

U.S. Bureau of Land Management Nevada Groundwater Projects

Southern Nevada Water Authority Right-of-Way Project Update

July 2012 – Newsletter No. 9

The Bureau of Land Management (BLM) Nevada Groundwater Projects Office has provided 8 newsletters on the Southern Nevada Water Authority (SNWA) Clark, Lincoln, and White Pine Counties Groundwater Development (GWD) Project. Newsletter No. 9 offers project updates, information about the Final Environmental Impact Statement (EIS), discussion about project financing costs, and an update on water rights.

Project Updates

New Alternative in the Final EIS

The Council on Environmental Quality (CEQ) guidance specifically allows an agency to develop new alternative(s) between the Draft and Final EIS if the new alternative is qualitatively within the spectrum of alternatives analyzed in the Draft EIS. In such a case, the agency is allowed to develop and evaluate one or more additional alternatives in the Final EIS.

Based upon this guidance, the BLM has developed and analyzed **Alternative F – Distributed Pumping in Spring, Cave, Dry Lake, and Delamar Valleys** in the Final EIS. Groundwater withdrawal volumes proposed for Alternative F is 114,129 acre feet per year (afy), which are within the qualitative spectrum of the Proposed Action (176,655 afy) and Alternative E (78,755 afy). See **Table 1** for valley-specific water quantities. The alternative is equivalent to Alternative E in regard to construction footprint. Alternative F would not include groundwater development in Snake Valley.

Alternative F differs from the Proposed Action in the following manner:

- Volumes of groundwater developed would not exceed 114,129 afy
- There would be no groundwater development, power facilities, or ancillary facilities associated with this project in Snake Valley;
- The number and size of ancillary facilities, including pumping stations, regulating tanks, and access roads, would be reduced;
- The length of power lines would be reduced; and
- Future ancillary facilities would be fewer.

The agency’s decision to develop the new alternative was based upon review of public comments, input from the applicant, and the desire to analyze a greater range of alternatives in the Final EIS. The proposed development of the main water conveyance pipeline and related facilities is consistent with that analyzed for Alternative E in the Draft EIS. The larger groundwater development volumes and pumping-related impacts presented and analyzed for Alternative F provide additional information for consideration by the public and decision makers.

Table 1 Comparison of groundwater Withdrawal Volumes

	Current NSE Rulings	Proposed Action (Original Nevada State Engineer [NSE] Applications)	Alternative E (Previous NSE Rulings)	Alternative F
Spring Valley	61,127	91,224	60,000	84,370
Delamar Valley	6,042	11,584	2,493	6,591
Dry Lake Valley	11,584	11,584	1,584	11,584
Cave Valley	5,235	11,584	4,678	11,584
Total Delamar, Dry Lake, and Cave Valleys	22,861	34,752	18,755	29,759
Snake Valley	0	50,679	0	0
TOTAL	83,988	176,655	78,755	114,129



Draft EIS Comments and Responses

The BLM received approximately 460 sets of written and oral comments and over 20,000 form letters following the public review of the Draft EIS. From these letters, the BLM responded to approximately 4,500 individual comments. **Table 2** summarizes frequent comment topics. Responses to comments will be provided in Appendix H of the Final EIS.

Table 2 Frequent Comment Topics

Topic	Comment Themes
General	Duration of the comment period
	Definition of alternatives
	Programmatic analysis of the future facilities
	Public policy issues associated with groundwater allocation
	Water conservation
Air Quality and Climate Change	Potential dust-related effects on human health
	Visibility, especially related to Great Basin National Park (GBNP)
	Requests for additional Air Quality modeling
	Potential long-term effects of Climate Change on the area
Geology	Long-term subsidence
Water Resources	Definition of the groundwater flow model area
	Use of simulated changes to flow in selected springs and stream
	Development and pumping timeframes for the programmatic analysis
	Predicted water use and drawdown under the No Action Alternative
	Use of the regional groundwater flow model and simulated 10-foot drawdown to define the drawdown area for the impact analysis
Biological Resources	Loss of vegetation, particularly wetlands/meadows and white sage (winterfat)
	Vegetation re-establishment and treatment/prevention of annual invasive weed species in areas of disturbance
	New policies (e.g., greater sage-grouse)
	Loss of hunting and fishing habitat
	Potential pumping effects on special status species in Utah hydrologic basins
	Potential effects on special status aquatic species
Human Resources	Visual resources concerns related to project components and desertification
	Effects to recreation and tourism including visitation to the GBNP
	Inadequate tribal consultation and Native American concerns related to loss of historic lands, Traditional Cultural Properties, artifacts, plants and animals of cultural importance, and loss of water which many tribes hold sacred
	SNWA's need for additional water given current economic conditions or projected growth in the Las Vegas Valley
	Potential that exportation of water for this project could foreclose economic development opportunities in White Pine County and Snake Valley, Utah
Cumulative Impacts	Basis for choice of projects included/excluded and the process for conducting the cumulative impact analysis
Monitoring, Management, and Mitigation	Requests for additional specificity in the mitigation, management, and monitoring plans
	Effectiveness of proposed monitoring, management, and mitigation
	Assurances that long-term monitoring, management, and mitigation would occur
	Concerns that pumping would not be discontinued even if major adverse effects are identified
	Cost implications of monitoring, management, and mitigation



Sclerocactus blainei, photo by Alicia Styles (BLM Caliente)

SNWA's Estimate Project Development and Financing Costs

Introduction

As part of its review of right-of-way (ROW) applications, it is BLM policy that an applicant demonstrate the technical and financial capability to construct, operate, maintain, and terminate its project. SNWA's status as an existing unit of local/regional government, current service provider in a major metropolitan market, and established presence in the capital markets is evidence of such capability.

Project implementation costs do not factor into the BLM's decision on the ROW application and the BLM is not required by the National Environmental Policy Act (NEPA), Federal Land Policy and Management Act (FLPMA), or other regulations, to independently validate SNWA's projected construction costs, or make determinations regarding the feasibility of the proposed financing, or the overall project. Neither is a benefit-cost analysis required.

SNWA presented conceptual construction cost and financing information for the GWD Project at the NSE's hearing on the SNWA's water rights applications in the Spring, Delamar, Dry Lake, and Cave valleys. That information, along with a comparison of construction cost estimates for the EIS alternatives, is summarized below in response to public comment on the Draft EIS.

Construction and Financing Costs

SNWA's conceptual construction cost estimate for the GWD Project is \$3.22 billion; \$2.01 billion for the main system, \$ 0.47 billion for future facilities,

and \$0.74 billion for design and construction management (expressed in 2007 dollars [SNWA 2011]). That estimate does not include allowances for contingencies or long-term financing. SNWA envisions construction of the project over approximately 40 years, although the schedule could be modified in response to changes affecting Colorado River supply, future demand, or other factors.

A conceptual project financing approach, detailed in the *Ability to Finance Report to the Southern Nevada Water Authority*, was presented at the NSE hearings (Hobbs, Ong & Associates 2011). The financing plan uses a combination of short-term borrowing and long-term bonded debt to complete construction of the GWD Project. Under the conceptual approach, the last bond would be issued in year 38, with a final payment scheduled to occur in year 66.

According to the *Ability to Finance Report*, the total monetary outlay associated with construction of the proposed groundwater drawdown GWD system totals \$15.46 billion over 66 years. Of the total, base construction costs account for 23%; cost increases due to inflation 18%; bond issuance and capitalized interest 5%; and interest on the bonds the remainder – see **Figure 1**.

Effects on Ratepayers

The *Ability to Finance Report* examines the potential effects of the conceptual funding approach on consumer water rates, assuming reliance on commodity charges to repay the debt, including interest. The analysis indicates a likely need to raise the commodity charges to address debt service to fund the GWD Project and SNWA's existing debt and other major planned projects. The magnitude of the potential increase attributable to the GWD Project would be to more than double the per

1,000 gallon commodity charge compared to what it would be absent the GWD Project. The study's authors characterized those results as a "worst case" assessment because: 1) the revenue projections are based on more conservative population growth than was assumed in the 2009 Water Resource Plan; and 2) the analysis does not include allowances for revenue from regional connection charges or sales taxes that could reduce the impacts on commodity charges.

Note: In April 2012, the SNWA adopted a 3-year infrastructure surcharge to help pay for large water system projects. Revenues generated by the surcharge are to help offset the dramatic decline in connection charges in recent years.

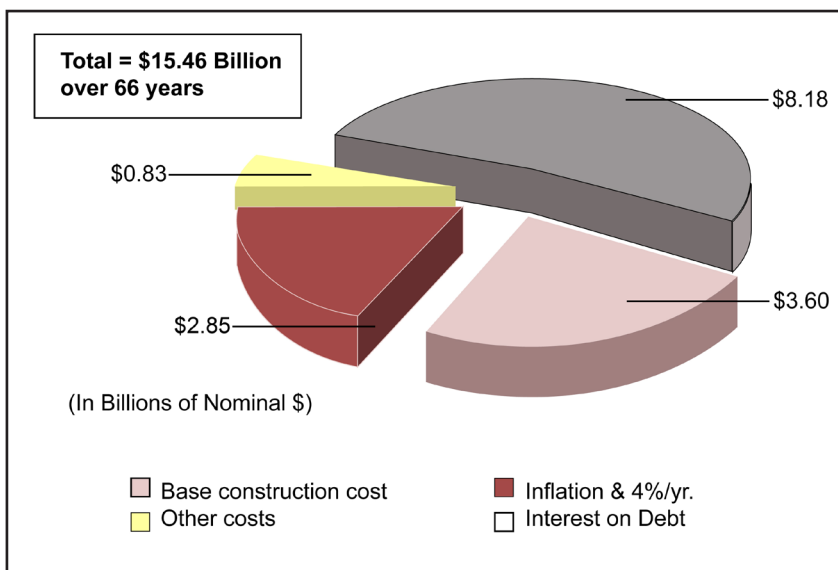


Figure 1 Conceptual GWD Project Costs Assuming Long-Term Debt Financing

Effects on Operating Costs

The *Ability to Finance Report* does not address the incremental effects of the GWD Project production and system operations on the SNWA operating costs, or potential impacts of those costs on wholesale delivery charges that the SNWA relies on to fund operations. Neither does the conceptual financing approach explicitly address the potential cost of mitigation. SNWA acknowledges the uncertainty associated with implementation of the monitoring, management, and mitigation framework developed for this project, indicating that "...SNWA has the flexibility and capability to fund construction and operation of the GWD Project, including any costs associated with monitoring, management and mitigation of groundwater development." (SNWA 2012b)

Comparison of Construction Costs for the EIS Alternatives

SNWA prepared conceptual construction cost estimates for the EIS alternatives using an approach consistent with that presented at the NSE hearings, including a revision for the Proposed Action. The comparative costs range from \$3.87 billion for the Proposed Action to \$2.43 billion for Alternative D (see **Figure 2**). The range between the high and low cost is 37%. However, interpreting the differences as a savings, or a lower cost option, would be inappropriate because the alternatives vary substantially in the amount of water conveyed. The net implications of the cost differences on the potential increases in commodity charges are unclear.

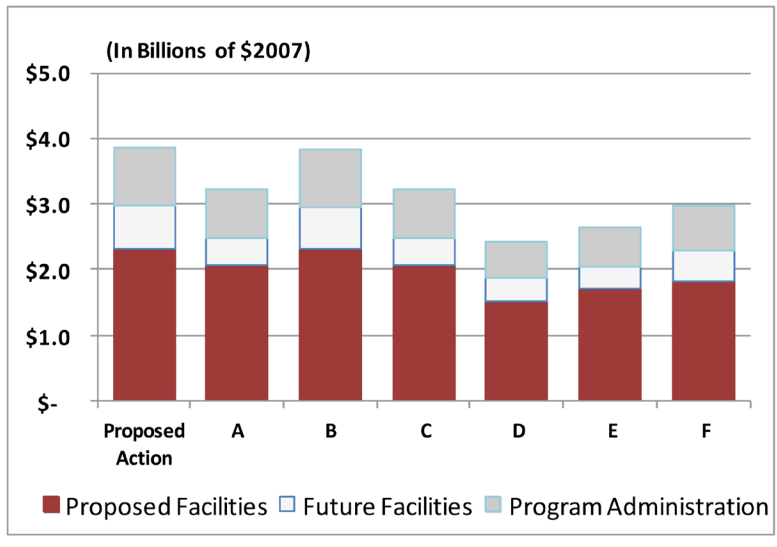


Figure 2 Conceptual GWD Project Construction Costs for the EIS Alternative (does not include contingencies or financing costs)



Photo by Janet Netcher (BLM Ely)

References:

- Hobbs, Ong & Associates, with Public Financial Management, Inc. 2011. Ability to Finance Report to the Southern Nevada Water Authority, June 27, 2011. Submitted as SNWA Exhibit 383 to the Nevada State Engineer in association with the hearings on SNWA's groundwater applications in the Spring, Delamar, Dry Lake, and Cave valleys.
- SNWA 2011. Summary of Cost Estimate for Clark, Lincoln, and White Pine Counties Groundwater Development Project. June 2011. Submitted as SNWA Exhibit 195 to the Nevada State Engineer in association with hearings on SNWA's groundwater applications in the Spring, Delamar, Dry Lake, and Cave valleys.
- SNWA 2012a. SNWA approves infrastructure charge increase. www.snwa.com/about/news_surcharge.html.
- SNWA 2012b. Conceptual Cost Estimates for Environmental Impact Statement Alternatives, Clark, Lincoln, and White Pine Counties Groundwater Development Project. Letter from Z. Marshall, SNWA to P. Woods, BLM, dated March 21, 2012.

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Cooperating Agencies

Central Nevada Regional Water Authority	U.S. Army Corps of Engineers
National Park Service	U.S. Bureau of Indian Affairs
Nellis Air Force Base	U.S. Bureau of Reclamation
Nevada Counties: Clark, Lincoln, White Pine	U.S. Fish and Wildlife Service
Nevada Department of Wildlife	U.S. Forest Service
State of Utah	Utah Counties: Juab, Millard, Tooele

Final EIS

Summary of Changes

Comments and testimony provided during the public review of the Draft EIS have been used to guide the preparation of the Final EIS and inform the BLM

of public and agency concerns regarding laws and regulations affecting land management, environmental resource protection, and other related issues. **Table 3** summarizes the major changes between the Draft and Final EIS.

Table 3 Major changes between the Draft and Final EIS

Chapters 1 & 2	Clarification added to Purpose and Need section
	Introduction and discussion of Alternative F
	Identification of the Agency Preferred Alternative
	Summary of NSE Rulings for SNWA's water right applications in Spring, Delamar, Dry Lake, and Cave valleys
	Addition of a discussion of project capital costs
Chapter 3	Addition of Alternative F analysis
	Addition of a regional-scale model to more clearly assess potential project-related pumping and groundwater drawdown impacts to air quality
	Expansion of climate change discussion
	The greater sage-grouse analysis now reflects the newly enacted Instruction Memorandum No. 2012-044 which specifies increased buffer zones around leks and transmission lines
	Additional analysis regarding potential long-term effects to the landscape as viewed from the GBNP was added for all alternatives
	The Cultural Resources impact discussion was expanded to include totals of cultural sites and historic properties potentially impacted for each alternative
	The Native American Traditional Values, Section 3.17, was expanded to include a comparison of alternatives highlighting the impacts to sites and places of tribal concern
	Additional information on past, present, and reasonably foreseeable future actions was incorporated into the cumulative effects section
	Section 3.20, Monitoring and Mitigation Summary, was revised to include the provisions for a new Construction, Operation, and Monitoring (COM) Plan for the project
Some mitigation measures have been added, removed, or modified based on agency and public comment	
Chapter 4	The description of irreversible and irretrievable resource commitments associated with the GWD Project was updated
Chapter 5	Addition of a synopsis of the Public Meetings on the Draft EIS and a summary of overarching comments received on the Draft EIS
Chapter 6	The list of preparers and reviewers for the EIS was updated
Appendices	SNWA's summary of Applicant Committed Measures (ACMs) in Appendix E was revised
	Additions were made to the consultation record presented in Appendix G
	Revisions to Appendix F sub-appendices related to individual resources have occurred as appropriate to support changes in the main document
	Appendix H was added, presenting the comments and comment responses on the Draft EIS

COM Plan

It is understood that the SNWA would implement the ACMs it has proposed as part of its project unless superseded by the Ely or Las Vegas Resource Management Plan (RMP) management actions, Best Management Practices (BMPs), Section 106 Programmatic Agreement, U.S. Fish and Wildlife Service Biological Opinion Terms and Conditions, or unless specifically modified by other ROW conditions. Under the FLPMA, the BLM may impose conditions on any ROW grant it permits for the GWD Project. Additional requirements and mitigation measures may be included in the Record of Decision (ROD) issued by the BLM for this EIS.

For the GWD Project, the BLM will require a comprehensive COM Plan to be developed and implemented. The objectives of the COM Plan are to protect federal resources and federal water rights that may be impacted by project construction, operation, maintenance, and abandonment. The plan is designed to provide early warning of potential adverse impacts, provide time and flexibility to implement management and mitigation measures, and gage effectiveness of those measures to determine if additional action is needed to protect resources.

The COM Plan presented in of the Final EIS includes a comprehensive monitoring, management, and mitigation program for the entire project to integrate the various actions which are provided through the following obligations and other commitments:

- BLM Land and Resource Management Plans
- BLM – BMPs
- U.S. Fish and Wildlife Service Biological Opinion
- Section 106 Programmatic Agreement
- Mitigation from Final EIS
- Stipulation Agreements
- ACMs

If ROW grants for the groundwater development areas are approved in the future, COM Plans would be required for these as well.

Water Rights

The NSE held a hearing on The SNWA's water rights applications for Spring, Delamar, Dry Lake, and Cave valleys in the fall of 2011. On March 22, 2012, the NSE issued Rulings #6164, #6165, #6166, and #6167 permitting water rights to SNWA totaling up to 83,988 afy in Spring, Delamar, Dry Lake, and Cave valleys. In Spring Valley, SNWA was permitted up to 61,127 afy in 3 stages of development (Ruling #6164). In Delamar, Dry Lake, and Cave valleys, SNWA was permitted 5,235 afy, 11,584 afy, and 6,042 afy, respectively (Rulings #6165, #6166, and #6167). All of the rulings required compliance with hydrologic and biological monitoring and mitigation plans, preparation of annual reports, completion of baseline studies, and periodic updating of a groundwater flow model. The NSE has not identified a schedule for the Snake Valley water rights proceedings. Please visit the NSE website to view the rulings (<http://water.nv.gov>).

Table 1 compares the amounts granted by the NSE and the amounts analyzed in the Proposed Action and Alternatives E and F. Groundwater withdrawal volumes granted by the NSE are bracketed between the quantities analyzed for Alternatives E and F.

Schedule and Next Steps

The Final EIS is expected to be released to the public in August 2012. The analysis in the Final EIS will inform the BLM and other governing agencies as they address decisions to:

- 1) Approve, modify, or deny the ROWs proposed by the SNWA;

- 2) Apply appropriate monitoring, management, and mitigation measures; and
- 3) Develop and implement monitoring plans that ensure compliance with decisions, assess the effectiveness or success of decisions, and determine how to modify decisions if the desired outcomes are not being achieved.

A ROD will be signed no earlier than 30 days after the Final EIS is made available to the public, in accordance with NEPA. The ROD is a written public record identifying and explaining the reasoning for the decision. The ROD will include:

- The decision that is made
- The reason for the decision, including a discussion of the factors that the decision-maker must balance when coming to a conclusion (such as economic and technical factors, the mission of the agency, laws and regulations affecting the decision, and consideration of national policies)
- The alternatives that were considered
- Mitigation measures that were proposed in the EIS and are now adopted into the ROD
- Explanation of any monitoring and enforcement program(s) that are adopted into the ROD
- Explanation of any requirements for the applicant to prepare detailed, site-specific construction and operation plans for each project phase or facility component; these plans require BLM approval prior to surface disturbance and issuance of a Notice to Proceed for construction.



Photo by Janet Netcher (BLM Ely)