FEIS. Please also see Standard Resource Response WL-3 with regard to NEPA and BLM's obligations.
34802-6	Additionally, the DEIS recommends only 2-mile buffers on power lines. The best available science recommends 3-5 mile buffers on potential raptor perch and nest structures from known active leks. Further guidance is being drafted within the BLM and is planned to be released soon after the comment period for this document. This guidance will further restrict development options within identified sage-grouse habitats, and the Final EIS should comply with sage-grouse guidance in order to provide regulatory assurances to the USFWS for sage-grouse protections by the BLM, the primary public land management agency responsible for securing the species habitats in Nevada.	Please see Standard Resource Response WL-2 regarding greater sage-grouse updates to the FEIS.
34802-7	Caves: More data on the effects of cave systems and habitats within them should be collected before any groundwater pumping is allowed.	Potential impacts related to groundwater pumping have been addressed at a programmatic level in this EIS. Subsequent NEPA will be required to determine and disclose site-specific impacts. See Standard Resource Response Gen-2 for a discussion of programmatic analysis and subsequent NEPA.
34802-8	Predicted impacts to vegetation that are stated as irreversible and irretrievable are unacceptable.	Please review the update chapter 4 in the FEIS.
34802-9	Invasive species including cheat grass and red brome are major concerns in the Ely District of the BLM. Current control and restoration efforts do not appear to be working. According to the DEIS, the proposed SNWA pipeline will create conditions that accelerate the spread of invasive plant species, further exacerbating the impacts to native vegetation communities.	Please refer to standard resource response Veg-3 for information on this topic.
34802-10	The cost of mitigation from all of this is likely incalculable as the obvious requirement for maintaining intact vegetation communities would be to return an equivalent amount of water back to these areas in hopes of maintaining current underground water resources for plants. Additionally, the cost to restore invasive to native plant communities is also extensive. The BLM should estimate these costs and require that SNWA post a bond for the full amount before construction can begin.	Thank you for expressing your concern regarding the costs associated with mitigation and monitoring. Information provided by SNWA, and included in its testimony at the Nevada State Engineer water rights hearings for Spring, Delamar, Dry Lake and Cave valleys, indicate the inclusion of approximately \$400 million in the estimated project costs for initial implementation of the monitoring and mitigation requirements outlined in the Final EIS. It is the BLM's understanding that SNWA does not represent that the sum reflects the result of detailed calculations tied to specific impacts and mitigation measures, but rather that is an allowance for addressing potential impacts.
Red Rock Audubon Society		
35952-1	We are impressed with the detail and depth of information presented in the DEIS, but are very concerned about the ultimate decision that will be made in terms of issuance of the requested right of way (ROW).	Thank you for your comment.
35952-2	The stated mission of the BLM is to "sustain the health, diversity and productivity of the public lands for the use and enjoyment of present and future generations." That stated mission puts the agency in an untenable position with regard to the legislation passed in 2004 which ordered the agency to issue a ROW for the pipeline project proposed by the Southern Nevada Water Authority (SNWA). It is not clear to us that the 2004 legislative mandate supersedes the intent of the legislation which created the BLM (FLPMA). This is an issue which will probably have to be decided in the courts. However, if the Bureau wants to fulfill its' stated mission then the no action alternative is the only rational choice.	Thank you for your comment.
35952-3	It is our opinion that the decision about whether to issue a ROW should be based on most long term information that is available. In this case it is the 200 + years modeling projection, which clearly indicates that there will be major impacts to springs, wetlands and vegetation which is dependent upon groundwater near the land surface. It is generally agreed that the impacts of groundwater pumping take time to become evident, Hence, the decision that will be made in this case is not about the present generation of people living in the affected areas, but about future generations yet unborn.	Please refer to standard resource responses WR-1 and WR-2 for information on this topic.
35952-4	In the arid lands of the Great Basin, every species of wildlife that needs free water to live is dependent, for some portion of the year, on the existence of springs, streams or wetlands. If the groundwater development project proposed is developed the existing modeling data indicates that virtually all the perennial surface water resources in the affected areas will disappear. That means that many species of wildlife will die out or leave the area. Even animals such as deer and elk, which tend to be found on the mountain slopes depend on the valley bottoms for winter range so they too will be affected. Some have suggested that impacts to wildlife can be mitigated by constructing rainfall catchments (colloquially know as "guzzlers") to provide water to wildlife. We feel that guzzlers are neither a long term solution nor a solution for all animals. All aquatic species will just be lost.	The mitigation measure regarding artificial water sources for big game is proposed to mitigate for potentially lost water sources for big game. The potential residual impacts to wildlife habitat are disclosed in the FEIS. Impacts to aquatic species are address in section 3.7.2.

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ID	Comment	Response
35952-5	The Greater Sage-Grouse has been petitioned for listing as endangered under the Endangered Species Act and the U.S. Fish and Wildlife service has ruled that listing is warranted but precluded due to insufficient resources. This proposed water project will, over time, eliminate the Sage Grouse population in Spring Valley. It is certainly possible that Spring Valley may be declared "critical habitat" for the Great Basin population of the Greater Sage-Grouse. With the major effort underway by both the State of Nevada and the Federal Government to avoid having the Greater Sage-Grouse listed as endangered or threatened, approving a project that will eventually eliminate one of the healthiest Sage Grouse populations doesn't seem wise.	Please see general comment response WL-2 regarding greater sage-grouse updates to the FEIS .
35952-6	Although the ultimate decision on whether to approve SNW A's application for water rights in the Delamar, Dry Lake, Cave and Spring Valleys rests with the Nevada State Engineer that does not relieve the BLM of the responsibility to make the appropriate decision with regard to protecting the lands under its' jurisdiction. The history of large scale groundwater pumping is one of over-exploitation of the resource, with strongly negative results for biological resources of the areas affected. In this case the DEIS clearly spells out what the impacts are very likely to be. To ignore the projected impacts and approve the ROW application would be incredibly irresponsible. As a group promoting responsible stewardship of our natural resources we strongly urge the BLM to choose the no action alternative and deny the application for a ROW for the Clark, Lincoln and White Pine Counties Groundwater Development Project.	Please refer to standard resource responses MM-1, MM-2, and Gen-8 for information on this topic.
Round River Conservation Studies		
34893-1	The DEIS describes major impacts that would result from this proposal moving forward, but fails to explore alternative sources of water for the future.	See Standard Resource Response Gen-3 for alternative water sources.
34893-2	the impacts on tribes of the Great Basin are too great and their needs and rights off-reservation have not been adequately considered.	Tribal consultation to identify and evaluate cultural resources and historic properties, and properties of traditional religious and cultural importance to the tribes is ongoing and will continue to occur during each tier of the Project.
Sierra Club, Southern Nevada Group		
33994-1	The irreparable damage to the Great Basin habitat and possible dust bowl it could create.	Please review the updated section 3.3 (water resources) and 3.5 (vegetation) for potential impacts from groundwater pumping. Please also review standard resource response Air-10.
33994-2	Alternatives	This text should not have been marked as a substantive comment. No response necessary.
33994-3	Why not negotiate with California to get assess to the water in Lake Mead, right in our backyard. If we could replace their 250,000 acre feet of draw with desalinated water from the Pacific, no pipeline would be needed and the groundwater could remain undisturbed.	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.
Sierra Club, Toiyabe Chapter		
34380-1	We found this section on "purpose and need" to be quite counterintuitive and incorrect. The underlying need for this document, as required by NEPA. is not to meet BLM's "need" or "purpose" as stated in this section. The draft EIS is being written for the proponent's proposed water development and conveyance project to obtain and transport as much rural groundwater as the Nevada State Engineer (NSE) will approve. The majority of the draft EIS's 4,000 pages discusses this need and the hydrological model, as well as estimates project impacts, not BLM's interpretation of the purpose and need for the EIS.	Based on this and other comments, Chapter 1 has been revised.
34380-2	Therefore, many of the biological impacts can only be inferred by the current coarse-scale groundwater modeling, and could be better assessed with more fully developed ecological models.	These issues will be addressed in future tiers. See comment response Gen-2.
34380-3	SNWA has proffered a number of "Applicant-Committed Environmental Protection" measures. These include (1) monitoring, management and mitigation measures provided for under Stipulation Agreements with federal agencies, as well as the requirements of the Nevada State Engineer and {2) adaptive management measures proffered by SNWA. While they serve as a good starting point, these currently committed and proposed mitigation measures are not yet sufficiently developed or specified to assure that unreasonable adverse effects will not occur to the groundwater-dependent resources.	Please refer to standard resource response MM-1 for information relevant to this comment.

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ID	Comment	Response
34380-4	Whether the GWD project is an appropriate way to obtain reliable water supplies for drought protection in southern Nevada is questionable. Scanning the Drought Monitor Archive (http://droughtmonitor.unl.edu/archive.html) from 2000 to 2010 shows that during that decade of drought, central-eastern Nevada dry conditions often coincided with drought in the upper basin states of the Colorado River. Missing from the draft EIS are the disclosures that: 1) there was no shortage condition for the lower basin states (including Nevada) despite the severe drought which saw shrinking of the two largest reservoirs on the Colorado River, and 2) any water withdrawn from eastern NV/western UT by SNWA to "make up" lost Colorado River water will likely occur while eastern Nevada and western Utah are also experiencing similar drought and further stress the environment and economy of the region. The draft EIS fails to provide any information on the reliability of targeted groundwater in the GWD project for future delivery to southern Nevada communities.	Please see section 1.6 for a discussion of water supplies and future needs.
34380-5	The draft EIS states on page ES-19 in regard to scheduling, that pipeline construction can be deferred for several years, depending on many factors. If this is an accurate statement, then this draft EIS is quite premature and should be delayed until the proponent is ready to proceed with construction. (See our comments in #2F).	Thank you for expressing your concerns related to the Draft EIS. Your suggestions have been carefully considered by the BLM, but have not reversed the decision to proceed with the proposed project.
34380-6	In addition, beyond developing and conveying rural groundwater to So. Nevada, the water must be actually put to use. Is it to be used for drought protection? How would that work? If rural groundwater is pumped only during Colorado River shortages, we understand how that would work. If it is pumped all the time, then where would it be stored for use only during droughts?	Alternative C is crafted under the supposition that groundwater withdrawn would occur only in times of drought. The other alternatives do not rely on drought as a criteria for the timing of groundwater pumping.
34380-7	This section's characterization of Congressional mandates for ROW permits is misleading and is contradicted by many other statements in the draft EIS which clearly state that BLM, under FLPMA, has the authority to approve, modify or deny the ROW request. The Lincoln County Conservation, Recreation and Development Act (LCCRDA) also mandates that BLM's obligation to grant a ROW is subject to meeting the requirements of NEPA in this EIS, as follows: Nowhere in LCCRDA is there Congressional direction to BLM to ignore the findings of this EIS nor to not comply with any other federal laws governing BLM's management and protection of public lands and resources, including FLPMA and the Endangered Species Act (ESA).	Chapter 1 has been revised to clarify BLM's mandated authority in regard to this project. This EIS was written in accordance with NEPA and LCCRDA as well as FLPMA. Please also review standard resource responses MM-1, MM-2, MM-3 and Gen-8 for further information.
34380-8	In order to compensate for significant missing project information, the use of tiering in the EIS is inappropriate and incorrect and leads to piece-mealing the NEPA process.	Thank you for your comment. Please refer to General Comment Response Gen-2.
34380-9	BLM's use of "tiering" in this EIS is incorrect and inappropriate. Tiering is used by agencies usually for vehicular transportation ROW projects, with known construction phases. We know of no precedent for BLM's use of tiering for proposed developments with over from decades of construction and 24 decades of project impacts.	Thank you for your comment. Please refer to General Comment Response Gen-2.
34380-10	Tiering also cannot be used by the BLM to avoid addressing incomplete and unavailable information. In this case, the draft EIS acknowledges that it is missing critical information on this project. The proponent has not only not supplied BLM with complete information on its proposed project, but it also does not have any groundwater, approved by the NSE to convey at this time. Critical "future" facilities, such as the number of wells and the location of well sites, are only identified conceptually. The draft EIS uses a theoretical "distributed pumping area" concept in order to attempt to conduct an impacts analysis, but Nevada water law would require the proponent if granted any water rights by the NSE. To apply for changes in points of diversion, a process which allows protests and requires additional water hearings, and which may not be approved.	Thank you for your comment. See Standard Resource Response Gen-2 for a discussion of programmatic analysis and tiering under NEPA.
34380-11	EIS discloses a host of incomplete, unknown, missing, and uncertain information in every project description, to its scheduling, to the impacts analysis. This is due in part to piecemeal the NEPA analysis of SNWA's proposed project before critical information the project has actually coalesced. The detail of the hydrological impacts in Chapter 3 bely the justification in the draft EIS's for "programmatic" assessment of groundwater pumping impacts. While we do appreciate BLM's disclosures of this magnitude of missing information, we believe that BLM is mis-using the tiering process for an inadequately defined project.	Thank you for your comment. See Standard Resource Response Gen-2 for a discussion of programmatic analysis and tiering under NEPA.
34380-12	The draft EIS also consistently fails to provide the relevance of this incomplete and unavailable information, especially in the impacts analysis in chapter 3, a violation of CFR 1502.22.	Thank you for your comment. See Standard Resource Response Gen-2 for a discussion of programmatic analysis and tiering under NEPA which has a strong relationship to incomplete and unavailable information.

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ID	Comment	Response
34380-13	This "tiering" approach also fails because BLM is allowing the proponent to select which part of its rural groundwater exportation project to include in this EIS. SNWA has water rights and applications in many other than the 5 basins studied in this document. If the applications are approved by the NSE, this water would also have to be transported in the SNWA pipeline. In fact, during the passage of the LCCRDA, a map circulated showing SNWA's proposed pipeline into these other basins in E. Nevada at: http://toivabe.sienclub.org/conservation/pipelines/images/Con-idorsfeb04sm.jpg . NEPA does not allow "piece-mealing" a proposed project, so that it would minimize otherwise estimated impacts of a complete project. Nor does NEPA allow the segmentation of BLM analysis and decisions for parts of the project which are "known" now. Concerned citizens are faced with a future nightmare when contemplating (p. ES-8) this statement: "The BLM will approve or deny any future ROWs after careful environmental analysis with a decision document issued for each additional request." One ROW or an unknown number of future ROWs? One EIS or an unknown number of future EISs?	Thank you for your comment. See Standard Resource Response Gen-2 for a discussion of programmatic analysis and tiering under NEPA. The statement you quote from the DEIS is referring to future NEPA actions described in the programmatic analysis of this EIS.
34380-14	What "other governing agencies"? Doesn't BLM have sole authority over the ROW issuance?	The Corps of Engineers will be using the analysis in the EIS when considering the Section 404 permit. We have clarified this section in the FEIS.
34380-15	Are the other decisions- "applying" mitigation and "developing and implementing" mitigation plans the responsibility of BLM or of "other governing agencies"?	The BLM has sole authority of issuing the ROW grant. Other governing agencies would include federal or state agencies that are responsible for permits or resources on lands crossed by the ROWs.
34380-16	Because of the contradictory language in chapters 1 and 2 about BLM's Congressional mandate to issue ROWs and in other parts of these chapters such as this one about BLM's ability to "approve, modify or deny" ROW requests, BLM must clarify if it does have the authority to modify or deny this project's proposed ROWs or not?	Clarifying language has been added to the executive summary in Section 2.3.
34380-17	Who would " apply" appropriate mitigation? Does "apply" mean implement? What is "appropriate" mitigation and who decides? Who will enforce implementation of mitigation?	The BLM will identify mitigation in the Record of Decision as conditions in the ROW permit. Mitigation will be enforced by the BLM on public lands.
34380-18	How will monitoring plans "ensure compliance with decisions?" What decisions are referenced here?	Text was revised to explain how monitoring will ensure compliance with conditions specified in the Record of Decision. Also, please see Standard Resource Response MM-1.
34380-19	How can the BLM decision to issue the ROW permit be "modified?" Would modification occur before or after the Record of Decision? What other "decisions" on this proposed project could be modified by the BLM? What project "purpose or need or desired outcomes" are referenced in this draft EIS statement? How would "desired outcomes" be set? Is this a public process? Who would determine whether these are being achieved or not? How would this be determined? What is the definition or parameters of "achievement" or non-achievement?	Please refer to standard resource response MM-1 for information relevant to this comment.
34380-20	As stated in our comments above (IA), the draft EIS states that construction may be delayed. It does not give us much comfort that BLM (p. 1-6) states that "BLM will require that construction be initiated on each segment of the ROW within five years of the issuance of the ROW." What does "initiation" mean? If the proponent starts digging a trench for the pipeline, but then stops due to "relief from drought" or "insufficient funding," or any other reason, any of which seem highly likely over the next 40 years, does BLM withdraw its ROW permits? With likely stops and starts to pipeline construction, are there benchmarks of progress that the proponent must meet? When is "full build-out" reached? This is not a phased project. Instead the proponent appears to be seeking ROW permits now for a project whose construction schedule is highly uncertain. The lack of this critical information prevents the public and the BLM from making informed comments and decisions on this draft EIS.	Section 1.3.4 has been edited for additional clarity. As stated in the EIS, BLM will not issue a notice to proceed until all requirements stated in the ROW grant (if issued) have been fulfilled. This would include (but is not limited to) an on-the-ground cultural resources survey, detailed engineered drawings, and an updated Plan of Development including a number of sub-plans as outlined in Chapter 2. The updated Plan of Development must be approved by BLM before and notice to proceed is issued.
34380-21	In short, this GWD project has no final point. Especially with its new increased pipeline diameter to 96 inches, it could morph in the future into pipelines and ROWs all over NV, especially to include other basins with SNWA water rights or applications. Piecemealing the NEPA process allows the proponent to continually change its project. Sierra Club scoping comments in 2005 and in 2006 pointed out that the project description is a moving target. This draft EIS attempts to deal with a theoretical project/ROW with substantially incomplete information and indefinite timelines. We know of no requirement that BLM must consider a speculative project with major critical missing information.	Please refer to standard resource responses Gen-1 and Gen-2 for information on this topic.
34380-22	Please clarify this statement (p. 1-6): " ... the framework for development of monitoring plans is assumed to follow the Stipulation ... " Are there no existing developed monitoring plans? How can the effectiveness of un-developed monitoring plans be assessed in the draft EIS? Why is this "assumed?" Doesn't BLM know whether mitigation will or will not follow the provisions in the stipulations? Why is the "3M" plan for Snake Valley a "recommended" mitigation measure? Who recommended it? To whom was it recommended? Is it actually "required" by BLM either now or in the future?	Thank you for your comment. Please see Standard Resource Response MM-1.

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ID	Comment	Response
34380-23	1 C. Sec. 1.4 relationship of BLM and NV water rights process: Significant information on the history of the controversial nature of the GWD project has been omitted. Please add the interbasin transfer requirements in NRS 533.370(6) to the first paragraph in this section as they are at the heart of the controversy over SNWA's applications for rural groundwater to export to So. Nevada. Also, please add the following correction and addition to Sec. 1.4.1.1: "In 1989, the Las Vegas Valley Water District (LVVWD) filed 146 applications with the Nevada State Engineer for permits within 26 hydrologic basins for groundwater withdrawals totaling approximately 800,000 acre feet per year. In response to the filing of the applications, the State Engineer received over 3,600 protests from nine hundred different parties. LVVWD did not pursue these applications for over 13 years, turning them over to SNWA in 2002."	Based on this comment, text has been added to chapter 1 and section 3.3.
34380-24	The draft EIS mischaracterizes BLM's participation in the water rights process and fails to disclose BLM's multiple conflicts of interest. Please add the information to the second paragraph in this section that BLM's role as a protestant was terminated by its agreement, along with other federal agencies, to drop all federal protests, in exchange for a "stipulated agreement" with SNWA. We disagree with the statement that BLM's role as a (former) protestant is separate from the EIS process. The EIS process and the water hearing process are inextricably linked, since they both address the same SNWA proposal to export as much rural groundwater as possible to Southern Nevada. The draft EIS should disclose that BLM has a conflict of interest as the manager of the public lands and resources impacted by the proposed GWD project, the agency responsible for the EIS, as well as a party to the stipulated agreements in Spring and Cave, Delamar, and Dry Lake Valleys with the proponent of the project. Please disclose in the EIS how it proposes to resolve this conflict of interest.	BLM's review of the ROW application is being conducted in the strictest compliance with NEPA, FLPMA and LCCRDA, among other federal laws. BLM, as the manager of public lands, has a responsibility, among others, to manage those lands for multiple use and sustained yield. BLM's action in participating in the stipulations was consistent with this responsibility and is not in conflict with its role in reviewing the ROW application.
34380-25	The interpretation in this section that the NSE has exclusive authority over water rights appropriations in Nevada and the BLM has no authority or responsibility as the manager of public lands and their water-dependent resources to prevent undue and unnecessary degradation from water pumping impacts is incorrect.	The statement about the BLM's relationship to the Nevada Water Rights process is correct.
34380-26	The draft EIS mischaracterizes the overlapping but separate roles of the BLM and the NSE. We refer you to a recent Nevada Supreme Court ruling which clearly states that the land use agency is not obligated to approve proposed developments whose water rights have been granted by the NSE. The citation is: Redrock Valley Ranch v. Washoe County 127 Nev. Adv. Op. No. 38 July 7, 2011 IN THE SUPREME COURT OF NEVADA No. 55695 at: http://www.nevadajudiciary.us/index.php/advancedopinions/1162-redrock-valley-ranch-v-washoe-county . Additional information about BLM's responsibilities to manage and protect public lands and resources under FLPMA and other laws, regulations and executive orders should be added to this section.	BLM understands its role as it relates to water rights and the use of public lands. This is discussed in chapter 1 of the EIS.
34380-27	If BLM grants ROW requests, BLM will facilitate the development of SNWA water rights and allow pumping damages (as disclosed in the draft EIS) to its lands and resources. There is no law preventing BLM from limiting the pumping if it damages lands under its jurisdiction or from requiring mandatory mitigation measures, including setting impact thresholds to limit or stop SNWA pumping as conditions of any ROW permit granted.	Please refer to standard resource responses MM-1 and MM-2 for information on this topic.
34380-28	Water demand information in the draft EIS appears to be based on SNWA's 2009 Water Resources Plan, which in turn based on 2008 population forecasts by UNLV's Center for Business and Economic Research. This information is significantly outdated in 2011 because of the impacts of the recent economic recession on So. Nevada's economy and population. We will have more comments about the draft EIS population/demand forecasts and "short-term adjustment" in our comments on Sec. 18 in Chapter 3.	Additional information has been added to section 3.18 to address your concern.
34380-29	The BLM does have the responsibility to ensure that information provided by the proponent for the draft EIS is as accurate and up-to-date as possible, including information on SNWA demand projections, timing and quantity of water required, and potential alternative sources of water, including increasing water efficiency and conservation. This information should be the basis for the range of alternatives analyzed in this EIS.	The FEIS has been updated with the most current information available. Please see standard resource responses Gen-3 and Gen-5 concerning the range of alternatives.
34380-30	This research documents the substantial water efficiency gains made over the past twenty years with declines in per capita water delivery rates, despite rapid population growth, and concludes that projecting future water demands should take into account the successes achieved in cities by successful water conservation programs.	Thank you for your comment. The subject of this comment is beyond the Draft EIS scope and does not require further agency response. However, your comment topic will be considered by the BLM during preparation of the Final EIS and Record of Decision. Your comment has been provided to SNWA for consideration in the next version of their Water Resource Plan.
34380-31	On p. 1-14 of the draft EIS is the statement: "The other Colorado River states have expressed the view that Nevada should develop its in-state resources before attempting to modify the Colorado River Compact. What is the documentation for this purported "view? Spending \$15.4B for the total current estimate of costs of the GWD project seems quite a high investment to ask of SNWA and Nevada to meet the "opinion" of other Colorado states. Please disclose in the EIS what Nevada gets from the other Colorado River states in return for this huge financial investment and massive devaluing of the intrinsic values of the public lands in eastern Nevada and Utah's West Desert.	Text has been revised.

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ID	Comment	Response
34380-32	A critical failure of the draft EIS is not providing the public information on the costs of the GWD project. For this information, we had to go to a document on the NSE's website filed by the proponent on the project's financial feasibility: Ability to Finance Report to the SNTVA by Hobbs, Ong & Assoc. and Public Financial Management, June, 2011, NSE exhibit# 383: http://water.nv.gov/heari11gs/upcoming/springetal/exhibits/Southern%20Nevada%20Water%20Authoritv/SNWA Exh 383 Hobbs%20and%20Bonow%20Report.pdf . This report estimates the current cost of the project to be a total of \$15,463,466,453.00, with \$7,283,335,000 the cost of the project and \$8,180,131,453 financing cost of the project. The report also estimates that the average monthly bill for single-family residences will rise to \$90.62. We understand that this is a tripling of the current average bill of around \$30/mo.	Thank you for your comment. The underlying concerns in your comment are outside the scope of the EIS, which relates to the BLM's processing of a ROW application (see Standard Resource Response Gen-3). However, because of comments received to the EIS, summary information project cost are included in the FEIS. See also Standard Resource Responses SocEcon-1, SocEcon-3 and SocEcon-6. As noted in the comment, further 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
34380-33	The draft EIS also fails to disclose how much SNWA has currently spent on the GWD project, including the purchase of ranches, water rights, operating costs, permitting costs and the related Coyote Springs/Moapa project to implement NSE order # 1169.	Thank you for your comment. The subject of this comment is beyond the Draft EIS scope and does not require further agency response. However, your comment topic will be considered by the BLM during preparation of the Final EIS and Record of Decision. Please refer to standard resource response SocEcon-1 for information on this topic.
34380-34	Mitigation costs (over 200 years) are missing. We will provide costs of mitigation by LADWP in Owens Valley as part of our comment #4 on monitoring and mitigation.	A determination of monitoring and mitigation costs are beyond the scope of the EIS. Mitigation and monitoring will be further defined in future NEPA. See Standard Resource Response Gen-2 for a discussion of programmatic analysis and subsequent NEPA.
34380-35	Revenue projections appear to be based on a constantly increasing population - neither is likely.	Please refer to standard resource response SocEcon-2 for information on this topic.
34380-36	More conservative population estimates should have been used, such as those of the Nevada State Demographer of the 2010 population projections: http://nvdemography.org/featuredarticles/235/	See also Standard Resource Response SocEcon-2 regarding the presentation of population forecasts in the EIS.
34380-37	Any contingencies for cost overruns are missing, e.g. a \$40M cost overrun in 2011 for the \$700M 3rd straw project at Lake Mead and a \$31.3M overrun in 2000 for the River Mountains Water Treatment Facility.	See also Standard Resource Response SocEcon-1 regarding the inclusion of summary project cost information in the FEIS. Additional information regarding SNWA's cost estimates can also be found on the Nevada State Engineer's website: www.water.nv.gov/hearings/past/springetal/documents.cfm?DIR=exhibits.SNWAExhibits .
34380-38	Estimates depend on an unreasonable, unrealistic and unwise future debt load, especially if the economy of So. Nevada does not recover quickly.	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. This information will be provided to SNWA for their use in future water resource planning. Refer also to Standard Resource Response SocEcon-1.
34380-39	SNWA's ability to implement its plan in part Sierra Club Comments on BLM GWD Draft EIS Page 11 of 49 depends upon its ability to continue its practice of refinancing debt, which hinges on market perception of its creditworthiness; transporting water from water-rich to water-poor regions is an energy-intensive practice that makes regional economies vulnerable to energy price volatility; supply projects with high marginal costs can limit a utility's financial flexibility, leaving it unable to adjust to future changes in supply, demand, and governance structure. If this forces water rates past a certain point, regional economic competitiveness may be compromised; relying on growth to pay for system reliability is fundamentally unsustainable; and retail providers are not necessarily bound to purchase water from their wholesale provider, creating credit risk for the wholesale entity.	Thank you for your comment. The subject of this comment is beyond the Draft EIS scope and does not require further agency response. However, your comment topic will be considered by the BLM during preparation of the Final EIS and Record of Decision. Please refer to standard resource response SocEcon-1 for information on this topic.
34380-40	In addition, the draft EIS fails to provide any information on the minimum amount of groundwater necessary to make the GWD project financially feasible. Is it 100% of the proposed 176.655 afa amount? 75%, 50%, 25%? The public and BLM are unable to make informed comments and decisions on whether a smaller pipeline, less groundwater, and a cheaper project would be preferable to the Proposed Action.	New text has been added to Section 2 of the Executive Summary and Section 1.3 and 1.6 of the Final EIS to clarify that SNWA is solely responsible for projecting future demand and pursuing actions it deems reasonable and prudent to meet those demands (including the determination of the volume of water that makes this project financially feasible) and that BLM's processing of SNWA's ROW application does not consider those projections.
34380-41	IE. Sec. 1.7 Public and agency seeping: In Sierra Club seeping letters of August 1, 2005 and October 16, 2006, we raised issues which are not addressed in the draft EIS, including: changing project descriptions/incomplete information. In the draft EIS, BLM is dealing with this moving target problem by its attempt to "tier" EISs, but has had to disclose a substantial amount of unknown, incomplete, and uncertain information on which it based its impacts analysis, because of the changing nature of the proposal. • piecemealing NEPA • non-public negotiations on federal agency/SNWA stipulation agreements in Spring and Cave, Delamar and Dry Lake Valleys and 3M plan negotiations in Snake Valley, NV. • cumulative impacts not analyzed adequately • BLM conflict of interest as signatory to SNWA/federal stipulations and also lead agency in developing the GWD project EIS and monitoring and mitigation requirements for pumping impacts. • inadequate purpose and need • inadequate range of alternatives, including eliminating demand reduction and desalination. • inadequate protection for Great Basin National Park and its cave resources • segmentation of SNWA's overall GWD plans by omitting significant parts • non-disclosure of GWD project costs or energy costs • inadequate analysis of socioeconomic and environmental justice impacts	Based on this comment and others, text has been added to the FEIS to clarify and strengthen many of these issues. Chapter 1 contains a thorough explanation of BLM's legal mandates and responsibilities, including BLM's role in the Nevada State Engineer's process for protesting water rights applications. Also, please see Standard Resource Response MM-1.

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ID	Comment	Response
34380-42	The draft EIS fails to study an adequate range of alternatives. The Sierra Club considers alternatives A-E to simply be varying scenarios of the Proposed Action, as they all grant SNWA its ROW requests for its GWD project and all show pumping impacts that cause undue and unnecessary degradation of public lands. Smaller pumping amounts simply take more time to cause these unacceptable impacts.	The BLM identified alternatives (see sections 2.1 and 2.2) that utilized the Congressionally-mandated LCCRDA corridor south of the White Pine County line and presented a range to encompass analyses related to pumping volumes, pumping locations and concentration of pumping activities, valleys where pumping could occur, and alternative pumping scenarios. BLM Best Management Practices, Applicant-committed Measures, Stipulated Agreements signed by the Department of Interior Bureaus, and additional mitigation and monitoring presented both in the FEIS and in additional plans drafted by the BLM will help to protect the environment from large-scale damage to the extent possible.
34380-43	BLM states that the No Action alternative (p.2-6) is " ... a benchmark for comparison of the Proposed Action and the other alternatives," implying that the BLM cannot select the No Action alternative. Is this correct? If not, w1der what conditions can the BLM select the No Action alternative?	The No Action alternative is presented, analyzed, and considered as a true alternative in this EIS analysis. However, the LCCRDA identified a corridor below the White Pine County Line granting a right-of-way for a groundwater conveyance system. Therefore, the LCCRDA is in conflict with the No Action alternative.
34380-44	In Sierra Club comment # 1 C, we have discussed BLM's mischaracterizations of limitations on its authorities and responsibilities because of provisions of the LCCRDA and the Southern Nevada Public Lands Management Act (SNPLMA). This section raises possible questionable limitations on BLM as a signatory of the Spring Valley and the Cave, Delamar, and Dry Lake Valleys stipulated agreements (p. 2-5) as the language, " ... BLM may negotiate monitoring programs ... " and " ... the BLM may request and enforce changes in groundwater pumping regimes ... " to protect public lands from undue and unnecessary degradation from SNWA pumping impacts (see also Siena Club comments on monitoring and mitigation in #4) and also to actually require any mitigation for unavoidable impacts ..	Thank you for your comment. Please see Standard Resource Response MM-1.
34380-45	The draft EIS fails to adequately describe the No Action Alternative: There is no justification for including either SNWA's or LCWD's water rights in the "total" of existing water rights. Both are dependent for transport and use of its water on the SNWA pipeline. SNWA is likely not to pursue its agricultural endeavors in Spring Valley if it either receives no water rights from the NSE or no ROW permit from the BLM. The LCWD will not likely have the funds to construct a pipeline to transport its converted agricultural water rights out of Lake Valley. In addition, including these #sin the No Action alternative tends to minimize the impacts of the GWD project. There is no table to accompany Figure 2.2-1, listing by basin the industrial and power, municipal and irrigation water rights purportedly represented in the Figure in hard to locate dots or color smears. This information should be disclosed in the EIS. There is no justification for not including climate change impacts, as they will occur whether the GWD project ROW is approved and the project built or not.	The Nevada State Engineer has granted some water rights in Spring, Delamar, Cave, and Dry Lake Valleys. Both identified individuals are using current agricultural water rights, see section 2.2.1 of the FEIS. The water rights are described in detail in section 3.3.1.7 and in table 3.3.1-18 of the FEIS. The climate change main discussions and information is in section 3.1.1.4 and various discussions are in other resource sections in the FEIS.
34380-46	The proposed BMPs are inadequate to protect public lands and resources. The draft EIS list of Best Management Practices (BMP) appears to only apply to project construction, not to drawdowns, subsidence, or drying of springs, streams, seeps, wetlands, etc. by groundwater pumping. Is this correct? In addition, the draft EIS omits any BMPs for preventing or mitigating potential pumping impacts from an unknown # of construction wells and temporary wells (described in Sec. 2.5) on water sources for wildlife and wild horses. We suggest that, for such a major project. The BLM require the proponent to fund an on-site BLM employee (perhaps more if the active construction zone is more than just a few miles in length) reporting directly to the BLM district offices involved. There are too many BMP's which would require that the construction company to notify the BLM of some problem or needed decision so that the BLM can then take some action. Having to contact BLM officials in the Ely or Las Vegas offices would delay the BLM's response and makes any problem less likely to be resolved in an acceptable manner when environmental resources are at stake.	Section 3.20 describes how all the protective measures associated with this project are interrelated. BMPs are just one category of protective measures and come from the Ely Resource Management Plan. In ACM A.1.2 (applicant committed measures listed in Appendix E -- another category of protective measures), SNWA committed to funding a BLM compliance inspector(s) which would fulfill the duties as identified in this comment.
34380-47	BLM decisions on ACECs are arbitrary, capricious and inconsistent. We strongly object to the statement on p. 2-13 regarding a non-conforming buried water reservoir in the Proposed Action which would be located in the Coyote Spring Area of Critical Environmental Concern (ACEC) set aside to protect threatened Desert Tortoises: "The provisions of the LCCRDA supersede the BLM ACEC management prescriptions." What is the legal basis for this statement? Yet, in another non-conform1ing part of the Proposed Action. The BLM includes a portion of the proposed ROW outside the LCCRDA corridor "in order to protect a stand of Joshua trees and avoid the need for an additional pumping station." Please explain why relocating a water reservoir to protect Desert Tortoises in the LCCRDA corridor within an ACEC is not acceptable to the BLM, but realigning the proposed ROW outside the LCCRDA corridor in Delamar Valley to protect Joshua trees is acceptable for the Proposed Action? We find BLM's decisions on what to accept or not accept in the draft EIS to be arbitrary and capricious.	The information that is responsive to this comment, including rationale, is contained in Section 3.14, Special Designations. BLM ACEC's are identified as ROW avoidance areas, except within designated utility corridors (such as LCCRDA). This section has been updated to more accurately describe where the facilities are located with respect to the LCCRDA corridor. Language has been added to this portion of Chapter 2 referring the reader to Section 3.14 for more information.

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ID	Comment	Response
34380-48	<p>Non-conforming impacts of the GWD project must not be allowed. Other potential non-conforming impacts on public lands and resources, including those identified on p. 2-13 - aquatic resources in Shoshone Ponds, vegetation resources in the Swamp Cedars and Baking Flat ACECs, potential riparian vegetation changes related to aquifer drawdown in wilderness areas within the Fortification Range, Highland Ridge, and Mount Grafton and visual management guidelines should not be allowed. All other non-conforming impacts on BLM programs in the targeted areas should be identified in the EIS and not allowed. BLM should set limits to the disturbance and loss of important and unique resources in ACECs and other BLM lands in the EIS. It is entirely appropriate for the BLM to determine that certain features and unique areas are not to be harmed by the proposed pun1ping. The BLM has chosen to delay this critical impacts avoidance measure to some undefined future process not subject to NEPA and out of Sierra Club Comments on BLM GWD Draft EIS Page 14 of 49 the public scrutiny. Pem1tting a ROW for a project which leads to the loss of water for vegetation and ponds in ACECs and wilderness areas is not discretionary, but is a violation of BLM's laws and mandates.</p>	<p>The purpose of the NEPA analysis is to disclose potential impacts. Based partially on the analysis in the EIS, the BLM, in collaboration with other Federal Agencies will make a determination of the actions allowed on public land. Please see Standard Resource Response Gen-2 for a discussion of programmatic analysis and tiering under NEPA.</p>
34380-49	<p>Of note is the lack in the draft EIS of any proposed monitoring and mitigation plan for the Nevada side of Snake Valley. Any such plan should be developed in an open and transparent process. with full participation by all interested citizens, in a full NEPA process.</p>	<p>Thank you for your comment. Please see Standard Resource Response MM-1.</p>
34380-50	<p>Language on the ACMs appears to leave mitigation of groundwater pumping impacts to the project proponent which would be an abnegation of BLM responsibilities. What is meant by the statement "It is understood than SNWA would implement the ACMs it has proposed. w1less superseded ... "? Who "understands" this? And why? Does this mean that ACMs are not enforceable by the BLM? Why and how would (voluntary) ACMs be superseded? Who makes that decision? What would they be superseded by?</p>	<p>Thank you for your comment. Please see Standard Resource Response MM-1.</p>
34380-51	<p>The draft EIS fails to disclose the capacity for water transport by the SNWA pipeline. The 96" pipeline in the Proposed Action would appear to have capacity to transport water which far exceeds the runow1ts of water studied in the Proposed Action and other scenarios. Likewise, we believe that the same is true for the other scenarios (A-E). The draft EIS fails to disclose how much water (gallons and acre-feet) could be transported in a 96 inch pipeline and how the excess capacity could be used to transport additional volumes of water. Additionally what are the sources of additional water that could be transported in this over-sized pipeline? What impacts would occur by pumping additional water in the targeted or newly targeted basins and when would they be analyzed in the NEPA process?</p>	<p>See Standard Resource Response Gen-2 for additional information regarding the tiering process.</p>
34380-52	<p>The Proposed Action is not adequately defined. We have a host of questions about omissions from the description of the Proposed Action: 1. Where would future lateral pipelines connect into the main SNWA pipeline? 2. How much water would be used for construction purposes, if wells are to be drilled every 10 miles along the ROW? 3. Is this construction water part of the 176.655 afa or the 114,785 afa amounts in the Proposed Action or other scenarios? 4. If not, when would the impacts of groundwater pumping in up to 30 additional wells be analyzed by the BLM? 5. How many additional temporary water wells would be drilled within the construction areas? 6. How much water would be pumped in these wells? When will these pumping impacts be analyzed? 7. What happens to the construction wells (and groundwater) when construction is completed? 8. Why were 75 and 200 years selected as the only points in time for comparison of future groundwater pumping impacts? 9. Why weren't shorter timeframes selected, such as 10, 25, or 50 years? 10. What is the likelihood that the construction schedule in the draft EIS will be "deferred"? 11. On p. 2-3, the draft EIS justifies the BLM decision to include "distributed pumping, in the Proposed Action and most of the scenarios because of" ... the objective of minimizing effects on senior water rights or areas containing water-dependent sensitive or listed species and their habitats." While these objectives are possible, the draft EIS fails to disclose that SNWA may also attempt to change its points of diversion from any well sites approved by the NSE to other sites in order to maximize groundwater production. This is a far more likely SNWA "objective" considering the applications were filed in 1989 and some are are in sites unlikely to yield the application an10tmts. 12. On p. 2-30. Figure 2.5-6 shows "SNWA's Preliminary Construction Schedule for the Proposed Action." The construction schedule in the draft EIS is totally inaccurate and a misrepresentation of the intentions of SNWA to start construction in 2012, ramping up to a construction workforce of over 900 by 2015. This has been confirmed on September 26, 2011 by Patricia Mulroy, general manager of SNWA. In sworn testimony at the on-going water hearings in Carson City, Ms. Mulroy stated that SNWA has no intention of starting construction on the GWD project. until it is needed. She defined "need" as Lake Mead levels falling to the 1 07 5 foot elevation (official shortage), the Las Vegas economy recovering quickly, or a need to replace other Colorado River water supplies. She told the NSE that she wanted permits from the NSE and the BLM, but the GWD project would "stay on the shelf" until needed.</p>	<p>1. Unknown at this time - See standard resource response Gen-2 for details regarding the tiering process. 2. Unknown at this time. See standard resource response Gen-2 for details regarding the tiering process. 3. Unknown at this time. See standard resource response Gen-2 for details regarding the tiering process. 4. See standard resource response Gen-2 for details regarding the tiering process. 5. Unknown at this time. See standard resource response Gen-2 for details regarding the tiering process. 6. Unknown at this time. See standard resource response Gen-2 for details regarding the tiering process. 7. The wells would either be capped or be converted to production wells. 8. See WR-2 for a discussion regarding timeframes chosen for analysis. 9. See WR-2 for a discussion regarding timeframes chosen for analysis. 10. Unknown at this time. 11. Changes to SNWA points of diversion would be an action that would be addressed by the Nevada State Engineer. This EIS analyzes the Points of Diversion that currently are identified in applications to the Nevada State Engineer. 12. Thank you for your comment.</p>

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ID	Comment	Response
34380-53	<p>We have a number of questions about the ACMs. summarized on pp. 2-38 to 44. • Please explain the term "applicant-committed." • Are ACMs enforceable by BLM? If so, what are the costs of enforcement and funding sources (for up to 200 years)? • If not, is it more accurate to describe them as "voluntary"? • Does this mean that the applicant can implement the ACMs or not, at its discretion? We ask these questions because of the wording in the draft EIS (p. ES-21): "SNWA has identified applicant-committed environmental protection measures that may be implemented, if needed, to minimize or mitigate potential water-related effects associated with future withdrawals." • Who decides whether or not ACMs are implemented? • And who decides if ACMs are needed or not?</p>	<p>Based on your comment, additional text has been added to the FEIS. ACMs are enforceable by BLM because they will be placed in the ROW, a legal instrument, and made part of its terms and conditions. In some cases, BLM may find a particular ACM to be similar or lesser to a mitigation measure developed through the EIS and would not include that ACM in the ROW.</p>
34380-54	<p>Other "mitigation" described in Sec. 3.5 of the Executive Summary involves words like " ... are designed to avoid, minimize or mitigate ..." but their implementation is not guaranteed, nor, of course. The effectiveness of the ACMs. The words "some impacts" appear to limit ACMs and additional mitigation to a subset of impacts from construction and operation of the GWD project. This is very confusing to the reviewer. The EIS should be very clear on what mitigation is required and will be enforced, versus what mitigation is voluntary and not enforceable. In addition, the draft EIS should identify the impacted resources which will not be mitigated at all (other than the ones identified in the Irretrievable and Irreversible Impacts section).</p>	<p>All mitigation that is determined to be part of the Record of Decision as permit conditions will be enforced by the BLM. Section 3.20 contains a summary of the COM Plan and all recommended mitigation, management and monitoring actions related to this ROW.</p>
34380-55	<p>If the Gonder to Spring Valley electrical power line transmission line is actually needed, it should be located on public lands to avoid the unnecessary complications of federal permitting and oversight of the line by another federal agency.</p>	<p>Thank you for your comment. The subject of this comment is beyond the Draft EIS scope and does not require further agency response. However, your comment topic will be considered by the BLM during preparation of the Final EIS and Record of Decision.</p>
34380-56	<p>The draft EIS fails to consider all reasonable alternatives to the GWD project to foster informed decision making. There is nothing unreasonable about analyzing feasible, less costly and less environmentally damaging alternatives such as reduced demand/increased efficiency and desalination. These alternatives do not have to be "acceptable" to the proponent in order to be analyzed in an EIS. Both were suggested to the BLM many times in public scoping comments. Instead, these strawman alternatives (trucking, railroads, aqueducts, phased development and groundwater return) were easily "considered" and then rejected for further analysis in the draft EIS.</p>	<p>The BLM identified alternatives (see sections 2.1 and 2.2) that utilized the Congressionally-mandated LCCRDA corridor south of the White Pine County line and presented a range to encompass analyses related to pumping volumes, pumping locations and concentration of pumping activities, valleys where pumping could occur, and alternative pumping scenarios.</p>
34380-57	<p>Many of these possible alternatives were not selected for further study because "construction costs would be substantially higher than the Proposed Action," "is not economically feasible" or "high operation and maintenance costs," yet the draft EIS failed to disclose the costs of the GWD project. BLM must know the costs or it could not have used costs to make decisions to reject possible alternatives. This is critical missing information which should be disclosed in the EIS.</p>	<p>See also Gen-3 regarding alternative water sources. Although the term "cost" appears in the discussion of several of the groundwater conveyance and management alternatives, the costs of these alternatives were not known and comparative cost was not the basis for dismissing an alternative. Rather the screening was based on other factors, i.e., the impracticality and environmental effects associated with a rail collection and transportation network. Section 2.7 has been revised to clarify that comparative costs were not the basis for dismissing an alternative.</p>
34380-58	<p>We have discussed a demand management alternative in our comment #1D on SNWA's "need" for rural groundwater. We believe it is a substantially cheaper alternative than the proposed GWD project. It would completely avoid the catastrophic environmental impacts disclosed in this draft EIS of proposed groundwater pumping. thus preventing the undue and unnecessary degradation to public lands and resources. The BLM has been arbitrary and capricious in not analyzing demand management as a reasonable alternative in this EIS.</p>	<p>Thank you for your comment. The subject of this comment is beyond the Draft EIS scope; however, it should be understood that the BLM identified alternatives (see sections 2.1 and 2.2) that utilized the Congressionally-mandated LCCRDA corridor south of the White Pine County line and presented a range to encompass analyses related to pumping volumes, pumping locations and concentration of pumping activities, valleys where pumping could occur, and alternative pumping scenarios. BLM Best Management Practices, Applicant-committed Measures, Stipulated Agreements signed by the Department of Interior Bureaus, and additional mitigation and monitoring presented both in the FEIS and in additional plans drafted by the BLM will help to protect the environment from large-scale damage to the extent possible.</p>
34380-59	<p>Desalination was also rejected for study in the draft EIS. What information did BLM use to justify its decision and was it out-of-date? Desalination is being used by more and more communities all over the world. The costs of building desalination plants are falling, because the technology is improving. In addition, Pacific Ocean water is unlimited, while groundwater is a very finite resource, whose availability and reliability as a water source are limited by the same factors affecting Colorado River supplies - droughts and climate change. Another reason for rejection was: the time frame for modifying these (CO River) agreements and regulatory approvals could be "lengthy." The timeframes for completing the GWD project are at a minimum 38 years, but, with construction "deferral" might be double that. BLM has been arbitrary and capricious in not analyzing desalination as a reasonable alternative in the EIS. We suggest that BLM re-evaluate this decision and offer a recent SCIENCE article which discusses the future of seawater desalination: Menachem Elimelech. William A. Phillip. The Future of Seawater Desalination: Energy, Technology, and the Environment. Science, 5 August 2011: Vol. 333 no. 6043 pp. 712-717 DOI: 10.1126/science.1200488</p>	<p>Desalination is a potential source for SNWA in the future as is defined in their water plan. Also see common resource response Gen-3.</p>

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ID	Comment	Response
34380-60	<p>The BLM fails to adequately identify and assess the cumulative impacts and conflicts of RFFAs. The draft EIS fails to include a number of proposed developments, limiting the cumulative impacts analysis to an unreasonably small number of future developments which then biases the analysis towards a conclusion of minimal to no cumulative impacts. This is an arbitrary and capricious decision by the BLM. For example: 1. the Coyote Spring development is a reasonable, past, present, and foreseeable future Sierra Club Comments on BLM GWD Draft EIS Page 18 of 49 development, since its golf course has been built and is using a considerable amount of groundwater from the Coyote Spring basin, which may be impacting downflow basins and sensitive water-dependent resources, such as Warm Springs and its endangered Moapa dace. This development has other water rights for its proposed housing and commercial development. While future development plans are on hold due to the economic recession, the plans have received approval by local counties and seem far more advanced than the LCWD plans to request change of use and place for its water rights in Lake and Dry Lake Valleys, destined for delivery to Coyote Springs and other developments through the proposed SNWA pipeline. The draft EIS does not include some water rights and applications held by the LCWD and due to be delivered to Coyote Spring through the proposed SNWA pipeline as part of all of its scenarios: therefore, how can BLM reject the Coyote Spring LLC development as a RFFA? Table 2.9-5 includes a total of 13,600 afa in Coyote Spring Valley in its total estimated cumulative groundwater consumption use. Not selecting it as an RFFA is an arbitrary and capricious decision by the BLM. 2. the Kane Springs project is a RFF A, but is currently on hold. It has been approved to develop and deliver 1,000 afa to the Coyote Spring development. This is inconsistent with the BLM decision to reject the Coyote Spring development as a RFFA, but to include a project whose purpose is to deliver water to this development. 3. the LCLA GWD and Utility ROW Project was rejected as a RFFA, but its water rights were included in draft EIS alternatives and its potential impacts could affect Lower Meadow Valley Wash in the project study area. 4. the draft Programmatic EIS for Solar Energy Development in Six Southwestern States identified solar development sites in Dry Lake and Delamar Valleys, two of the targeted basins, yet the draft EIS does not explain why projects using water rights in the RFFA column of Table 2.9-5 are not included in its list of RFFAs:</p>	<p>The Coyote Springs development and associated water sources have been added as an RFFA because the water that would potentially serve the development was included as future demand in the groundwater model. Modifications to the cumulative impact discussion have been made in response to your comments on the information used in the analysis.</p>
34380-61	<p>The draft EIS also fails to consider reasonably foreseeable actions by SNWA and by the LCWD.</p>	<p>The EIS considered SNWA and LCWD actions that could conceivably cause cumulative effects in the basins affected by the GWD project.</p>
34380-62	<p>The draft EIS fails to identify or consider over the life of this massive and expensive project the impact of pumping these applications which total to 91,250 afa in Coal, Garden, Patterson, and Pahroc Valleys. Yet the Proposed Action and scenarios in the draft EIS do include LCWD water in Lake Valley. BLM is arbitrary and capricious in what it includes and excludes as RFFAs in the draft EIS. This draft EIS purports to look at changes which could occur to the BLM managed public lands, overall environmental changes, surface water losses, and socioeconomic landscape for 40 (build out), 75 and 200 years; yet the likely possibility that these applications will be brought forward within that time frame is ignored by the BLM and is a failure of the draft EIS. The result is that the potential but likely impacts to the region's environment and economy are neither identified nor analyzed. The draft EIS is deficient in that it fails to consider these applications as RFFAs in the draft EIS.</p>	<p>The RFFAs identified and used in the analysis were based on an assessment of potential overlapping impacts. Additional NEPA tiers will be performed and the assumptions around RFFAs could be revisited at that time. Please see Standard Resource Response Gen-2 for a discussion of programmatic analysis and subsequent tiering under NEPA.</p>
34380-63	<p>The BLM claims that other SNWA applications filed in 1989 do not have to be included in the EIS because SNWA has "no plans" at this time to develop them. SNWA holds applications (or permits) in the region which total to 114,152 afa which date from the 1989 filing in two valleys Tikapoo north and Railroad Valley. Once again, BLM has an obligation in an EIS which purports to predict environmental impacts to the region's environment and economy for many years into the future - at "full build-out in 2050 (or later) and then 75 years and 200 years from now to include the pumping of all SNWA applications because they are reasonably foreseeable should the pipeline be built at all. SNWA holds applications (or permits) in Coyote Spring Valley immediately adjacent to the pipeline corridor studied in the draft EIS. Pumping is proceeding by the SNWA in Coyote Spring Valley as part of the 2002 NSE Order #1169 to determine what amount of more than 50,000 acre-feet per year of already permitted underground water rights in Coyote Spring and 5 adjoining basins he will ultimately allow. Currently, SNWA has a permit to pump a maximum of 9,000 acre-feet per year as part of the study to determine the effect this pumping will have. (The order indicated that the obligated parties to the test were Las Vegas Valley Water District, Southern Nevada Water Authority, Coyote Springs Investment, LLC, Nevada Power Company, and Moapa Valley Water District.) At risk are flows in all down gradient basins of Coyote Spring Valley. The draft EIS must include pumping scenarios for Coyote Spring Valley because they are not only foreseeable, but actually ongoing and will result in the allocation of water which could be placed into the pipeline. SNWA's claim that this pumping is not ultimately a part of the pipeline project and should not be considered in the draft EIS cannot be supported.</p>	<p>BLM has appropriately identified the RFFAs to be included in the EIS. The method and basis for including the specific projects and actions is discussed in the EIS.</p>
34380-64	<p>The draft EIS must include pumping scenarios for Coyote Spring Valley because they are not only foreseeable, but actually ongoing and will result in the allocation of water which could be placed into the pipeline. SNWA's claim that this pumping is not ultimately a part of the pipeline project and should not be considered in the draft EIS cannot be supported.</p>	<p>During the development of the model, it was determined that Coyote Springs pumping by SNWA would not be a reasonable foreseeable action. This determination was made through consultation with SNWA and other agencies and supporting information on this criteria is contained in the FEIS in chapter 2. The FEIS shows those actions that BLM determined to be reasonable foreseeable at the time of the analysis. However, future tiers of water development and NEPA will allow the opportunity to add or subtract additional valleys and pumping situations for analysis review. Future analysis can further define potential impacts with additional data and a better understanding of the future.</p>

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34380-65	SNWA also has recently applied for additional water in Spring Valley associated with the ranches mentioned in the draft EIS. These applications total to more than 11,000 afa. SNWA is- even after the Sierra Club Comments on BLM GWD Draft EIS Page 20 of 49 publication of this draft EIS - still applying for additional water resources which could have the potential to be placed into the pipeline. The draft EIS is premature because it is clear that the SNWA has yet to identify where all of the water to fill the pipeline will come from. Ultimately, the draft EIS is deficient in that it does not address these additional water applications which are likely to be developed and conveyed in the proposed SNWA pipeline within the 40 to 200 year impacts analysis timeframe used in the draft EIS.	The groundwater pumping associated with this ROW application is analyzed conceptually. The assumptions in the EIS are based on SNWA's Conceptual Plan of Development. The recent NSE rulings which are within the pumping amounts analyzed in the EIS (and are described in Chapter 1 of the FEIS), however, they would require additional NEPA analysis before any water can be pumped. Any additional water that SNWA may acquire in the future would have to undergo additional NEPA analysis.
34380-66	The draft EIS does not analyze all indirect effects. By selecting the Proposed Action or any of the scenarios in the draft EIS, BLM would fail to prevent undue and unnecessary degradation to public lands from the unanalyzed and unmitigated indirect impacts of the GWD project. For example, SNWA cannot use water rights outside of its service area in Clark County, according to previous NSE rulings. The draft EIS suggests that SNWA is committed to providing or augmenting water as mitigation for groundwater pumping impacts, but what are the sources of this water? If "mitigation" requires water in targeted and affected basins, SNWA will have to purchase existing water rights or apply for new water rights in specific basins, for specific mitigation purposes. Obtaining water from additional sources in the area already experiencing adverse impacts from SNWA groundwater withdrawals and pun1ping drawdowns on both ground and surface water sources will exacerbate those problems. When will these environmental impacts on public lands and resources be analyzed in the NEPA process? What monitoring and mitigation would be required to address these indirect impacts? What are the costs of the required monitoring and mitigation and the source of funds?	Thank your for your comment. Please see Standard Resource Responses Gen-7 and MM-1 for a discussion on mitigation and Gen-2 for additional detail on the programmatic analysis process and subsequent NEPA.
34380-67	On page 3-1, the draft EIS states that this chapter 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 draft EIS fails to disclose the "acceptable" levels of impact intensity. Deferring this critical information to some future process not subject to NEPA prevents the public and the BLM from making informed comments and decisions on the draft EIS. What is the definition of "acceptable level of intensity" of impacts? How and who defines what is "acceptable?" For instance, are water drawdowns to 200 feet acceptable? to the BLM? to the SNWA? to the public? If not. are drawdowns to 100 feet acceptable? Is subsidence over 575 square miles acceptable? to whom? If not. then is subsidence over 300 or 100 square miles acceptable? to whom? We can see that there may be substantial differences of opinion on acceptable or non-acceptable levels of impact intensities. How are differences to be resolved? Who resolves them?	Text in this section does not use the words "acceptable level of intensity". The sentence says "If impacts are still considered to be at a level of intensity after applying protection measures . . ." Impact analyses used a relative indication of impact levels such as low, moderate, and high in situations where a standard or threshold level could not be defined. Additionally, please see Standard Resource Response MM-1.
34380-68	The list of incomplete and unavailable information in the draft EIS on pp.3-4 to 3-5 does not represent the total information missing from this document. The BLM has had to make so many assumptions to compensate for the missing information that the draft EIS does not have a solid foundation. For example, project descriptions for well sites have not been provided to the BLM by the applicant. Instead, the applicant provided information on "groundwater development areas." However, without approval by the NSE for applications for changes in the points of diversion (which have not yet been filed), the "groundwater development areas" are simply a fiction. In addition, BLM has chosen to omit from impacts analysis of RFFAs large areas with SNWA water rights applications, which, if approved by the NSE, would provide additional water to be transpm1ed through the SNWA pipeline.	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.
34380-69	The draft EIS is critically flawed by the incomplete information on possible springs, streams, seeps, and wetlands in the "large" regional study area which would be the most vulnerable to pumping drawdowns (see our comments in #3D). This is a massive project with potential impacts on 12,535,040 acres in 35 basins in eastern Nevada. However, the size of the affected area is not an acceptable excuse for the paucity of information in the draft EIS 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.
34380-70	"Tiering" in the draft EIS allowing future collection of missing information for an unknown number of future NEPA analyses has created a nightmare of missing and uncertain information and unknown impacts all of which will doom the ability of the public to keep track of future BLM decisions, monitoring, and the effectiveness of proposed mitigation. The draft EIS provides no information on how tracking of what missing information would be collected and who would collect it, and how the public would know this. The draft EIS also fails to disclose the costs of and timefran1e for collecting future information. In any event, without knowing the majority of water resources to be affected by the GWD project, it would be impossible to collect information on dried springs discovered in the future and futile, as how would future information change BLM's decision on the ROW already issued?	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. Please refer to General Comment Response Gen-2.
34380-71	Other incomplete and unavailable information listed in this section (visual resource information, soils, wildlife information, special status species, Great Basin National Park, caves, groundwater flow modeling/water resource information, and climate change) are critical for the public and the BLM to make informed comments and decisions on this draft EIS. The EIS process should not proceed until this information is supplied to the BLM by the proponent. (See additional SC comments on missing and incomplete inform1ation on these areas of missing information in nearly every section of the draft EIS.)	See Standard Resource Response Gen-2 for details regarding the programmatic analysis and tiering process.

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34380-72	The draft EIS inappropriately fails to include in its impacts analysis areas affected by pumping drawdowns between the estimated 1 and 10 foot drawdown contours, even though major impacts could occur in these areas dependent on shallow groundwater. Potentially affected by a less than 10 foot drawdown are springs, wetlands, sub-irrigated meadows, and wells, as well as vegetation. BLM justifies eliminating the areas affected by 1-10 foot drawdowns because that is what the agency has done in the past. However, for this project this BLM decision is inappropriate since areas affected with less than a 10 foot drawdown may cover hundreds of square miles. In addition, analyzed climate change impacts to the study area could also be stressing water-dependent resources.	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.
34380-73	Likewise, limiting the timeframes of impacts analysis in the draft EIS to only 200 years is 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.	Please see Standard Resource Response WR-1.
34380-74	The draft EIS does not disclose when equilibrium would be reached with various pumping amounts in the Proposed Action and scenarios 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 draft EIS fails to show pumping will cause a large amount of undue and unnecessary damages to public lands and resources.	Please see Standard Resource Response WR-2 for a discussion of model timeframes.
34380-75	Contrary to BLM laws and regulations (and Secretarial Order 3226) on considering climate change impacts when making major decisions affecting BLM's environmental resources, the draft EIS dismisses all potential climate change impacts from its impacts analysis in chapter 3 (page 3-5): "since the current state of climate change science prevents the association of specific actions with specific climate-related effects, the BLM can neither: (a) analyze the climate-related effects of BLM actions nor (b) ascribe any significance to these potential effects." Despite difficulties and uncertainties in predicting the exact effects of climate change, these impacts should be a part of the impacts analysis for all resources, not just air and atmospheric resources.	Please see common responses Air-15 and Air-17.
34380-76	The Humboldt-Toiyabe (H-T) National Forest Climate Change Vulnerability Report, published in April 2011, for much of the same area affected by the GWD project shows that climate change will increase temperatures and aridity and that warmer winters will cause earlier melting of snow with less water available overall. The study shows that " ... higher temperatures will increase evapotranspiration and droughts ... " and " ... warmer wintertime temperatures and earlier melt dates will deplete this virtual reservoir, leaving much less available water for natural systems and human uses." Has BLM conducted similar climate change vulnerability studies on its public lands in eastern Nevada and western Utah? The report can be found at: http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5294901.pdf . The H-T report and the draft EIS both agree that climate change will affect precipitation amounts, timing and locations, thus affecting evapotranspiration, infiltration and recharge and the ultimate availability of water for human and environmental uses. Even SNWA in its Water Resources Plan (p. 11) gives more consideration to current and future significant impacts of climate change on its Colorado River supplies than the draft EIS: "Climate change impacts on the Colorado River and the American Southwest are expected to be significant. The majority of regional climate models project a more arid climate and reductions in Colorado River runoff in the future. These reductions are expected to be in addition to natural-flow variabilities and temporary drought conditions." The EIS should use the H-T study and the best available science for a model analysis of reduced precipitation to assess the effects of various scenarios of recharge on future water supply availability and reliability. The draft EIS model should also assess the cumulative impacts of the GWD project, especially the pumping drawdowns with, for example, a 10, 20, and 30% reduction of recharge in the study area.	Please see common response Air-16. Refer to the Cumulative Impact section in each resource.
34380-77	The draft EIS should examine the current carbon footprint of water management in southern Nevada and the impacts on the future carbon footprint with exportation of up to 177,665 afa of rural groundwater.	Please refer to the GHG calculations in Section 3.1.2. In addition, please see common response Air-19.
34380-78	On p.3.1-34, the draft EIS makes a questionable statement in regard to function of native vegetation dried up in pumping drawdown areas (40 basins): "It is expected that annual species would continuously bind the soil surface with living or dead root systems, even though the individual annual plants would not act as long-term barriers to wind." In addition, the conclusion from this "fact" is equally counterintuitive: "Therefore, 10% of the surface area composed of this ET unit and affected by groundwater drawdown would be affected." What science supports these questionable statements? What is the total surface area of this ET unit which will be affected by pumping drawdowns? How many of the 40 basins in the project study area would this "conclusion" apply to?	Please see Standard Resource Response VEG-5, which addresses the concerns raised in this comment
34380-79	On p. 3.1-36, the draft EIS estimates that " ... up to 40 percent of the project's power requirements can be offset by the installation of hydro-turbines at the three pressure reducing stations." Please explain how this calculation was made. Does this statement imply that hydroturbine use will reduce the 327,000 tonnes of CDE per year, the estimate of total emissions, by 40%?	The installation of hydroturbines is an action slated for future analysis. Please see Standard Resource Response Gen-2 for a discussion of programmatic analysis and subsequent NEPA analysis.

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34380-80	On p. 3.1-37, the draft EIS refers to C.2.5 as a mitigation measure to "conduct large-scale seeding to assist with vegetation transition from phreatophytic communities in Spring and Snake Valleys to benefit wildlife and reduce potential air resource impacts." What plants would be seeded? How much water would be needed for this large-scale seeding? What are the sources of this water? When would the impacts of acquiring, developing, and using water for this purpose be analyzed in a NEPA review? What are the costs of this "mitigation" measure?	Please see revised ACM text that was modified to indicate that consultation would be conducted with the BLM, NDOW, and the U.S. Department of Agriculture to determine species and methods to succeed.
34380-81	On p. 3.1-38 the draft EIS states: "the level and extent of these impacts (of groundwater drawdowns 10 feet or greater on windblown dust emissions) are highly uncertain." How uncertain? What is the relevance of this uncertainty? The draft EIS goes on to estimate the tons of PM2.5 each year for 200 years, but these amounts still lead to this vague impact estimate: "At these levels it is possible that windblown dust emissions from groundwater drawdown could impair visibility conditions at Great Basin National Park." How much would GBNP visibility be impaired? At full build out, 75 years, and 200 years? How can the draft EIS be so certain of emission estimates but so uncertain of air quality impacts on GBNP?	Please see common response Air-5 and Air-9.
34380-82	On pp. 3.1-52 and 53, the draft EIS states: "As the seasonal variability (from climate change) increases, and the amount and form of precipitation changes, aquatic species and their habitats would likely be affected." "Climate change could affect aquatic biological resources in the Project Area by: • modification or alternation of aquatic habitats due to changes in precipitation, • potential changes in water temperature and other water quality parameters such as dissolved oxygen, and • potential changes in aquatic species abundance, distribution, phenology, and community composition in response to habitat and water quality changes." How can the adverse effects of climate change on aquatic species be separated out from the adverse effects of groundwater drawdowns? Without this knowledge, we do not see how any "mitigation" plan would be effective. Instead, "mitigation" discussions with no required timeframes by BLM and SNWA to reach consensus on the attributability (SNWA pumping, drought, climate change, or others' pumping) of adverse pumping impacts, while pumping continues unabated, will inevitably lead to the failures of any required or voluntary mitigation measures to protect aquatic species habitat, including that of TES species.	The EIS will not be able to quantify the potential effects from climate change on aquatic habitat in combination with groundwater pumping for the project alternatives or other cumulative pumping. The EIS discloses that climate change could affect aquatic habitat and species in qualitative terms. The goal of monitoring studies is to determine if water levels or flows are reduced from project pumping or other cumulative actions including climate change.
34380-83	On p.3.1-60 in the cumulative effects discussion, the draft EIS states: "It is predicted from model simulations that pumping drawdowns of 10 feet or greater would potentially lead to changes in vegetation that would increase windblown dust emissions. The level and extent of these impacts is highly uncertain." How uncertain? Could windblown dust be far worse than the predictions in the draft EIS? What is the relevance of this uncertain and missing information?	Changes have been made in the FEIS text to address the central concern that underlies this comment; however, due to its overarching nature, specifics regarding the placement of changes in the FEIS are not provided in this response. Please see standard resource responses Air-7, Air-9, and Air-10.
34380-84	The draft EIS dismisses any impacts on cave resources, including at the GBNP, with this statement on p. 3.2-21: " ... data do not exist to provide a connection of area caves to groundwater: therefore, caves are not anticipated to be affected by groundwater pumping." Isn't it also true that data does not exist to prove that there are no connections between area caves and groundwater? The Prudic and Glancy 2009 report suggest no connection. but with what certainty? BLM will be in violation of its legal mandates, including the Federal Cave Resources Protection Act of 1988 if it approves a project which destroys cave resources, because the applicant has not provided sufficient information to assure that pumping will not destroy caves.	Potential impacts to caves from drawdown are more appropriately addressed in Section 3.3.2.8, Water Resources Groundwater Development and Pumping and Section 3.6.2.8, Terrestrial Wildlife Groundwater Development and Pumping. A statement referring the reader to these sections has been inserted under the Issues heading in Section 3.2.2.8 and references to caves have been deleted from the groundwater pumping headings under Section 3.2.2.8.
34380-85	The draft EIS provides no support for its rejection (on p. 3.2-23) of incorporating climate change estimates into its impacts analysis on potential changes to future groundwater availability because specific long-term effects of climate change are not known. The draft EIS often discloses that specific long-term effects of pumping on water table drawdowns, subsidence, water sources, air quality, soils, water resources, wildlife, recreation, and socioeconomics are also "not known" because of a host of incomplete and uncertain information. BLM is arbitrary and capricious in not analyzing some impacts. while purporting to analyze other impacts, all of which are based on uncertain and incomplete information.	Climate change discussion has been added to the cumulative impacts analysis for appropriate resources. The NEPA allows analysis of knowns and disclosure of unknowns. Please see Standard Resource Response Gen-2 for a discussion of programmatic analysis and subsequent NEPA.
34380-86	On p. 3.2-30, the draft EIS presents total feet of ground subsidence by basin from pumping in the Proposed Action at full buildout plus 200 years in Table 3.2-6. Totals include drawdowns by 10-20 feet to over 200 feet, with subsidence ranging from <1 to 1 foot to > 10 feet. A statement on the same page says: "As can be seen on Table 3.2-6, about 525 square miles may be at risk for 5 feet of subsidence or greater." The totals of square miles affected in the table range from 60 square miles of > 200 foot drawdowns to 1,071 square miles of 50-100 feet of drawdowns. However, in Table 3.2-18 on p. 3.2-48. totals of subsidence compared by alternatives states that the Proposed Action at full build out plus 200 years would total 525 square miles. How was the 525 square mile calculated? Please explain this inconsistency. The BLM's decision to only report subsidence >5 feet is arbitrary and capricious	The estimated subsidence areas were calculated based on the assumption that subsidence magnitude would be consistent with drawdown magnitude. The areas shown on Table 3.2-6 and other subsidence summary tables are essentially the areas of predicted drawdown. There is no inconsistency between Tables 2.2-6 and 3.2-18.

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34380-87	On p. 3.2-52, the draft EIS states: "It is possible that subsidence caused by groundwater pumping could damage roadways and structures and could cause local alterations in drainage flow patterns. Because of the long time frames, there would be a long-term opportunity to monitor subsidence as it begins to appear, and to potentially alter pumping regimes to reduce the rate of subsidence ... any subsidence measured at the soil surface is probably irretrievable." Is it correct to interpret these statements that the BLM is requiring no mitigation for subsidence, including damages to roadways, structures, and flood patterns? Does the statement " ... there would be a long-term opportunity to monitor subsidence as it begins to appear ... " mean that BLM is not actually requiring long-term monitoring of subsidence? Is this a suggestion for academic research to document the adverse impacts of the GWD project on 525 square miles of public lands for over 200 years? What is the potential for "altering regimes to reduce the rate of subsidence" and how would this potential be realized in BLM decisions?	Potential impacts related to groundwater pumping have been addressed at a programmatic level in this EIS. Please see Standard Resource Response MM-1.
34380-88	The draft EIS fails to provide sufficient information on what is a "reasonable" draw down of the water table. Is an > 200 foot drawdown reasonable? What do other states or the courts say is "reasonable?"	The potential effects to water resources are addressed in Section 3.3 of the EIS. The EIS analysis describes potential impacts to water resources and water dependant resources associated with the projected drawdown. The NEPA analysis is not required to speculate as to where or not the projected drawdowns associated with GWD pumping activity are "reasonable" or not. In Nevada, the State Engineer is responsible for evaluation the effects to senior water rights prior to ruling on water appropriations.
34380-89	On p. ES-5, the draft EIS states that "5 basins are the primary source of groundwater that would be conveyed by the pipeline." What are the secondary sources? When are the impacts of groundwater development and pumping of "secondary" sources in other basins going to be analyzed?	The Proposed Action includes pumping in five hydrographic basins as described in Section 2 of the EIS. These sources of water were analysed in the FEIS. Please see Standard Resource Response Gen-2 for a discussion of programmatic analysis and subsequent NEPA tiering.
34380-90	The draft EIS fails to discuss the potential reliability of rural groundwater supplies in the face of climate change-induced changes in amounts and timing of precipitation, decreases in recharge to aquifers, higher temperatures and evapotranspiration and more extreme weather events. This missing information is critical, since water sources intended for municipal and industrial uses should be reliable.	Please refer to standard resource responses Air-16 and Air-17 for information on this topic.
34380-91	Does Figure 3.3.1-2 "conceptual groundwater flow system" show the interconnections between surface and groundwater?	Figure 3.3.1-2 is an illustration of the conceptual flow system and shows different groundwater flow paths (blue lines with arrowheads) some of which intersect the surface at a spring.
34380-92	The draft EIS fails to provide adequate information on existing and future water quality in the study area. Will pumping drawdowns exacerbate water quality problems? Will arsenic and other elements exceeding EPA drinking water standards require water treatment by SNWA? How much will the water treatment cost annually and over the life of the proposed project?	See response WR-8 regarding the request to add more detailed descriptions of the potential impacts to water resources.
34380-93	Table ES-11 of the draft EIS discloses substantial impacts of the GWD project on senior water rights, but the draft EIS fails to provide any information on what administrative or legal remedies senior water rights owners have when faced with pumping impacts. Please include this information as well as the estimates of the costs of the remedies in the EIS.	Potential impacts to water rights are discussed in Section 3.3.2 and 3.3.3 of the EIS. GW-WR-6 is provided as a general mitigation measure to address potential impacts to water rights. The protection and mitigation of effects to water rights is the responsibility of the Nevada State Engineer (and UDWR in Utah). In Nevada, the State Engineer would oversee the groundwater development project and monitor effects to existing surface and groundwater rights and take necessary actions to prevent or mitigate impacts if they occur.
34380-94	The LCCRDA mandates in Section 301(d) STATE WATERLAW.-Nothing in this title shall- (1) prejudice the decisions or abrogate the jurisdiction of the Nevada or Utah State Engineers with respect to the appropriation, permitting, certification, or adjudication of water rights; (2) preempt Nevada or Utah State water law; or (3) limit or supersede existing water rights or interests in water rights under Nevada or Utah State law." How can BLM issue a ROW permit to the proponent when BLM's EIS shows significant and unmitigated impacts to senior water rights?	NEPA is not a substantive statute, rather it is a disclosure statute. It does not require an agency to adopt the most environmentally friendly course of action. NEPA requires a federal agency to consider every significant aspect of the environmental impact of a proposed action and to ensure the agency has informed the public that it has indeed considered the environmental concerns in its decisionmaking process.
34380-95	The draft EIS fails to disclose when a new equilibrium would be reached by the pumping amounts in the Proposed Action and the various scenarios. It also fails to disclose the relevance of this missing information.	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.
34380-96	The draft EIS fails to disclose the amount and location of all federal reserved water rights in the project study area. On p. 3.3-65, the draft EIS states: "The unknown nature of unadjudicated federal reserved water rights, regarding both locations and quantities of water, limit the ability to further describe water use of this type in the hydrologic study area." How can an analysis of GWD project impacts on federal water rights be conducted in this EIS without the complete identification of these water rights? How can the BLM protect its water rights if it cannot identify these rights? The draft EIS fails to disclose the relevance of this incomplete and missing data.	Impacts to all potential water sources – whether or not those sources are the subject of federal reserved water rights, state appropriation-based water rights, or are unappropriated waters – have been summarized, evaluated, and considered in the EIS. Similarly, project mitigation measures apply to all water sources regardless of water rights status. By analyzing potential impacts to all identified water sources, the EIS analysis thus encompasses potential impacts to any federal reserved water rights that may later be identified in or adjudicated on these sources. Finally, the EIS describes the background for federal reserved water rights in Chapter 3, Section 3.3.1.7, Water Resources. There is no federal authority prohibiting the grant of a federal right of way on BLM land prior to the adjudication of federal reserved water rights. In this instance, Congress specifically mandated that certain portions of the right-of-way be granted by the BLM for the GWD Project. See Pub.L. No. 108-424, § 301.

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ID	Comment	Response
34380-97	Are all federal reserved water rights listed with the NSE's office? Are these all adjudicated? If federal reserved water rights are not listed on the NSE's website, does this mean that they are not valid? The draft EIS also fails to disclose the location and amounts of all Public Water Reserves (PWRs) in the project study area. Again, are all PWRs in the NSE's data base? If not, does this mean they are not valid? Does PWR #4 apply to all springs on public lands?	Impacts to all potential water sources – whether or not those sources are the subject of federal reserved water rights, state appropriation-based water rights, or are unappropriated waters – have been summarized, evaluated, and considered in the EIS. Similarly, project mitigation measures apply to all water sources regardless of water rights status. By analyzing potential impacts to all identified water sources, the EIS analysis thus encompasses potential impacts to any federal reserved water rights that may later be identified in or adjudicated on these sources. Finally, the EIS describes the background for federal reserved water rights in Chapter 3, Section 3.3.1.7, Water Resources. There is no federal authority prohibiting the grant of a federal right of way on BLM land prior to the adjudication of federal reserved water rights. In this instance, Congress specifically mandated that certain portions of the right-of-way be granted by the BLM for the GWD Project. See Pub.L. No. 108-424, § 301. The DEIS states that “[t]he most common type of federal reserved water rights on BLM land in the project area are Public Water Reserves” and identified all federal reserved and state-adjudicated water rights located through searches of the NDWR and UDWRi databases. See EIS, Section 3.3.1.7. A Public Water Reserve may support a claim of a federal reserved water right in specific circumstances for the reservation of water available from public springs and water holes to preserve water for domestic and stockwatering, and to prevent monopolization of vast tracts of western lands by control of scarce water sources. Impacts to all potential water sources – whether or not those sources are the subject of federal reserved water rights, state appropriation-based water rights, or are unappropriated waters – have been summarized, evaluated, and considered in the EIS. Similarly, project mitigation measures apply to all water sources regardless of water rights status. By analyzing potential impacts to all identified water sources, the EIS analysis thus encompasses potential impacts to any federal reserved water rights that may later be identified in or adjudicated on these sources. Finally, the EIS describes the background for federal reserved water rights in Chapter 3, Section 3.3.1.7, Water Resources.
34380-98	Does BLM have sufficient federal reserved water rights, PWRs, or other water rights to administer water-dependent BLM programs? If not, how is BLM going to secure adequate water necessary for it to comply with federal laws and mandates in protecting and managing public lands and resources, considering SNWA's proposal which would, in effect, monopolize all remaining unallocated water in five basins as well as considering the scale of the severe negative impacts of GWD project pumping on up to 12,535,040 acres or 19,586 square miles of mostly public lands in eastern Nevada? Or, is BLM relinquishing all water to SNWA in this vast area?	Please review the updated section 3.3 (water resources) which discusses potential impacts from groundwater pumping. Please refer to standard resource response WR-9 for information on this topic.
34380-99	The draft EIS fails to provide sufficient information on the susceptibility of caves to groundwater drawdowns.	Potential effects to cave resulting from drawdown is provided in Section 3.3.
34380-100	The draft EIS information in Section 3.3 identifying springs in the project study area is very confusing. The characteristics, including flow data and magnitude, of springs which have been inventoried are known for only a few springs in the project study area. Other springs identified are marked "not field-verified" for which a footnote explains "these springs have not been field verified (i.e., actual existence and flow characteristics are uncertain)." And there are an unidentified number of springs and seeps which are neither known or field-verified. How can the draft EIS conduct an impacts analysis on GWD project pumping impacts on these critical desert water sources if they are either not field-verified or not known? This is incomplete and missing information which is critical to the analysis of impacts of the GWD project.	All available information regarding springs and seeps was incorporated into the EIS water resource analysis as described in Section 3.3.1.4. The information on inventoried springs discussed in this section and provided in Table F3.3.1-1A, Appendix F3.3.1 includes flow data for most of the inventoried springs identified in the region.
34380-101	The draft EIS provides no scientific justification for the BLM decision not to assess drawdown impacts of less than 10 feet. By this decision, BLM may significantly underestimate the impacts of pumping drawdowns on vegetation and springs and other resources which are dependent on shallow groundwater tables.	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.
34380-102	The draft EIS fails to provide information on the sources of water for development of public lands identified for disposal.	Your comment has been passed onto the Ely District for their consideration during the next phase of land use planning. The Nevada State Engineer controls water allocations for future uses and has stated this in his recent rulings.
34380-103	Table 3.18-68 "Socioeconomic Effects Associated with Long-term Pumping, Future Facilities with the Proposed Action," makes unquantified statements on GWD project pumping impacts. Are these impacts low? medium? or high? These are undefined terms which must be quantified. Will these impacts collectively result in the depopulation of eastern Nevada and Utah's West Desert? What is the relevance of this missing information on the intensity of these impacts? How can the public and the BLM make informed comments and decisions on this draft EIS with substantial incomplete and missing information?	Thank you for your comment. No absolute standards that apply to the types and scale of short and long-term effects associated with the proposed GWD project have been established by agency or CEQ guidance. Furthermore, the extended time horizons and unknowns associated with the groundwater drawdown projections result in considerable uncertainty regarding the impacts. Consequently, these topics would be subject to further study in subsequent tiered NEPA.
34380-104	The draft EIS fails to disclose the costs of the damage to private and public roads and structures from subsidence over 525 square miles from GWD project pumping drawdowns. If insurance is available to cover such damages, what is the cost of the insurance to property owners?	Thank you for your comment. The areal extent and potential risks of subsidence are addressed in Section 3.2.2.8. The potential long-term effects on roads and structures due to subsidence are unknown, as are the costs of damages. Text has been added in 3.2.2.8 acknowledging those unknowns and how such damages would be addressed given SNWA's status as a public entity. Text has been added to 3.18.2 regarding the potential indirect effects on roads and other infrastructure and the uncertainty regarding the extent, timing and effects of subsidence.

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ID	Comment	Response
34380-105	The analysis of pumping impacts on soils in the draft EIS is weakened by incomplete and missing data. From Table 3.4-1, we found a footnote that states: "Portions of Coyote Spring, Las Vegas, Pahrnagat, Spring (184), and Steptoe Valleys have no soils data or are limited to the more general STATSGO data. STATSGO are included in the table when more specific data are not available." We could find no definition of STATSGO data in the draft EIS, but it appears to be inferior to data necessary for adequate impacts analysis. What is also missing in the draft EIS is a disclosure of the significance or relevance of the missing soil data on the impacts analysis. Does this less specific information affect the data presented in Table 3.4-6 comparing important soils parameters across alternatives. specifically revegetation potential and erodible soils disturbed? If so, then the missing data is highly relevant.	Section 3.4.1.2 introduces STATSGO and states that this is the U.S. General Soil Map, with the reference cited as USDA NRCS 2006c. The reference list provides a web link to the dataset if more information is needed. NEPA requires the disclosure of incomplete or missing data, which was done, but does not preclude completion of the impact analysis without the missing data. STATSGO is less site-specific than the SSURGO data that is part of the NRCS soil survey, but was used to fill in gaps in a small portion of the study area. The level of detail provided is adequate to perform the analysis on a hydrologic basin level to disclose potential impacts under each alternative. If the project is approved, site-specific evaluations of the soils to be disturbed will be needed in order to prepare erosion and sediment control plans and to implement successful reclamation and revegetation plans to minimize erosion and stabilize soils.
34380-106	Missing from the draft EIS is any information on how much groundwater BLM needs to sustain vegetation on public lands that would be affected by groundwater pumping. Vegetation is the basis for most of BLM's programs from livestock grazing to wild horses, wildlife, air and water quality, recreation, scenic values, etc. This missing information should be presented in the EIS by categories, such as the cover types in tables for lands affected by the ROW and in groundwater development areas or "evapotranspiration areas" (listed in Table 3.5-7) from which groundwater would be withdrawn by SNWA pumping. In addition, this information should be presented by basin, so that the public can understand vegetation water requirements in areas smaller than the total study area.	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.
34380-107	Also missing is any information on how BLM will secure needed water for sustaining its vegetation resources considering the GWD project's huge water exportation targets in the five basins and also the direct impacts of pumping drawdowns in all the basins in the study area. Since SNWA's GWD project would effectively monopolize any non-appropriated water over a huge area of eastern Nevada and western Utah, we want to understand how BLM will retain enough water to sustain its vegetation resources.	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.
34380-108	How many additional acres of vegetation would be affected by a less than 10 foot draw down from SNWA groundwater pumping?	A detailed discussion on the use of the 10-ft drawdown contour for analysis specific to this EIS analysis may be found in Standard Resource Response WR-1.
34380-109	Are the increased costs of weed management programs and fighting wildland fires caused by the impacts of SNWA groundwater pumping on drying up vegetation and facilitating weed invasion be the obligation of federal, state and local governments? Or would BLM require SNWA to cover the increased costs of fighting fires?	Thank you for expressing your concern regarding the costs associated with mitigation and monitoring. Information provided by SNWA, and included in its testimony at the Nevada State Engineer water rights hearings for Spring, Delamar, Dry Lake and Cave valleys, indicate the inclusion of approximately \$400 million in the estimated project costs for initial implementation of the monitoring and mitigation requirements outlined in the Final EIS. It is the BLM's understanding that SNWA does not represent that the sum reflects the result of detailed calculations tied to specific impacts and mitigation measures, but rather that is an allowance for addressing potential impacts.
34380-110	Our review of the wildlife section revealed that the draft EIS drastically underestimated the impacts of SNWA's groundwater pumping not only on wildlife but also on the small subset of terrestrial wildlife which are dependent on surface water potentially affected by GWD project groundwater withdrawals and drawdowns. We found that there are no quantified impacts for SNWA groundwater pumping on terrestrial wildlife, similar to the egregious ones listed in Table 3.6-11. Upon further review, we found that this table only applies to impacts in groundwater development areas. Tables and figures in Appendix F3.6 do not supply acreages of habitat potentially affected by pumping drawdowns and the reader is left to guess what the impacts may or may not be. The draft EIS fails to disclose specific quantified pumping impacts on acres of winter and summer habitat of pronghorn, Rocky Mountain elk and mule deer, Greater Sage Grouse, special status species, migratory and resident birds, and all other wildlife.	Please see the response to comment N-34284-91-323.
34380-111	The draft EIS fails to disclose any information about pumping drawdown impacts on predators or their prey (a critical part of ecosystem health) or to any wildlife other than a subset of animals living in the targeted basins.	The FEIS has been updated to include additional discussion on predators as well as interactions between predators and prey base.
34380-112	In searching for the definition of groundwater development areas, we could not find one in the draft EIS. The first mention of the term is in a barely legible legend "groundwater development area" for Figure ES-2, "SNWA Proposed Groundwater Development Main Right-of Way and Future Groundwater Development Basins." Figure ES-5, entitled "Groundwater Development Project Main Right-of-Way Alignments" show similar shaped areas but these are not labeled. We were able to locate a larger scale Figure 2.5-9 which shows cross-hatched areas labeled groundwater development areas. They appear to occur only in the five basins.	Section 1.3.3 states "For future facilities not yet fully defined, the SNWA has identified groundwater development areas within which it anticipates accessing its permitted and applied for water rights (Figure 1.1-1). The analysis relies on assumptions that encompass the SNWA identified areas where water production wells, collector pipelines, and distribution power line routes might be located."

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ID	Comment	Response
34380-113	<p>We checked for the definition or description of the entire project study area where groundwater pumping impacts extend beyond the five basins and found a reference on p. 3-3 to "project study area" but the extent of it is not disclosed. Instead, we found the statement "... the project study area varies depending on the resource." On p. 3-II, Figure 3.0-3 "Water Resources and Natural Resources Region of Study" lists 40 basins, but we could not determine which basins were included in an area marked in purple as "region of study" and an area marked in yellow that is labeled "water resources region of study." We checked Section 3.6 again and found on page 3.6-1 a statement that "the region of study for terrestrial wildlife includes 33 hydrologic basins that encompass basins in Nevada and Utah." But Figure 3.6-1 for pronghorn habitat, Figure 3.6-2 for elk habitat, Figure 3.6-3 for mule deer habitat, Figure 3.6-4 for Desert Bighorn Sheep habitat, and Figure 3.6-5 for Rocky Mountain Big Horn all list the 40 basins; none list 33 basins. On p. 3.6-71, the draft EIS states that: "based on evaluation of the model-predicted 10 foot groundwater drawdown contour for the Proposed Action pumping and geology and groundwater characteristics, there is potential risk to terrestrial wildlife species (perennial streams, springs, ET wetland/meadow, and basin shrubland) in habitat portions of 8 basins (Spring, Snake, Cave, Pallanagat, Steptoe, Hanlin, Lake, and Lower Meadow Valley Wash) ... ", but the draft EIS fails to disclose the acreage of wildlife habitat impacted by groundwater pumping in the 8 basins.</p>	<p>Please refer to the second paragraph of the wildlife section (3.6.1) for the region of study relevant to Terrestrial Wildlife. Please also refer to the legend of the referred to figures. The natural resources region of study is in purple and the water resources region of study is in orange. The list of basins in the figure is part of the legend meant to assist the reader with basin names and to help distinguish which basins are within the specified region of study. The methodology section (3.6.2.8) describes how the pumping impact analysis is conducted. See also the response to comment F-35028-121-43.</p>
34380-114	<p>To further confuse the reader, the draft EIS discloses on p. 3.5-2 further complications in where pumping impacts on wildlife are assessed: "The natural resources region of study consisted of the five hydrological basins proposed for groundwater development along with 28 other hydrologic basins which collectively encompass all or a portion of 5 flow systems ... The natural resources region of study differed from the water resources model area in that four basins (Long, Jakes, Garden and Coal) were excluded on the eastern boundary due to a lack of sensitive species habitat. The natural resources region of study also included four basins (Pine, Wah Wah, Tule, and Deep Creek) that were not a part of the water resources area. These four basins included game or special status species." Why did BLM exclude 4 basins without "sensitive species habitats" but which could include extensive habitat areas for both game and non-game species? Why did BLM include 4 basins with "game or special status species" which were not in the "water resources area" when these basins may include extensive habitat for non-game species, but to which the drawdown studies could not be applied? The complex, inconsistent and contradictory parameters used to include or exclude basins from study of impacts to wildlife habitats prevents the public and the BLM from making informed comments and decisions on the draft EIS.</p>	<p>Please see the response to comment N-34380-113-203. Further, the decision to exclude four basins from the natural resources region of study was made by agency input from the Natural Resources Group. This group included representatives from the BLM in Nevada and Utah, USFWS in Nevada and Utah, NDOW, and UDWR. The decision was based on the lack of special status species in these four basins. Even if these basins had been included in the natural resources analyses, modeling results in this EIS do not indicate risks to water sources in these four basins.</p>
34380-115	<p>The draft EIS fails to disclose the total acreage of the five targeted basins. We were able to locate it on the NSE's website as 2,601,600 acres or 4,065 square miles. From the same source, we were able to compute the total acreage of the 35 basins only in Nevada as 12,535,040 acres or 19,586 square miles. Therefore, the 5 basins acreage is about 20% or 115 of the total acreage in the project study area, minus Utah acreage. No information on the acreages of the five Utah basins was found. The draft EIS has failed to adequately disclose potential impacts of the GWD project pumping drawdowns on at least 4/5's of the project study area, including impacts on wildlife and wildlife habitat.</p>	<p>The FEIS analyzes impacts to wildlife and wildlife habitat within the 33 basins in the natural resources region of study. It addresses the action in question (request for a ROW grant) and programmatically addresses future facilities and potential water drawdown to set the state for subsequent treatment under NEPA. Appropriate subsequent NEPA analysis will be completed prior to construction of future facilities.</p>
34380-116	<p>Figure 3.0-2 on p. 3-10. "Process for Analyzing Groundwater Pumping Effects on Environmental Resources" shows a diagram of how the draft EIS splits "affected areas" into those with groundwater impacts on phreatophytic vegetation and shrub land habitat and subsequently only on wildlife species and visual resources and the other area where surface water is connected to groundwater to 3 categories: surface water sources, hydric soils, and vegetation and habitat (springs, ponds, wetlands, meadows, perennial streams, playas, swamp cedar woodlands). Surface water resources include: wildlife, livestock, wild horses, recreation, Native American concerns, and socioeconomics. Hydric soils resources included soils, air quality and visual resources. Vegetation and habitat resources were Sierra Club Comments on BLM GWD Draft EIS Page 31 of 49 listed as aquatic resources, wildlife species, livestock, wild horses, special designations and visual resources. This overly complicated process results in the draft EIS failure to quantify impacts of groundwater pumping on terrestrial wildlife and other resources listed in this figure.</p>	<p>The figure was modified to include additional connections with groundwater sources. The figure is only intended to show resource and groundwater / surface water connections. It does not quantify impacts.</p>
34380-117	<p>The process used in the draft EIS to assess pumping impacts on terrestrial wildlife species is extremely confusing and misleading and unnecessarily complicated. It appears to have led BLM into significant underestimation of pumping impacts to public lands and resources. Terms used in this process and in figures are either not defined or poorly defined and are inconsistent from one section or chapter to another. Because BLM keeps switching areas, definitions, #s of basins studied, it is essentially impossible for the reader to figure out where the worst impacts to which species will occur from pumping drawdowns, associated with the GWD project ROW permit.</p>	<p>A full explanation of the Natural Resources Study Area, including reasons for its extension beyond the boundaries of the Water Resources Study Area, may be found in Section 3.0 of the EIS. The Natural Resources Study Area is consistent in the Vegetation, Terrestrial Wildlife, and Aquatic Biology sections and the boundaries of the Water Resources Study Area is further discussed in standard resource response WR-6, WR-10 and WR-11.</p>

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ID	Comment	Response
34380-118	By not clearly disclosing potential pumping impacts over 200 years over a specific # of acres on specific wildlife and wildlife habitat resources, the draft EIS fails to comply with explicit Congressional mandates in LCCRDA, Section 301 (b)(3) regarding wildlife: "(3) COMPLIANCE WITH NEPA.-Before granting a right-of- way under paragraph (1), the Secretary shall comply with the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.), including the identification and consideration of potential impacts to fish and wildlife resources and habitat." By specifically mentioning potential impacts to fish and wildlife resources and habitat, we believe that Congress intends BLM to specifically protect these resources from adverse environmental impacts of the GWD project pumping. The draft EIS fails to comply with LCCRDA requirements to specifically address impacts to fish and wildlife resources and habitat affected by the ROW and GWD project.	The DEIS does disclose impacts to fish and wildlife habitat due to pumping including acres of wildlife habitat potentially affected in terms of water sources and water-dependent vegetation.
34380-119	The draft EIS also fails to disclose any information on how much groundwater and connected surface water BLM needs to sustain wildlife and wildlife habitat on public lands that would be affected by groundwater pumping.	Sections 3.6.2.9 through 3.6.2.15 of the Draft EIS describes potential impacts to wildlife species due to potential reduction of groundwater-dependent habitat (such as the miles of perennial streams potentially impacted by each alternative, percentage of ET habitat potentially impacted by each alternative, etc). The Final EIS has been updated to also include this analysis for Alternative F.
34380-120	Also missing is any information on how BLM will secure water needed for wildlife and wildlife habitat considering the GWD project's huge water exportation targets in the five basins and also the direct impacts of pumping drawdowns in all the basins in the study area. Since SNWA's GWD project would effectively monopolize any non-appropriated water over a huge area of eastern Nevada and western Utah, we want to understand how BLM will retain enough water to sustain its wildlife resources.	The Final EIS identifies areas where BLM resources may be at risk due to impacts from groundwater pumping. The BLM does hold water rights for uses on public lands such as stockwatering, recreation and wildlife beneficial uses. In areas where the BLM holds a senior water right to the SNWA applications, these sources will be protected by Nevada Water Law since Nevada is a prior appropriation state (NRS 533). In areas where the Draft EIS identified potential impacts to resources and the BLM does not currently hold a water right, these resources may be at risk to some level of loss. BLM would have to obtain new water rights through the Nevada Water Law process, and any new rights granted to the BLM would be junior to SNWA's water rights. The BLM could not, therefore, rely on securing water rights as a means of protecting wildlife habitat. Please refer to standard resource response MM-1 for information relevant to this comment.
34380-121	The BLM fails to meet its obligations to protect rare species under the ESA, FLPMA and internal agency policies and executive orders. The draft EIS fails to take a hard look at pumping impacts on such terrestrial species as the threatened Desert Tortoise, and sensitive Greater Sage Grouse. Desert Tortoise ACEC management directions would be violated (see previous SC comment# 2D) by proposed project facilities. More mesic Sage Grouse summer habitat areas, including areas around springs, perennial streams, and ET wetland/meadow would be impacted first by drawdown and are a key seasonal habitat for Sage Grouse (page 3.6-73). Federally endangered Southwestern Flycatcher and Yuma Clapper Rail, and Federal Candidate Yellow-billed Cuckoo use riparian habitats especially in Lower Meadow Valley Wash and Pahranaagat Valley which would be impacted by pumping drawdowns. Other species listed on pp. 3.6-73 to 75, including pygmy rabbits, bats, gila monsters, terrestrial invertebrates and Great Basin National Park cave species (listed in Table 3.6-16) will be impacted by pumping drawdowns. Other cave species new to science are being discovered in GBNP caves as more studies are being done.	Please refer to Standard Resource Response WL-3.
34380-122	The draft EIS fails to disclose the state requirement to protect wildlife in Nevada Water Law, as follows: "NRS 533.367 Requirement to ensure access of wildlife to water it customarily uses; waiver. Before a person may obtain a right to the use of water from a spring or water which has seeped to the surface of the ground, the person must ensure that wildlife which customarily uses the water will have access to it. The State Engineer may waive this requirement for a domestic use of water." The draft EIS fails to disclose that the GWD project will fail to comply with state laws, based on the drawdown impacts estimated by the hydrological model on springs on which wildlife is dependent.	<p>NRS 533.367 is directly related to water rights on surface water sources and appropriation/development of those sources. For example, if a permittee has a water right on a spring and puts in a trough, the permittee must allow the wildlife that typically use that spring access to it.</p> <p>In this case, SNWA is appropriating groundwater which may result in loss of flow to a spring. The NSE is required to appropriate all water in the state and does not have to take potential impacts to surface waters or phreatophytic vegetation into account unless there is a senior water right that could be impacted or it is not within the public interest.</p> <p>Additionally, under the amount granted in the Spring, Delamar, Dry Lake, and Cave valleys rulings, the NSE found that the GWD project was environmentally sound. Through the Stipulated Agreement 3M Plans and adaptive management plan impacts to surface waters will be monitored and managed.</p>
34380-123	All of the alternatives in the draft EIS will cause devastating impacts to aquatic biological resources on public lands in eastern Nevada and Utah's west desert. Yet, the draft EIS fails to assess pumping impacts to aquatic biological resources over the entire area potentially affected.	The EIS discloses impacts to aquatic biological resources for the entire project area that was modeled. The model results indicated that some portions of the study area would have no or low level risks to aquatic habitat from groundwater pumping.
34380-124	Are the inventories of aquatic biological species in Figures 3. 7-4 and 3. 7-5 one-time surveys? If so, then species may be missed. The draft EIS does not always provide this information.	The EIS figures provide species occurrence information based on one or multiple surveys depending on the waterbody. In many cases, fish occurrence in streams is based on multiple surveys conducted by NDOW in different years.

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ID	Comment	Response
34380-125	The draft EIS proposes a Monitoring, Management, and Mitigation (MMM) process to avoid, minimize and mitigate groundwater pumping impacts to aquatic biological resources and special status species. However, this process is fundamentally flawed and will result in ineffective actions, at best. (See our Comment #4 on the stipulated agreements). A mitigation "process" is not mitigation. Triggers or thresholds for stopping pumping within short timeframes should be added to any MMM agreement, since any other "mitigation" than restoring the natural water regime would be ineffective to protect aquatic biological resources. However, since the MMM agreements are all dependent on sufficient annual budgets, the draft EIS should consider a lack of future funding (over 200 years) when it purports to assess the effectiveness of MMM. The over-reliance on ineffective proposed and voluntary mitigation (which may or may not be funded) in the draft EIS will lead to significant violations of the ESA.	See comment response MM-1.
34380-126	The draft EIS fails to disclose the inflexibility of mitigation "agreements" to expand their obligations to address pumping impacts on recently described species and species yet to be discovered.	See comment response MM-1.
34380-127	In addition, we know of no science-based support for the feasibility and effectiveness of the mitigation proposal by the proponent to create artificial water sources for aquatic species whose habitat is significantly impacted by SNWA pumping drawdowns.	The ACMs are measures that are committed by the applicant and considered part of the Plan of Development. The BLM cannot require the applicant to modify these measures. However, the applicant has voluntarily revised some ACMs in response to DEIS comments.
34380-128	Missing from the draft EIS is any information on how much groundwater (and connected surface water) BLM needs to sustain aquatic biological resources on public lands that would be affected by groundwater pumping.	Please refer to standard resource responses MM-1 and Gen-8 for information on this topic.
34380-129	Also missing is any information on how BLM will secure needed water for sustaining its aquatic biological resources considering the GWD project's huge water exportation targets in the five basins and also the direct impacts of pumping drawdowns in all the basins in the study area. Since SNWA's GWD project would effectively monopolize any non-appropriated water over a huge area of eastern Nevada and western Utah, we want to understand how BLM will retain enough water to sustain its aquatic biological resources.	The BLM does not have the authority to retain water for protection of environmental resources. The Nevada State Engineer decides on the volume of water to be allowed under their permitting process.
34380-130	The draft EIS fails to comply with specific Congressional mandates in LCCRDA, Section 301 (b)(3) regarding wildlife: "(3) COMPLIANCE WITH NEPA.-Before granting a right-of-way under paragraph (1), the Secretary shall comply with the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.), including the identification and consideration of potential impacts to fish and wildlife resources and habitat." By specifically mentioning potential impacts to fish and wildlife resources and habitat, we believe that Congress intended BLM to specifically protect these resources from adverse environmental impacts of the GWD project pumping. Aquatic biological resources are, by definition, "fish and wildlife resources and habitat."	The EIS discloses impacts to fish and wildlife resources and identifies BMPs, applicant-committed measures, and additional mitigation to protect these resources.
34380-131	Issuing a ROW permit to the applicant will give SNWA, in effect, a monopoly on rural land uses. Conversely, the draft EIS fails to adequately assess the environmental impacts of the GWD project, including additional water deliveries of 78,755 afa to 177,655 afa on land uses in the basins receiving the exported water.	The action before the BLM relates to granting a right-of-way for groundwater conveyance. Please see Standard Resource Response GEN-8.
34380-132	The draft EIS fails to address GWD project drawdown impacts on state parks and state wildlife management areas. The only information we could locate on drawdowns were two springs in one state park in the moderate to high risk category in the appendices in a table F3.3.1-1A "inventoried spring list." In a search for information on drawdown threats or estimates of declining spring flows in wildlife management areas, we could find no information. These springs provide recreational fishing as well as habitat for TES species and other wildlife. The draft EIS fails to address the human loss of the special places within the more than 20,000 square miles of Nevada and Utah which will be damaged or destroyed by the pumping of groundwater by SNWA.	Impacts to state WMAs and state parks from groundwater pumping is discussed in Section 3.9.2.9 under "Groundwater Pumping". The only anticipated recreation areas with springs or streams affected are summarized in Table 3.9-16 and 3.9-17. As indicated in these tables, the only WMA or state park anticipated to be affected is Cave Lake State Park under Alternative B 200 years after full build out (3 miles of perennial streams). The cumulative effects section (3.9.3) also notes the potential for cumulative effects to springs and streams in recreation areas, which include Kershaw-Ryan State Park, Cave Lake State Park, and Overton WMA.
34380-133	In many visits to Shoshone Ponds and the "swamp cedar" forests in Spring Valley, we are always amazed to find such diverse landscapes in this desert valley. Of course, the pond is the home of an endangered species -- the Pahrump Poolfish. But the value of this landscape to the human experience goes far beyond the pond providing habitat for this and other rare fish. The extensive wetland and woodland landscape, only a small part of which the BLM has designated an ACEC, should be protected by the BLM from the damage which will be caused by all of the pumping scenarios analyzed in the BLM's draft EIS.	Please refer to standard resource response WR-4 for information on this topic.
34380-134	The draft EIS makes that pretty clear. But, the draft EIS offers essentially nothing which will prevent the ultimate loss of all of the unique water resources of Spring Valley valued by all of us.	Please refer to standard resource responses MM-1, MM-2, and Gen-8 for information on this topic.
34380-135	Missing from the draft EIS is any information on how much groundwater (and connected surface water) BLM needs to sustain recreational resources on public lands that would be affected by groundwater pumping.	Thank you for your comment. Please see the response to Gen-8.

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ID	Comment	Response
34380-136	Also missing is any information on how BLM will secure needed water for sustaining its recreational resources considering the GWD project's huge water exportation targets in the five basins and also the direct impacts of pumping drawdowns in all the basins in the study area. Since SNWA's GWD project would effectively monopolize any non-appropriated water over a huge area of eastern Nevada and western Utah, we want to understand how BLM will retain enough water to sustain its water-dependent recreation programs and resources.	Thank you for your comment. Please see the response to Gen-8.
34380-137	The draft EIS fails to adequately assess the impacts of increased short-term construction traffic on rural roads and highways and increased LT general traffic in urban areas receiving exported groundwater. It also fails to assess long-term unmitigated damages to rural roads from estimated subsidence over 525 square miles in eastern Nevada and western Utah. What are the estimated costs of short-term traffic disruption and management and the long-term costs of repairing subsidence damaged roads in the basins of origin? Who is financially liable for necessary road repairs?	Section 3.10.2 provides an estimate of worker trips during construction as well as anticipated roads that would be affected, with disclosure of associated impacts. The section also states that "During operation and maintenance of the ROWs and facilities, only minimal traffic that coincides with the current levels of traffic would be anticipated." The section further explains the ACMs in proposed to address construction-related transportation effects, including development of a construction traffic management plan. Mitigation measure ROW-T-1 elaborates on the components of the traffic management plan, which includes "A commitment to monitor and repair federal, state, and county roads that are used for delivering construction materials." Impacts to transportation infrastructure from subsidence is addressed in Section 3.2, a reference has been added in the transportation section. Also see section 3.20.
34380-138	The draft EIS fails to assess impacts of the GWD project on availability of water for future mining exploration, development, and ore processing. All mining operations require some amount of water, yet because of SNWA's proposed effective monopolization of unappropriated water in 5 basins and the impacts of groundwater drawdowns in up to 40 basins, water availability will be decreased for future mining operations. The only alternative left is for future mining enterprises to acquire existing water rights. If the NSE approves any of SNWA's 1989 water rights applications, this water will not be available for use outside Clark County. In effect, the draft EIS fails to disclose that the GWD project will effectively preclude any future mining in the 5 targeted basins and in many of the other impacted basins in the project study area.	Potential impacts related to groundwater pumping have been addressed at a programmatic level in this EIS. Subsequent NEPA will be required to determine and disclose site-specific impacts.
34380-139	The draft EIS also fails to analyze the similar effects of the GWD project on precluding future alternative energy development, especially in the Dry Lake and Delamar Valley SEZs.	The solar programmatic EIS was issued as a draft document and has been out for public review. Based on the review and the resultant document changes, a supplement DEIS was issued. Since the BLM Solar PEIS is still in draft, not finalized, and only for the purposes of guiding future solar development; it would not be appropriate to assume the types of activities that would occur. Therefore, these activities are not considered reasonable foreseeable future actions.
34380-140	The draft EIS fails to adequately assess the impacts of GWD project pumping drawdowns on the forage base of public land permittees as native plants used for forage dry up and are replaced by invasive annuals and weeds in an area covering as many as 12,535,040 acres or 19,586 square miles.	Vegetation connected with groundwater (wetland/meadow and basin shrubland communities) has been analyzed by correlating these areas with the 10 foot or greater drawdown contour in section 3.12.2.8 through 3.12.3.10. Upland plant communities that aren't connected to groundwater sources are not expected to change as a result of groundwater pumping. Mitigation measures, ACM's and BMP's stated in Section 3.5 (Vegetation Resources) and Appendix D will combat the spread and establishment of invasive species to the greatest extent possible. Practices included in the ACM's for the reestablishment of desired vegetation communities and control of noxious weeds include consultation with the BLM regarding seed mixtures, timing of planting and monitoring, compliance with BLM Handbooks H-9011, H-9011-1, H-9014, and H-9015, two to three years of pre-treatment for noxious weeds that exist within the ROW, Pre-use inspection of borrow or fill sites, and construction vehicle wash stations located within the ROW.
34380-141	The draft EIS fails to analyze impacts of pumping drawdowns <10 feet on public rangelands. If adequately analyzed, these impacts could cover many hundreds of thousands more acres than disclosed in the draft EIS, affecting the availability and quality of livestock forage on public lands. The draft EIS should disclose how much carrying capacity and AUMs would be reduced on each allotment affected by pumping drawdowns in the 40 basins in the project study	See Standard Resource Response WR-1 regarding the 10-foot drawdown.
34380-142	Many ranchers in Lincoln and White Pine Counties depend on the desert valleys for all of their winter grazing allotments. This includes all of the 5 targeted valleys studied in the draft EIS. Because the analysis in the draft EIS of construction and pumping impacts fails to address the loss to individual grazing allotments, the claim that livestock stocking rates would not be affected cannot be supported. Numerous rancher owned water rights on springs and seeps are critical to winter grazing allotments particularly in the southern part of the study area. The loss of these springs from lowering of the groundwater table would eliminate the winter grazing critical to the year-round ranching.	Impacts to vegetation communities are analyzed by allotment for the project right-of-way. Groundwater pumping impacts were analyzed by correlating the 10 foot or greater drawdown contour to springs, streams, and phreatophytic vegetation communities. The BLM can not accurately predict the impacts to livestock stocking rates for individual allotment in this programmatic EIS. Subsequent NEPA will perform a more detailed analysis of the effects of ground disturbance and pumping related to future facilities.
34380-143	The failure of the draft EIS to quantify the loss of water sources and critical winter vegetation on winter allotments compounds the inadequacy of the socio-economic analysis on the local communities. The draft EIS analysis of the proposed action and the other pumping scenarios is inadequate to evaluate and quantify the losses to the agricultural dependent communities.	Acreage of impacts to vegetation communities are analyzed for ROW areas. This allows the reader to evaluate impacts to different vegetation communities as opposed to treating them all as equal. Groundwater pumping impacts have been analyzed by overlapping the 10 foot or greater drawdown contour with springs, streams, and phreatophytic vegetation communities. It is not possible to state whether livestock stocking rates would be affected for each individual allotment in this EIS. Subsequent NEPA will be conducted to disclose a more detailed analysis on the effect of pumping in the five targeted valleys.
34380-144	Missing from the draft EIS is any information on how much groundwater and connected surface water BLM needs to sustain vegetation on public lands which is currently the basis for livestock grazing permits that would be affected by groundwater pumping. This information should be broken down by basin, so that the public can understand vegetation water needs in areas smaller than the total study area.	Please refer to standard resource responses MM-1 and MM-2 for information on this topic.

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ID	Comment	Response
34380-145	Also missing is any information on how BLM will secure needed water for sustaining its vegetation resources considering the GWD project's huge water exportation targets in the five basins and also the direct impacts of pumping drawdowns in all the basins in the study area. Since SNWA's GWD project would effectively monopolize any non-appropriated water over a huge area of eastern Nevada and western Utah, we want to understand how BLM will retain enough water to sustain the vegetation resources critical to the continuation of its grazing program.	The Draft EIS identified areas where vegetation resources could be impacted by the project and associated a level of risk (high, medium, low) with the potential loss (section 3.3.2.8) . The analysis within the Vegetation Resources section (3.5) identified that riparian wetland areas and phreatophytic vegetation was most at risk due to groundwater pumping. These riparian type habitats would convert to upland habitats as the water table is lowered and soil moistures decrease. This would result in a decrease in riparian vegetation species and an increase in upland vegetation species.
34380-146	The draft EIS fails to adequately describe the summer and winter ranges and water holes which wild horses and burros use on public lands in the project study area. It also fails to disclose the extent of the impacts to wild horse and burros habitat needs by the GWD project pumping drawdown effects on both native vegetation and water holes and springs. It fails to describe current federal water rights used for wild horse water sources.	It would be impractical to provide descriptions of summer and winter ranges and for every allotment intersected by the ROW, overlapped by well field development, or within the study area. Typically, summer ranges are at higher elevations and would have less of a connection to groundwater and therefore would be less effected by drawdown. Winter ranges, in the lower elevations, would likely be more effected by groundwater drawdown. The figures that illustrate predicted changes to groundwater levels in the Water Resources Section (3.3) would be the best way to track where these drawdown areas occur in regards to summer/winter ranges, springs, and streams. Tables 3.13-8 through 3.13-17 in the Wild Horses Section quantify potential impacts to springs, streams, and wetland/meadow and basin shrubland vegetation. More specific information regarding overall impacts to native vegetation can be found in the Vegetation Resources Section (3.5).
34380-147	As native rangelands desiccate and water sources dry up, the carrying capacity for wild horses will decline far below what is needed to support AMLs in HMAs. Will BLM then eliminate HMAs? or whole herds? The artificial water sources in the applicants voluntary ACMs will not only not comply with WH&B Act requirements on wild horse management in "thriving natural ecological balance," but also are unrealistic and unsustainable considering that the draft EIS shows that pumping impacts will occur for at least 200 years; that's assuming that any wild horse herds survive the desiccation of their forage base on public lands affected by pumping drawdowns.	For the Proposed Action, water sources and phreatophytic vegetation contained within the 10 foot or greater contour for all model time periods are below a level that would indicate significant desiccation to rangelands even at full build out + 200 years.
34380-148	Missing from the draft EIS is any information on how much groundwater and connected surface water BLM needs to sustain vegetation on public lands which is currently the forage basis for wild horses and burros that would be affected by groundwater pumping. We prefer this information to be broken down by basin, so that the public can understand vegetation water needs in areas smaller than the total study area.	Please refer to standard resource responses MM-1 and MM-2 for information on this topic.
34380-149	Also missing is any information on how BLM will secure needed water for sustaining its vegetation resources considering the GWD project's huge water exportation targets in the five basins and also the direct impacts of pumping drawdowns in all the basins in the study area. Since SNWA's GWD project would effectively monopolize any non-appropriated water over a huge area of eastern Nevada and western Utah, we want to understand how BLM will retain enough water to sustain the vegetation base which supports its wild horses and burros.	The Draft EIS identified areas where vegetation resources could be impacted by the project and associated a level of risk (high, medium, low) with the potential loss (section 3.3.2.8). The analysis within the Vegetation Resources section (3.5) identified that riparian wetland areas and phreatophytic vegetation was most at risk due to groundwater pumping. These riparian type habitats would convert to upland habitats as the water table is lowered and soil moistures decrease. This would result in a decrease in riparian vegetation species and an increase in upland vegetation species. As discussed in the Wild Horse and Burro Herd Management section (3.13) most of the forage utilized by wild horses is upland vegetation, which is supported by precipitation and not connected to groundwater. Since upland habitat is not connected to groundwater, it will not be impacted by the groundwater pumping. Existing riparian habitat is connected to groundwater and as the groundwater table is lowered, it will be converted to upland habitat; potentially creating more available forage for wild horses.
34380-150	The draft EIS fails to describe all lands with special designations in the project study area, including state parks and wildlife management areas. The draft EIS fails to include adequate information on lands with special designations in eastern Nevada and Utah's west desert and to adequately disclose the impacts of GWD project construction and pumping on these lands and their resources, including recreation and wildlife.	State parks and wildlife management areas are addressed in Section 3.9 of the DEIS. Special management areas that occur within the region of study are listed in Table 3-14.2 and shown on Figure F3.14-2 of the DEIS, and those areas crossed by the ROWs or Ancillary Facilities or occur within the groundwater development areas are discussed in the impact analysis in Section 3.14. An analysis of drawdown impacts is included in the water resources analysis in Section 3.3 of the DEIS. Impacts to specific resources contained within special designations, such as recreation, wildlife, or visual resources, are included in those respective sections as discussed in the Section 3.14.2 analysis introduction.
34380-151	The roadless inventory carried out in the project area is not documented well, so the reader has little information on which to make informed comments on this section in the draft EIS.	The BLM maintains an LWC inventory at the Field Office and the results of that inventory were incorporated into the DEIS. Adequate information is provided in the EIS to allow the public to see the potential impact of the proposed project and alternatives on areas determined to meet LWC criteria. Public comments on the inventory findings are outside the scope of this project EIS. The documentation of the LWC inventory is available at the BLM Field Office or through a FOIA request.
34380-152	What are the costs of the mitigation proposed for the Shoshone Ponds ACEC (p. 3.3-121) including "improving" the existing well, drilling a new well and installing a pump to maintain flow to the ponds for the foreseeable future regardless of groundwater drawdown? What are the maintenance costs, the replacement costs, and the energy costs to run the pump for up to 200 years or more? This proposed "mitigation" appears futile since the draft EIS shows significant GWD project pumping impacts on the lands and woodlands surrounding Shoshone Ponds and additional pumping will only exacerbate drawdown problems.	Please see Section 2.6.8 in the Final EIS for a discussion related to capital costs for the project.

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ID	Comment	Response
34380-153	<p>The Proposed Action and all the scenarios in the draft EIS will result in a vastly changed landscape from the serene remote desert valleys in the five basins targeted by the GWD project and many of the 35 other basins in the project study area. The draft EIS fails to assess the significance of these changes and disclose that the future industrialized landscapes in the five targeted basins and the future desiccated landscapes in many of the 40 basins affected by pumping drawdowns violate visual resource management objectives in its Resource Management Plans as well as BLM's underlying laws and regulations regarding conserving visual resources. For example, what would (Table ES-12) an 86% reduction in ET in Snake Valley after full build out and 200 years look like?</p>	<p>The significance of visual impacts is based on conformance with BLM VRM objectives and issues presented in Section 3.15.2.1. The impact analysis in Section 3.15.2.2 evaluated conformance with VRM objectives for all proposed facilities. Through the application of BLM BMPs, SNWA ACMs, and additional mitigation measures ROW-VR-1 through ROW-VR-5, the Proposed Action and Alternatives A through F would meet visual resource objectives. The visual resources analysis evaluates the impacts to Groundwater Development and Groundwater Pumping in Section 3.15.2.8. This section provides sufficient information to compare project alternatives and their impacts. The section also discloses that future site-specific impact assessments will assess visual impacts for specific project facilities in detail as the locations of facilities become better defined. Photographic simulations were prepared for project's Proposed Facilities as described in Section 2.5 using the methods described in Section 3.15.2.1 where sufficient locational and design information was provided to prepare an artistic rendering of the potential impacts at a given location. Further, the known extent and degree of potential transitions from wetland/meadow, spring-fed communities, and basin shrubland communities to more drought-adapted and shallow rooted vegetation species is insufficient to prepare artistic renderings the the appearance of this transition at full-buildout and after 200 years. Please also see Standard Resource Response Gen-1 for a discussion of future facility tiering.</p>
34380-154	<p>The draft EIS fails to adequately describe cultural resources in the project study area and to disclose the significance of GWD project impacts to cultural resources. The draft EIS fails to disclose the impacts of groundwater drawdowns and the resulting widespread subsidence and loss of vegetative cover and stable soils. The draft EIS fails to require effective mitigation for these impacts on cultural resources. We do not believe that the trust responsibility of the federal government to the tribes adversely impacted by the proposed GWD project can be abandoned. The draft EIS shows that Proposed Action and all the scenarios, except the No Action Alternative, would result in w1acceptable impacts on cultural resources. BLM cannot approve a proposed project with this level ofwm1itigated and undue and unnecessary impacts to cultural resources on public lands.</p>	<p>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. Government-to-government consultation between the BLM and federally-recognized tribes currently is ongoing and will continue up to and including project construction.</p>
34380-155	<p>The draft EIS fails to provide any mitigation, required or volw1tary, for systemic chru1ges to native vegetation caused by the GWD project pumping and desiccation of extensive public lands in the targeted areas. How will tribes who are dependent on the listed native plants carry out their traditions as the native plants are replaced by invasive annuals and weeds?</p>	<p>Please see the Vegetation section (3.5) for a discussion of vegetation succession; dessication of all vegetation is not anticipated.</p>
34380-156	<p>How many potential Traditional Cultural Properties (TCPs) occur in the 5 targeted basins and the other 35 basins affected by pumping drawdowns? We strongly believe that BLM cannot select the Proposed Action or any of the scenarios in the draft EIS which would destroy TCPs before they are designated by the federal government.</p>	<p>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. The BLM has been and will continue to consult with federally-recognized tribes to identify potential TCPs that could be affected by the proposed project.</p>
34380-157	<p>Missing from the draft EIS is any information on how much groundwater and connected surface water BLM needs to sustain vegetation on public lands that would be affected by groundwater pumping. Vegetation is the basis for Native American traditional uses, both of plants and also of the animals which depend on native plants. We prefer this information to be broken down by basin, so that the public can understand vegetation water needs in areas smaller than the total study area.</p>	<p>The BLM has not estimated how much water is needed to sustain vegetation. The approach is to monitor groundwater and vegetation to determine the amount of pumping that can be allowed while sustaining the vegetation.</p>
34380-158	<p>The draft EIS seems to not comprehend that traditional values of Native Americans are tied to the land, the plants, and the animals. Once lost because of GWD project impacts, traditional values have no basis and will also be in retrievably lost.</p>	<p>Impacts to cultural resources, water resources, plants, animals, and Native American traditional values are discussed in sections 3.16, 3.3, 3.5, 3.6, 3.7, and 3.17 of the DEIS. Mitigation measures for all resources are discussed in sections 2.3, 2.4, and 2.5. The ethnographic overview in section 3.17.1 provides information on traditional subsistence practices of tribal groups in the analysis area. Also included in section 3.17.1 are excerpts from tribal resolutions explaining the importance of the land, animals, and plants to these tribal groups. The impact assessment in section 3.17.2.9, emphasizes the importance of these resources to traditional practices of the Great Basin tribes. The FEIS expands on these discussions. </div></p>
34380-159	<p>Also missing is any information on how BLM will secure needed water for sustaining its vegetation resources considering the GWD project's huge water exportation targets in the five basins and also the direct impacts of pumping drawdowns in all the basins in the study area. Since SNWA's GWD project would effectively monopolize any non-appropriated water over a huge area of eastern Nevada and western Utah, we want to understand how BLM will retain enough water to sustain its vegetation resources which are critical to Native American Traditional Values.</p>	<p>The Draft EIS identified areas where vegetation resources could be impacted by the project and associated a level of risk (high, medium, low) with the potential loss. The analysis within the Vegetation Resources section (3.5) identified that riparian wetland areas and phreatophytic vegetation was most at risk due to groundwater pumping. These riparian type habitats would convert to upland habitats as the water table is lowered and soil moistures decrease. This would result in a decrease in riparian vegetation species and an increase in upland vegetation species.</p>
34380-160	<p>The draft EIS fails to adequately analyze the impacts of the GWD project on socioeconomics and environmental justice, especially the pumping draw downs on the rural and urban communities potentially losing water and gaining water. White Pine County basins would supply 75% of groundwater targeted by SNWA, yet the socioeconomic impacts analysis is minimal, quite perfunctory.</p>	<p>Thank you for your comment. Section 3.18.2.1 addresses the effects associated with construction and operation of the main pipeline and facilities; the actions tied to decisions to be made by the BLM on this EIS. Few adverse social and economic impacts are expected from those activities. Long-term risks to agriculture and tourism 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, have been added in the latter section and further assessments could occur as part of subsequent NEPA to be done in conjunction with future facilities (see Gen-1 and Gen-2).</p>

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ID	Comment	Response
34380-161	From a resident familiar with local county planning, economics, programs, revenues and budgets, we learned that the draft EIS has failed to take a hard look at the existing socioeconomic conditions and GWD project impacts in the five targeted basins as well as in many of the additional 35 basins in the project study area by not incorporating significant information that is readily available. The size and scope of the project does not negate the need for BLM to take a hard look at existing conditions and potential impacts. For instance, baseline information on recreation and tourism fails to include NDOW information on hunter days by hunt unit and species as well as angler days. The BLM and USFS provide information on recreation visitor days and local communities can provide lodging tax revenue by month and by property. Other missing available information is on agricultural impacts on local economies, published in reports and studies by the University of Nevada, Reno Agricultural Economics Department and Cooperative Extension Service. Also missing is consideration of White Pine County's planning documents or Annual Comprehensive Economic Development Strategy.	Thank you for your comment. Examples of factors considered when developing the description of existing socioeconomic conditions include the regional scale of the proposed project, size of workforce, and anticipated results from other disciplines that would factor into the assessment. In this instance, Section 3.18.2.1 addresses the effects associated with construction and operation of the main pipeline and facilities; the actions tied to decisions to be made by the BLM on this EIS. Characteristics of linear utility infrastructure, most of those effects would be temporary and the level of detail regarding current conditions is adequate to support the assessment of such impact. Information on hunting and fish activity, as well as other outdoor recreation use can be found in Section 3.9 Recreation. Most of the effects cited in the comment are related to drawdown associated with future facilities and pumping. Those effects are addressed programatically in this EIS, and would be subject to further analysis in subsequent, tiered NEPA analysis to be done in conjunction with future facilities. See Gen-1 and Gen-8, as well as Section 2.5 of the Executive Summary and 2.1.2 of the main document for additional information on tiering.
34380-162	The draft EIS also fails to disclose the effects that SNWA's water rights applications in 1989 have had on suppressing growth and development in White Pine and Lincoln Counties from 1989 to 2011.	Section 3.18 acknowledges the identified concerns on the part of some residents and officials of White Pine and Lincoln counties. Moreover, some previously approved water rights remained available for economic development, applications for water to support local economic development could have been filed with the NSE, and as noted, water is but one factor necessary to support growth and development. Consequently, there are no assurances that growth and development would have occurred in the proposed groundwater production basins absent the applications.
34380-163	Table 3.3.2-6 discloses substantial adverse impacts to water resources of the Proposed Action. What are the economic impacts to residents and rural communities of losing water rights, both surface and groundwater, because of pumping impacts? What are the estimated costs of having to deepen wells to Sierra Club Comments on BLM GWD Draft EIS Page 40 of 49 adapt to "reasonable lowering" of groundwater tables? What are the estimated costs of senior water rights holders to legally challenge SNWA's taking of their water rights and seeking redress in the courts? How many senior water rights holders will lose their livelihoods as a result of GWD project pumping drawdowns? What are the effects on rural communities of the loss of water-dependent livelihoods? How much loss over how much time would lead to the collapse of rural communities and the depopulation of eastern Nevada and western Utah?	Thank you for your comment. The primary purpose of this EIS is to disclose potential project impacts related to the right-of-way, access roads and ancillary facilities. The proposed pipeline routes, as submitted by the applicant, have been analyzed in this EIS and the impacts associated with the proposed alignment have been presented therein. Impacts related to well locations, pumping, and groundwater drawdown, including those cited in this comment, are analyzed on a programmatic level in Section 3.18 and would be analyzed in further detail in future NEPA. See Standard Comment Responses Gen-1 and Gen-2 for more information on tiering. The characterization of the potential effects of the GWD on water availability, "...without water everyone..." contained in the comment is inconsistent with the water analysis in Section 3.3 which portrays the areal and vertical extents and the general time horizon of long-term drawdown given the assumed pumping regimes. Furthermore, an extensive monitoring and mitigation program (the COM Plan) would be put in place and Nevada water law recognizes and offers protections for senior water rights, including municipal water sources. Text has been added to Section 3.18.2.8 describing the long-term drawdown, including reference to Figures 3.3.2.-7 and 3.3.2.-8.
34380-164	The draft EIS fails to analyze the direct and indirect impacts to areas in Southern Nevada which may gain up to 176,655 afa of groundwater as a result of NSE and BLM actions on applications for water rights and requests for ROW permits. These include "growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems" (40 CFR 1508.7). Our calculations show that an additional 176,655 afa would support a population increase of 1,766,550, assuming that a typical household of 2.5 persons uses an average of 1/4 afa annually.	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.
34380-165	Conversely, whether one uses the varying population estimates in the SNWA Water Resources Plan cited in the draft EIS, or the 2011 Hobbs, Ong Financial Feasibility Report, or the lower population growth estimates in the State Demographer's 2010 forecast, the draft EIS does not disclose the costs (financial, environmental and sociocultural) associated with So. Nevada accommodating population increases which would be supported by rural groundwater. These would include (but not be limited to): how many more freeways and roads, traffic and traffic accidents, schools, policy and fire protection, hospitals, parks, sewer systems, additional pollution of Lake Mead would occur due to additional water as a result of the proposed GWD project?	Thank you for your comment. Section 3.18.2.9, the subsection entitled "Relationship of the GWD Project to Potential Growth Inducing Effects", addresses the role of water in enabling but not causing economic development. See also 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.
34380-166	In addition, there is no information in the draft EIS on either the costs of the project or the impacts of funding the project on the public, either as rate-payers or taxpayers.	Thank you for your comment. Information on project cost are included in the FEIS - see SocEcon-1, SocEcon-3 and SocEcon-6. Additional information regarding project costs and financing can also be found in information filed by SNWA in conjunction with the water hearings -- http://www.water.nv.gov/hearings/past/springetal/documents.cfm?DIR=exhibits.SNWAExhibits
34380-167	The draft EIS fails to disclose impacts of the GWD project pumping drawdowns on agricultural, recreation and tourism, essential parts of the economies of Nevada and Utah counties and communities, including Lund, Preston, and Sunnyside in White River Valley. What mitigation is proposed for adverse impacts of the GWD project on the socioeconomics of the targeted basins?	The purpose of this EIS is to analyze impacts related to the right-of-way, access roads and ancillary facilities. The proposed pipeline routes, as submitted by the applicant, have been analyzed in this EIS and the impacts associated with the proposed alignment have been presented therein. Impacts related to well locations, pumping, and groundwater drawdown are analyzed on a programmatic level and may be analyzed in further detail in future NEPA. See Gen-1 and Gen-2 for more information on tiering.

Comments and Responses - Non-governmental Organizations

ID	Comment	Response
34380-168	<p>The draft EIS fails to disclose the impacts on the need for housing and other needs of GWD project construction workers. There is very limited housing available in rural communities along the proposed ROW corridor. How much temporary and permanent housing would be needed? How long would it be needed? How would it be provided - in construction camps or scattered in RVs all along the ROW corridor? What are the impacts of a large, but temporary housing demand on local housing availability and pricing? Will SNWA provide food for the workers, or will they be dependent on local markets and restaurants? What is the capacity for local businesses to handle this demand? What are the impacts of worker demands or needs on local governments' other services, such as medical care and emergency medical service, police and fire, county health and road departments, the court system and other county and city agencies? What are the costs of the GWD project demands on these local services and how will they be paid'?</p>	<p>Thank you for your comment. Temporary housing demands, the limited availability of housing in the rural communities, possibility of a contractor-sponsored temporary construction worker facility, and indirect effects on communities and public services are addressed in Section 3.18.2.2. Text has been added noting that some service providers may seek to add staff to meet short-term increases in demand and to address the uncertainties regarding funding. Text changes were also made to correct the erroneous statement that SNWA was "tax exempt" with respect to sales tax. Consequently, sales and use tax revenues will be generated on the materials portion of facility construction.</p>
34380-169	<p>The draft EIS fails to consider GWD project impacts on environmental justice in this section, including to urban and county residents whose incomes are below the poverty levels. Such impacts in rural areas would include project demand for scarce housing driving up the costs and lowering the availability of housing for low income residents. Also, long-time residents who lose their farms and ranches because of GWD project pumping drawdown impacts on their wells, springs, sub-irrigated meadows and livestock forage and to the costs of lawsuits or the pursuit of other remedies for pumping impacts to their senior water rights are victims of environmental injustice. Likewise, local business owners who depend on income from agricultural operations and recreation may also lose their livelihoods to GWD impacts. Impacts on low income residents in urban areas would include their inability to afford to pay water bills increased to cover the costs of the GWD project and lack of accessibility to county services because of increased demands by the additional population supported by additional water supplies.</p>	<p>Thank you for your comment. Consideration of environmental justice in this EIS is guided by CEQ guidance pertaining to EO12898. The potential occurrence of effects of the type cited are noted in Section 3.18. Although the incidence of these effects on various populations, may not be perceived as equitable, they do not arise to the threshold of disproportionately high adverse human health and environmental effects on minority and low-income populations as they would affect a broad cross-section of the population. For instance, among the examples cited, the primary demand for housing associated with the project would be temporary short-term housing, e.g., motels and campgrounds, that typically don't serve low-income residents. Holders of senior water rights can pursue remedies through the NSE and also have added protections through the bi-state agreement and the COM Plan.</p>
34380-170	<p>Missing from this section of the draft EIS is information on and a hard look at the potential for the GWD project construction and pumping impacts to release particles of dust as small as 2.5 microns which are potentially contaminated by nuclear testing conducted at the Nevada Test Site for decades. The downwind area for nuclear tests extends east to the study area in Nevada and Utah. A non-nuclear bomb blast test, called the Divine Strake, proposed in 2007 by the Bush Administration at the Nevada Test Site, was eventually cancelled in large part due to concerns about the proposed project disturbance and re-mobilization of radioactive dust. The federal government admitted the soils contain radioactivity and that they could become airborne. This unanalyzed impact could affect the health and safety of both construction workers and also of residents who live in areas downwind of construction activities and basins impacted by GWD project pumping drawdowns which would expose soils to wind erosion.</p>	<p>Please see standard resource response Air-1.</p>
34380-171	<p>The draft EIS also fails to disclose impacts on public safety of roads, buildings, and other infrastructure damaged by subsidence caused by GWD project pumping drawdowns, or the costs associated with necessary repair and restoration, and who would be liable for these costs.</p>	<p>The areal extent and potential risks of subsidence are addressed in Section 3.2. Text has been added to 3.18.2 regarding the potential indirect effects on roads and other infrastructure, the uncertainty regarding the extent, timing and effects of such subsidence or how damages would be addressed given SNWA's status as a public entity.</p>
34380-172	<p>The process was a secret one, with no public input or review permitted. Besides the public, local counties and residents who depend on the use of public lands and resources and who will directly be impacted by the short and long-term effects of the GWD project were prohibited from participating in negotiations. Local tribes were also excluded, apparently with federal trust responsibilities exercised on their behalf, but with no tribal consultation, input or consent. Although the stipulated agreements are major federal actions significantly affecting the environment, including private lands, because they are among the only measures in the draft EIS proposed by BLM to "mitigate" the devastating effects of this groundwater mining project, no NEPA process was required. Because it was a secret process, the public does not know what the parameters were or whether they were political or scientific. What is known is that the stipulated agreements were developed before the USGS BAR CAS and other studies of the carbonate aquifer flow system were published and before hydrological model used by BLM in the draft EIS was developed and used to estimate the widespread and devastating effects of proposed pumping drawdowns on public lands and resources. Even though the two agreements were completed in 2006 and in 2008, the process remains a secret one, with no public notification of what work has been accomplished by the parties, what public funds have been spent, whether baseline information has been collected and its reliability, whether changes have been made in the agreements. A couple of years of annual reports have been sent to the NSE where they are filed away. Access requires traveling to Carson City, searching the paper files, and paying substantial fees for copies of the reports. The public cannot find out if the Spring Valley stipulated agreement will be extended to SNWA water right applications filed since 2006, including the 11,788.8 afa of surface water applications filed in 2011 to date. in Spring Valley.</p>	<p>Thank you for your comment. Please refer to standard resource response MM-1, MM-2, and MM-3. BLM has assembled all comments on the stipulated agreements and have provided them to the Executive Committee which oversees the implementation of the agreements.</p>

Comments and Responses - Non-governmental Organizations

ID	Comment	Response
34380-173	<p>Other procedural problems in the stipulated agreements include (but are not limited to): 1. The agreements may limit BLM's ability to require and enforce mitigation for GWD project impacts, especially drawdown impacts, to only those explicitly a part of the agreements, and only for the four basins. BLM may not be able to require mitigation for impacts in the other 35 basins in the project study area and for all impacts to private lands and water rights 2. The agreements may represent a conflict of interest for BLM as a party to the agreements and also the agency conducting the NEPA analysis other GWD project. 3. Since the draft EIS does not provide any information on BLM monitoring of GWD project impacts, especially pumping drawdowns on public lands and resources in the entire study area, nor on any required mitigation for those impacts, we are left with the conclusion that BLM has delegated its monitoring and mitigation obligations to SNWA to monitor changes in the quantity and quality of natural resources on the ELM-administered public lands in the four basins, and also for other public lands affected by the GWD project. If so, BLM has greatly exceeded its authority. 4. The agreements may also limit BLM's ability to protect federal reserved water rights, PWRs, and other federal water rights (not identified in the stipulated agreements or in the draft EIS) from GWD project impacts. If so, then BLM has effectively disposed of federal property, without Congressional authority or consent.</p>	<p>Please refer to standard resource responses MM-1, MM-2, and MM-3 for information relevant to this comment. All comments on the stipulated agreements have been provided to the executive committee overseeing the implementation of the Stipulated Agreements</p>
34380-174	<p>Substantive problems with the stipulated agreements are equally serious: 1. The agreements set up 3 levels of "committees" to talk and achieve consensus about whether monitoring shows pumping impacts and the severity of impacts, whether SNWA's pumping is causing the impacts, and whether and what mitigation should be done by SNWA. 2. There are no explicit thresholds for what constitutes impacts or "unreasonable" impacts, what "proof," is needed to establish SNWA's pumping is responsible for impacts, nor what mitigation or its timing and duration would be for specific levels of impacts. 3. There are no triggers or thresholds in the Spring Valley stipulated agreement (or a process to develop these) to stop SNWA pumping or otherwise "mitigate" pumping impacts (SNWA has not offered to restrict or stop its pumping to protect public lands and resources in Spring Valley). In the Cave, Delamar and Dry Lake Valley stipulated agreement, there is only a process to develop these critical triggers. 4. There is no time-frame for discussing and coming to consensus by any of the three committees. 5. There is no requirement for SNWA pumping to stop while discussions continue; therefore, public lands and resources will continue to be damaged by SNWA pumping. 6. The NSE has explicitly declared that the NSE is not a party to the stipulated agreements, yet he is designated as the arbitrator of unresolved disagreements on mitigation required. The other alternative mentioned is some unnamed arbitrator to be selected by the parties. 7. There is a caveat that implementation of the stipulated agreements is dependent on sufficient annual budgets by Congress and by the SNWA board of directors. 8. There is no timeframe for how long the agreement is in effect and no mention of its implementation for 200 years or longer while pumping impacts continue to occur. 9. There is no process for evaluating the effectiveness of monitoring or mitigation in the stipulated agreements. 10. There is no process or way to track the implementation of the stipulated agreement annually or for over 200 years. 11. Only the lands and resources of the Great Basin National Park were explicitly protected from GWD project impacts with a "no effects" provision, while the protection of all other public lands and resources was limited to an undefined standard of "unreasonable" impacts. 12. There is no explicit goal to prohibit groundwater mining. 13. Monitoring wells proposed in the stipulated agreements at specific sites may or may not be adequate since the draft EIS states that production wells may be located anywhere in the groundwater development areas of the five basins far from the sites of the existing monitoring wells. 14. Proposed "mitigation" measures of augmentation and artificial recharge, both of which require additional water, merely transfer unacceptable pumping impacts from one location to elsewhere in the valleys. 15. The stipulated agreements do not require third party independent collection of data, both baseline and monitoring, nor in the assessment and handling of monitoring data.</p>	<p>Thank you for expressing your concerns related to the Draft EIS. Your suggestions have been carefully considered by the BLM, but have not resulted in changes to the analyses presented in this document. Please refer to standard resource responses MM-1 and MM-3 for information on this topic.</p>
34380-175	<p>The draft EIS makes no commitment that the stipulated agreements will be a part of the Record of Decision or required as conditions of ROW permits.</p>	<p>Thank you for your comment. BLM has assembled all comments on the stipulated agreements and have provided them to the Executive Committee which oversees the implementation of the agreements. Since the stipulated agreements have already been executed by the DOI agencies and SNWA, there is no need to make a requirement for their adherence, however, they will be recognized in the ROD as relevant to the decision being rendered.</p>
34380-176	<p>The draft EIS does not disclose the costs of developing and implementing the stipulated agreements, nor who is responsible for these costs.</p>	<p>Each stipulation addresses the responsible party for costs to the extent known at the time the stipulation was entered into. Certain costs would be borne by each of the parties to the stipulation as stated in the stipulation.</p>
34380-177	<p>On pp. 3.3-121 and 122 of the draft EIS is the statement: "however, considering the regional scale of the predicted drawdown and number of perennial water sources identified that could be affected, it may not be feasible to effectively mitigate impacts to all the potentially affected water sources." The draft EIS fails to disclose how many of impacts to potentially affected water sources would be "feasible" to effectively mitigate? 90%? 50%? 10%? The public and the BLM cannot make informed comments or decisions on the draft EIS when this critical information is missing?</p>	<p>The number of resources that will actually be affected will depend on a number of factors including: (1) the yet to be determined locations, design and pumping schedule for the production wells; (2) the magnitude and extent of the drawdown that propagates overtime from the project pumping; (3) the actual hydraulic interconnection between the aquifer affected by pumping and the specific water resource; and (4) actions taken by SNWA, or required through permits or stipulations and agreements by the Nevada State Engineer, the BLM, the DOI or other state and federal agencies to minimize or avoid effects to specific surface and groundwater resources.</p>
34380-178	<p>The draft EIS fails to clearly state what monitoring of GWD project impacts on public lands and resources will be required, who will conduct the monitoring, the costs of monitoring, public disclosure of monitoring results or how monitoring results will be used.</p>	<p>See Standard Resource Response MM-1.</p>

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ID	Comment	Response
34380-179	The draft EIS fails to clearly state what mitigation of GWD project impacts on public lands and resources will be required, who is responsible for implementing mitigation, the costs of mitigation and who is financially responsible for mitigation, how the effectiveness of mitigation will be determined, and what will be required if mitigation fails. This missing cost information for mitigation is very critical for the public and the BLM to make informed comments and decisions on the draft EIS.	BMPs, applicant-committed measures, and additional mitigation are described in the EIS for environmental resources located on public lands. SNWA is responsible for mitigation costs. Mitigation cost information can not be estimated until the measures are finalized in the FEIS. Additional details on monitoring and mitigation will be defined to the extent possible in the FEIS. See also Standard Resource Response Gen-7, SocEcon-3, and MM-1.
34380-180	The draft EIS fails to distinguish between required and voluntary monitoring and mitigation and how BLM will even know whether voluntary monitoring and mitigation has been implemented how mitigation effectiveness has been evaluated, and how failed mitigation is to be corrected.	Thank you for your comment. Please see Standard Resource Response MM-1.
34380-181	Critical information on the project and the impacts was not published in the hard copies of the draft EIS. Without a computer, we note that the public cannot even access the Addendum and Appendices.	Your comments on the Draft EIS have been considered. The public is encouraged to access computers at their public libraries. If no access was available, BLM would be happy to furnish hard copies of the appendices and water reports.
34380-182	A serious omission from the draft EIS is the lack of disclosure that SNWA is paying the costs of the hydrological model, the EIS, and associated BLM costs. No one from SNWA is listed in Chapter 6 on pp. 6-1 & 6-2, although we understand the SNWA staff has been heavily involved in both the provision of information to the BLM for the EIS and in decisions on the formatting of the EIS. Instead, SNWA is listed in the "company and business" section, not reflecting its critical role in the preparation of the draft EIS.	Comment noted. As a quasi-governmental agency, the information you reference is available to the public. SNWA has contributed their Plan of Development as background information for the project.
34380-183	The USFWS biological opinion is missing from the draft EIS. We were told that it would not be available until the final EIS is published, so there is no way for the public to review and consider whether USFWS requirements to protect TES species from the severe impacts of groundwater pumping drawdowns appear adequate or not. This is critical missing information since the GWD project impacts could cause the extinction of many TES species which are totally dependent on springs shown by the EIS hydrological model to have declining flows in the future.	There is not a public review process associated with the section 7 consultation. The Biological Opinion issued by the USFWS for this project will be attached to the Record of Decision.
34380-184	As we sought information to understand the proposed action, we reviewed many of the documents posted on the NSE website for the upcoming water hearing listed as SNWA exhibits. It appears to us that SNWA is presenting substantially different information to the NSE on its GWD project than the BLM used in the draft EIS, especially on the hydrology of the four valleys and on potential pumping impacts	This EIS process is not dependent on actions related to the NSE process. As the two are separate processes, the data presented by the SNWA and used by each agency for different purposes is related but not identical.
<u>Southern Utah Wilderness Alliance</u>		
35313-1	The DEIS fails to consider the potential impacts of this proposed project on lands with wilderness characteristics identified by the Utah Wilderness Coalition and proposed for wilderness designation in America's Red Rock Wilderness Act. Those lands are mapped here: http://www.protectwildutah.org/proposal/index.html .	LWC areas that are directly affected by the ROWs or Ancillary Facilities or occur within the groundwater development areas are discussed in Section 3.14.1.4, listed in Table 3.14-3, and shown in Figure 3.14-3. Since there are no areas directly affected in Utah by proposed project infrastructure, the analysis of drawdown impacts is provided in the water resources analysis in Section 3.3 of the DEIS.
35313-2	The DEIS also fails to discuss how this project will impact those areas in Utah within the project boundary that were identified by the BLM in 1999 as part of its Utah wilderness reinventory. See BLM, Utah Wilderness Inventory (1999), http://www.access.gpo.gov/blm/utah/index.html .	LWC areas that are directly affected by the ROWs or Ancillary Facilities or occur within the groundwater development areas are discussed in Section 3.14.1.4, listed in Table 3.14-3, and shown in Figure 3.14-3. Since there are no areas directly affected in Utah by proposed project infrastructure, the analysis of drawdown impacts is provided in the water resources analysis in Section 3.3 of the DEIS.
35313-3	The DEIS must analyze how this project will impact vegetation, soils, and wildlife in these proposed areas with wilderness characteristics (as these resources are part of the wilderness qualities of these areas) and how those impacts will effect wilderness character.	As discussed in Sectin 3.14.2, "Sections 3.3 (Water Resources), 3.5 (Vegetation), 3.6 (Terrestrial Wildlife), and 3.7 (Aquatic Biology Resources) discuss the potential effects on resources that many of these special designations protect."
35313-4	To comply with NEPA's "hard look" requirement, BLM must explain how its actions will or will not comply with environmental laws and policies. 40 C.F.R. § 1502.2(d); see also id. § 1508.27(b)	Thank you for your comment. The BLM believes that this FEIS satisfied the "hard look" requirement and has disclosed compliance with applicable laws and policies.
35313-5	The new one-hour maximum standard was lowered to 100 parts per billion. See id. at 6474-82. The DEIS still lists the old standard in its Appendix F3.1 discussion of NAAQS.	Based on your comment the FEIS has been edited to clarify. Thank you.
35313-6	The DEIS does not explain which areas in Utah along the Wasatch Front area currently in non-attainment for NAAQS criteria pollutants. The BLM must update this.	Based on your comment the FEIS has been edited to clarify. Thank you.
35313-7	The DEIS has not discussed how reclamation of the area will take place or how it will succeed if dewatering is observed. There is no explanation in the DEIS how water removal operations will be able to reclaim such areas and prevent massive dust storms that impact air quality in places such as the Wasatch Front.	Please see the mitigation measures described in Section 3.1.2. Please refer to standard resource responses MM-1, Air-8, Air-9 and Air-14 for information on this topic.
35313-8	BLM has not developed any successful reclamation strategies for the area that will prevent significant dust storms after the evaporation ponds are removed or abandoned.	Please see the mitigation measures described in Section 3.1.2.

Comments and Responses - Non-governmental Organizations

ID	Comment	Response
35313-9	It is also likely that the dewatered areas will not yield easily to post-production reclamation techniques, particularly since the discovery of this dewatering will be followed by long periods of dewatering. The DEIS has not fully disclosed this threat and has not analyzed its impacts.	Not all vegetation required the root zone to be in the groundwater. Only phreatophytic vegetation requires this, which is discussed in sections 3.3 and 3.4 in the FEIS. Reclamation plans would be required (based on the ACMs and BMPs) to be submitted with the final POD. Please refer to standard resource responses MM-1 and MM-2 for information on this topic.
35313-10	The BLM must perform dispersion modeling to analyze the impacts of this project on air quality in the region and along the Wasatch Front. Only with dispersion modeling can the BLM compare the impacts of this project to NAAQS and PSD increment limits.	Please see common response Air-9.
35313-11	Simply describing predicted particulate matter pollution from operations in terms of tons per year does not give a comparison to NAAQS or PSD increment limits. This does not satisfy the BLM's NEPA and FLPMA duties.	Changes have been made in the FEIS text to address the central concern that underlies this comment; however, due to its overarching nature, specifics regarding the placement of changes in the FEIS are not provided in this response. Please refer to standard resource responses Air-8, Air-9, and Air-14 for information on this topic.
35313-12	The BLM has not considered a worst-case scenario where dewatering from the development alternative produces significant dewatering that is then a continual source of windborne dust erosion and deposition along the Wasatch Front. It is possible that such a scenario might result. The BLM must model the significant amounts of dust that could result from this scenario.	Please see common responses Gen-5 and Air-8.
35313-13	Lacking dispersion modeling for air quality concerns the BLM simply cannot demonstrate that this development will comply with federal air quality standards.	Changes have been made in the FEIS text to address the central concern that underlies this comment; however, due to its overarching nature, specifics regarding the placement of changes in the FEIS are not provided in this response. Please see standard resource responses Air-7 and Air-9.
35313-14	The EA has not discussed the potential impacts of this decision on the snowpack of mountain ranges downwind of the Snake Valley, locations such as the Wasatch Mountains and the Wasatch Plateau as well as the Pahvant Range.	Please see section 3.1 for a discussion of potential climate change impacts to which your seems to be referring.
35313-15	The DEIS has not evaluated the potential contributions to the problem of disturbed desert dust leading to early snowmelt from this proposed leasing and the possible development that could result.	Please see common response Air-18.
35313-16	Climate change should be part of the baseline as well as a reasonably foreseeable impact under each alternative analyzed in the DEIS.	Please see common response Air-15.
35313-17	The DEIS should include a discussion of how climate change coupled with potential dust on snow issues could severely reduce available water supply in places such as the Wasatch Front. The cumulative effect could be devastating to water supplies.	See the climate change discussion under air quality cumulative effects in which the issues raised are considered.
35313-18	The BLM has not considered the impacts of this project coupled with the planned potash development on the nearby Sevier Lake dry lakebed. In combination these two projects could lead to severe soil erosion and windborne dust.	A specific estimate of dust generation, as well as dust controls are not yet available for the Sevier Lake project. Interactions with this source have been considered in the regional air quality model.

The League of Women Voters of Salt Lake City

99999-1	Our conclusion on the DEIS is that we believe that the No Action Alternative should be BLM's position because of the current incomplete state of the BLM's information and the DEIS' lack of coverage of the entire area.	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. Please refer to standard resource responses Gen-1 and Gen-2 for information on this topic.
99999-2	The Environmental Impact Study (EIS) should NOT BE PUBLISHED without the various unconsidered or missing information items mentioned in the draft -- well locations, costs, water rights, and other uncertainties; the upcoming US Geologic Survey / Utah Dep't of Natural Resources (USGS/UNR) hydrology study on Great Basin National Park area; discussion of the economic viability of the project (including but not exclusively the pipeline); and other unknowns. Please delay closing the comment period, or at least to agree to issue a supplemental EIS after the missing information is obtained.	Thank you for expressing your concerns related to the Draft EIS. Your suggestions have been carefully considered by the BLM, but have not resulted in changes to the analyses presented in this document, the comment period, or the issuance of the supplemental EIS. Impacts related to well locations, pumping, and groundwater drawdown however will be analyzed in greater detail in future NEPA.
99999-3	If Spring Valley is a shared aquifer system with Snake Valley, it could be illegal to pump water out of the area; the Lincoln County Land Act requires studies showing the relationship between Spring and Snake Valleys and the effects of pumping in one or both before pumping.	Please review revised section 3.3 which discusses potential impacts from groundwater pumping.
99999-4	The financial information is also extremely important. We cannot find information in the DEIS on the real costs of the project, or who will be expected to pay for it.	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. The underlying concerns in your comment are outside the scope of the EIS. However, because of comments received to the EIS, 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
99999-5	However, a water supply adequate to add over 300,000 families to Las Vegas seems unrealistic. We wonder if the intent of SNWA is to acquire access to a tremendously valuable commodity for resale rather than to fill a real need, and we wonder why the project has to be so oversized.	Thank you for your comment. The subject of this comment is beyond the Draft EIS scope and does not require further agency response. However, your comment topic will be considered by the BLM during preparation of the Final EIS and Record of Decision. This information will be provided to SNWA for their use in future water resource planning.

Comments and Responses - Non-governmental Organizations

ID	Comment	Response
99999-6	We want the final EIS to detail exactly the degree of damage that will be done on all public BLM land affected by the water removal, and on adjacent private lands.	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.
99999-7	We are concerned with the DEIS discussion of probable desertification downwind of the Wasatch Front; the DEIS suggests 24,000+ tons of blowing dust will be created. Nevada's desert is contaminated with disease spores, radioactive materials from nuclear testing, and fine particulate materials which act in human lungs exactly like asbestos.	Please see common responses Air-1 and Air-2.
99999-8	Snake Valley was a prime pumping area in SNWA's planning; SNWA now wants to discuss that "later." Approval of the pipeline without considering Snake Valley is inappropriate. Please take no action without full and complete analysis of probable outcomes in Snake Valley.	Three alternatives (D, E, and F) exist that would preclude groundwater development and pumping in Snake Valley. Additionally, 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.
99999-9	The Lincoln County Land Act says no groundwater shall be taken out of the Snake Valley basin without agreement between Utah and Nevada. Approval of the DEIS as written may allow SNWA to work-around the Land Act.	These concerns have been considered in the development of the agency preferred alternative, Section 2.8.

The Nature Conservancy

34210-1	A 10 foot or greater drawdown in groundwater levels was used by BLM as a threshold for predicting adverse impacts and risks to the groundwater-dependent ecosystems. While this may be a reasonable starting point, adverse impacts to many important groundwater-dependent ecosystems and species could occur at much smaller water level declines. BLM cites that "drawdowns of less than 10 feet could reduce flows in perennial springs or streams ... which in turn could potentially cause declines in the diversity and abundance of associated riparian flora and fauna that may only be able to tolerate water declines on the order of a few feet." (Chapter 3, p 3.3-87).	See Standard Resource Response WR-1 regarding the 10-foot drawdown.
34210-2	Therefore, many of the biological impacts can only be inferred by the current coarse-scale groundwater modeling, and could be better assessed with more fully developed ecological models.	These issues will be addressed in future tiers. See comment response Gen-2.
34210-3	SNWA has proffered a number of "Applicant-Committed Environmental Protection" measures. These include (1) monitoring, management and mitigation measures provided for under Stipulation Agreements with federal agencies, as well as the requirements of the Nevada State Engineer and (2) adaptive management measures proffered by SNWA. While they serve as a good starting point, these currently committed and proposed mitigation measures are not yet sufficiently developed or specified to assure that unreasonable adverse effects will not occur to the groundwater-dependent resources.	Please refer to standard resource response MM-1 for information relevant to this comment.
34210-4	The Conservancy believes that the current monitoring, management and mitigation provisions in the Stipulation Agreements, while a good starting point, are inadequate to assure that "unreasonable adverse effects" will not occur to the groundwater-dependent resources over the duration of groundwater development.	Please see Standard Resource Responses MM-1, MM-2 and MM-3. This section outlines the process that BLM now and in the future will follow for mitigation for this project. Mitigation related to groundwater development will be included in subsequent NEPA and associated valley-specific COM Plans as described in section 3.20. All comments on the stipulated agreements have been provided to the executive committee overseeing the implementation of the Stipulated Agreements.
34210-5	Ecological models have not been developed to better determine the impacts of reduced groundwater levels and flows to the other key ecological attributes of the groundwater dependent ecosystems, including their significant biota. The Conservancy and federal agency partners now routinely use ecological models to forecast future conditions and the potential effects of alternative management strategies for terrestrial and riparian ecosystems at a landscape-level; we strongly encourage the use of ecological modeling as a management tool. Ecological models- with parameters linked to the predicted groundwater levels, spring and stream flows, and vegetation evapotranspiration from the agreed regional groundwater model -could allow the forecasting of adverse impacts well before they might occur, as well as testing a variety of mitigation management strategies in advance of any actual impacts.	Thank you very much for your comment. As described in Section 1.3.3 of the Final EIS, details regarding the number and locations of wells and pumping rates are presently unknown. Therefore, the potential long-term effects of groundwater pumping were the subject of a programmatic analysis. In brief, the programmatic analysis is an initial environmental assessment that considers the general characteristics of the proposed activity but is not site-specific. Programmatic assessments typically result in broad characterizations of potential impacts over a wide area or period of time with the expectation that assessments will be refined in subsequent NEPA analysis. Due to the programmatic nature of the analysis in this EIS, ecological models have not been employed in determining biological impacts. Additional analyses will be performed during subsequent NEPA to address specific areas with specialized biota.
34210-6	No standard has yet been established for what actually constitutes an "unreasonable adverse impact." The Conservancy commonly uses a standard that the Key Ecological Attributes for an ecological system or species should fall within an acceptable range of natural variation for the system to be considered viable, recognizing that some management actions may still be required to maintain the system. If such a standard were deployed, then any predicted movement of an indicator or a suite of indicators outside of the acceptable range of variation might be considered an "unreasonable adverse impact"- whatever the cause, be it groundwater withdrawal or other management practices affecting the ecosystem.	Thank you for your comment. Please see Standard Resource Response MM-1.

Comments and Responses - Non-governmental Organizations

ID	Comment	Response
34210-7	No ecological thresholds have been determined that would translate a standard of "unreasonable adverse impact" into measureable indicators for the various groundwater-dependent ecosystems. The EIS implicitly suggests that a predicted 10 foot or greater drawdown in groundwater levels (Chapter 3, p 3.3-87) or a 5 percent or greater reduction in predicted spring flows (Chapter 3, p 3.3-92) might constitute such thresholds for two vital attributes- groundwater levels and spring flows. These types of thresholds need to be developed and specified for all Key Ecological Attributes for identified species and ecosystems based upon clearly articulated standards.	The methodology section for groundwater pumping in each resource describes the information that was used to predict adverse effects on that resource. For example, the use of the 10-foot drawdown contour and risk category for springs and streams was discussed in the aquatic biological resources methodology along with the estimated flow reduction value of 5 percent for some springs.
34210-8	There are no firm "trigger" mechanisms to assure that sufficient mitigation will occur based upon predicted unreasonable adverse effects (i.e., when a predicted threshold is crossed). Mitigation measures include redistribution, reduction, or cessation of pumping, as well as improvements to habitat and other measures. Instead, the existing Stipulation Agreements provide for a consultation process among the parties to the Agreements (i.e., SNWA and the federal agencies) to determine what might constitute an unreasonable adverse impact and what mitigation measures, if any, would be required. While we support a consultation process and encourage consensus-based decisions, we believe the presumption should be that mitigation will occur unless the parties agree otherwise.	Thank you for your comment. Please see Standard Resource Response MM-1.
34210-9	There is no clear process for resolving a deadlock if the parties to a Stipulation Agreement cannot reach a timely agreement about a projected unreasonable adverse impact or a proposed mitigation action. Final decisions are to be made by an Executive Committee, but if the Executive Committee cannot reach agreement there is no clear final arbiter or resolution process.	Please see Standard Resource Responses MM-1, MM-2 and MM-3. Mitigation related to groundwater development will be included in subsequent NEPA and associated valley-specific COM Plans as described in section 3.20. All comments on the stipulated agreements have been provided to the executive committee overseeing the implementation of the Stipulated Agreements.
34210-10	The EIS acknowledges several of the current deficiencies of the Stipulation Agreements, but does not recommend any measures to assure that these deficiencies will be adequately addressed before a federal Record of Decision is issued. BLM specifically notes ... "The biological monitoring plans that have been developed to date are strictly monitoring plans (i.e., they lack the mitigation and management component). Thresholds for management action/response have not been identified ... It will be important to link monitoring to appropriate management responses and mitigation to avoid unreasonable adverse effects." (Chapter 3, p 3.7-47)	Please see Standard Resource Responses MM-1, MM-2 and MM-3. Mitigation related to groundwater development will be included in subsequent NEPA and associated valley-specific COM Plans as described in section 3.20. All comments on the stipulated agreements have been provided to the executive committee overseeing the implementation of the Stipulated Agreements.
34210-11	The additional proffered "Applicant-Committed" mitigation measures- which propose an adaptive management approach - as described in the EIS are wholly inadequate to avoid adverse impacts. The EIS states that "SNWA has developed an Adaptive Management Plan to ... establish adaptive management thresholds, conduct monitoring ... and determine whether SNWA's groundwater pumping has likely caused or contributed to (italics ours, to emphasize the use of the past tense) adverse environmental impacts, and if so, then to determine the appropriate adaptive management strategy to avoid future adverse environmental impacts and minimize or mitigate those that have already occurred." (Chapter 2, p 2-44).	Please see Standard Resource Responses MM-1, MM-2 and MM-3. This section outlines the process that BLM now and in the future will follow for mitigation for this project. Mitigation related to groundwater development will be included in subsequent NEPA and associated valley-specific COM Plans as described in section 3.20.
34210-12	This approach is unsatisfactory, in that it is reactive to environmental impacts that have already occurred (and may be difficult if not impossible to successfully mitigate), rather than proactive in using groundwater and ecological models to forecast adverse impacts well before they occur, test alternative management and mitigation strategies, and truly adaptively manage for ecologically sustainable withdrawals.	Please see Standard Resource Response MM-1. This section outlines the process that BLM now and in the future will follow for mitigation for this project. Mitigation related to groundwater development will be included in subsequent NEPA and associated valley-specific COM Plans as described in section 3.20.
34210-13	The Stipulation Agreements between SNWA and various federal agencies for Spring Valley and Delamar, Dry Lake and Cave Valleys still lack clear standards, methods and processes for assuring mitigation of any predicted unreasonable adverse effects on groundwater-dependent resources, as we have described above.	Thank you for your comment. Please see Standard Resource Responses MM-1, MM-2 and MM-3. Additionally, the BLM has assembled all comments on the stipulated agreements and have provided them to the Executive Committee which oversees the implementation of the agreements.
34210-14	BLM states that it is "mandated by law to grant certain ROWs (rights of way]" (ES-14). However, the Conservancy believes that the circumstances surrounding the currently proposed Alternatives are far too uncertain (as described above) to reasonably evaluate them, other than to conclude that each Alternative other than No Action is likely to produce unreasonable adverse effects on significant biological and environmental resources.	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. Please refer to standard resource responses Gen-1 and Gen-8 for information on this topic.
34210-15	Moreover, we maintain that some Alternatives are beyond the scope of being reasonable, in that they assume withdrawal amounts well beyond the levels already granted by the Nevada State Engineer. Lastly, any Snake Valley withdrawal amounts as of this date are completely speculative.	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. Please refer to standard resource responses Gen-1 and Gen-3 for information on this topic.
34210-16	The Proposed Action and Alternative B should be discarded, as they are based on an unreasonable assumption about the amount of groundwater pumping- an amount substantially in excess of the amounts previously approved by the Nevada State Engineer.	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. Please refer to standard resource responses Gen-3 and Gen-5 for information on this topic.
34210-17	Alternatives D and E should be amended to reflect the new amount of SNWA withdrawals, if any, that are approved by the Nevada State Engineer in the upcoming proceedings.	Alternatives D and E were not modified in the FEIS. A new Alternative F was added. Alternatives e and F bracket the volume of water approved by the Nevada State Engineer.
34210-18	Alternatives A and C should be discarded, as they are based on a highly speculative future withdrawal amount from Snake Valley being approved by the Nevada State Engineer- with the SNWA application postponed until 2019, with a still unsigned bistate agreement and with no 3M provisions under a signed agreement.	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. Please refer to standard resource response Gen-5 for information on this topic.

Comments and Responses - Non-governmental Organizations

ID	Comment	Response
34210-19	One or more new Alternatives should be developed, based upon a substantially lower level of pumping, assuming that cessation and/or reduction of pumping will be required over the project's lifespan to avoid the types of adverse environmental impacts so well documented in the EIS.	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. Please refer to standard resource response Gen-5 for information on this topic. Please note that an additional alternative has been added to the FEIS. The NSE has issued a new ruling, as discussed in section 1.4. Please note that the new water amounts are either the same or higher than suggested in this comment.
34210-20	This would be a reasonable effectuation of the monitoring, management and mitigation plans under the existing Stipulation Agreements, which explicitly provide for cessation or reduction of pumping as a mitigation option. BLM has already shown its willingness to consider variable and intermittent pumping levels under current Alternative C.	As stated in the comment, the reduction or cessation of pumping will be an option of monitoring, management, and mitigation plans, as listed under one of the applicant-committed measures for all alternatives. This measure would determine a reduction or cessation of pumping on a case-by-case basis for individual production wells or well fields using technical and consultation processes identified in the stipulated agreements.
34210-21	Given the types, levels and extent of environmental impacts predicted in the EIS, the Conservancy recommends that monitoring, management and mitigation measures be more fully developed and specified under any Alternative, including the following provisions:	This comment should not have been bracketed separately. Please see the responses to your specific comments below.
34210-22	A clear standard be established for what constitutes an "unreasonable adverse impact."	The term "unreasonable adverse impact" will be defined as part of monitoring and mitigation for the project. See Standard Resource Resonse MM-1 for a description of the COM Plan.
34210-23	A requirement that ecological models be developed to better forecast the impacts of reduced groundwater levels and flows to the Key Ecological Attributes of the groundwater-dependent ecosystems that have been developed in the Spring Valley and Delamar, Dry Lake and Cave Valleys Monitoring Plans.	Please see Standard Resource Responses MM-1, MM-2 and MM-3. This section outlines the process that BLM now and in the future will follow for mitigation for this project. Mitigation related to groundwater development will be included in subsequent NEPA and associated valley-specific COM Plans as described in section 3.20. This section outlines the process that BLM now and in the future will follow for mitigation for this project. Mitigation related to groundwater development will be included in subsequent NEPA and associated valley-specific COM Plans as described in section 3.20. All comments on the stipulated agreements have been provided to the executive committee that has oversight responsibility for the stipulated agreements for Spring, Delemar, Dry Lake and Cave Valleys. These type of models are more useful when specific data are available, such as when the actual groundwater development parameters are established during SNWA's future proposals for groundwater pumping and well placement which would be analyzed in subsequent NEPA.
34210-24	A requirement that ecological thresholds be determined that would translate a standard of "unreasonable adverse impact" to measurable indicators for the groundwater dependent ecosystems (indicators have already been established for each Key Ecological Attribute under the Monitoring plans).	Please see Standard Resource Responses MM-1, MM-2 and MM-3. This section outlines the process that BLM now and in the future will follow for mitigation for this project. Mitigation related to groundwater development will be included in subsequent NEPA and associated valley-specific COM Plans as described in section 3.20. All comments on the stipulated agreements have been provided to the executive committee overseeing the implementation of the Stipulated Agreements.
34210-25	Establishment of firm "trigger" mechanisms to assure that mitigation will occur, including cessation or reduction of pumping if necessary, based upon any predicted unreasonable adverse effects (i.e., impacts that cross the above thresholds as may be forecast by the regional groundwater model and/or ecological models).	Please see Standard Resource Responses MM-1, MM-2 and MM-3. Mitigation related to groundwater development will be included in subsequent NEPA and associated valley-specific COM Plans as described in section 3.20. All comments on the stipulated agreements have been provided to the executive committee overseeing the implementation of the Stipulated Agreements.
34210-26	Establishment of a clear process for resolving a deadlock in the event that the parties to a Stipulation Agreement cannot reach a timely agreement on management or mitigation actions.	Please see Standard Resource Responses MM-1, MM-2 and MM-3. Mitigation related to groundwater development will be included in subsequent NEPA and associated valley-specific COM Plans as described in section 3.20. All comments on the stipulated agreements have been provided to the executive committee overseeing the implementation of the Stipulated Agreements.

Trout Unlimited, Great Basin Chapter

34054-1	Headwater reaches of perennial streams within the pumping area of influence have dried up and been lost with their accompanying species populations. The same can be expected to occur with the massive pumping of the SNWA GWDP, especially in the perennial streams of the North & South Snake Range and the Schell Range. The DEIS fails to address these impacts and the accompanying socio-economic and recreational impacts.	Perennial streams within the Snake and Schell ranges were included in the analysis area. Potential impacts to streams are identified if the streams are located within the 10-foot drawdown contour and are located in valley margins and valley bottom areas. The Appendix F3.7 tables F3.7-11 through F3.7-25 list specific streams affected by the various alternatives. Impacts to recreational fishing and economics related to fishing are discussed in those respective resource sections.
34054-2	In the Snake Valley portion of the GWDP area there are some 15 perennial streams of at least 40 stream miles that would be impacted. These streams contain occupied habitats for native fish, especially the Bonneville Cutthroat Trout (BCT) and numerous other game species. These species and their habitats would be impacted by groundwater pumping and subsequent dewatering of occupied habitat with accompanying loss of populations, either partially or totally. This would have a serious impact on the recreational economy of White Pine County, the Baker area especially, and adjacent counties affected by the GWDP. These biological and socio-economic impacts are not covered adequately or at all in the DEIS.	Potential effects to streams containing Bonneville cutthroat trout are discussed for all alternatives in Section 3.7. Impacts to recreational fishing are discussed in a general manner in Section 3.9 (Recreation) and Section 3.18 (Socioeconomics), with a reference to the aquatic biological resources section.

Comments and Responses - Non-governmental Organizations

ID	Comment	Response
34054-3	The DEIS fails to incorporate and analyze the GWDP impacts associated with the northern portion of Snake Valley, including the Fish Springs NWR, and the Deep Creek Valley with the Goshute Indian Reservation (GIR). Hydrologic studies have shown definite connectivity of these areas to the aquifers in Spring and Snake Valleys, and therefore perennial streams and springs on the GIR can be expected to be impacted by the GWDP.	See response WR-5 regarding potential effects to Fish Springs. The maximum extent of the model simulated drawdown area resulting from the GWD pumping scenarios occur at the full-build out plus 200 year timeframe. At this point in time, the nearest location of the simulated drawdown area resulting from project pumping is located in northern Spring Valley; located two hydrographic basins away from (approximately 20 miles southwest) of Deep Creek Valley; and approximately 15 miles from the Goshute Indian Reservation boundary. Therefore, impacts to water resources in Deep Creek Valley and the Goshute Indian Reservation are not anticipated. Drawdown related effects are estimated to eventually propagate into the southeast margin of the Steptoe Valley Hydrographic Basin as described in Section 3.3 and Appendix F3.3 of the EIS.
34054-4	The Deep Creek Range, in northern Snake Valley, has some 33+ miles of perennial streams with BCT occupied habitat on its East Slope. The West Slope of the Range encompassing the Deep Creek Valley and Goshute Indian Reservation (GIR) has another 30+ miles of occupied BCT habitat in seven perennial streams. Most of the streams occur on the GIR. These streams on the GIR have cultural and religious significance to the Tribe and their loss due to dewatering and streamflow reduction would seriously affect the Tribe and its socio-economic viability. The DEIS fails to address these areas and resources.	The BCT streams in Deep Valley were included in the impact analysis for groundwater pumping (see Appendix F, Table F3.7-2). No pumping effects were predicted for streams in Deep Creek Valley.
34054-5	The DEIS fails to adequately address the impacts of soils erosion, wind blown dust, radioactive materials in the dust, and mercury particulates which would enter perennial waters from land disturbance activities associated with the pipeline and pumping/well site construction activities. We fail to see how the BLM can make a decision without analysis of essential information from SNWA about the project.	Soils susceptible to wind and water erosion are described for each hydrologic basin that might be affected by project construction and drawdown. It is stated that ACMs and BMPs would be implemented to minimize accelerated erosion that might result from surface disturbance so increased sediment delivery to streams would not result from the project. The soils section states the potential hazards of not successfully stabilizing disturbed soils that have low revegetation potential, are highly erodible, or are compaction prone in an effort to disclose potential impacts to the BLM. At the end of Section 3.4.1.2, there is a description of the results of testing for radioactive materials and the lack of hazard established by soil testing in the region. This section also describes the lack of hazards from erionite in the windblown dust. No information on mercury particulates is available to address this issue.
34054-6	The Conservation Agreement and Conservation Strategy for the BCT in the State of Nevada is tiered to the Range-Wide Agreement and covers the area and waters within the area of influence of the GWDP of SNWA. BLM must adhere to Authorities governing the implementation of these Agreements. Nevada BLM management for sensitive species, i.e. BCT and other species, must adhere to management consistent to not contributing to the need to list any species as Threatened and Endangered, as cited in BLM Manual 6840.06, the FLMA 1976, as amended (Sections 5, 6, 7, and 10), the ESA (Section 6(c)(1), as amended, and the Fish & Wildlife Coordination Act 1956. The other signator agencies under this Agreement are also subject to laws, i.e. USFS under the NFMA 1976, 16 U.S.C.1604 (g)(3)(B) and FSM 2670 for species management to sustain native species; and the NDOW through NRS 503.351 & 503.584 for the State's obligation to conserve and protect imperiled native species. Any BLM decision that would subsequently allow the GWDP to proceed would have serious consequences to the survival of these sensitive and/or candidate species and their occupied habitats and therefore violate the Authorities that BLM must adhere to under the Law.	The EIS discloses impacts to Bonneville cutthroat trout and discuss potential conflicts with the management plan for this species. Streams occupied by this species are included in recommended monitoring and mitigation measures for groundwater pumping. Additional detail will be added to these measures as part of the monitoring, mitigation, and management planning process.
Trout Unlimited, Southern Nevada Chapter		
34022-1	These springs will dry up if the aquifers are depleted. These streams will dry up without these natural springs. The Native Bonneville Cutthroat Trout will die without sufficient water in these streams.	Comment noted.
34022-2	Because the ranchers know that once the water is piped out, they will not have enough water to support their livestock and sustain their ranches.	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. Please refer to standard resource responses MM-1 and SocEcon-5 for information on this topic.
34022-3	If they're wrong will they agree to stop pumping before they have completely wiped out the area.	This option is one of the applicant-committed protection measures identified under Adaptive Management Measures. Reduction or cessation of pumping would be determined on a case-by-case basis for individual wells or well fields using technical and consultation processes in the stipulated agreements.
Utah Air Quality Board Member		
34431-1	Figure 3.3.1-1 appears to be blank, making it difficult to frame my comments.	Thank you for your comment. See revised text.
34431-2	You have not adequately considered air quality impact of groundwater removal (dewatering) these regions, which would lead over the long term to loss of vegetation and higher levels of windblown dust (PM10 and PM2.5) and visibility impairment. I believe that once you consider the effect of dewatering on windblown dust, you could very well be above the conformity threshold levels.	Please see common response Air-5.

Comments and Responses - Non-governmental Organizations

ID	Comment	Response
34431-3	I disagree that the proposed project will have no effect on Utah because none of the right of ways extend in to Utah. Several counties in Utah are in non-attainment for PM10, and EPA recently proposed to disapprove Utah's redesignation request for PM10. This disapproval was based, in part, on PM10 levels in Utah during high-wind events, when dust can be transported 100s of miles. The proposed project will exacerbate current problems with achieving PM10 NAAQS in Utah.	Please see common response Air-14.
Utah Audubon Council & Citizens Educ Proj		
35341-1	Utah Audubon chapters and their members have a deep interest and concern in preserving habitat for birds and wildlife in the region. Areas potentially affected negatively by the proposed groundwater development include premier habitat for threatened sage grouse populations and other important and protected species such as raptors, and critical wetlands used as stopovers for migratory birds along the Pacific Flyway. Citizens Education Project is particularly concerned about the social and economic justice aspects of this proposal.	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. Please refer to standard resource responses SocEcon 2, SocEcon-5, WL-2, WL-4, MM-1 and MM-2 for information on this topic.
35341-2	In general, BLM has done a credible job of cataloging potential adverse impacts from the proposed action and the limited right of way alternatives described. These identified short and long-term, irreversible and irretrievable impacts are so widespread and severe that we believe that BLM, in order to fulfill its mission and uphold its public trust duties to preserve and protect the public resources under its jurisdiction, must choose the No Action Alternative and deny the Right of Way.	Thank you for your comment. Please see general comment response Gen-6
35341-3	Additionally, the DEIS identifies a plethora of incomplete and unavailable information, a great number of "known unknowns". The DEIS is replete with errors and omissions and vague and unsupported assertions, many of which we detail below. Taken together, we believe that the DEIS is too flawed and too inadequate for BLM to use as a basis for such a critically important, far-reaching decision, and that BLM must acknowledge this either by withdrawing, substantially revising and then reissuing this DEIS, or by preparing a Supplemental Environmental Impact Statement (SEIS).	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. Please also review updated and revised Chapter 4.
35341-4	The DEIS states that Federal law dictates that BLM grant a Right of Way (ROW) in Clark and Lincoln Counties. But this mandate conflicts with NEPA, which mandates that all reasonable alternatives, including no action, be considered. BLM does posit a No Action Alternative – meaning no ROW in NEPA parlance – but then claims it is doing so only to set a baseline against which to measure impacts from 6 other alternatives, all of which allow a ROW. No Action in its real and legal meaning is turned on its head to be used as a means to justify taking action by granting at least some portion of the ROW sought by the proponent.	Per LCCRDA, the right-of-way corridor was established. It goes on to state that the ROW will be granted to SNWA, subject to NEPA. Please refer to standard resource response Gen-8 for information on this topic.
35341-5	Does the legislative mandate constitute the need for federal action rather than the avowed need of SNWA and its customers for a new water source and a conveyance system for that water?	Thank you for your comment. The subject of this comment is beyond the Draft EIS scope and does not require further agency response. However, your comment topic will be considered by the BLM during preparation of the Final EIS and Record of Decision.
35341-6	We would argue that one troubling aspect of this DEIS and this groundwater development project is that it is a constantly moving target on a number of levels, which, in fairness to BLM, greatly complicates impacts analysis.	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.
35341-7	It is evident from the DEIS and from the public statements of Southern Nevada Water Authority (SNWA) officials that SNWA and BLM really don't know or can't say when construction or pumping may commence. SNWA General Manager Pat Mulroy is now stating that SNWA doesn't intend to build the pipeline anytime soon, while the DEIS projects that construction will peak in 2015 (ES). SNWA has long held that we won't know what impacts will be until pumping begins. Now SNWA testifies before the Nevada State Engineer (NSE) that it intends to pump intermittently if and when it commences pumping, further complicating impacts analysis. How is granting a ROW now for water that may or may not be used or not used for 37 years an urgent necessity?	Thank you for your comment. The timeline in the FEIS is presented as best available information at the time this EIS was produced. Adjustments to the timeline are possible in the future and those adjustments would be addressed by the BLM if and when they occurred.
35341-8	SNWA and BLM don't know precisely where many of the facilities will be sited. Answering its own question, what future facilities would be required for groundwater pumping, the DEIS states it developed "a series of assumptions" because "locations of wells is presently unknown" (ES-29).	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.

Comments and Responses - Non-governmental Organizations

ID	Comment	Response
35341-9	SNWA's stated intent to use distributed pumping - and the tiering of studies of where wells and associated infrastructure would possibly be located – further complicates impacts analysis. Water rights applications are site-specific, and no site-specific analysis is done in this DEIS, which argues that the EIS is premature. Moreover, this evolving and non-specific process, if sanctioned by BLM, will result in numerous change applications to the NSE – perhaps throughout the project lifetime – and require a near constant flow of environmental analyses and EA revisions by BLM. This will create a bureaucratic and legal nightmare for all concerned, and will be very expensive and time consuming. By postponing of gathering of essential information, the tiering of decisions endorsed by the DEIS for this project adds to the uncertainties surrounding impacts and impact analyses. Tiering sanctions and encourages speculation (the speculative nature of this project) – water may or may not be needed or used, well locations are undetermined and indefinite, well locations are subject to change, impacts may or may not be mitigated or able to be mitigated – by pushing those decisions in to the future and off the table for current and more precise 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. The complexities involving change applications to the NSE are beyond the scope of this EIS. Please see standard resource response Gen-1 for further information on this topic.
35341-10	Worse, the Tier 1 decision will lock-in all future decisions, despite new information and subsequent environmental analyses which might corroborate concerns that the issuance of the ROW allows for unacceptable negative impacts.	Future NEPA Tier 2 analyses will include new information and analyses. Please refer to Gen-1 for information on this topic.
35341-11	The BLM fails to analyze whether or not there is a need for the project (1-16), washing its hands of the issue in violation of the spirit if not the letter of NEPA. BLM claims it has no jurisdiction or responsibility to assess or question SNWA's stated need, purpose, timetables, finances, etc. "As a result, no water supply or management alternatives were determined to be reasonable alternatives to a ROW grant for this draft EIS." (ES-16) How does this respond to the BLM's statutory responsibility to "respond to the purpose and need for the action" (ES-15)?	In response to this and other comments, Chapter 1 has been revised.
35341-12	The DEIS notes that by 2035, conservation in Clark County is expected to save 276,000 afy of water (DEIS p. 1-13). These conservation savings exceed the total SNWA water applications for the project by 100,000 afy and raise the question as to whether the project is needed at all. (Additionally, these conservation savings, not only makes the project less necessary, it makes it less financially viable because less water use results in fewer revenues to the Authority to pay for the project.)	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.
35341-13	The current state of the economy in Las Vegas is not taken into account in the needs analysis, making it dated and presumptive, increasing an already great range of uncertainty, and postponing the "need" for additional water sources further into the future. The demographic projections are out-of-date (p. 1-12 and as admitted by the State Demographer) and should be recalculated in light of current economic conditions and trends.	Thank you for your comment. The specifics of SNWA's projected water demand, the population growth projections embedded therein, and its consideration of alternative sources of water are outside the scope of this EIS. As noted in Sections 1.1 and 1.6, SNWA is acting within its statutory obligations and responsibilities in the development of its water plan, recognizing the long lead-times and uncertainties associated with securing additional water resources and major capital facility development. Standard Resource Responses Gen-3 and SocEcon-2 provide additional response to this comment.
35341-14	The DEIS wrongly narrows the range of alternatives considered to other modes of water conveyance and pipeline alignments (ES-15), stating that no other alternatives would "fulfill the purpose and need for the federal action or provide a comparable volume of water, within a similar time frame, and under financially feasible terms". Yet the DEIS fails to substantiate this declarative statement with any information whatsoever. How can the BLM make such a determination without studying those alternatives? If BLM did study other options, what were they, and on what specific bases were they rejected?	The BLM identified alternatives (see sections 2.1 and 2.2) that utilized the Congressionally-mandated LCCRDA corridor south of the White Pine County line and presented a range to encompass analyses related to pumping volumes, pumping locations and concentration of pumping activities, valleys where pumping could occur, and alternative pumping scenarios. BLM Best Management Practices, Applicant-committed Measures, Stipulated Agreements signed by the Department of Interior Bureaus, and additional mitigation and monitoring presented both in the FEIS and in additional plans drafted by the BLM will help to protect the environment from large-scale damage to the extent possible. Please refer to standard resource response Gen-3 for additional information on this topic.
35341-15	It does not appear in the DEIS that the BLM studied the financial feasibility of the Proposed Action. No cost analysis or cost-benefit analysis appears in the document. On the other hand, the DEIS states that BLM did analyze the costs of other alternative groundwater conveyance methods such as trains, trucks or aqueducts and found that "none of these alternatives would result in a reduction of environmental impacts or be more economical than the proposed action" (ES-15). This would imply that BLM did analyze the costs of the Proposed Action and Alternatives and chose to do the same for these three additional alternatives, but chose not to do so for a wide range of alternative water sources not associated with this SNWA proposal. How does BLM justify this selectivity? Is it appropriate in a document that purports to be a programmatic analysis to eliminate alternatives without rigorous analysis?	Thank you for your comment. Please see SocEcon-1, SocEcon-3 and SocEcon-6 regarding the inclusion of project cost information in the FEIS and the lack of BLM authority or need for the BLM to independently analyze project costs in conjunction with the ROW application. Comparative environmental and economic costs factored into the elimination of conveyance alternatives, e.g., rail haul, but were not a factor in eliminating alternative water supply sources from consideration (see Gen-3).
35341-16	We will only mention here some of the alternatives that could have been subject to the same economic and environmental feasibility review that BLM conducted for trucks, trains, aqueducts and pipelines: additional water conservation, ocean desalination (with intergovernmental exchanges negating the need for water transport from the ocean to Las Vegas), installation of water reuse systems, and purchase or lease of Colorado River water from Upper Basin States or American Indian Tribes.	Thank you for your comment. The BLM carefully considered the input from the public and other agencies while making a decision on alternatives to analyze in the Draft EIS. Please see standard resource responses Gen-3 and Gen-5.
35341-17	The DEIS not only does not make any no cost estimates for construction and operation/maintenance of the pipeline, but the indirect costs of the pipeline – these costs to federal, state and local governments and to private interests are nowhere described, analyzed or quantified. It is certainly possible to do a range of estimated costs and to correlate that with each of the big picture alternatives and the ROW alternatives– a projected cost/benefit analysis – but the DEIS fails to do so. This is a critical flaw in the analysis.	Please refer to standard resource responses SocEcon-1 and SocEcon-6.

Comments and Responses - Non-governmental Organizations

ID	Comment	Response
35341-18	Cumulative Impacts analysis used throughout the DEIS misses some obvious and predictable potential developments or projects, such as enhanced agricultural development (e.g. from growing specialty crops for specific markets, improved branding/marketing), increased residential development (catering to a second home/retirement/lone eagle market, especially with new cell phone tower/access allowing more “telecommuting”), and tourism-oriented developments (dude ranches, recreational outfitters). Most recent developments/projects in the area include military projects, some that became operational like JLENS and White Elk MOA. Others didn’t (e.g. Dugway property expansion). The DEIS should have analyzed the cumulative impact of potential military initiatives.	Please See Standard Resource Response Gen-2 for a discussion of programmatic analysis and subsequent NEPA. The items detailed in your comment are more suited to the specific cumulative impact analysis that will be required for subsequent NEPA tiers.
35341-19	The potential for the ROWs to facilitate additional development – and therefore more and greater cumulative impacts – is glossed over.	It is unlikely that the ROWs will facilitate additional development, since the ROWs are primarily on public land. 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.
35341-20	The DEIS inappropriately and arbitrarily limits the impact analysis to areas of 10 feet or more of drawdown. It is quite possible and not burdensome to model impacts in areas with less than 10 feet of drawdown, and this should have been done for this DEIS. The DEIS also arbitrarily limits the analysis of future impacts from drawdowns throughout the document to 75 and 200 years when some of the aquifers may not come to equilibrium for hundreds and even thousands of years.	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.
35341-21	The DEIS states that there will be 345 water rights impacted in 75 years and 500 water rights in 200 years. Where does this estimate come from? How was it arrived at? Which specific water rights are included in those figures? How much will it cost to mitigate the harm to these water rights? Where will the money come from?	Potential impacts to water rights are discussed in Section 3.3 of the EIS. GW-WR-6 is provided as a general mitigation measure to address potential impacts to water rights. The protection and mitigation of effects to water rights is the responsibility of the Nevada State Engineer (and UDWRi in Utah). In Nevada, the State Engineer would oversee the groundwater development project and monitor effects to existing surface and groundwater rights and take necessary actions to prevent or mitigate impacts if they occur.
35341-22	We wish to point out that there is no groundwater specifically reserved for BLM lands in the draft Utah- Nevada Agreement from the pool of “unappropriated” water. (The only water protected for federal uses in Utah under the draft agreement supplement and/or protect water rights for Fish Springs). How will BLM assure that it will be able to meet its public trust obligations to protect the public lands in Snake Valley if drawdowns result in significant adverse impacts requiring replacement or supplemental water as mitigation when BLM has no additional reserved water rights in Snake Valley under the draft bi-state agreement?	Thank you for your comment. Please see Standard Resource Response MM-1.

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ID	Comment	Response
35341-23	The DEIS fails to adequately address federally reserved water rights in the affected basins. In fact, the DEIS fails to do due diligence to even identify existing federal reserved rights.	Impacts to all potential water sources – whether or not those sources are the subject of federal reserved water rights, state appropriation-based water rights, or are unappropriated waters – have been summarized, evaluated, and considered in the EIS. Similarly, project mitigation measures apply to all water sources regardless of water rights status. By analyzing potential impacts to all identified water sources, the EIS analysis thus encompasses potential impacts to any federal reserved water rights that may later be identified in or adjudicated on these sources. Finally, the EIS describes the background for federal reserved water rights in Chapter 3, Section 3.3.1.7, Water Resources. There is no federal authority prohibiting the grant of a federal right of way on BLM land prior to the adjudication of federal reserved water rights. In this instance, Congress specifically mandated that certain portions of the right-of-way be granted by the BLM for the GWD Project. See Pub.L. No. 108-424, § 301. The DEIS states that “[t]he most common type of federal reserved water rights on BLM land in the project area are Public Water Reserves” and identified all federal reserved and state-adjudicated water rights located through searches of the NDWR and UDWRi databases. See EIS, Section 3.3.1.7. A Public Water Reserve may support a claim of a federal reserved water right in specific circumstances for the reservation of water available from public springs and water holes to preserve water for domestic and stockwatering, and to prevent monopolization of vast tracts of western lands by control of scarce water sources. Impacts to all potential water sources – whether or not those sources are the subject of federal reserved water rights, state appropriation-based water rights, or are unappropriated waters – have been summarized, evaluated, and considered in the EIS. Similarly, project mitigation measures apply to all water sources regardless of water rights status. By analyzing potential impacts to all identified water sources, the EIS analysis thus encompasses potential impacts to any federal reserved water rights that may later be identified in or adjudicated on these sources. Finally, the EIS describes the background for federal reserved water rights in Chapter 3, Section 3.3.1.7, Water Resources.
35341-24	DEIS doesn’t address potential impacts to the Great Salt Lake Desert and to Utah valleys on the edge of Snake Valley, though it acknowledges the potential for impacts to Fish Springs - and some reduction of discharge in interbasin flows to Pine, Wah Wah and Tule Valleys - and does estimate interruption of groundwater flow to the GSL basin and other Utah basins at 24,000 afy. The potential for drawdowns resulting in reversing the flow in the north Snake Valley – possibly leading to saltwater/brackish water intrusion- is not addressed.	See response WR-8 regarding the request to add more detailed descriptions of the potential impacts to water resources.
35341-25	The DEIS inappropriately dismisses the potential for disturbance of erionite in area soils (3.2-9), stating that there are no known deposits of erionite in the GWD. Yet at the same time, the DEIS acknowledges in the Soils Section that there are large areas within the affected basins where soil samples were not taken and soils composition is not characterized. Given the extreme toxicity of erionite and its widespread distribution naturally and its spread by human activity, it behooves the BLM to use the precautionary principle and survey the GWD area extensively to assure that construction personnel and others will not be exposed to this deadly fiber.	Please see common response Air-2.
35341-26	Likewise the DEIS dismisses concerns about re-suspension of radioactive fallout particles in the soil and potential exposure of workers. Again, this conclusion is not supported by soil sampling. The same can also be said for other contaminants and toxic substances in the soil, including mercury from gold mining operations in Nevada.	Please see common responses Air-1 and Air-3.
35341-27	The DEIS wrongly limits the affects of increased dust created by drawdowns and vegetation die-off to the immediate area, despite overwhelming information (research literature, records) that dust transport is region-wide. Impacts – and cumulative impacts - upon downwind communities, including the highly populated and air-quality-challenged Wasatch Front, are called “highly uncertain” and then ignored. This must be rectified. To predict that there will be some 24,000 additional tons of dust created annually by the drawdowns in 75 years and 34,000 tons in 200 years, and then to fail to postulate the level and extent of those impacts fails the “hard look” test.	Please see common response Air-9.
35341-28	The DEIS gives short shrift to climate change concerns, devoting just 6 pages to the subject (3.1-49 to 55). Yet even this general and superficial review predicts that climate change will likely result in: - Widespread warming leading to reduced snowpack, earlier melting of snowpack, earlier spring run-off, and associated declines in river flows. - Decreasing and more variable precipitation, rapid landscape transformation, increased flood risk and reduced flood-buffering capacity, and more widespread drought. - Vegetation die-off will result in increased frequency and severity of wildfires. Impacts will be “substantial for some resources, impacting biodiversity, protected areas and agricultural lands.” “Impacts on species distributions, community structure and ecosystem function may be significant.” - “Lower soil moistures, increases in erosion, more severe droughts, altered distribution of vegetation, and types, increased water temperatures affect aquatic biological resources, modifying, shifting or eliminating habitats, altering or restricting the physical ranges of species present, more invasive species, decrease quality of rangeland, reduced livestock feed, increased ET (greater discharge). All of this adds up to less water available for export and greatly increases the negative consequences of all the alternatives (but, of course, effects the No Action Alternative least). Unfortunately, the DEIS makes no attempt to quantify any of these critically important climate change-related impacts. This is a major flaw that greatly increases the range of uncertainties of all the impacts identified or predicted – and quantified - throughout the DEIS. Almost certainly, and almost 100% across the board, climate change will worsen those effects.	Please see common response Air-15.

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ID	Comment	Response
35341-29	While it is true that “it is impossible to link a specific greenhouse gas emission and a specific climate change” (3.1-49), it is also obvious, as the DEIS notes, that the “impact on water resources will depend in part by changes in system characteristics, changing pressures on the system, how the management of the system evolves, and what adaptations to climate change are implemented”. (3.1.50) There is nothing that more dramatically fits that description than the proposed groundwater development project.	Please see common response Air-15.
35341-30	The BLM ducks the question of how much worse will climate change make the impacts of the Proposed Action, and evades the express policy outlined in Secretarial Order 3226, and kicks the can down the road by stating that “future NEPA documents will follow DOI and BLM policies related to climate change.”	Please see common response Air-17.
35341-31	BLM argues that “since the current state of climate change science prevents the association of specific actions with specific climate-related effects, the BLM can neither: a) analyze the climate related effects of BLM actions nor (b) ascribe any significance to these potential effects. For these reasons, climate change impacts could not be evaluated for the proposed action”... (3-5). But the assertion that the impacts are uncertain and non-specific should not give license to pass over the subject for another day. This “Incomplete and Unavailable Information” is just too critical to ignore for purposes of decision making now, within the context of the granting or denying of the ROW.	Changes have been made in the FEIS text to address the central concern that underlies this comment. Please see common response Air-15.
35341-32	The predicted land subsidence over an area of some 575 square miles is unacceptable, and should be considered evidence of illegal groundwater mining.	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.
35341-33	The DEIS fails to identify specific locations where subsidence is expected to occur, making it impossible to fully analyze the impacts of subsidence. At the least, the DEIS should be able to provide a range of probability of locations where subsidence could be expected. This would then allow the DEIS to project the severity of those impacts.	Potential impacts related to groundwater pumping have been addressed at a programmatic level in this EIS. Subsequent NEPA will be required to determine and disclose site-specific impacts. Please see Standard Resource Response Gen-2.
35341-34	The DEIS should, but doesn’t, attempt to project the costs of subsidence to governments and to private interests. These costs can be presumed to be substantial. Since there is no physical “mitigation” that can be done feasibly, then mitigation must be financial, and therefore BLM should make a best faith estimate of the price tag for such mitigation. Additionally, the costs of subsidence must also be included in the analysis of the cumulative impacts of subsidence.	Monitoring and mitigation measures related to groundwater pumping impacts are focused on the framework and process at this stage of the project. Costs can be estimated when specific details are defined for these measures. Costing could be initiated after the Record of Decision for this EIS is completed and continue into subsequent NEPA analysis.
35341-35	DEIS states that there are additional soils studies underway. How will this information be incorporated into the decision-making process when available if this data were to show greater concerns or negative impacts regarding soils than anticipated (e.g. presence of erionite)?	Thank you for your comment. Please see Standard Resource Response MM-1.
35341-36	The DEIS makes clear that there are significant challenges to protecting vegetation resources in the groundwater development basins, noting that there are 35 BLM sensitive species, 17 US Forest Service sensitive species, 6 Nevada protected critically endangered species, 24 Nevada protected cacti or yucca species, and one federally threatened species within the ROW areas.	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.
35341-37	DEIS acknowledges that the effectiveness of early warning monitoring will not avoid all impacts, especially under the plans for Snake Valley 3M (UT-NV Agreement) (3.5-47). It is important to note that “a process for mitigating impacts” (3.5-46) is not “mitigating impacts”. Nor is “a commitment to a process” (Pat Mulroy testimony to NSE, 9/26/11) a contractual obligation. That SNWA will develop a detailed monitoring plan is not justification for BLM to delegate the authority for and responsibility to protect biological resources.	Thank you for your comment. Please see Standard Resource Response MM-1.
35341-38	Short-term, long-term and permanent loss of vegetation, introduction and expansion of noxious weeds and invasive species, loss of vegetation communities, loss of individuals or populations of sensitive or endangered species, increased dust and wildfires, and impacts of these events to the ecology, wildlife and humans due to construction and pumping are unacceptable impacts that cannot adequately be dealt with by any 3M program.	Please review the updated section 3.20 and standard resource response MM-1 for information relevant to this comment.
35341-39	The DEIS does not address complications that climate change present to re-vegetation efforts or how it may exacerbate problems with invasive species, noxious weeds or other successor vegetation.	Thank you for your comment. Climate change was addressed in in the DEIS in Section 3.1, Air Resouces. To better address reader concerns, climate change has now been addressed in each resource section under Cumulative Impacts.
35341-40	The DEIS notes that BLM Sensitive Species List is under review and up-dates are not available (3.6-1), the Nevada Wildlife Plan is also under review and not available for this DEIS, and that the USFWS has no current Avian Protection Plan. This is typical of the incomplete and unavailable information problem plaguing this DEIS, and further evidence that the DEIS for this project is not timely. The DEIS does find 34 special status species within the GWD (p.20) including the Endangered Southwest Willow Flycatcher (in Parangat Valley and NWR and Muddy River).	The FEIS analysis reflects the updated BLM Sensitive Species list, and the Draft revised Nevada Wildlife Action Plan. The analysis in the DEIS used the previous versions of these two documents. The FEIS also reflects the current status of discussions between the USFWS, SNWA and the BLM regarding the development of a Bird Conservation Strategy and the possible development of an Eagle Conservation Plan.
35341-41	Because the DEIS does not quantify the impacts upon the various species and populations of small mammals of vegetation changes or die-off due to groundwater development, analysis of the impacts of loss of prey to raptors is wholly inadequate. Changes to the habitat may result in raptors leaving the area, as may changes in prey species composition, which may also disruption of their migratory routes. This out-migration of raptors will have further impacts upon small mammal species populations in an ecological feedback loop. None of this is characterized or quantified in the DEIS.	The FEIS does quantify potential impact to the groundwater dependent habitat as described in the methodology section 3.6.2.8. The FEIS has been updated to include additional discussion on predator-prey interactions.

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ID	Comment	Response
35341-42	This same flaw holds true for the cursory, nearly non-existent analysis of the impacts of groundwater pumping on predator mammals. Habitat fragmentation, loss of habitat, change of species composition, and reduction of prey base are noted as having impacts upon predators, but are not quantified. How predators will respond to these critical changes to their environment is not addressed.	The FEIS has been updated to include additional discussion on predator-prey interactions. However, quantification of these impacts would be speculative in this programmatic assessment. Please also refer to general comment response Gen-2 with regard to tiering and appropriate subsequent NEPA.
35341-43	Crucial winter habitat for pronghorn in N. spring, N. Snake, Tippet Valleys, for elk in Deep Creek V., for mule deer project area-wide, potential for Rocky Mt. Bighorn and Desert Big Horn sheep will be affected, possibly resulting in reduced numbers (and reduced prey for cougar).	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.
35341-44	Impacts of groundwater pumping to the Greater Sage-Grouse may prove to be unavoidable, unacceptable and difficult if not impossible to mitigate. Loss of sagebrush habitat critical to sage grouse will likely result in population losses, disruption of mating, nesting, and ability to survive winters. There are 15 leks identified within 2 miles of ROW (nine active). We believe the distance for this proximity analysis should be expanded to 5 miles. The DEIS states that pumping and surface impacts "could result in the reduction or even loss of some local sage grouse populations in Cave, Snake and Spring Valleys (3.6-74).	Please see general comment response WL-2 regarding greater sage-grouse updates to the FEIS .
35341-45	The DEIS notes that 12,208 acres of native shrublands and woodland habitat would be removed or disturbed by groundwater development, requiring 20 to 200 years to recover. These impacts cannot be mitigated in any way that will preserve habitat for terrestrial wildlife. Greater Sage Grouse, with active leks in Cave, Spring, Lake, Snake, Hamlin, Steptoe, Tippet, and Deep Creek Valleys, will be especially challenged by these changes. The DEIS states that "in Nevada, sage grouse rely on wet areas for their survival". Disappearance of springs, seeps and sub-irrigated meadows will further threaten sage grouse populations.	Please see standard resource response WL-2 for a discussion of current initiatives to conserve Greater sage grouse and their habitats.
35341-46	Northern Harrier, Flammulated Owl are species of special management concern. The DEIS does not mention how impacts to these species might be mitigated.	Please see general comment response WL-1 regarding protection of raptors. Please also see the FEIS mitigation measure regarding raptor survey and avoidance.
35341-47	Direct impacts to raptor species include reduction of foraging and nesting habitat up to 8,265 acres as a result of facilities construction, operation and maintenance. The DEIS doesn't recommend any mitigation measures (3.6-67). Acreages of habitat lost due to groundwater pumping were not listed. Habitat impairment and loss of surface waters in Important Bird Areas, including GBNP and the Lake Creek/Big Springs and Pruess Lake complex, is a particular concern for raptors, especially eagles, who use open waters for forage. There is no mitigation for loss of Big Springs and Pruess Lake for these species – they will be reduced in numbers in these areas.	Additional mitigation measures and applicant mitigation measures have been added to the mitigation related to migratory birds.
35341-48	The DEIS states that the population status and trends of the Western Burrowing Owl are not well understood. Since this species has been identified in or near ROWs in 7 valleys, including Snake, Spring, Dry Lake and Delamar, special care should be taken to avoid adverse impacts to individual birds from ROW construction.	Please refer to Best Management Practices and Management Direction (Appendix D) and other mitigation measures and plans described in section 3.20.
35341-49	The DEIS concedes that groundwater sources and impacts to caves is not well understood, so it is hard to know how seriously cave species will be impacted.	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.
35341-50	The DEIS doesn't mention that bat colonies throughout much of the eastern U.S. are suffering from the devastating, population decimating white nose disease. The cumulative impacts upon the species of groundwater depletion coupled with this disease (should it migrate to the reason), should be considered.	The FEIS has been updated to include a potential cumulative impacts from white-nosed syndrome.
35341-51	Cumulative impacts analysis in this section is overly broad and general. The organization of this chapter made it difficult for the reader to follow and make sense of to be able to offer useful critiques.	Please see Standard Resource Response Gen-2 for a discussion of programmatic analysis and subsequent tiering under NEPA. Due to the scale of the project, a broad analysis of cumulative impacts is appropriate. Additional cumulative analysis will be performed for subsequent NEPA tiers.
35341-52	The DEIS notes that, within the groundwater development region, there are 29 federally designated Wilderness Areas, 12 Wilderness Study Areas, 27 Areas of Critical Environmental Concern, 8 National Wildlife Refuges or State Wildlife Management Areas, and two National Parks. The DEIS does not state whether or not reserved water rights for these areas were considered.	Thank you for your comment. Please see the Standard Resource Response Gen-8.
35341-53	The EIS fails to analyze impacts of drawdown upon state lands (SITLA administered lands) in Utah's portion of Snake Valley and potentially other Utah basins. Any loss of value to these lands due to drawdowns, subsidence, vegetation change, or other degradation should be quantified.	There are no areas directly affected in Utah by proposed project infrastructure. The analysis of drawdown impacts is provided in the water resources analysis in Section 3.3 of the DEIS. Please see Gen-1 for additional information on future project reviews.
35341-54	The number and value of AUMs affected should be quantified. How much value will be lost should be quantified.	Due to the size of the project and the range of variation in forage vegetation production it is impractical to quantify loss of vegetation for the project as a whole in terms of AUMs. It is felt that a much more valuable analysis comes from describing disturbance to vegetation types (communities) in terms of acreage/percentage of allotments. This creates additional depth to the analysis by allowing the reader to differentiate between impacts to higher vs. lower quality vegetation.

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ID	Comment	Response
35341-55	Costs to states from lost hunting and fishing, tourism, non-game wildlife viewing (as bird watching) due to facility construction and long-term groundwater pumping should be estimated (quantified).	Due to the location and length of the ROW, quantification of the effects of the type noted isn't practical. Moreover, the effects would be limited during facility construction and operation. Estimates of the long-term effects associated with pumping and drawdown also aren't practical due to extended time horizon involved, unforeseeable changes in environmental conditions, other management changes, and the fact that it is unclear whether such uses would diminish, continue but shift to different locations, or continue despite the other changes.
35341-56	The DEIS states that there are no anticipated impacts to transportation from groundwater pumping (3.10-20). How is it possible that, if there are 575 square miles of ground subsidence, no roads will be affected? BLM should have done an analysis of impacts of subsidence on transportation. Also, the DEIS should analyze how increased dust due to drawdowns will affect aircraft use for local travel, cropdusting, and other uses due to decreased visibility. Likewise, the DEIS should assess whether increased dust storms may have an effect upon low-level military aircraft training maneuvers.	Effects of subsidence on existing infrastructure, including roads, is discussed in Section 3.2. Impacts to visibility from dust is discussed in Section 3.1.
35341-57	The DEIS did not consider burying powerlines where they do not currently exist as a mitigation measure. Why not? The proposed action (and alternatives A-E) would have impacts on visual quality outside of GBNP that would not meet visual quality objectives and cannot be effectively mitigated.	Photographic simulations were prepared for project's Proposed Facilities as described in Section 2.5 using the methods described in Section 3.15.2.1 where sufficient locational and design information was provided to prepare an artistic rendering of the potential impacts at a given location. Further, the known extent and degree of potential transitions from wetland/meadow, spring-fed communities, and basin shrubland communities to more drought-adapted and shallow rooted vegetation species is insufficient to prepare artistic renderings the the appearance of this transition at full-buildout and after 200 years.
35341-58	The DEIS provides an inadequate analysis of socio-economic impacts but still shows that impacts will put ranchers and farmers out of business and de-populate rural communities.	Changes to section 3.18 (socioeconomics and environmental justice) have been made to clarify information regarding your concern. Please also see standard resource response SocEcon-5.
35341-59	Loss of employment in the region due to groundwater pumping should be quantified, as should the costs of safety-net services to those employed and their families.	Estimates of the long-term effects of the type cited would amount to speculation due to the extended time horizon associated with pumping, level of drawdown, and the changes in environmental conditions and responses thereto. Furthermore, the characterization of the potential effects of the GWD on water availability, in terms of loss of employment in the region, is not entirely consistent with the conclusions of the socioeconomic assessment and the water analysis in Section 3.3.
35341-60	The DEIS fails to take a hard look at indirect and cumulative socio-economic impacts, including future development in the region.	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. As noted in Section 3.18.3, the potential cumulative effects as they pertain to the decisions to be made by the BLM based on the ROD from this EIS would be those that arise primarily in instances of concurrent development activity during construction of the pipeline. Based on the identification of other RFFAs and the limited number of operating jobs associated with the pipeline, the potential for cumulative socioeconomic effects is low. The potential for long-term cumulative effects during the extended period of groundwater pumping and drawdown can be characterized as largely uncertain. The timing, nature, location and level of future development in the region, other than in Clark County and the infrastructure projects identified, is largely a matter of conjecture. As noted, the lack of information regarding the specific projects effectively constrains the cumulative analysis.
35341-61	An argument can be made that the stipulated agreements and associated monitoring and mitigation plans inappropriately and perhaps illegally delegate to other parties the duties and responsibilities that BLM was charged with under the Organic Act. These agreements are replete with problems and will not effectively prevent environmental damage, including the severe negative impacts BLM has identified throughout the DEIS. A short list of the problems with these agreements includes that they are vague, unenforceable (even arbitration is not binding), and unfunded, lack guidelines, lack time limits for resolving disputes, provide no penalties, and are dependent upon the State Engineer for placing conditions on well permits to remediate their failings.	Thank you for your comment. Please see Standard Resource Responses MM-1, MM-2 and MM-3. Additionally, the BLM has assembled all comments on the stipulated agreements and have provided them to the Executive Committee which oversees the implementation of the agreements.
35341-62	The DEIS identifies 6 Herd Management Areas (HMAs) in the groundwater development area, with the Eagle and Silver King herds being the most directly affected. The DEIS states that there are some 3000 acres of facility footprints, 24 miles of perennial streams and 292 springs within HMAs, and approximately 3.4 million HMA acres within the study region.	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.
35341-63	Negative effects upon horses from project construction include disruption on foaling, injuries, noise, and impacts to water sources. Groundwater pumping effects identified include loss of water sources, reduced forage, disruption of herd movement, and increased human conflicts (such as horse-vehicle collisions). Cumulatively, these effects will result in reduced carrying capacity of the habitat for wild horses in the region.	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.

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ID	Comment	Response
35341-64	A problem with the DEIS analysis of project impacts on wild horses is that no data is given on springs potentially affected by pumping in HMAs in Utah – Choke Cherry, Confusion, Conger, Kingtop, and Sulphur HMAs. There is no information provided on the number of springs in those areas, nor is there any data or analysis of the impacts upon horses if those springs are compromised by pumping. The Sulphur herd exhibits some traits and bloodlines thought to be descendent from the Spanish Barb horses brought to America by Spanish explorers in the 1600s (BLM 2009). The DEIS should consider additional measures to assure protection and continued viability of this special herd.	No HMAs in Utah would be affected by ROW or facility construction or maintenance and none contain springs within the 10 foot or greater drawdown area. Information regarding unaffected springs (outside of the 10 foot or greater drawdown area) is not a part of the analysis for wild horses. Tables 3.13-5, 3.13-7 - 3.13-9, and 3.13-11 - 3.13-17 summarize HMAs that would be affected by the project; either due to direct surface disturbance or by experiencing drawdown effects to water sources and/or wetland/meadow and basin shrubland vegetation that is located within the 10 foot or greater drawdown contour.
35341-65	The DEIS notes serious impacts upon wetland/meadows areas that are typically sub-irrigated or springfed (8000 acres in Siver King HMA). The forage available in these areas is important for herds. Mitigations proposed appear inadequate to address reduction or loss of this food source.	Please review Section 3.20 and see standard resource response MM-1 for information regarding this comment.
35341-66	The DEIS minimizes the effects of pumping on springs that wild horses depend upon (just one verified spring in the Eagle HMA, none in Antelope or Silver King HMAs, 3.12-21) This simply does not square with other estimates in the DEIS of the number of springs being dried up or having flow greatly reduced due to pumping.	The number of springs affected by groundwater drawdown is conveyed in Table 3.13-8. This represents springs that are contained within the 10 foot or greater drawdown contour. The same water modeling data was used to populate this table as for the entire document.
35341-67	There is ample evidence from past experience in the Great Basin that when springs frequented by wild horses dry up, that the horses are at significant risk of death by dehydration (e.g. Needle Springs). The proposed mitigation of using “artificial” water sources such as stock ponds and bubblers may not be adequate in these circumstances, as horses may not move to those new sources quickly enough. This mitigation may also prove difficult to achieve if groundwater drawdowns prove to be greater than anticipated and deeper wells must be drilled to provide artificial water. Intensive (daily) monitoring of herds should be contemplated should critical springs dry up.	Thank you for your comment. Please see section 3.20 for additional information on monitoring, management, and mitigation related to this project.

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33967-1	Even the slightest lowering of the underground water resource adversely impacts farmers and ranchers. The increased pumping costs could render agriculture economically infeasible in the immediate area and broader region.	Thank you for your comment. The potential effects of drawdown on pumping costs and the local agriculture industry are noted in Section 3.18.2.8 and suggested mitigation measure SE-6 outlines the need for mechanisms to help address potential adverse financial burdens. Text has also been included to note the recognition and protection of existing senior water rights incorporated in Nevada water law.
33967-2	The establishment of this trans-basin transfer of Snake Valley groundwater so closely associated with the rights of a neighboring state and its citizens is of concern.	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.
33967-3	An analysis of Snake Valley and its connection to the aquifer that straddles the Utah-Nevada border merits discussion.	See response WR-6 regarding the northeast boundary of the model; and Section 3.3 regarding estimates of potential effects to Pine Valley and Fish Springs.
33967-4	Protections are noted for Fish Springs from the impacts of underground downstream pumping, but no similar allowance is made for the potential impacts to the Snake Valley uses.	Comment noted.
33967-5	Pumping associated with Spring Valley and other downstream aquifers could interrupt the normal flow of groundwater across western Utah, adversely impacting regionally winter livestock grazing on Utah's West Desert.	For the proposed action, groundwater drawdown at full build out + 200 years is expected on have an effect on the western portion of Millard and Beaver counties only (see Figures 3.3.2-3 through 3.3.2-5). This should not affect livestock grazing on winter range in western Utah on a regional level.
33967-6	Fully vetted studies including USGS are critical in assessing the impacts SNWA's authorized pumping in Spring Valley will have on Snake Valley's hydrology.	Comment noted.
33967-7	If damage to the ecosystem occurs after the pipeline is completed, is there a mitigation plan to remediate impacts including the closure of the pipeline?	Thank you for your comment. Please see Standard Resource Response MM-1.
33967-8	Utah food and agriculture contributes \$15 billion to the Utah economy and employs nearly 70,000 Utahns. The economic contribution is of greatest importance to our state's rural citizens, including Utah's west desert and Snake Valley. In the counties that could be harmed by the proposed SNWA pipeline, there is additional cultural and economic importance. The BLM must fully assess the potential adverse socio-economic impacts to the historic residents of the region, especially the impacts to Utah.	Thank you for your comment. The BLM acknowledges the social, economic and cultural significance of farming and ranching to Nevada and Utah, and to the study area for the EIS. At the same time, without diminishing the value of that production within the local community, it is noted that the production constitutes a very small fraction of statewide production cited in the comment. Long-term risks to agriculture in the region 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, and the geographic distribution of crop lands in Juab and Millard county, have been added in the latter section and further assessments could occur as part of subsequent NEPA (see Gen-1)

Utah Physicians for Healthy Environment

35562-1	To this extent UPHE considers the BLM EIS inadequate, incomplete and in some cases remarkably inaccurate.	Thank you for your comment on the Draft EIS. The best available science was used to analyze the direct and indirect impacts that would result from granting the right-of-way and to complete the programmatic analysis of groundwater development and pumping activities.
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Comments and Responses - Non-governmental Organizations

ID	Comment	Response
35562-2	In Section 2.13 the EIS asks this question: "What are the controversies associated with this project?" In the BLM's attempt to answer their own question, air quality and health impacts from downwind dust aren't even mentioned. Specifically, air quality impacts on the heavily populated Wasatch Front of Utah is left completely unaddressed.	Please see common response Air-3.
35562-3	While NEPA does require the disclosure of economic impacts which would include a potential jobs analysis, it also requires a complete disclosure of potential social and environmental impacts of the proposed project, which of course includes potential negative consequences to human populations downwind. This void presents a serious inadequacy in the NEPA analysis.	Please see Section 3.18 (socioeconomics) and Section 3.1 (Airquality and Climate) for discussions related to human populations downwind.
35562-4	The estimates of newly created PM10 dust pollution offered by the BLM-- between 24,122 and 34,742 tons per year-- could be a significant underestimation by the BLM's own admission. We found nothing in the report indicating the methodology used for that estimation which makes it impossible for members of the public to critique the results.	The methodology for developing the emissions estimates is presented in Section 3.1.2.
35562-5	Using the median estimate of Owens Valley based PM10 (4,450,000 tons) yields a value of 15,893 tons of PM10 per km2. By contrast the BLM is estimating a value of one ton of PM10 per km2 from the 24,000 km2 affected by the pipeline. This is, in effect, 16,000 times less dust per sq. km than what has been historically observed by dewatering the Owens Valley. The BLM should explain this enormous discrepancy.	The methodology for developing the emissions estimates is presented in Section 3.1.2. Please see common response Air-10.
35562-6	Loss of Great Basin native vegetation will make the Basin even hotter, creating a positive feedback mechanism that will lead to even greater stress on remaining vegetation, further accelerating vegetation die off and increasing the ensuing dust. We see no evidence that this phenomenon has been considered or factored into this EIS.	No changes in local temperatures are anticipated as a result of this project. Over time, phreatophytes will likely be replaced by species that are not dependent on groundwater resources (See Standard Resource Response VEG-5). The amount of shade provided by these plants will vary by species and density. Potential differences in microclimatological response due to changing floristics is likely negligible.
35562-7	The BLM's estimation of PM10 emissions from the desertification consequences of this pipeline are 30-100% greater than the entire emissions of Salt Lake County, which have substantial health impacts.	Please see common response Air-21. Locations of impacts will be summarized from modeling results in FEIS.
35562-8	In Chapter 3, Section 3.1 PM10 this statement is made: "Air pollutant concentrations below the standards generally are not considered to be detrimental to public health and welfare." With the current state of research into the public health consequences of air pollution, the most generous way to characterize this statement is that it is naive or decades out of date. Without trying to second guess the motives or expertise of the authors, suffice it to say that the statement contradicts the overwhelming body of scientific research.	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.
35562-9	In the BLM's document, the only mention of areas in Utah with regard to potential air quality impacts is Tooele, and the statement is made that the nonattainment part of Tooele County is "well outside of the groundwater development areas." We find the omission of any mention of air quality impacts on Utah residents difficult to reconcile.	Changes have been made in the FEIS text to address the central concern that underlies this comment; however, due to its overarching nature, specifics regarding the placement of changes in the FEIS are not provided in this response. Please see common response Air-8 and Air-12.
35562-10	The history of Owens Valley and the Aral Sea cannot be ignored when examining the unintended but predictable collateral damage of water diversion. The BLM EIS should have included these historical and real time examples of the consequences of water diversion projects.	Please see common response Air-10.
35562-11	For the BLM to state that erionite "has not been identified in the project area" reveals virtually nothing about how much investigation has been conducted and offers no reassurance that this is not a potentially serious health issue.	Please see common response Air-2.
35562-12	Given the toxicity of erionite, and its known presence in the Great Basin, the residents of the Western US have a right to know the details of the investigation that allows the BLM to conclude that erionite "is not expected to be an air contaminant resulting from project activities."	Please see common response Air-2.
35562-13	The BLM's EIS makes this statement: "There is not anticipated to be re-suspension and transport of radionuclides from past nuclear testing at levels considered to be harmful to human health." Similar to our statement on erionite, UPHE considers this statement unsubstantiated at best and grossly inaccurate at worst.	Please see common response Air-1.
35562-14	Children are much more susceptible to radiation caused health affects and human embryos, especially during early gestation, are perhaps thousands of times more at risk for genetic mutations from radiation exposure than are adults. There are over 2,600 diseases described in the medical literature caused by genetic mutations. Mutated genes are passed down from generation to generation in perpetuity, impacting the health of future generations. The BLM EIS makes no differentiation regarding risk among these vastly different population subsets or these thousands of diseases.	The DEIS did not find a link between radiation in soils and downwind exposure of children after analysis of soil radiation levels and particulate modeling. Therefore, this issue was not further analyzed in detail.
35562-15	This type of detailed radio-biological assessment may be beyond the scope of the BLM's EIS, but it is a very real factor in determining the health impacts of the SNWA's project and the residents of Utah certainly deserve that. Without it the BLM has no basis for making statements like "re-suspension and transport of radionuclides are not considered to be harmful to human health."	Please see Standard Comment Response Air-1.

Comments and Responses - Non-governmental Organizations

ID	Comment	Response
35562-16	If the BLM has made an actual assessment of concentrations of residual radioactive isotopes in the surface soil of the pipeline's anticipated affected landscape and/or if modeling has been done to assess public exposure to radioactivity from the ensuing dust, this information should be shared with the public. Unless both of these assessments have been done, the BLM cannot offer any credible opinion about possible health impacts from radioactive isotopes.	Please see Standard Comment Response Air-1.
35562-17	Given the toxicity of mercury, the BLM should have made an assessment of mercury and other heavy metal levels in the soils that will be turned into dust by the project. The Aral Sea history proves the health consequences of dust borne heavy metal exposure. We see no evidence the BLM has made any attempt to assess concentrations of non-radioactive heavy metals in the affected area.	Mercury concentrations are not identified as a hazard in the soils surveys in the region and the potential for mercury or other heavy metals being distributed due to the project was not raised as an issue to be addressed. Also, it is assumed that ACMs and BMPs would be implemented to minimize wind erosion that might result from project-related surface disturbance.
35562-18	UPHE considers the BLM's EIS grossly inadequate in assessing the public health impacts of SNWA's project, especially regarding Utah residents.	Your comments on the Draft EIS have been considered. Please see standard resource responses Air-8 and Air-10 regarding these issues.
35562-19	This means the BLM's findings must be thorough, impartial, and most importantly error on the side protecting public health. This current draft fails on all those accounts.	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.

Utah Rivers Council

35554-1	We also believe that if the BLM adopts any of the alternatives presented in the DE IS, the agency will effectively be violating the multi-use policy of the Federal Lands Policy Management Act (FLPMA) by disfavoring all other uses for BLM lands in this area save for water development itself.	The authorization of a water conveyance facility ROW is consistent with BLM's mandates under both FLPMA and LCCRDA.
35554-2	The fact that this project has been exempted from NEPA, among other federal statutes, clearly shows that the Southern Nevada Water Authority has no interest in ensuring that appropriate safeguards are created to ensure the continued existence of community livelihoods and native ecosystems in both rural Utah and Nevada.	The project is currently proceeding through the NEPA process. The issuance of the EIS, conducting public scoping, and capturing public comments are all part of NEPA.
35554-3	the fact that the southern portion of the proposed project have never been subject to NEPA analysis	The entire project is currently undergoing NEPA 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.
35554-4	The BLM greatly fails in adequately demonstrating purpose and need for the project	Based on your and others' comments, Chapter 1 has been revised.
35554-5	the current real estate sector collapse is greatly deterring population influx into Las Vegas. Yet the BLM does not adequately address this change in describing the water use projections for the region in the DEIS.	Thank you for your comment regarding water use and future water needs in Clark County. The subject of this comment is beyond the scope of the EIS - see Standard Comment Responses Gen-3 and SocEcon-2. Statements of opinion do not require specific responses or text revisions under the NEPA regulations; however, they will be considered by the BLM and documented in the administrative record associated with this EIS.
35554-6	If SNWA's water use today was 199, the water use projection presented in Appendix A would have to be delayed by several decades, assuming population growth was to continue in Clark County at pre-recession levels	Thank you for your comment regarding water use and future water needs in Clark County. The subject of this comment is beyond the scope of the EIS - see Standard Comment Responses Gen-3 and SocEcon-2. Statements of opinion do not require specific responses or text revisions under the NEPA regulations; however, they will be considered by the BLM and documented in the administrative record associated with this EIS.
35554-7	SNWA doesn't truly need to implement this project since less expensive and less damaging alternatives exist to provide Clark County with more water, which are not being considered in the DEIS, such as water demand reduction strategies and policies.	Information relevant to this comment is available in Appendix A. Your comment will be provided to SNWA for consideration in their next version of the SNWA Water Resources Plan.
35554-8	The DEIS must consider a suitable stand alone Alternative in this DEIS which provides the Las Vegas area with water through water demand reduction. This Alternative is just as valid as any of the Alternatives currently presented in the DEIS.	Thank you for expressing your concerns related to the Draft EIS. Your suggestions have been carefully considered by the BLM, but have not resulted in the generation of a new alternative based on water demand reduction.
35554-9	we hereby request that the BLM prepare a suitable purpose and need section through its own planning effort and analysis, instead of simply pointing members of the public to another agency (SNWA)	Based on your and others comments, Chapter 1 has been revised. BLM does not have a legally mandated authority to prepare or implement water resource planning for municipalities in the state of Nevada.
35554-10	For this reason, the Utah Rivers Council believes the BLM has not considered a full array of alternatives in this NEPA planning process and must add another alternative which provides the Clark County community with additional water but without this groundwater project.	Thank you for expressing your concerns related to the Draft EIS. Your suggestions have been carefully considered by the BLM, but have not resulted in the generation of the requested new alternative.
35554-11	DEIS does a poor job addressing the fact that Las Vegas has entered an entirely new era of record foreclosures, population decline, economic stagnation and record real estate value decreases.	Please see standard resource response SocEcon-2 for information relevant to this comment.
35554-12	making claims that Las Vegas will double in population by the year 2035 are without merit as is claiming that its water needs will double In this period of time.	Thank you for your comment regarding future growth and water needs in Las Vegas. Statements of opinion do not require specific responses or text revisions under the NEPA regulations, however, they will be considered by the BLM and documented in the administrative record associated with this EIS. Standard Comment Response SocEcon-2 also addresses this topic.

Comments and Responses - Non-governmental Organizations

ID	Comment	Response
35554-13	We respectfully request that a completely new Purpose and Need section be prepared that adequately addresses future water needs without basing these projections on the rapid population growth observed during the real estate bubble years.	Thank you for your comment regarding future growth and water needs in Las Vegas. Statements of opinion do not require specific responses or text revisions under the NEPA regulations, however, they will be considered by the BLM and documented in the administrative record associated with this EIS. SocEcon-2 also addresses this topic.
35554-14	The immense capital costs of drilling deeper for water after the Southern Nevada Water Authority lowers the aquifer below the level which these communities may withdraw water may be prohibitive to the continued habitation in these areas. Yet the DEIS makes little mention of which communities would have to be abandoned, when this would occur or what the economic impacts of these changes would have upon rural Utah and Nevada. Simply monitoring the depletion rates of groundwater aquifers does not do enough to prevent these impacts from occurring.	Please see standard resource response SocEcon-1 for information relevant to this comment.
35554-15	The EIS needs to carefully predict which communities will need to be abandoned and when based on the actions of the Southern Nevada Water Authority.	Thank you for your comment. The underlying concern expressed in this comment is outside the scope of this EIS. The water analysis in Section 3.3 portrays the areal extent of long-term drawdowns. Although some of the drawdowns have the potential to affect communities, the COM Plan program will be put in place, and Nevada water law recognizes and offers protections for senior water rights, including municipal water sources. An assessment of the potential indirect long-term effects on community vitality, given the uncertainties, is beyond the scope of this EIS
35554-16	the Utah Rivers Council is concerned that the proposed project does not adhere to past treaty obligations made between these Tribes and the United States.	BLM is aware of the past treaty. BLM has and continues to engage in government-to-government consultation with all 25 Tribes or Tribal Bands in the area of the project.
35554-17	The Tribes of the Great Basin consider these areas sacred areas that are therefore subject to cultural analysis when the proposed project would effectively permanently dewater these cultural treasures. Yet the DEIS fails to address the cultural impacts of this dewatering upon the Tribes of the Great Basin.	Impacts to cultural resources and Native American traditional values are discussed in sections 3.16 and 3.17 of the DEIS.
35554-18	the DEIS fails to address the economic impacts of this dewatering upon these Tribes or evaluates the extent to which this dewatering effectively violates above treaty obligations.	Please note response to comment #16. Impacts to Tribal lands and interests have been included in the hydrology analysis in Chapter 3.3.
35554-19	The DEIS fails to adequately address specific impacts to fish and wildlife of the Great Basin areas affected by the proposed project especially given the massive area which would be affected.	Impacts to wildlife and aquatic biological resources are discussed in detail in Sections 3.6 and 3.7, respectively.
35554-20	For these and other reasons, we hereby request that the BLM prepare a new DEIS which adequately addresses the oversights of this outdated document and considers a new Alternative which allows Clark County to provide for its water needs without destroying the livelihoods of rural Utah and Nevada residents and fish and wildlife species.	Thank you for expressing your concerns related to the Draft EIS. Your suggestions have been carefully considered by the BLM, but have not resulted in the generation of the requested new alternative or changes to the analyses presented in this document.
Water Keepers		
34039-1	I referred them specifically to his presentation there titled, "Dr. Chamberlain's Great Basin Geologic Presentation." For EIS and related purposes, I recommend this presentation to you and others with the Bureau of Land Management's Clark, Lincoln and White Pine Counties Groundwater Development Project, and to AECOM because it raises project environmental issues, such as project water quality and the inadequacy of existing geologic mapping and knowledge for all project related purposes, including for modeling.	Please see standard resource response Gen-1 and Gen-2 for a discussion of programmatic analysis and subsequent NEPA.
34978-1	FLPMA requires BLM to have an inventory of the affected; lands that is suitable for the purposes of this project. But this inventory is incomplete and missing.	Thank you for expressing your concerns related to the Draft EIS. Your suggestions have been carefully considered by the BLM, but have not resulted in changes to the analyses presented in this document.
34978-2	BLM has not established rules and regulations regarding the criteria to be used for making determinations on water rights applications or for public involvement in right-of-way and other application processes necessary for the project.	Please see chapter 1 for specifics regarding the BLM's authority and legal mandates regarding rights-of-way application on public lands. The Nevada State Engineer has authority regarding water rights.
34978-3	The water rights project and the corridor coupled With are impermissible uses inconsistent with multiple use.	Multiple use as defined by FLPMA is often supplemented by other legislation. In the case of this project, the mandates of FLPMA must be considered in conjunction with LCCRDA. This is discussed in the EIS in Chapter 1.
34978-4	The project will eliminate one or more FLPMA principal or major uses that are defined as grazing, fish and wildlife development and utilization, mineral exploration and production, rights-of-way, outdoor recreation and timber production (43 USC 1702(1)), and must be reported to Congress.	BLM complies with the FLPMA at the local and Washington office level.
34978-5	To the extent that the project is inconsistent with BLM plans or require amendment of BLM plan. they are impermissible BLM management decisions must implement land use plans. 43 USC 1712(e).	Disclosure of non-conformance with land use plans is not necessary as the project is in conformance with applicable plans.
34978-6	PEIS project water rights and right-of-way permit actions cannot be approved by BLM until it has defined and used its public trust authority to protect the ground and surface water resources, and the resources, fish and wildlife, and other multiple uses that are dependent on the waters that are in the project areas and other areas that may be affected by projects.	Multiple use as defined by FLPMA does not provide a hierarchy of uses and protections, but rather BLM is mandated to consider natural and cultural resources in conjunction with other uses.
34978-7	The DEIS comment period should be reopened until after the close of the comment period for the Nevada State Engineer hearing on Dry Lake. Delamar. Cave and Spring valleys that is underway at this time New information is being presented at the hearing through witnesses and cross examination, and applicant and protestant information is being presented that responds to information in the DE IS and to comments made for the DIES.	Please see standard resource responses Gen-1 and Gen-2. The NSE process and the NEPA process are separate processes and administered by separate agencies.

Comments and Responses - Non-governmental Organizations

ID	Comment	Response
34978-8	The EIS needs to include a complete listing of all applications to BLM related to the Project. A listing of all applications made to BLM including to any of its offices that are for or relating to the project by any applicant needs to be in the EIS, including any that have been withdrawn. The project, application date, type of NEPA document, application and NEPA disposition, current status and office location where the fire may be reviewed and procedures to review them need to be on the list. These applications are part of the project.	This information is not required for this NEPA document.
34978-9	The DEIS should be revised and recirculated for 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.
Western Resource Advocates		
34997-1	We request that BLM adopt an alternative that minimizes groundwater withdrawals and adverse impacts to the climate	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. Please see standard resource response Gen-5.
34997-2	Particularly because this project was proposed in part to address the uncertainties of water supply associated with climate change, the alternative selected by BLM should ensure that the GDP contributes as little as possible to problem of climate change.	Please see common response Air-17 and Gen-6.
34997-3	The power requirements, energy sources, and greenhouse gas emissions must be clearly articulated in the DEIS, as the energy use associated with the pumping stations and the pipeline has important implications for air quality and climate change. The DEIS is not explicit about the power source of the pumps.	No existing electrical power distribution lines are sufficient to meet the needs of the GWD Project. Therefore, construction of a power line is identified as part of the GWD Project. The power line would begin in the south, at the Silverhawk Generating Station near Apex, and would tie into the Gonder Substation near Ely (see Figure 2.5-3). The anticipated power supply of approximately 97 megawatts (MW) necessary to operate project facilities would be obtained from the Silverhawk Generating Station. Construction of new power generation facilities would not be required. A substation connection at the northern end of the power line provides improved reliability for system operations. Power lines would include 230-kV, 69-kV, and 25-kV conductors. Wherever possible, multiple conductors would be strung on the same power pole. Table 2.5-3 summarizes anticipated power line lengths. Two new primary electrical substations and five secondary electrical substations (Table 2.5-4) are required to reduce electrical voltage from the higher levels for long-distance conveyance down to the lower levels appropriate for operational needs. A primary substation would reduce power from 230 kV to 69 kV, and a secondary substation would further reduce power to 25 kV.
34997-4	The DEIS should clarify the sources of energy for both the groundwater pumps and the pipeline.	No existing electrical power distribution lines are sufficient to meet the needs of the GWD Project. Therefore, construction of a power line is identified as part of the GWD Project. The power line would begin in the south, at the Silverhawk Generating Station near Apex, and would tie into the Gonder Substation near Ely (Figure 2.5-3). The anticipated power supply of approximately 97 megawatts (MW) necessary to operate project facilities would be obtained from the Silverhawk Generating Station. Construction of new power generation facilities would not be required. A substation connection at the northern end of the power line provides improved reliability for system operations. Power lines would include 230-kV, 69-kV, and 25-kV conductors (electrical wires). Example 230-kV and 69-kV power pole configurations are shown in Figure 2.5-4. Table 2.5-3 summarizes anticipated power line lengths. Two new primary electrical substations and five secondary electrical substations (Table 2.5-4) are required to reduce electrical voltage from the higher levels for long-distance conveyance down to the lower levels appropriate for operational needs. A primary substation would reduce power from 230 kV to 69 kV, and a secondary substation would further reduce power to 25 kV.
34997-5	Full articulation of the GDP's power demands and associated greenhouse gas emissions will promote informed decision-making by BLM. To this end, BLM should also provide its own calculation of the low-end energy demand and greenhouse gas emissions of Alternative C.	The BLM has developed an estimate of the GHG emissions associated with the project alternatives and this analysis is presented in the FEIS. Please see custom response Air-19
34997-6	actual energy demands of groundwater pumping could have a significant impact on the project's total energy demands. The DEIS must clarify the energy required for pumping groundwater.	The anticipated power supply of approximately 97 megawatts (MW) necessary to operate project facilities would be obtained from the Silverhawk Generating Station. Construction of new power generation facilities would not be required. A substation connection at the northern end of the power line provides improved reliability for system operations. Two new primary electrical substations and five secondary electrical substations (Table 2.5-4) are required to reduce electrical voltage from the higher levels for long-distance conveyance down to the lower levels appropriate for operational needs. A primary substation would reduce power from 230 kV to 69 kV, and a secondary substation would further reduce power to 25 kV.
34997-7	the DEIS claims that hydroelectricity can supply up to 40% of the power requirements for each the Proposed Action and Alternatives despite the fact that the power requirements vary (i.e., they are half as much for Alternatives D and E). Presumably, the hydroelectric generation is proportional to the volume of water flowing through the main pipeline.	The generation of hydroelectricity is considered a future action and not part of this ROW request.

Comments and Responses - Non-governmental Organizations

ID	Comment	Response
34997-8	The potential for hydropower generation appears significant for this project, but the quantification of this potential lacks important details and should be more explicitly integrated into the power supply plans for this project. Solar power is also briefly mentioned as a power supply option for the air monitoring stations, but this is not quantified. The potential for solar power to meet some or all of the pumping stations' energy demands and reduce emissions of critical pollutants should also be quantified.	The generation of hydroelectricity and utilization of solar power is considered a future action and not part of this ROW request.
34997-9	the costs of all energy sources—fossil and renewables—should be included in the cost-benefit analysis of this project.	Thank you for your comment. A cost-benefit analysis of the project is not required under NEPA, and is not a part of the BLM's EIS for the project.