RECLAMATION

Managing Water in the West

Walker River Basin Acquisition Program

Revised Draft Environmental Impact Statement

Volume 2: Responses to Comments

Photo by Tom Lopes

Cooperating Agencies

Bureau of Indian Affairs, U.S. Fish and Wildlife Service, Walker River Paiute Tribe, Yerington Paiute Tribe, Nevada Department of Wildlife, Lyon County, Mineral County, Mason Valley Conservation District, Smith Valley Conservation District, Walker River Irrigation District, and University of Nevada

U.S. Department of the Interior
Bureau of Reclamation

February 2010

Mission Statements

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitments to island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

Revised Draft Environmental Impact Statement prepared by

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Contents

Volume 2: Responses to Comments

Responses to Comments:

Introduction

Introduction

The Bureau of Reclamation (Reclamation) appreciates all who took time to provide comments on the Walker River Basin Acquisition Program (Acquisition Program) Draft Environmental Impact Statement (DEIS). We recognize that the Acquisition Program analyzed in the DEIS is of great importance and concern to the upstream agricultural communities and the downstream Walker Lake communities as well as a myriad of other interested entities.

All comments and questions regarding the Acquisition Program analyzed in the DEIS received during the public comment period were documented and responded to. Comments and questions included those from the four public hearings held in August 2009, and those provided through mail or email; approximately 650 comments and questions on the DEIS were received. Volume 2, incorporating comments, questions, and responses, is structured as shown below:

- Introduction
- Standard Responses
- Federal Agencies
- State Agencies
- Local Agencies
- Organizations
- Individuals
- Tribes
- Public Hearings
  - Reno
  - Wellington
  - Yerington
  - Hawthorne
- References

Comments and questions on the DEIS and a response to each are presented in this Volume 2 of the Revised DEIS. Comments were evaluated and, if determined appropriate by Reclamation, the DEIS text or analysis was revised and incorporated into the Revised DEIS. These changes are noted in the response to each comment. Additional changes and updates were incorporated into the Revised DEIS to reflect new data and other information affecting the analysis, legislative changes related to the Acquisition Program. The Revised DEIS also incorporates information on the transfer of the Acquisition Program from the

University of Nevada System of Higher Education (University) to the National Fish and Wildlife Foundation (NFWF).

Where a similar comment was expressed by several commenters, a standard response was developed. Many comments reflected a statement of opinion rather than specific information or a suggested change regarding the DEIS analysis. Some comments included statements in support of or against the Acquisition Program. These types of comments are acknowledged and documented for the record.

Responses given at the public hearings were summarized, but in many cases have been expanded to provide a more complete response or corrected to include more accurate information from the analyses in the Revised DEIS. Because of the challenges of obtaining a clear audio transcript of the hearings, the documentation of questions and comments made at the public hearings may not reflect exactly the commenter's identity or statement; however, every effort was made to compare the court reporter notes to other hearing notes to ensure all comments have been included.

The Revised DEIS, including Volume 2 Response to Comments, has been made publicly available and provided to NFWF for review and consideration in their efforts to further develop and implement the Acquisition Program under the authority provided by Public Law (PL) 111-85.

Responses to Comments:

Standard Responses

STANDARD RESPONSES TO FREQUENTLY RAISED COMMENTS

Where a similar comment was expressed by several commenters, a standard response was developed. These 17 standard responses are listed below.

SR-1, Acquisition Program Transfer from the University to NFWF

How will the program be transferred to NFWF?

PL 111-85 was enacted October 28, 2009. The law directs Reclamation to provide funding to NFWF or the University for the Walker River Basin Acquisition Program. In December 2009, the University and NFWF signed an Assignment and Delegation Agreement conveying to NFWF all of the University's rights, obligations and interests for the Acquisition Program, including all existing Option and Purchase agreements with willing sellers that the University entered into since 2007. The Revised Draft EIS has been updated to reflect NFWF's role under the new public law and the specifics of their role under the Assignment and Delegation Agreement. A grant agreement between Reclamation and NFWF has been completed to convey funds to NFWF for the Acquisition Program and related activities as authorized in PL 111-85.

SR-2, National Fish and Wildlife Foundation (NFWF)

Who is NFWF, what is their role, and why were they selected?

The National Fish and Wildlife Foundation (NFWF) was established by Congress in 1984 as a federally chartered nonprofit corporation to undertake activities that further the conservation and management of fish, wildlife, and plant resources in the United States for present and future generations. NFWF is authorized to accept funds from any legal source to further its mission. NFWF currently administers the Columbia Basin Water Transactions Program from its Western Partnership Office in Portland, Oregon, which involves Native American tribes, nonprofit organizations, farmers and ranchers, federal agencies, and state agencies from Idaho, Montana, Oregon and Washington. The program supports water acquisition efforts, including leases, purchases, and water banking. NFWF intends to build on the Columbia Basin model in developing the Walker Lake acquisition and leasing programs. Congress selected NFWF to receive funds to implement the Acquisition Program. Their selection was likely related to their previous similar water acquisition experience working with a variety of stakeholders in the Columbia Basin.

SR-3, No FEIS/No ROD

Why aren't you doing an FEIS or ROD?

A Final EIS (FEIS) is usually issued under NEPA after preparation of a DEIS. However, Reclamation has determined that, since the agency does not have discretion for the Acquisition Program and NEPA is not required, an FEIS will not be issued. Based on comments received, Reclamation determined it was appropriate to issue a Revised DEIS rather than an FEIS. The Revised DEIS incorporates responses to comments on the DEIS document that was circulated for public review and discussed at Public Hearings. All comments provided in writing and at the public hearings were considered and evaluated, and changes were made and incorporated into the Revised DEIS if determined appropriate by Reclamation.

In 2008, DOI revised its regulations for implementing NEPA (43 CFR Part 46 Implementation of the NEPA of 1969 Final Rule); the rule was finalized on November 14, 2008. Section 46.100 (a) of these regulations states:

"A bureau proposed action is subject to the procedural requirements of NEPA if it … is subject to bureau control and responsibility (40

CFR 1508.18). The determination of whether a proposed action is subject to the procedural requirements of NEPA depends on the extent to which bureaus exercise control and responsibility over the proposed action and whether Federal funding or approval are necessary to implement it. If Federal funding is provided with no Federal agency control as to the expenditure of such funds by the recipient, NEPA compliance is not necessary."

This Revised DEIS was prepared by Reclamation for the action of providing funding to NFWF (and formerly to the University) for their development and implementation of the Acquisition Program. Reclamation does not exercise control or responsibility over the Acquisition Program, is not approving the action, and does not have control over the expenditure of federal funds by the recipient. NEPA compliance is therefore not required per the new DOI regulations regarding no agency control over the expenditure of funds and because the Acquisition Program is not a federal agency discretionary action.

The Revised DEIS includes analysis based on assumptions related to ongoing development details of the Acquisition Program that will be finalized as the program is developed and implemented. The Revised DEIS recognizes that the Acquisition Program funding, existing litigation, and other factors are part of a dynamic process that will likely continue to change over time and affect the analysis as currently provided in this Revised DEIS.

The value of the Revised DEIS is in describing impacts as they are known at this time and incorporating the results of the process that allowed public opinion to be heard, documented for public availability, and considered in the analysis. The Revised DEIS was completed to provide current data and other information on the Walker River Basin and on analysis of impacts expected from implementation of the Acquisition Program. The Revised DEIS is for both public information and for consideration by the entities designated in the public laws to make the decisions on development and implementation of the Acquisition Program.

A ROD is usually the final step in the NEPA process for an EIS. However, as noted above, Reclamation has determined that NEPA compliance is not required. The ROD is the federal decision on the range of alternatives addressed in the EIS and under the authorizing legislation, Reclamation is not given decision-making discretion for development of EIS alternatives beyond acquisitions, development of mitigation measures that would be required to be implemented, design of the Acquisition Program, and selection of an alternative. The legislation directs that the University or NFWF determines how the Acquisition Program is to be developed and implemented. Reclamation's directed role is to provide funding to the University or NFWF for those purposes. As previously noted, the University and NFWF have entered into an assignment agreement for the Acquisition Program, and PL 111-85 directs Reclamation to provide funds to NFWF for the Program.

In looking more closely at the legislation in light of the 2008 DOI regulations regarding agency control over expenditure of funds, Reclamation has determined that issuing a ROD for the EIS is not appropriate because NEPA is not required. Reclamation does not have decision-making authority for the Acquisition Program, does not have an ability to meaningfully influence the action, and is only the funding conduit for the entity that does. There is no federal agency discretion involved in the design or implementation of the Acquisition Program, nor are there any environmental consequences that result from a federal agency decision. Reclamation was not given authority in the Desert Terminal Lakes Public Laws to select an alternative or alternatives for implementation of the Acquisition Program.

SR-4, CEQA Requirements

Why isn't a CEQA analysis being conducted?

Under all acquisition alternatives, Bridgeport Reservoir and Topaz Lake Reservoir operations are not projected to change significantly because acquired storage water rights would still be expected to be

exercised during the irrigation season in accordance with past patterns of use. Operating criteria for these reservoirs are not anticipated to be changed by the Acquisition Program, and the reservoirs are expected to continue to be operated in accordance with the WRID Operations Manual, California water rights licenses (as amended for the new proposed place and purpose of use), and the Walker River Decree (Decree C-125).

At some later date, it may be determined that changes in the timing of reservoir releases could be beneficial for the river ecosystem and/or for efficient passage of acquired water to Walker Lake. It this occurs, additional environmental analysis, permitting, and documentation would be necessary, most likely under or in conjunction with CEQA.

In general, compliance with CEQA will be necessary whenever discretionary approvals by an agency of the State of California are needed, such as when changes are proposed to the place and/or purpose of use of the allocated (and subsequently acquired) portions of WRID's storage water rights, which are actually licensed as California water rights even though they are appurtenant to and used on lands located in Nevada.

SR-5, No Mitigation in EIS

Will there be mitigation for impacts of the Acquisition Program?

As explained in Chapter 1, mitigation measures for adverse impacts were not developed for the Revised DEIS because the legislation does not give Reclamation express decision-making authority for development and implementation of the Acquisition Program (such as requiring certain mitigation). Therefore, the impacts described in the Revised DEIS are the impacts that would occur without any mitigation. Preparing a mitigation plan for impacts of the Acquisition Program would be speculative because it is unknown what mitigation measures would be considered and implemented by NFWF. However, it is Reclamation's understanding that the University and NFWF have preliminarily indicated that they would likely implement the Acquisition Program in a manner that protects agricultural, environmental, and habitat interests in the Walker River Basin.

Many of the University and Desert Research Institute (DRI) Walker Basin Project studies were specifically designed to inform implementation of the Acquisition Program to assist in the development of projects that sustain the economy, ecosystem, and lake.

In addition, PL 111-85 also included $10,000,000 in funding for NFWF for associated conservation and stewardship activities that could include mitigation activities associated with the Acquisition Program. PL 111-85 also included $200,000 to support alternative crops and alternative agricultural cooperative programs in Lyon and Mineral Counties that promote water conservation in the Walker River Basin. There is potential in the future for additional Desert Terminal Lakes funding for these types of conservation and stewardship activities.

SR-6, Alternatives

Which alternative will be implemented? Is there a potential combination of all three alternatives?

The Revised DEIS analysis shows that all three acquisition alternatives, Purchase, Leasing and Efficiency, have value for providing water to the lake in different ways (quantities, timing, costs, and retention of more upstream agricultural land). The analysis shows the potential beneficial and adverse impacts of each alternative. Impacts from implementation of a combination of the alternatives would fall within the range of impacts described in the Revised DEIS for each alternative.

Reclamation is not authorized to make decisions on the implementation of alternatives; NFWF, and formerly the University, were designated in the related public laws to make decisions on implementation of the Acquisition Program. It is Reclamation's

understanding that all three alternatives are being considered and some form of each will likely be implemented in combination, as supported by the current legislation. It is unknown at this time how much of each type of acquisitions (Purchase, Leasing, and Efficiency) would occur. New Legislation in PL 111-85 authorizes funding for a 3-year WRID water leasing demonstration program in the Walker River Basin to increase Walker Lake inflow.

This proposed demonstration leasing program is not specifically part of the analysis of the Revised DEIS, but will likely have many of the same program aspects and subsequent beneficial and adverse impacts of the Revised DEIS Leasing Alternative. Annual evaluation of the WRID demonstration program is expected to occur to assess whether and how a longer-term leasing program fits within a larger flow restoration effort.

SR-7, No Bias in NEPA Impacts Analysis

Is there a bias in determining NEPA impacts?

The expected adverse and beneficial impacts of the Acquisition Program were described in the EIS without bias. All acquisition alternatives and the No Action Alternative included potential significant adverse impacts. An EIS is prepared when significant impacts are expected to occur. NEPA does not prohibit implementation of an action with significant adverse impacts; NEPA merely requires that the impacts be presented and considered prior to implementation. Therefore, there is no need to bias impacts.

The Revised DEIS analysis relies on published research studies; local, state, and federal agency expertise; publicly available data; public comment; tribal consultations; and information provided by Cooperating Agencies with jurisdiction and expertise related to the Walker River Basin.

SR-8, Measurement and Enforcement

How will water delivery be measured and enforced?

Chapter 2 of the Revised DEIS discusses this topic under the Measurement and Monitoring heading. Under all acquisition alternatives, it is assumed that institutional arrangements would be put in place, in coordination with the federal water master, WRID, the NSE, and other jurisdictional entities, to measure and monitor increased flows derived from acquired water and water rights, as well as surface water diversions and groundwater withdrawals associated with acquisition transactions and agreements. An operating agreement for Weber Reservoir in coordination with BIA and WRPT is also anticipated.

SR-9, Acquisition Program Funding

How was the $70 million spent? What will happen with the remaining funding?

Of the $70 million of funding allocated under PL 109-103 for this Program, as of December 2009, approximately $15.2 million has been spent by the University of Nevada, as follows:

- $350,000 to develop a plan for the $70 million funding;
- $9.6 million, out of $11.1 million allocated, for research by the University and DRI;
- $2.5 million, out of $2.7 million allocated, for work related to investigating and implementing water rights acquisitions (e.g., for work done by WDS related to option agreements) and for the EIS;
- $2.725 million for water right options, out of $55.5 million allocated for acquisitions and related activities.

It is anticipated that most of the remaining funding amounts will be de-obligated from the University and provided to NFWF for the Acquisition Program.

- For updates regarding funding expenditures under the Desert Terminal Lakes Program, see www.usbr.gov/mp/lbao/desert_terminal/status_funding.html

SR-10, Socioeconomic Impacts

What will be the socioeconomic impact on Lyon County? What data did you use for the socioeconomic analysis? Why was the whole county considered? Why didn't you use local information?

The Revised DEIS analysis showed the Acquisition Program would have impacts at both the county and local level. Chapter 10, Socioeconomics, discloses these impacts in detail. Some impacts were adverse at the local level, but not at the county level. The chapter was revised where possible to separate out impacts at the local and county level. This chapter also includes citations of data that were used in the analysis, including data provided by Cooperating Agencies.

SR-11, Whole Water Rights vs. Consumptive Use

Do you buy the entire water rights or just consumptive use?

The NSE has indicated that the amount of water that can be transferred will be determined on a case-by-case basis. The decision will depend on the circumstances of the particular seller and how the transfer would affect other water rights holders. Both potential scenarios of whole water right and consumptive use have been analyzed in the Revised DEIS.

SR-12, Topaz Lake Reservoir and Bridgeport Reservoir

Why aren't Topaz Lake Reservoir and Bridgeport Reservoir addressed in the EIS? Will the program affect these reservoirs?

For the purposes of the Revised DEIS, it is assumed that, under all acquisition alternatives, Bridgeport Reservoir and Topaz Lake Reservoir operations would not change significantly because acquired storage water rights would still be expected to be exercised during the irrigation season in accordance with past patterns of use. Operating criteria for these reservoirs are not anticipated to be changed by the Acquisition Program, and the reservoirs are expected to continue to be operated in accordance with the WRID Operations Manual, California water rights licenses (as amended for the new proposed place and purpose of use), and Decree C-125.

SR-13, Acquisitions Required to Deliver 50,000 af/yr to the Lake

How much water do you have to acquire to get 50,000 af/yr additional inflow to Walker Lake?

The answer to this question is described in Chapter 3 of the Revised DEIS. Under the Full Transfer Scenario, it was estimated that an average of 82,000 af/yr would be needed to get 50,000 af/yr additional inflow to Walker Lake. Under the Consumptive Use Scenarios, it was estimated that about 57,000 af/yr would be needed. More water would need to be acquired under the Full Transfer Scenario because reductions in groundwater recharge (which would not occur for the Consumptive Use Scenarios) would cause more infiltration from the river to groundwater. Under Alternative 3, the amount of water needed to be acquired would be even greater than 82,000 af/yr because groundwater effects on river flow would be larger (unless most of the water conservation results from a reduction in evapotranspiration).

SR-14, TDS

What is the current TDS level? How long will TDS be reduced if water is delivered to the lake under the Acquisition Program?

The current TDS level in the lake was recorded as 17,500 mg/l in 2009. With sufficient additional inflow to Walker Lake, TDS concentration in the lake would be expected to decrease and then gradually increase over time. Figure 3-20 shows the estimated increase in TDS over time. A summary of estimated TDS concentrations (both at the estimated low point and program to year 2200) for each alternative is provided in Table 3-15 of the Revised DEIS.

SR-15, Groundwater Impacts

How will the program affect groundwater?

The Acquisition Program could have an adverse impact on groundwater levels depending on how it is implemented. This analysis is provided in Chapter 3 of the Revised DEIS. The Full Transfer Scenario and some Alternative 3 conservation measures could reduce groundwater recharge. However, because there appears to be a strong connection between the river and the aquifer, it is likely that much of a reduction in groundwater recharge could be compensated by increased infiltration from the river to the aquifer. The link between the river and the aquifer was a key part of the assessment of the Full Transfer Scenario and the assessment of Alternative 3 (Chapter 3, upstream analysis in Incidental Groundwater Recharge and Return Flows and River Losses).

If all water transfers were to be limited to the consumptive use portion of a water right, then there would be little impact on groundwater levels and, if supplemental groundwater pumping associated with acquired water rights were discontinued, groundwater levels could even rise relative to the No Action Alternative (see descriptions of the Consumptive Use Scenarios in the Revised DEIS).

For the Full Transfer Scenario and Alternative 3, the coarse estimates of average drop in groundwater levels provided in the DEIS were evaluated and determined to be incorrect (too low) and have been corrected in the Revised DEIS. However, even these corrected estimates are still substantially less than the average rate of decline in groundwater levels observed over the past several decades (see Groundwater Levels in the Revised DEIS).

SR-16, Paper Water vs. Actual Water

What is the difference between paper water and what would actually reach Walker Lake?

The difference between paper water and actual water that would likely reach the lake is large and has been considered in the Revised DEIS. This distinction was very important in the Chapter 2 assessment of how much actual water could be obtained with funding of $56 million. The Full Transfer Scenario of Chapter 3 in the Revised DEIS is based entirely on actual water (actual water needed to increase Walker Lake inflow by an average of 50,000 af/yr and actual water used to irrigate crops). In the Revised DEIS, a new analysis (the Consumptive Use Scenarios) has been added. The new analysis is based on water-righted acres and considers the potential water yield of paper water rights.

SR-17, Geothermal

Will acquisition of geothermal water adversely affect river, reservoir, or lake water quality?

The Homestretch Geothermal Pilot Project is being analyzed in an Environmental Assessment being prepared by Reclamation. The pilot project will only be authorized if it complies with all applicable state and federal environmental laws and regulations including NPDES discharge permitting requirements. The pilot project, if approved by the regulating entities and implemented, would be evaluated during the pilot period to determine if permanent acquisition of the geothermal water was feasible or appropriate under the Acquisition Program. If implemented, the Division of Minerals would monitor the project to prevent degradation of the geothermal resources and NDEP would monitor water quality. Changes and adjustments based on the monitoring could occur.

Responses to Comments:

Federal Agencies

Comment Letter F-01 (Laura Fujii and Kathleen Goforth, U.S. Environmental Protection Agency, Region 9, October 2, 2009)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

Letter F-01

OCT 2 2009

Mrs. Caryn Huntt DeCarlo
Bureau of Reclamation
Lahontan Basin Area Office
705 N Plaza, Room 320
Carson City, NV 89701

Subject: Draft Environmental Impact Statement for Walker River Basin Acquisition Program (CEQ# 20090250)

Dear Mrs. DeCarlo:

The U.S. Environmental Protection Agency (EPA) has reviewed the above-referenced document pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act. Our detailed comments are enclosed.

We have rated the DEIS as Environmental Concerns – Insufficient Information (EC-2) (see enclosed "*Summary of Rating Definitions*") due to our concerns regarding the long-term feasibility of the project given increasingly constrained water supplies, climate change, and the lack of full funding; compliance with Total Maximum Daily Load requirements; and full disclosure of potential mitigation measures, program implementation and governance, and public participation and transparency measures. F01-1

EPA supports efforts to address the threats to the Walker Lake ecosystem. We urge action be taken now to prevent further decline of this ecosystem. Shrinking lake volumes, increasing total dissolved solids concentrations, and declining water quality in terminal lakes is becoming a significant issue throughout the west (e.g., Pyramid Lake, Salton Sea). As water demand increases, it is becoming ever more challenging to equitably balance available supplies, water supply commitments, and environmental needs. EPA believes that long-term water supply planning should focus, in part, on determination of available supplies and bringing water supply commitments and needs into alignment with these supplies. F01-2

We strongly recommend the Walker River Basin Acquisition Program (Acquisition Program) utilize all available tools for enhancing water management flexibility and reliability. These tools could include water transfers between irrigation districts or other water sources, conservation, pricing, irrigation efficiencies, operational modifications, market-based incentives, water acquisition, conjunctive use, voluntary temporary or permanent land fallowing, and wastewater reclamation and recycling. F01-3

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We note that none of the action alternatives, as currently funded and designed, would provide sufficient water for long-term restoration of the Walker River Basin nor stabilize the surface elevation and total dissolved solids concentrations of Walker Lake. We recommend evaluation of a multifaceted alternative that combines the approaches of the three action alternatives – land and associated water right purchases, leasing of water rights, and implementation of water efficiency measures. The FEIS should include a mitigation plan, program implementation and governance framework, mechanisms to provide additional and future funding, and procedures to ensure public participation and transparency of program actions. F01-4

The Walker River Basin and Walker Lake are resources highly valued by the regional Native American tribes, especially the Walker River Paiute Tribe. We urge Reclamation and the managers of the Acquisition Program to pursue government-to-government consultations with all potentially affected tribes. F01-5

We understand the Bureau of Reclamation's (Reclamation) legislatively directed role is to provide funding to the University of Nevada for their Acquisition Program and research. Given Reclamation's water management expertise, we urge you to take a leadership role in guiding development of the program, and ensuring acquisition and implementation decisions are based on full understanding of environmental, social, and economic consequences. F01-6

We appreciate the opportunity to review this DEIS. When the FEIS is released for public review, please send one hard copy and one CD ROM to the address above (mail code: CED-2). If you have any questions, please contact me at (415) 972-3521, or contact Laura Fujii, the lead reviewer for this project. Laura can be reached at (415) 972-3852 or fujii.laura@epa.gov. F01-7

Sincerely,

Kathleen M. Goforth, Manager
Environmental Review Office
Communities and Ecosystems Division

Enclosures: Summary of Rating Definitions
Detailed Comments

cc: Bureau of Indian Affairs, Phoenix Area Office
US Fish & Wildlife Service, Nevada Office
US Geological Survey, Carson City
Roxanne Ellingson, Walker River Paiute Tribe
University of Nevada, Reno

2

Comment Letter F-01 Continued (Laura Fujii, U.S. Environmental Protection Agency)

SUMMARY OF EPA RATING DEFINITIONS*

This rating system was developed as a means to summarize the U.S. Environmental Protection Agency's (EPA) level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the Environmental Impact Statement (EIS).

ENVIRONMENTAL IMPACT OF THE ACTION

"LO" (Lack of Objections)

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

"EC" (Environmental Concerns)

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

"EO" (Environmental Objections)

The EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

"EU" (Environmentally Unsatisfactory)

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

ADEQUACY OF THE IMPACT STATEMENT

"Category 1" (Adequate)

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

"Category 2" (Insufficient Information)

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analysed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

"Category 3" (Inadequate)

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analysed in the draft EIS, which should be analysed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640, Policy and Procedures for the Review of Federal Actions Impacting the Environment.

EPA DETAILED DEIS COMMENTS ON WALKER RIVER BASIN ACQUISITION PROGRAM, LYON & MINERAL COUNTIES, NV. , OCTOBER 2, 2009

Acquisition Program Design

Evaluate a multifaceted alternative that combines the approaches of the three action alternatives. Walker Lake is a natural desert terminal lake dependent on the quantity and quality of inflows to maintain its water quality. Although the lake is listed as impaired for total dissolved solids (TDS), selenium, and phosphorus (p. 3-31), it serves as an important stop for migratory birds and once supported an abundant population of the threatened Lahontan Cutthroat Trout (LCT). A reduction in lake elevation, loss of access to spawning habitat, and increasing TDS concentrations led to a loss of this fishery in the lake, which is now maintained with stocking from the Lahontan National Fish Hatchery Complex (p. 5-4). F01-8

Data provided in the Draft EIS (DEIS) demonstrate that long-term water quality improvements in Walker Lake are only achieved with approximately 50,000 acre feet per year (af/yr) of increased inflows. While lower inflow rates provide temporary benefits, they do not prevent a gradual reduction in lake surface elevation and an increase in TDS over fish tolerance levels. We note that all the action alternatives, as currently funded and designed, do not provide sufficient water to restore the Walker River Basin nor stabilize the surface elevation and TDS concentrations of Walker Lake.

Recommendations:

We recommend evaluation of a multifaceted alternative that combines the approaches of the three action alternatives – land and associated water right purchases, leasing of water rights, and implementation of water efficiency measures. The full range of available options to obtain sufficient water for Walker Lake inflows should be considered in the Final EIS (FEIS). Additional options to evaluate in more detail are irrigation system telemetry, wastewater reclamation and recycling, conjunctive use programs, and modifications in system operations. F01-9

Provide an evaluation of potential crop changes and the water savings that may be obtained. As noted in the DEIS, there may be considerable potential to make water available by converting from existing conventional crops such as alfalfa to alternative crops that use less water. The DEIS did not evaluate the water savings associated with a change in crops because of concerns with the economic viability of alternative crops for Walker Basin growers (p. 2-13). Ongoing drought, an increasingly constrained water supply, and climate change may require a crop shift to ensure long-term viability of agriculture. An evaluation of alternative crops and potential water savings would be of benefit to Walker Basin growers and water supply managers. F01-10

Recommendations:

The FEIS should provide an evaluation of potential crop changes and the water savings that may be obtained. Include a description of required investments, availability of dependable markets, transition period, and potential benefits and risks to the grower. Where feasible, we urge consideration of a transition to higher value, more water efficient crops, which would improve long-term sustainability F01-11

1

Comment Letter F-01 Continued (Laura Fujii, U.S. Environmental Protection Agency)

of irrigated agriculture and generate increased water for Walker River and Walker Lake flows. F01-11 con't

Describe key components of the Acquisition Program. The DEIS states that the authorizing legislation limits Reclamation's decision-making discretion for development of alternatives and mitigation requirements, design of the Acquisition Program, and selection of an alternative (p. 1-5). Therefore, the DEIS does not describe a mitigation plan, program implementation and governance, mechanisms to provide additional and future funding, and procedures to ensure public participation or transparency of program actions. The National Environmental Policy Act process is intended to support good decision-making based upon understanding of environmental consequences and full disclosure of potential impacts. We believe key components of the Acquisition Program should be described in the FEIS in the spirit of full disclosure and sound decision-making. F01-12

Recommendations:
The FEIS should describe Acquisition Program implementation and governance, mechanisms to provide additional and future funding, procedures to ensure public participation and transparency of program actions, and proposed mitigation of program effects. F01-13

Water Resources

Demonstrate that the Acquisition Program is consistent with, and would contribute to, achieving TMDL criteria. Walker Lake is listed under Section 303(d) of the Clean Water Act as impaired for TDS, selenium, and phosphorus; and portions of Walker River are impaired for total suspended solids (TSS). In response, Total Maximum Daily Loads (TMDL) for TSS have been established for East Walker River and Walker River upstream of the Walker River Indian Reservation, and for TDS for Walker Lake (pps. 3-29, 3-31). F01-14

Recommendation:
The FEIS should demonstrate that the Acquisition Program is consistent with, and would contribute to, achieving load allocations of the TSS and TDS TMDLs for Walker River and Walker Lake. F01-15

Full Disclosure

Provide additional information on the use and ownership of Homestretch Geothermal water. The Acquisition Program has an option for a 5-year lease of spent geothermal water from the Homestretch Geothermal Power Plant upstream of Wabuska gage (personal communication, Caryn Huntt DeCarlo). If the option is exercised, the water would be discharged to Walker River in compliance with a Nevada Division of Environmental Protection (NDEP) water quality discharge permit. Spent geothermal water contains arsenic, boron, copper, fluoride, sulfate and TDS in excess of water quality criteria, and would require adequate dilution flows to meet water quality standards (p. 3-35). A pilot project, which is being evaluated under a separate NEPA environmental assessment, is being conducted to determine the feasibility of using this F01-16

spent geothermal water for Walker Lake inflows (p. 3-66). EPA is concerned about the potential utilization of spent geothermal water for beneficial uses in this situation, given that constituents of concern all exceed state water quality standards in a significant percent of samples, which would require significant dilution flows to ensure the discharge to the Walker River meets water quality standards (p. 3-66). F01-16 con't

Recommendations:
The FEIS should provide additional information regarding the potential use of Homestretch Geothermal spent water. Include specific information on the water rights associated with the spent geothermal water, a summary of the geothermal water reuse pilot project environmental assessment, and a summary of the draft NDEP discharge permit. F01-17

Conduct government-to-government consultations with all potentially affected tribes. The Walker River is a resource highly valued by the regional Native American tribes, especially the Walker River Paiute Tribe. Federally recognized tribes have broad regulatory and land management authority, including, in some cases, Water Quality Standards authorities, for resources within and traversing their reservations. Furthermore, many may have priority water rights which need to be considered. We note that the Homestretch Geothermal Power Plant is adjacent to the northwestern boundaries of the Walker River Paiute Tribe who have concerns regarding the use and ownership of surface water and groundwater rights. F01-18

Recommendation:
We urge Reclamation and the Acquisition Program managers to pursue government-to-government consultations with all potentially affected tribes. If not already done, we recommend inviting the Walker River Paiute Tribe to be a cooperating agency. F01-19

Describe the magnitude of the effect on the resources of Alkali Lake WMA. The DEIS states that the purchase of irrigated agricultural land adjacent to Alkali Lake Wildlife Management Area (WMA) would result in the reduction of water delivery to the area and subsequent reduction of tail water that reaches Alkali Lake (p. 4-13). The WMA supports a mosaic of riparian and semi-desert grassland outside of agricultural areas and is maintained by tail water from surrounding fields, meadows, and mountain runoff. Due to limited precipitation, reduced snowmelt, and reduced agricultural tail water caused by water conservation measures, the lake level has decreased significantly (p. 4-5). While the purchase of the adjacent Valley Vista Ranch LLC may further reduce agricultural tail water to the WMA, it is not clear what the magnitude of this effect would be on the Alkali Lake WMA. F01-20

Recommendation:
The FEIS should describe, in general terms, the magnitude of the effect on the resources of Alkali Lake WMA caused by the purchase of Valley Vista Ranch. For example, provide data on the amount of reduced agricultural runoff F01-21

Comment Letter F-01 Continued (Laura Fujii, U.S. Environmental Protection Agency)

anticipated, in comparison to the overall water received and required by the WMA. F01-21 con't

4

U.S. Environmental Protection Agency Rating System for Draft Environmental Impact Statements Definitions and Follow-Up Action*

Environmental Impact of the Action

LO – Lack of Objections
The U.S. Environmental Protection Agency (EPA) review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC – Environmental Concerns
EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce these impacts.

EO – Environmental Objections
EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no-action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU – Environmentally Unsatisfactory
EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

Adequacy of the Impact Statement

Category 1 – Adequate
EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis of data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2 – Insufficient Information
The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses or discussion should be included in the final EIS.

Category 3 – Inadequate
EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the National Environmental Policy Act and or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

* From EPA Manual 1640 Policy and Procedures for the Review of Federal Actions Impacting the Environment. February, 1987.

Responses to Comments of Letter F-01
(Laura Fujii, U.S. Environmental Protection Agency, Region 9, October 2, 2009)

F01-1

Comment acknowledged.

F01-2

Comment acknowledged.

F01-3

The available tools for enhancing water management flexibility and reliability are those acquisitions directed in the authorizing legislation as noted in Chapter 1, Purpose and Need. Only acquisitions were directed in the pertinent public laws and are therefore what was analyzed. Other actions that could provide water to the lake could be pursued in the future if authorizing legislation and funding from Congress or funding from another source becomes available. Different types of acquisitions are included in some of the suggestions listed in this comment by EPA.

F01-4

See Standard Response 6, Alternatives. The Revised DEIS analysis showed that all three alternatives, Purchase, Leasing, and Efficiency, have value for providing water to the lake. All three are being considered by NFWF and some form of each will likely be implemented in combination, as supported by the current legislation.

A mitigation plan, as explained in Chapter 1, was not developed because it is unknown what mitigation measures would be considered and implemented by NFWF. The authorizing legislation for the Acquisition Program does not give Reclamation authority to make decisions on mitigation, only to provide funding.

The legislation also does not authorize Reclamation to develop "a program of implementation and governance framework". NFWF is designated by Congress to implement the Acquisition Program. Reclamation has no "mechanisms for future funding"; the funding comes from Congress at their discretion. PL 111-85 does, however, include funding for conservation and stewardship measures, including "the establishment of a local, nonprofit entity to hold and exercise water rights acquired by, and to achieve the purposes of, the Walker Basin Restoration Program". It is Reclamation's understanding that NFWF will be implementing each of these provisions in conjunction with creation of a local advisory committee, which will provide input to guide NFWF's investments under the Walker Basin Restoration Program as authorized.

F01-5

Chapter 16 of the DEIS documents in detail the tribal status and involvement as Cooperating Agencies, as well as the meetings and consultations that occurred over more than 2 years in the EIS process. This chapter has been updated in the Revised DEIS with information on additional coordination that has occurred since the DEIS was released in July 2009.

F01-6

Reclamation's authority is directed in the authorizing legislation (to provide funding). Reclamation is not authorized to "take leadership of the Program." PL 111-85 designates NFWF in addition to the University to implement the Program. The University transferred the Acquisition Program to NFWF in a December 2009 agreement (Revised DEIS, Appendix 1A). Under this agreement, the University assigned to NFWF all of the University's rights, interests, and obligations for the Acquisition Program. This includes all the option and purchase agreements previously entered into by the University. NFWF's role going forward will be to further develop and implement the Acquisition Program. The University's role will

be to support such efforts through associated research, modeling, monitoring, and evaluation. Reclamation is providing funding to NFWF via a grant agreement.

F01-7

Comment acknowledged.

F01-8

Comment acknowledged.

F01-9

See Standard Response 6, Alternatives.

F01-10

As part of the University/DRI Walker River research investigations, Curtis et al. (2009) and Bartholet et al. (2009) performed a detailed evaluation of potential costs and water savings associated with crop switching. Crop switching is discussed but not specifically analyzed in the Revised DEIS because it is unclear whether farmers would be willing to switch to alternative crops and allow the saved water to flow to Walker Lake in exchange for financial assistance. Crop switching is discussed in Chapter 3 (see Methods-Alternative 3 and Alternative 3, Upstream Analysis Results).

F01-11

Crop shifting and other water conservation measures are not discussed in detail in the Revised DEIS because the selection of particular conservation measures is uncertain. The evaluation of Alternative 3 is hypothetical and general. It estimates increase in lake inflow if overall water use efficiency were increased from about 50 to 75% without going into the details of which conservation measures would be selected. If potential savings from crop switching were included, it is possible that lake inflow could be increased enough to reach the goal of an average 50,000 af/yr. In reality, participation in the program, selection of conservation methods that would be acceptable to farmers, and the ability to transfer water downstream are uncertain. The University/DRI 2009 studies by Curtis et al. and Bartholet et al. contain information about the use of alternative crops. Although not analyzed in detail in the Revised DEIS, crop shifting remains an option available to famers in the Walker River Basin.

F01-12

See Response to Comment F0-04 Also please note that while we recognize EPA is correct regarding their statement on the NEPA process, as explained in detail in Chapter 1, Reclamation has determined that NEPA compliance is not required per the 2008 DOI regulations for implementing NEPA.

F01-13

See Responses to Comments F01-04 and F01-12.

F01-14

Reclamation agrees with this comment.

F01-15

The text in Chapter 3 of the Revised DEIS for environmental impact WI-1 has been modified to discuss water quality in Walker Lake from the perspective of the CWA water quality goals for the lake. The DEIS text for WI-3 (pages 3-63 and 3-64) describes the potential adverse impact of increased sediment load in the reaches of the Walker River that are considered to be impaired because of elevated TSS.

F01-16

See Standard Response 17, Geothermal.

F01-17

See Standard Response 17, Geothermal.

F01-18

See Standard Response 17, Geothermal.

F01-19

See Response to Comment F01-5.

F01-20

Valley Vista Ranch is located in Mason Valley and the purchase of its water rights should not affect the Alkali Lake WMA, which is in the Smith Valley. Because it is a willing seller program, it is unknown where water acquisitions might occur. Therefore, only potential impacts on Alkali Lake WMA that may occur if there are acquisitions near the WMA are discussed in the Revised DEIS. The amount of water, if any, that could be acquired in this location is unknown.

F01-21

See the Response to Comment F01-20.

Responses to Comments:

State Agencies

Comment Letter S-01 (R. Tietje, Nevada State Clearinghouse, October 2, 2009)

JIM GIBBONS
Governor

STATE OF NEVADA

ANDREW K. CLINGER
Director

Letter S-01

DEPARTMENT OF ADMINISTRATION
209 E. Musser Street, Room 200
Carson City, Nevada 89701-4298
(775) 684-0222
Fax (775) 684-0260
http://www.budget.state.nv.us/

October 2, 2009

Caryn DeCarlo
US Department of the Interior
Bureau of Reclamation
Lahonton Basin Area Office
705 N. Plaza
Room 320
Carson City, NV 89701-4015

Re: SAI NV # **E2010-022** Reference:

Project: **Walker River Basin acquisition program draft EIS**

Dear Caryn DeCarlo:

Enclosed are comments from the agencies listed below regarding the above referenced document. Please address these comments or concerns in your final decision.

Department of Conservation & Natural Resources
Division of Conservation Districts
Division of State Lands
Division of Water Resources
Nevada Division of Environmental Protection

The following agencies support the above referenced document as written:

State Historic Preservation Office

This constitutes the State Clearinghouse review of this proposal as per Executive Order 12372. If you have questions, please contact me at (775) 684-0213.

Sincerely,

R. Tietje
Nevada State Clearinghouse

ALLEN BIAGGI
Director

State of Nevada
Department of Conservation and Natural Resources
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JIM GIBBONS
Governor

KAY SCHERER
Deputy Director

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DEPARTMENT OF ADMINISTRATION
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BUDGET AND PLANNING DIVISION

Division of Conservation Districts
Division of Environmental Protection
Division of Forestry
Division of State Lands
Division of State Parks
Division of Water Resources
Natural Heritage Program
Wild Horse Program

STATE OF NEVADA
Department of Conservation and Natural Resources
OFFICE OF THE DIRECTOR

October 1, 2009

Reese Tietje
Nevada State Clearinghouse
209 East Musser Street, Room 200
Carson City, NV 89701

RE: E2010-022 Walker River Basin Acquisition Program DEIS

Dear Reese:

The Nevada Department of Conservation and Natural Resources appreciates the opportunity to review the Walker River Basin Acquisition Program DEIS. A number of Divisions within the Department had feedback and those comments are provided in this letter and as an attachment.

The Department recognizes Walker Lake's importance to the economic viability of the region and the State. Mineral County relies heavily on the lake for tourism dollars and other economic benefits. Walker Lake is culturally significant to many stakeholders, especially the Walker River Paiute Tribe. The lake's environmental sustainability is critical to Nevada, its residents, and visitors. The Department supports exploring all measures that will benefit this valuable resource.

The Department supports the protection of Walker Lake for future generations, but must also consider impacts to other stakeholders in the region whose activities, livelihoods and community contribute to the identity of the region and Nevada as a whole. Measures proposed in the DEIS may have dramatic consequences on the Mason Valley, Smith Valley and the East Walker area.

It must be emphasized that the review of this DEIS took into consideration the benefits and impacts to all stakeholders. What follows is a summary of Division comments within the Department of Conservation and Natural Resources.

Comment Letter S-01 Continued (R. Tietje, Nevada State Clearinghouse, October 2, 2009)

DIVISION OF CONSERVATION DISTRICTS
Chapters 4,7,10 and 14

- The document did not seem to address alternatives after fallowing or purchasing water appurtenant to the land. S01-1
- The document does not adequately address the adverse affects to air quality, soil erosion, and noxious or invasive weed infestations and the impacts it has on nearby residents, travelers, economic impacts, etc. Specific questions that should be considered include: S01-2
  - Before transferring the rights, will some amount of water be allowed to be used to establish native plant seedlings?
  - During any fallowing will grazing be allowed on the property?
  - If so, who would be liable for any air quality violations, damage to neighbors?
  - During fallowing (or permanent purchase of water rights), if invasive weed species are found and spread, who is responsible for treatment?
- The timing and duration of higher flows could have impacts to riverbank soil erosion, or alter the hydrological geomorphology which in turn could alter the sediment transport and increase erosion and channel dynamics. S01-3
- Increased on-farm efficiencies might only benefit Walker Lake in above average water years. Under drier than average conditions higher efficiencies would be absorbed by junior water right holders. S01-4
- The potential loss of habitat on farmland and along ditches and drains should be discussed in the DEIS as a result of increased efficiencies. S01-5
- The State of Nevada has a relatively low concentration of prime farmland compared to many other states. Land evaluation and soil quality analyses (LESA) should be fully utilized before any water purchases take place and the process should be used to prioritize purchases. S01-6
- The socioeconomic impact of retiring farmland could have far reaching effects over a long period of time. For the first time in our nation's history, we import more produce than we export. These valleys have proven the capability of producing high value fruits, vegetables and herbs. The organic fruits and vegetables, grass fed beef, and free range poultry and egg markets are rapidly expanding. The DEIS does not adequately discuss this topic. S01-7

- Management of any fallowed or permanently idled agricultural lands is a major concern. It could cause federal, state and local governments to enact expensive and possibly unachievable land use laws and regulations to treat invasive weed species and decrease wind-blown soil erosion. The DEIS does not adequately discuss this topic. S01-8
- A water delivery efficiency improvement plan should remain a significant component of any chosen alternative. S01-9
- At a minimum, some water should remain with the land after any purchase to reduce soil erosion and to affectively establish native grasses, forbs and shrubs dependent on the soil type and what would typically be found in a particular area. S01-10

DIVISION OF WATER RESOURCES

- Additional water to Walker Lake to be generated through Alternative 3: Efficiency Improvements is estimated at 32,000 afy. The detailed information used to compute this amount should be made available. There appear to be serious inconsistencies in the mechanism through which additional water is to be made available. S01-11 S01-12
- In Table ES-2, p 7 of 13, Impact number LU-4, there will be no impact on the productivity of irrigated lands due to efficiency improvements under Alternative 3. Alternative 3 lists laser-leveling fields, flood to sprinkler or drip irrigation, and improved irrigation scheduling. These techniques will allow for more uniform application of water, and normally will result in a better crop. More crop equates to more water consumptive use by the crop. S01-13
- On page 2-12, there is a list of measures that could be implemented to save water. Many of these measures simply minimize seepage. Water infiltrated to the aquifer is not lost. Of the efficiency measures listed, only two water savings appear feasible. S01-14
  - Water savings by changing the application method so that there will be less evaporation while irrigating, for instance: drip irrigation vs. sprinklers. Please provide evidence documenting the saving of sprinklers over flood irrigation - keeping in mind that infiltrated water is not lost.
  - Water lost by vegetation along canals, ditches and other diversion structures would be reduced or eliminated by lining these structures with

Comment Letter S-01 Continued (R. Tietje, Nevada State Clearinghouse, October 2, 2009)

concrete. The use of pipes would eliminate losses from free water surfaces due to evaporation. S01-14 con't

- This concept of large water savings through efficiency improvements is repeated throughout the document, and water budgets are used to support the water savings estimates. This approach has the potential for large error. A more appropriate method might be to measure the actual site savings due to lower evapotranspiration adjacent to conveyance structures and evaporative savings as a result of piping water and more efficient application methods, less the increase in ET which would result from growing more crop. S01-15

- Wabuska Geothermal Effluent, pp. 3-34 and 3-35 - There is a proposal to increase production at the geothermal plant and route the discharge to the river. There is no discussion concerning the hydraulic connection between the geothermal aquifer and the fresh water aquifer. Is it proposed that the geothermal water is an entirely separate source? Because Wabuska is cool and relatively fresh, there is probably considerable mixing of the deeper geothermal source and shallow fresh water. Consumed fresh groundwater would eventually be replenished by river/irrigation seepage, the only significant source recharge in the Mason Valley. S01-16 The assumption that the spent water will otherwise just evaporate in discharge ponds is also in error. S01-17 The increase in geothermal production will be made possible only because of the purchase of the spent water for Walker Lake. In the absence of this program, geothermal production would not increase. S01-18

- Pp. 3-41 and 3-42. The issue of the Full Transfer Scenario versus the Consumptive Use reduction by the State Engineer is confusing. The message appears to be: for the greatest benefit, transfer more water than a given acreage actually uses, rather than the actual usage. Consider it another way. If more water is transferred from a given farm than it area actually uses, some other farm will wrongly be denied some of their Walker River water rights. That farmer(s) would then pump more of their supplemental groundwater rights, which of course would be replenished by increased recharge from the river. The net result would be no different than if the transfer was restricted to the consumptive use amount. S01-19

- P. 3-46, Table 3-12 footnote b. There is no long term savings from reducing incidental groundwater recharge. Such water is not lost. If this source supplies water to riparian/wetland vegetation, and it can be permanently captured, then the savings will be equal to the reduction in ET of the riparian/wetland vegetation. Don't include reduced recharge. That is double counting. S01-20

DIVISION OF ENVIRONMENTAL PROTECTION

The Nevada Division of Environmental Protection (NDEP) provided comments that are contained as an attachment to this letter, due to the specificity of the comments and minor grammatical corrections. The comments focused on water quality and changes to Table 3-9.

DIVISION OF STATE LANDS

The Nevada Division of State Lands (NDSL) reviewed the DEIS at an organizational level as well as a programmatic level. NDSL and its State Land Use Planning Agency work with local governments and stakeholder groups to ensure efficient dialogue is maintained with federal agencies in regard to proposals such as this DEIS.

Organizationally, the DEIS tends to be difficult to read.

- Of most importance, it is cumbersome for the reader to determine why the preferred alternative (1) has merit over the leasing alternative (2) and the efficiency alternative (3) (pages ES-5 through ES-7). Specifically, it is not clear how much water will reach the lake in Alternatives 2 and 3. It is suggested that a concise table be added that shows the difference between Alternatives 1, 2 and 3 in regard to *how much water will actually reach the lake under each scenario.* It is implied that more water will reach the lake under Alternative 1, but it is not clear. S01-21

- Many of the maps in the DEIS lack a reader-friendly legend. It is suggested that all maps have the same format and include legends. S01-22

- Table ES-2 is labeled "Impact Summary for Proposed Project and Other Alternatives". However, it appears that only the No Action Alternative is discussed in this table. S01-23

From a programmatic level, NDSL suggests that the DEIS more thoroughly discuss the benefits of combining aspects of all three alternatives into a fourth scenario.

- There is no discussion regarding the feasibility of utilizing efficiency practices, water leasing, AND the outright purchase of water rights for transfer to the lake. It seems, due to potential impacts to the economies in Mason and Smith Valleys, that a proper discussion should be included to reduce the impacts by blending the options. S01-24

- There should be a more in-depth discussion on the potential air quality impacts of Alternative 1 as many active farms and ranching activities will go fallow. S01-25

- The DEIS lacks an adequate discussion on the need for a "master plan" for water rights purchases. Without such a plan there is a substantial risk that water rights will be purchased haphazardly, simply due to a willing seller, with no regard for S01-26

Comment Letter S-01 Continued (R. Tietje, Nevada State Clearinghouse, October 2, 2009)

impacts to infrastructure or environmental consequences. The master plan should identify those willing sellers with land most "ripe" for water rights acquisition, and conversely, identify those parcels where agriculture and water should remain. The master plan should identify and prioritize parcels suitable for water rights purchase by the following criteria and others:

S01-26 con't

- ✓ Contiguity to other already-purchased parcels.
- ✓ Occurrence of sensitive species.
- ✓ Condition of infrastructure and consequences to adjacent parcels if water is eliminated and infrastructure is not maintained.
- ✓ Local land use master planning:
  - Parcels proposed for water rights acquisition should conform to non-agricultural master planned uses.
  - Parcels proposed for water rights acquisition should not be identified for open space, agricultural preservation, or for groundwater banking areas.
  - Parcels proposed for water rights acquisition should be adjacent to BLM lands identified for disposal for non-agricultural uses.
  - Parcels proposed for water rights acquisition should not be identified for, or adjacent to, lands suitable for recreational purposes in the County Master Plan.

I am pleased to provide you with these comments and I thank the Bureau of Reclamation for the opportunity to comment on this very important DEIS. The Department supports a balanced outcome that benefits all of the stakeholders in the region. If you have any questions, please feel free to give me a call at 775-684-2710.

Sincerely,

Allen Biaggi, Director
Nevada Department of Conservation and Natural Resources

cc: Kay Scherer, Deputy Director
Jim Lawrence, Administrator, Division of State Lands
Leo Drozdoff, Administrator, Division of Environmental Protection

ATTACHMENT

NDEP Comments
Page 3-27:

S01-27

Water Quality
Key water quality topics are water quality of Walker River and Walker Lake, groundwater quality, and the plume of contaminated groundwater from the Anaconda Mine site.
While several water quality constituents are of concern in the Walker River Basin, this Draft EIS focuses on TDS because of its impacts on the ecosystem of Walker Lake. TDS is a measure of all dissolved solids in water, including salts, metals, and all organic and inorganic components of water that are dissolved or extremely small (small enough to pass through a fine-mesh filter).
Walker River Water Quality
The water quality of rivers is determined largely by interaction of water with the landscape and human activities. Water moving across and through the landscape is exposed to different minerals within the soils and rocks of different geomorphic regions. Human activities that alter the land, consume and use water, or discharge material to a water body further modify water quality. It is common to find differences in surface water quality across a large region like the Walker River Basin, which encompasses urban, rural, and undeveloped desert areas.
Under section 303(d) of the federal Clean Water Act, Nevada is required to develop a list of water bodies requiring action to achieve water quality standards. Water bodies that do not meet established water quality standards and are listed on a state's 303(d) list are considered impaired. An impaired water body is a water body that has concentrations of pollutants or contaminants that exceed the threshold to support its beneficial uses (e.g., irrigation, or municipal and domestic water supply). The East and West Walker Rivers and the mainstem Walker River are listed as impaired waters on Nevada's 303(d) list, as shown in Table 3-9. Nevada's 2006 303(d) Impaired Waters List (Nevada Division of Environmental Protection 2006) is the most recent EPA-approved 303(d) list for the state.

Page 3-28:

Table 3-9. 303(d) Impaired Waters List for Walker Lake and Tributaries
Water Body Location Parameter TMDL Priority
West Walker River At the state line Iron, Low, Zinc Low
Topaz Lake Reservoir Topaz Lake Reservoir (Nevada Portion) Phosphorus (Total) Low Temperature Low
West Walker River From CA state line to Wellington Boron Low, Iron Low, Temperature Low
West Walker River From Wellington to confluence with the E. Walker River Temperature Low
East Walker River East Fork of Walker River at state line pH Low Phosphorus Low Temperature Low
East Walker River East Walker River at Bridge B-1475 to the East Walker at the state line
Phosphorus (Total) Low Temperature Low pH Low
East Walker River
East Walker River above the confluence with the West Walker to Bridge B-1475 Temperature, water Low Iron Low
Mainstem Walker River From the confluence of the East and West River to the inlet of Weber Reservoir Iron Low
Mainstem Walker River ,Walker Lake Entire lake Arsenic Low Cadmium Low Molybdenum Low Phosphorus Low Selenium Low Source: Nevada's 2006 303 (d) Impaired Waters List (Nevada Division of Environmental Protection 2008a)
Water Resources

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Deleted: Nevada's draft 2006 303(d) list, published in 2008, has not yet been approved by the EPA (Serlic pers. comm. 2008).

Comment [K1]: The portion of the river within the Walker River Paiute Tribe reservation is not included on the State of Nevada's 303(d) list.

Deleted: From the outlet of Weber Reservoir

Deleted: to the inlet of Walker Lake pH Low

Comment [K2]: Walker Lake is not 303(d) listed for TDS because a TMDL was developed by NDEP and approved by USEPA in 2005.

Deleted: TDS High

Deleted: 1 Draft

Comment Letter S-01 Continued (R. Tietje, Nevada State Clearinghouse, October 2, 2009)

Page 3-31:

Walker Lake Water Quality
Walker Lake is listed as an impaired water body on Nevada's 2006 303(d) list for cadmium, arsenic, molybdenum, selenium, and phosphorus (Nevada Division of Environmental Protection 2008a). A TMDL for TDS has been established for Walker Lake and approved by the EPA (Nevada Division of Environmental Protection 2005a). Mercury concentration in Walker Lake has also been a concern (Seiler et al. 2004).

Deleted: draft
Deleted: TDS

S01-27 con't

08-25-09:11:35

8/18

Rebecca Palmer

From: Nevada State Clearinghouse
Sent: Monday, July 27, 2009 4:23 PM
To: Rebecca Palmer
Subject: E2010-022 Walker River Basin acquisition program draft EIS - Bureau of Reclamation

NEVADA STATE CLEARINGHOUSE
Department of Administration, Budget and Planning Division
209 East Musser Street, Room 200, Carson City, Nevada 89701-4298
(775) 684-0213 Fax (775) 684-0260

TRANSMISSION DATE: 7/27/2009

State Historic Preservation Office
Nevada SAI # E2010-022
Project: Walker River Basin acquisition program draft EIS

Follow the link below to download an Adobe PDF document concerning the above-mentioned project for your review and comment.
E2010-022

Please evaluate it with respect to its effect on your plans and programs; the importance of its contribution to state and/or local areawide goals and objectives; and its accord with any applicable laws, orders or regulations with which you are familiar.

S01-28

Please submit your comments no later than Monday, September 7, 2009.

Use the space below for short comments. If significant comments are provided, please use agency letterhead and include the Nevada SAI number and comment due date for our reference.

Clearinghouse project archive

Questions? Reese Tietje, (775) 684-0213 or clearinghouse@state.nv.us

___No comment on this project ✓ Proposal supported as written
AGENCY COMMENTS:

Rebecca A Palmer 8/25/09

7/28/2009

Responses to Comments of Letter S-01 (R. Tietje, Nevada State Clearinghouse, October 2, 2009)

S01-1

Three acquisition alternatives that met the direction of the legislation were analyzed. The potential impacts of fallowing were addressed in various chapters in the Revised DEIS, including Air Quality, Vegetation, Socioeconomics, and others. Please see the Environmental Consequences sections of Chapters 3 through 15 for the analysis of fallowing and water purchases. Alternative ways to address fallowing impacts, such as mitigation, will be considered by NFWF (see Standard Response 5, Mitigation).

S01-2

The Revised DEIS analyzes impacts for each of the issues provided in this comment.

In regard to the questions on whether some water will remain on land and whether grazing will occur, these decisions are up to the individual private landowners and possibly NFWF may have input. In regard to the question on air quality, landowners would continue to be required to comply with air quality regulations, just as they have in the past. If NFWF were to acquire land in addition to water rights, NFWF would also be required comply with these air quality regulations. In regard to the question on invasive weed species, state and local ordinances would continue to prevail. As described in Chapter 4, Biological Resources—Vegetation and Wetlands, under Noxious and Invasive Weeds, noxious weeds are regulated by the Nevada Department of Agriculture (Nevada Department of Agriculture 2008) (Revised DEIS, Appendix 4B). As described in Appendix 1B, Regulatory Information, "The Nevada Department of Agriculture maintains a list of noxious weeds in the state (Nevada Department of Agriculture 2008), and is authorized to investigate noxious weed occurrence and require landowners or occupants to control noxious weeds (NRS 555 sections 005-217)."

S01-3

We agree with this comment. See the discussion for Impact WI-3 (Chapter 3 of the Revised DEIS). Please see Responses to Comments O1-14 and I6-39.

S01-4

For Alternative 3 to achieve the goal of providing water to the lake, it would likely be necessary to obtain rights to the conserved water in order to preclude the use of the water by junior water right holders. Also, see Responses to Comments L04-29 and PHR-10.

S01-5

The Revised DEIS discusses the potential loss of habitat on farmland, canals and drains in Impact VEG-9 (Chapter 4) and under Impact WILD-1 and WILD-6 (Chapter 6).

S01-6

A LESA analysis is being conducted and, like all other information in the Revised DEIS, will be provided (when finished) to NFWF and other interested parties for their consideration in further developing and implementing the Acquisition Program.

S01-7

Comment acknowledged. We recognize production of these crop types is rapidly expanding in the United States, and there is potential for increased production in Lyon County. PL 111-85 provides $200,000 for looking at such alternative crops. However, while Lyon County may have the potential to produce these kinds of crops in the future, the analysis relies on current agricultural practices and does not speculate about this possibility. Alternative crops and livestock are an option to any farmer who chooses to produce them.

S01-8

Landowners who participate in the Acquisition Program would be held accountable under existing laws, such as NRS 555, which requires landowners and occupants to control noxious weeds. See response to comment S01-02. It would be speculative to try to determine whether federal, state, or local governments would enact additional laws or regulations in the future. Potential conservation and stewardship measures are feasible as discussed in Standard Response 5, No Mitigation in EIS.

S01-9

Comment acknowledged and provided to NFWF for consideration. See Standard Response 5, No Mitigation in EIS.

S01-10

Comment acknowledged and provided to NFWF for consideration. See Standard Response 5, No Mitigation in EIS.

S01-11

In the Revised DEIS, details are provided in the upstream analysis section of Chapter 3(Water Resources, Methods-Alternative 3).

S01-12

Based on later comments by the commenter, it appears that the concern is that the effect of a reduction in groundwater recharge on river flow was not considered. However, this was a significant consideration in the Revised DIES analysis and the key reason that implementation of efficiency measures throughout all of the valleys (excluding potential crop switching) is not expected to yield the target increase in lake inflow of an average of 50,000 af/yr.

S01-13

Impact LU-4 does not address consumptive use but rather productivity. The goal of paying farmers to implement efficiency measures would be to have water savings remain in the Walker River to provide inflow to the lake, not to grow better crops. As a result, water applied to fields would be reduced and yield and consumptive use may not increase. Alternative 3 could result in small changes in crop yield and consumptive use, either up or down, resulting from efficiency measures or crop switching. However, these changes would likely be small and unpredictable compared to those associated with Alternatives 1 or 2.

S01-14

The effect of Alternative 3 on groundwater recharge was included in the analysis. The reduction in groundwater recharge that could result from many of the efficiency measures is the main reason that implementation of efficiency measures (excluding potential crop switching) throughout Mason Valley, Smith Valley, and the East Walker area would only yield an estimated 32,000 af/yr to Walker Lake out of 102,000 af/yr of savings (Chapter 3 of the Revised DEIS).

S01-15

If Alternative 3 is implemented, site-specific changes in water use would likely be measured. At this point, however, the exact actions to be taken and the site-specific data are unavailable. As a result, a more general approach was used, which was to estimate water savings if water efficiency were increased from approximately 50 to 75%. We agree that this approach (and probably any other approach) has a large potential for error, mostly because the degree of participation by landowners is uncertain. This analysis is an illustration of potential water savings (and groundwater effects) if every farmer were to increase water use efficiency. In reality, overall efficiency in the basin would probably not increase to 75%, but that may be counteracted by some farmers shifting to less water-intensive crops.

S01-16

Additional text was added to the Revised DEIS. Impact WI-8 was modified to include potential reduction in groundwater level associated with Homestretch Geothermal resulting from potential increased geothermal production, connection between geothermal and alluvial aquifers, and reduction of groundwater recharge from the existing discharge ponds.

S01-17

See the Response to Comment SO1-16.

S01-18

See Response to Comment S01-16 and Standard Response 17 on Geothermal Water.

S01-19

A consumptive use scenario has been added to the Revised DEIS. The full transfer scenario assumes the transfer of only the water that is used. This includes water that would seep to groundwater or return to the river, but the ramifications of the loss of groundwater recharge and return flows is included in the analysis and causes a reduction in the amount of water that could be moved to the lake.

S01-20

A reduction in incidental groundwater recharge is estimated to cause a large reduction in river flow and significant reductions in the amount of water estimated to reach Walker Lake. The small amount of recharge reduction that is not expected to be compensated by a reduction in river flow is expected to cause a reduction in groundwater levels, which is documented as an adverse impact in the Revised DEIS.

S01-21

A preferred alternative has not been identified and the beneficial and adverse impacts of all alternatives are analyzed. The commenter may be referring to the Proposed Project, which is not necessarily the preferred alternative. In the Revised DEIS, the Proposed Project has been renamed the Purchase Alternative (Alternative 3) to clarify that it is not the preferred alternative. All three acquisition alternatives will likely be implemented in combination (see Standard Response 6, Alternatives). Table 3-15 describes the additional average inflow that is expected under each acquisition alternative: 7,300 to 50,000 af/yr under Alternative 1; 50,000 af/yr for 3 years under Alternative 2; and 32,300 af/yr under Alternative 3. This inflow is in addition to the annual base flow. Table 3-15 has been added to the Executive Summary in the Revised DEIS (Table ES-2).

S01-22

All maps have legends. The format differs according to the source data.

S01-23

Table ES-2 in the DEIS summarizes the impacts of all alternatives, as indicated by the title. The table is now titled Impact Summary for the Acquisition Program Alternatives.

S01-24

We agree. All three acquisition alternatives, Purchase, Leasing and Efficiency, will likely be considered for implementation. See Standard Response 6, Alternatives.

S01-25

The analysis discusses the adverse impacts associated with fallowing activities. This comment lacks specific additional information needed to revise analysis.

S01-26

A master plan is not part of the Acquisition Program in the Revised DEIS because it is unknown at this time. However, NFWF is currently considering how to further develop the Acquisition Program. The purpose of the Acquisition Program is to support efforts to preserve Walker Lake while protecting agricultural, environmental, and habitat interests in the Walker River Basin. Chapter 2 of the Revised DEIS includes a list of potential acquisition factors that could be considered if offers exceed available funding.

S01-27

The text has been revised to correct 303(d) information.

S01-28

Comment acknowledged that the Nevada State Historic Office supported the proposal as written.

Comment Letter S-02 (Nevada Department of Wildlife)

Letter S-02

Nevada Department of Wildlife Comments

Comment #	Chapter #	Page #	Problem, Issue or Concern	Suggested Revision	Citation for New Information
Wildlife					
1	Chapter 6	13	On page 6-1, it states that Douglas County is not part of the study area; however, on page 6-13 there is a discussion about topaz Reservoir which lies in Douglas County	Delete discussion about Topaz Reservoir	Kris Urquhardt, NDOW
2	Chapter 6	16	It states that irrigated lands provide foraging habitat for waterfowl such as migratory ducks and geese	It should state that the irrigated lands provide habitat for waterfowl such as resident and migrating ducks and geese.	Elmer Bull, NDOW
3	Chapter 6	16	Under Wildlife Management Areas, it talks about NRS 501.105, 501 and 181. 501.105 doesn't really discuss how management areas will be managed. It simply gives the Board of Wildlife Commissioners authority to set policy etc. As for what 501 and 181 mean in that sentence I'm not sure.	That sentence needs more research and clarification. It should also be added that Nevada Board of Wildlife Commission Policy #66 directs NDOW to manage many of its wildlife management areas with emphasis on "wetland development and waterfowl activities including the use of the areas as public shooting grounds". That policy can be viewed at ndow.org/our agency/policy	Elmer Bull,NDOW
4	Chapter 6	17	Waterfowl are not listed as beneficiaries of the agricultural fields on the Mason Valley WMA. Wild turkey are also not included.	Large numbers (up to 5,000) of migratory geese feed extensively in the ag fields in Mason Valley during the winter months. Ducks also forage in the ag fields but to a lesser extent than the geese. Include wild turkey in the list also	This comment was included in previous comments submitted. Please include waterfowl and wild turkey as beneficiaries of the ag activity on the area. Elmer Bull - NDOW
5	Chapter 6	17	There is no mention of the fish resource that is present on the Mason Valley WMA.	The area has good populations of large mouth bass, bullhead and channel catfish, trout and bluegill The area is open to fishing on a seasonal basis and provides significant opportunity for sport fishing. The presence of the fishery resource results in significant public use on the area. In fact, the highest public use on the area occurs during the spring and summer months when users take advantage of the fishery resource.	Elmer Bull - NDOW
6	Chapter 6	18	Under Special – Status Wildlife species it states that no specific surveys for special-status wildlife species were conducted for this Proposed Project	While it may be true that no surveys were conducted for this project, there is data available as NDOW has conducted spring and fall surveys for water birds (including at	Jenni Jeffers - NDOW

Comment Letter S-02 Continued (Nevada Department of Wildlife)

Nevada Department of Wildlife Comments - Continued

Comment #	Chapter #	Page #	Problem, Issue or Concern	Suggested Revision	Citation for New Information
				least 3 special status species) at Walker Lake since 1988. In addition the U.S. Fish and Wildlife service has conducted aerial surveys of Walker Lake to census waterfowl and pelicans for the past few years.	
7	Chapter 6	19	On page 6-19 under Special Status Wildlife with Potential To Occur in The Study Area, it states that greater sage grouse and pygmy rabbit have not been recorded in the study area. However, on page 6-20, it states that sage grouse is known to occur in the project area and study area. It also states that according to the Wildlife Action Plan, the study area occurs within the pygmy rabbit range.	These sections seem to be contradictory and confusing. Accurate information regarding these species can be obtained by contacting Jason Salisbury, the NDOW biologist for this area, at (775) 423-3171 X236.	Elmer Bull, NDOW
8	Chapter 6	18,19 et.al.	In a number of locations, it states that various bird species (e.g. golden and bald eagles) are protected under NRS 501.	Chapter 501 of the Nevada Revised Statutes gives broad authorization for NDOW to enforce various laws but doesn't provide protection to any specific species. A more accurate statement would relate that the various bird species are protected under the federally authored Migratory Bird Treaty Act. NDOW law enforcement officers enforce the all of the laws but it's the MBTA that provides for the protection.	
9	Chapter 6	P.7	Misspelling tern	Forester's tern	Jenni Jeffers
10	Chapter 6	p. 9	Misspelling Silver-haired bat	Silver-haired bat	Jenni Jeffers
11	Chapter 6	P. 10	Pine marten included in list 6-1	No pine marten occur in the area	Jenni Jeffers
12	Chapter 6	P. 10	Species left out of table 6-1	Kit fox does occur in the area, red fox does not	Jenni Jeffers
13	Chapter 6	P. 18	Species designated as "protected" under NRS 501 not correct	All species on 6-18 thru6-19 protected Federally by migratory bird treaty Act (statute?) And then state protected under NRS 503.025->>>	See Fish & Wildlife for Federal protection references. Jenni Jeffers
14	Chapter 6	P. 19	Special status species not referenced	State which document these are considered as "special status" State? Federal?	Jenni Jeffers

Comment Letter S-02 Continued (Nevada Department of Wildlife)

Nevada Department of Wildlife Comments - Continued

Comment #	Chapter #	Page #	Problem, Issue or Concern	Suggested Revision	Citation for New Information
Alternatives					
15	Chapter 2	12 and others	At various locations in this chapter, it states that water conservation measures will result in more inflow to Walker Lake.	In theory, water conservation measures should result in water savings that could be delivered to the lake and in some years, that might be the case. However, in many years, water savings will simply benefit all of the water users on the system by keeping the decree priority at a higher level. If water savings could be ear marked for delivery to the lake then a benefit would be realized. However, that is not how the decree is administered. To state that conservation measures will result in more water being delivered to the lake exhibits a lack of understanding of how the Walker River decree (C-125) is structured and administered. Water conservation measures combined with the water leasing program could very well result in additional water flowing to the lake because each water user could identify anticipated surpluses and agree to sell additional water that has been saved through conservation measures.	This comment may seem moot but it points out the false belief that water conservation measures alone will bring about increased flows to the lake. NDOW believes strongly in implementing conservation measures and has done so at the Mason Valley WMA. However, the measures were implemented together with an agreement that water savings would be delivered to Walker Lake. Elmer Bull, NDOW
Land Use					
16	Chapter 7	5	It states that NDOW owns or has long term leases on over 117,00 acres of land that are incorporated into WMA throughout the state.	Due to a recent land exchange, that number now sits at 116,888 acres	Elmer Bull
17	Chapter 7	6	In the discussion about land use on the Mason Valley WMA, there is no mention of the fishing opportunity available on the area.	It should be noted that very good fishing for trout, large mouth bass, catfish and bluegill is available on the area. Over all public use on the area reaches its highest level during the fishing season with user days sometimes exceeding 4,000 users per month	I apologize for missing this during previous reviews. Elmer Bull
18	Chapter 7	6	It states that the Mason Valley WMA receives well water from the Fort Churchill Cooling Pond owned by Sierra Pacific Power Company	That utility is now called NV Energy	Elmer Bull
Recreation					
19	Chapter 11	10	It states in two locations that "under the Proposed Project, increased flows to Walker Lake are expected to cause lake elevations to rise 30 to 35 feet".	The average reader is going to wonder how long it will take to realize that gain in lake elevation. It should give a timetable under which those gains would be realized.	Elmer Bull

Comment Letter S-02 Continued (Nevada Department of Wildlife)

Nevada Department of Wildlife Comments - Continued

Comment #	Chapter #	Page #	Problem, Issue or Concern	Suggested Revision	Citation for New Information
Vegetation					
20	Chapter 4	6	The description of the area and vegetative communities around Alkali Lake is not very accurate. It states that the Alkali Lake WMA lies adjacent to the northernmost part of Smith Valley. It goes on to state that the area supports a mosaic of riparian and semi-desert grassland…… It states that several small areas of open water are within the WMA.	The Alkali Lake WMA lies in the northernmost part of Smith Valley. The predominant feature of the Area is a large playa that lies toward the north side of the WMA which is surrounded by emergent marsh vegetation on the south side and mixed salt desert scrub to the west ,north and east. It appears that a portion of the Honker Gun Club was included in the description of the area. That area is privately owned. The only open water present on this WMA occurs when the playa has been filled by ag. drainage and/or natural precipitation.	Elmer Bull
21	Chapter 4	5	It states that the Valley Vista Ranch is in Smith Valley. However, at the top of page 4-6, it states that the Valley Vista Ranch lies at the south end of Mason Valley.		Elmer Bull
Karie's comments					
22	Chapter 5	P5-2, P4, S3	The river downstream of Weber Reservoir seasonally becomes braided and shallow.	This portion channel is braided and shallow, it is that way all year around, not seasonally.	personal obsevation, Karie Wright
23	Chapter 5	P 5-3, P4, S3	NDOW has found native fish species in the East and West Walker	NDOW has found native fish species in the East and West Walker Rivers. I have previously stated that I, Karie Wright (cited source) have no idea of species compositon in the river from Yerington to Shurz. I still do not know what fish species are in the river in that segment, so please remove me from that part of the statement. The natives I observed were in the river through Yerington.	same citation

Comment Letter S-02 Continued (Nevada Department of Wildlife)

Nevada Department of Wildlife Comments - Continued

Comment #	Chapter #	Page #	Problem, Issue or Concern	Suggested Revision	Citation for New Information
24	Chapter 5	Table 5-1 P5-3, P5, S5	Abundance of Lahontan tui chub is listed as uncommon in Walker Lake The river reach from Weber….	Lahontan tui chub in Walker Lake are abundant. Preliminary population estimates by Robert Jellison and Dave Herbst estimate the population to to be 3.2 million fish or about 250 fish/ha. The field trip report states: "Currently, the channel below Shurz is shallow and braided, native vegetation is minimal. " not that it is that way from below Weber. The following statement comes from the field trip report cited: " as the photographs show, there appears to be suitable trout habitat in this portion of the river." This is refering to the section below Weber to Shurz. More work needs to be done here to determine any details of adequate habitat.	Jellison, R., and D. Herbst. 2008. Responses of Lahontan cutthroat trout prey items to changing hydrological regimes and salinity in Walker Lake. Wright, K. 2008. Walker Lake fishery Improvement Team. *Field trip report.* Walker River electrofishing. Results of electrofishing survey
25	Chapter 5	P5-4, P5, S3	All but Lahontan speckled dace are currently…..	Only LCT and Lahontan tui chub are currently found in Walker Lake.	The following highlighted comment is from my last set of comments made on this subject.
26	Chapter 5	P5-7, P7, S4	Tahoe suckers are relatively rare.	Tahoe sucker, Lahontan redside shiner, and Lahontan speckled dace have been extirpated from Walker Lake.	Walker Lake Fishery Improvement Plan. 2007. Walker Lake Basin Terminal Lakes Program P.L. 109-103. 25 p.

Comment Letter S-02 Continued (Nevada Department of Wildlife)

Nevada Department of Wildlife Comments - Continued

Comment #	Chapter #	Page #	Problem, Issue or Concern	Suggested Revision	Citation for New Information
27	Chapter 5	P5.5, P1	Non-native fish species….	Many more non-natives than those listed have been introduced to Walker Lake with no success. Some of these include: rainbow trout, brown trout, brook trout, Eagle lake rainbow, yellowstone cutthroat, Utah cutthroat, silver salmon, white catfish, white crappie, yellow perch, stripped bass, stealhead chum, salmon, threadfin shad, Blue Lake cutthroat, stealhead trout, king salmon, silver salmon, brown rockfish, greenling sea trout, pile perch, pacific white perch……	Mike Sevon. 1988. Walker Lake Fisheries Management Plan. This list is much more extensive, if you want to know all of these attempted introductions, contact Karie Wright, NDOW.

Responses to Comments of Letter S02 (Nevada Department of Wildlife)

S02-1

The discussion of Topaz Lake Reservoir has been deleted.

S02-2

The text has been revised to state that the irrigated lands provide habitat for waterfowl, such as resident and migrating ducks and geese.

S02-3

The text has been revised for clarification. It should also be noted that Nevada Board of Wildlife Commission Policy 66 directs NDOW to manage many of its WMAs with emphasis on "wetland development and waterfowl activities including the use of the areas as public shooting grounds." That policy can be viewed at ndow.org/our agency/policy.

S02-4

The text has been revised to add wild turkey and indicate that a large number of geese and ducks forage in agricultural fields.

S02-5

The text has been revised to add discussion of fish resources in the Mason Valley WMA.

S02-6

The text has been revised to indicate that NDOW and USFWS have conducted surveys for waterfowl at Walker Lake.

S02-7

The text has been revised to clarify that the ranges of these species occur within the study area.

S02-8

The text has been revised to indicate that the species are protected under the MBTA.

S02-9

Spelling of tern was correct

S02-10

Spelling has been corrected.

S02-11

Marten has been removed from the list.

S02-12

Kit fox has been added and red fox deleted from the list.

S02-13

See response to SO2-8.

S02-14

The text for each species has been revised to indicate authorizing state and federal legislation.

S02-15

Please see Responses to Comments PHR-10, L04-29, and S02-16.Text has been revised to show leases of 116,888 acres.

S02-17

The text has been revised to incorporate comment regarding fishing opportunities at MVWMA.

S02-18

The text has been revised to reflect name change to NV Energy.

S02-19

The text has been revised to indicate the maximum expected rise in lake elevation.

S02-20

The text has been revised to incorporate commenter's description of Alkali Lake WMA.

S02-21

The text has been revised regarding the location of Valley Vista Ranch.

S02-22

The text has been revised, replacing "seasonally becomes" with "is".

S02-23

The reference to species composition in the Yerington to Schurz reach has been deleted.

S02-24

The text has been revised to indicate that tui chub are common and to describe the channel below Schurz. In regards to the Jellison and Herbst comment, this section discusses LCT in the mainstem of Walker River, not the abundance of tui chub in Walker Lake. The rest of the text was revised to discuss the different sections of the Walker River.

S02-25

The text has been revised to say that only LCT and tui chub are found in Walker Lake.

S02-26

The text has been revised to update that these species have been extirpated from Walker Lake.

S02-27

The text has been revised to reflect the stocking of other nonnative species in Walker Lake.

Responses to Comments:

Local Agencies

Comment Letter L-01 (Dennis W. Stark, Lyon County, Board of County Commissioners, September 30, 2009)

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COUNTY MANAGER

Walker River Basin Acquisition Program
Draft Environmental Impact Statement

Lyon County Comments
Submitted September 30th, 2009

Dennis W. Stark, Lyon County Manager
Phyllis Hunewill, Board of Commissioners Chairperson

Letter L-01

Lyon County is in receipt of the Draft Environmental Impact Statement and offers the following comments for review and inclusion into the final report (EIS). This response is timely and conforms to the amended deadline of October 5th, 2009. There have been quantities of information and statistics previously submitted and discussed by various interested parties and entities. Lyon County has opted not to conduct an extensive 'impact study' or analysis due to current economic constraints. However, much of what will be referred to in the following narrative is just plain "common sense". L01-1

At a recent NACo conference in Nevada (September 2009), Governor Gibbon's was very supportive of agriculture and the rural communities. His comments reinforced the idea that agriculture was necessary and vital to our communities. Lyon County is rated as one of the premier counties of Nevada based on its diversified agriculture. ***There is really no way to quantify the economic gains vs. the economic losses by review of the draft EIS.*** L01-2

I will begin with several inquiries. One of my first questions to the Bureau of Reclamation is "Have you as an agency substantially and reasonably involved all those affected by the Draft EIS/report, and have you done everything possible and appropriately to come to your conclusions?" Will it stand up to potential legal challenges and the "test of time?" For example, will the University-once it divests itself of this project and monies-be exposed to any liability and challenges as relates to "meeting the requirements and intent of the law?" Has the University abided by, and operated within, the parameters of the enacted legislation regarding this particular project? Has the correct information and data been impartially evaluated and subsequently assimilated into the report? Will the appropriation be handled wisely, and legally, by any and all subsequent groups-post University? ***Who will have oversight into that aspect?*** As we all know, there are millions of dollars at stake along with a County's economic base and livelihood. L01-3 L01-4 L01-5 L01-6 L01-7

Lyon County believes that the Draft EIS is essentially faulty and CONTAINS ERRONEOUS INFORMATION. The southern part of the County is primarily agricultural in nature. Removing the water and sustenance will certainly affect the economics of a region that is governed by farming. The most basic of assumptions is that if the water is removed from the area and economy, there will be less agriculture and growth. Lyon County is the premier area in the State L01-8

of Nevada for farming and related agricultural endeavors and research. The County, and State of Nevada, will suffer if this economy and viability is lost. L01-8 con't

Lyon County has suffered severely during the recent economic down turn. The unemployment rate recently was 15.8 % (DETR website, August 2009) and at times Lyon County led the State in home foreclosures. Lyon County was and is one of the most severely "depressed" areas in the nation. The Kaiser Foundation recently released a report declaring Nevada as the number one most "economically stressed" state in the US. L01-9

These statistics reflect the aftermath of Lyon County experiencing a period of unprecedented growth. Lyon County cannot suffer another economic blow to its present and its future. Lyon County is approximately 2313 square miles in dimension and has an estimated population of 56,000 people and is an important part of Nevada. L01-10

Lyon County has reviewed and discussed the response submitted by the Walker Irrigation District, and supports its stance and conclusions. We join with our neighbors in voicing our opinions and concerns, and hope that these comments are seriously evaluated and considered. L01-11

The most severely affected areas in Lyon County would be Smith Valley and Mason Valley. Smith Valley is rural in nature and is basically a farm and ranch community. It relies on water for its sustenance and cannot do without adequate allocations. Smith Valley is located along SR 208 and is situated near the foothills of the Sierra Nevada Mountains. The crops are composed primarily of alfalfa, potatoes, onions, garlic and other grain crops. There are several cattle operations, and feedlots, also in Smith Valley. This is also a similar situation in Mason Valley-where agriculture is the primary economy and livelihood. The proximity to California and other regional markets make Lyon County an ideal area for the continuation of its agriculture base. L01-12

Walker River, both the East and West Forks, is the primary means of water delivery to the agricultural area of Lyon County (Smith and Mason Valleys). It is an important natural resource that provides life and sustenance to the economic and social fabric of an integral piece of Lyon County. This in turn generates the spin-off benefits to the remainder of the County, and region. In 2007, there were approximately 325 farms and ranches in Lyon County with an estimated total value (lands, buildings, equipment) of $380,656.900. There was approximately $91,108,000 in total sales of produced products of which about $62,158,000 came from irrigated crops and about $28,950,000 came from livestock sales. This points out the extreme value of our water resource. L01-13

Lyon County is interested in knowing what will be the next course of action after the Draft EIS is reviewed and/or accepted, and what weight the stakeholder comments will be given. Will recommendations be examined and incorporated or will the comments just be added to the EIS? Who will be the ultimate group that manages the 'purchased' water? It seems to be unclear at this point in time. Once again, how have the public and affected farmers, ranchers, and others been involved with this process and to what degree? L01-14

Comment Letter L-01 Continued (Dennis W. Stark, Lyon County, Board of County Commissioners, September 30, 2009)

Lyon County would support the water ***leasing program***. This alternative to water rights purchases provides more economic and environmental stability for Lyon County over the long run. This provides more advantages than the purchase option(s). A leasing program would benefit the 'willing' participants and also allow needed water to be redirected to Walker Lake. This would also enhance the political capital of those involved in this program. Dealing with water issues in a closed Basin type of environment is both complex and daunting-with many unknown variables to consider. Based on the available information, Lyon County would support this method of proceeding. Perhaps more research and water 'modeling' is needed to adequately address the needs of the region and that of Walker Lake. L01-15

The complete or partial loss of agricultural lands and water would be devastating to Lyon County. Loss of agricultural lands in Lyon County, or the related fallowing of those lands, would cause substantial adverse economic and environmental impacts on the region in general. No substantial or convincing research has been done as of this time, by the presenting parties of the Draft EIS, to either prove or disprove economic benefits or losses. This is in part due to the Bureau of Reclamation's determination and position that acquisition programs or leasing programs are not subject to the National Environmental Policy Act. The removal of water from Lyon County will adversely affect the overall revenue, individual farm and ranch income, number of jobs, and economic viability of the area. L01-16

The Lyon County Assessor has reviewed the maps in the Draft EIS report. In regard to the Draft EIS, the maps must be clear, consistent, and correct. It is not the responsibility of others to ensure that this occurs-but rather it falls on the people/group drafting the EIS document. In this case it is the Bureau of Reclamation. The maps included in the Draft EIS are unacceptable because they are incorrect. Because of this fact, there should be an additional ***extension of this process.*** Once the maps and associated information are corrected, then there should be sufficient detail so that misinterpretations do not occur and at that time we can provide sufficient and substantive comments. L01-17

The maps used (Figure 7-1, 7-2, and 11-1) don't necessarily reflect what actually is happening in the area (reality). The Mason Valley Wildlife area is shown as multi-residential (because it was taken off the land use codes). It is agricultural land even though there are nine residences on it. It also has 1,000+ acres of irrigated land that does *not* appear on the map (Figure 7-1). Land use codes reflect for the Assessor what is happening on the property-not necessarily what is happening in reality. Land use codes are used by the Assessor for appraisal purposes and do not necessarily reflect the actual use of the property-especially when it comes to water usage. Other irrigated land might not show up as agriculture deferred land and it wouldn't necessarily appear on the map. What is depicted on the map is what is taken from the land use codes and not actually what is happening on the property-especially with water usage. Land use codes should not be used to determine water rights and issues of that nature. On Figure 7-2 there is a distinction between single family residential and rural-and they are essentially the same. Both designations apply to single family residential (unless it pertains to zoning). On Figures 7-1 and 11-1 the Mason Valley Wildlife Area is not drawn correctly and does not appear on the map. **Note:** it is hard to distinguish detail in maps with such large scale as approximately 3,200 acres lies west of the Walker River... L01-18

The assessed value of land would also be diminished in the affected area. This was not referred to or addressed in the Draft EIS. L01-19

There are many more inconsistencies in the report. A few examples would be page 11-6: "Lyon County does not maintain any park facility within the study area." Several parks are in this particular area: Dressler Park and Mason Park. There is also an interpretive trail located in the Wilson Canyon area. L01-20

Also on page 11-6, the Draft EIS states that "Visitor use appears to have been relatively stable over the past 4 years (Table 11-1)." This is in reference to Walker Lake. However, other areas in the region-including Dayton State Park in Lyon County-have had as many visitors or more than Walker Lake. So why would we be taking the water from Smith and Mason Valleys to save a lake that provides fairly minimal recreation opportunities in comparison to other areas? L01-21

The Draft EIS also contains other substantive errors. The community listings are wrong in Smith and Mason Valleys as are references to industrial areas and business parks in Smith Valley (there are none). L01-22

It would be beneficial to correct the errors contained in this report prior to resubmitting it to the participating agencies for their review. It would take an exhaustive effort to analyze the draft EIS, piece by piece, by the participating agencies. Perhaps the deadline could be extended-again-well past the October 5th, 2009 comment submission date. I would first ask that all errors and omissions be corrected prior to us reviewing the Draft EIS again. L01-23

In closing, if the water is removed as proposed, the Smith and Mason Valleys of Lyon County will eventually cease to exist. This is probably going to occur in the short-term and will not take long. Once again, the financial and economic impacts to Lyon County (and the region) will be abysmal. L01-24

Federal intervention is not needed or is not necessary. Lyon County should be the governmental entity that decides the best use of its water resources, in conjunction with its citizens and constituents. L01-25

Respectfully submitted:

Dennis W. Stark, Lyon County Manager

September 30th, 2009

CODE	PERSON RESP	INITIAL & DATE
100		
101		
110		
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800		
900		
850	Hard copy	

Responses to Comments of Letter L-01 (Dennis W. Stark, Lyon County, Board of County Commissioners, September 30, 2009)

L01-1

Comment acknowledged.

L01-2

Comment acknowledged. The Revised DEIS documents in several chapters the importance of agriculture to the communities in Lyon County and that it is the leading agricultural county in Nevada.

L01-3

Reclamation believes we have substantially and reasonably involved those who will be affected by the Acquisition Program, both those in support of the program and those against it. Chapter 16 of the DEIS discusses the opportunities for involvement through public meetings, public hearings, tribal consultations, agency coordination, Cooperating Agency coordination, informational mailings to an extensive mailing list of interested parties, and provision of DEIS review and solicitation of comments throughout the Administrative DEIS and Public DEIS process. Four additional public meetings were added to the EIS process to provide information and updates and solicit additional public comment prior to preparing the DEIS for release for public review and comment. As requested, the DEIS comment period was also extended.

L01-4

The long-term legal implications of the DEIS are unknown at this time.

L01-5

Reclamation believes the University has fully complied with the legislation.

L01-6

See Standard Response 7, No Bias in NEPA Impacts Analysis. The Revised DEIS analysis relies on published research studies, local, state and federal agency expertise, publicly available data, public comment, tribal consultations, and information provided by Cooperating Agencies with jurisdiction and expertise related to the Walker River Basin.

L01-7

PL 111-85 enacted in October 2009 determines that funding for Acquisition Program-related activities are to be provided by Reclamation to NFWF or the University. All three entities are required to comply with all aspects of that law, other Desert Terminal Lakes Public Laws, and related local, state, and federal regulations, applications, agreements, and approvals.

In a December 2009 agreement, the University assigned to NFWF all of the University's rights, interests, and obligations for the Acquisition Program. This includes all the option and purchase agreements previously entered into by the University. NFWF's role going forward will be to further develop and implement the Acquisition Program. The University's role will be to support such efforts through associated research, modeling, monitoring and evaluation.

L01-8

Comment acknowledged. The County does not provide specifics about its concerns that the DEIS is essentially faulty and erroneous, so Reclamation is unable to address this comment. The Revised DEIS confirms that the Acquisition Program would affect the economy of the agricultural communities and discloses that adverse

impacts on Lyon County would occur. Based on comments received, the Revised DEIS was modified to show local impacts on Mason and Smith Valley as well as impacts at the county level.

L01-9

Comment acknowledged.

L01-10

Comment acknowledged.

L01-11

Comment acknowledged.

L01-12

Comment acknowledged. Chapter 10, Socioeconomics, has been modified to describe impacts on Mason and Smith Valleys as well as at the County level.

L01-13

The Revised DEIS recognizes the importance of agricultural production in Lyon County, which includes both the Mason and Smith Valley areas and part of the Newlands Project. Revised DEIS Chapter 10, Socioeconomics, includes information on farm income, livestock production value, and crop production value. The Revised DEIS reported that in 2006, farm income in Lyon County totaled nearly $72 million and that farm income generated through the sale of livestock and crops totaled approximately $33 million and $35 million, respectively.

L01-14

Every comment received on the DEIS was recorded, responded to, and evaluated to determine if incorporation of changes in the Revised DEIS was appropriate. All comments and responses will be made available for public review. The Revised DEIS will be released as an informational document for public disclosure of potential impacts of the Acquisition Program and for consideration for the implementers of the Acquisition Program. PL 111-85 states that funding for the Acquisition Program is to go to NFWF or the University to implement the Acquisition Program and, as noted, the University has transferred administrative responsibilities for the Acquisition Program to NFWF …

PL 111-85 includes language under NFWF authorities for "the establishment of a local, nonprofit entity to hold and exercise water rights acquired by, and to achieve the purposes of, the Walker Basin Restoration Program". Reclamation is not aware that any determinations have been made about establishment of that entity by NFWF.

Involvement of the public, affected ranchers, and others is discussed in the Response to Comment L01-3, above.

L01-15

Comment acknowledged. See Standard Response 6, Alternatives.

L01-16

The Revised DEIS discloses that adverse (and beneficial) economic and environmental impacts would occur as a result of the Acquisition Program. The Revised DEIS findings concur with the comment that acquisition from willing sellers in the amounts that would provide restoration to Walker Lake would have adverse impacts on overall revenue, individual farm and ranch income, number of jobs, and the economy of the upstream agricultural areas.

Reclamation's determination that a NEPA document is not required does not affect disclosure of impacts in the Revised DEIS; rather, the determination is that Reclamation does not have discretionary decision-making authority over the Acquisition Program and will therefore not issue a Final EIS or Record of Decision. A more

detailed explanation of this topic is provided in Standard Response 3, No FEIS/No ROD, Standard Response 7, No Bias in NEPA Impacts Analysis, and in Chapter 1 of the Revised DEIS under EIS Process.

L01-17

The maps presented in the Revised DEIS were created using data from the best sources of data available: USGS, UNR/DRI, and Lyon County and information provided by some Cooperating Agencies with expertise in the area. As errors have been discovered or commented on, they have been corrected. However, the commenter does not provide specifics on types of error requiring correction. In addition, the figures are for general discussion purposes only, and program-specific decisions will not be made based on these maps. The text has been revised to indicate this.

L01-18

Please see Response to Comment L01-17. The UNR/DRI and Lyon County data were the best available data for determining approximate current land use. In addition, it is not clear what the commenter means by the difference between what is happening in the area and what is happening in reality. The use of an assessor's database is an acceptable tool to use in describing land uses.

L01-19

The DEIS included a discussion of potential impacts of the program on property values and property taxes. The Revised DEIS has been modified to include a discussion of the potential impacts on property values. As disclosed Revised DEIS Chapter 10, Socioeconomics, and in studies conducted by the University (Bartholet et. al. 2009), the potential impact on property values is difficult to predict because of the number of variables, including the potential to raise alternative crops and the unknown willingness by sellers to maintain investment in lands from which water rights have been acquired. The Revised DEIS does conclude that the program would most likely result in an adverse impact on property values because of the large amount of land that would be removed from production and a variety of associated impacts.

L01-20

See Response to Comment L01-23. In addition, the two parks mentioned have been added to text. The discussion of the interpretative trail in Wilson Canyon is under the BLM discussion. Thank you for providing this information.

L01-21

The Revised DEIS does not analyze parks such as Dayton State Park, which is on the Carson River and outside of the study area. No water would be “taken” from Smith and Mason Valleys. Rather, the Acquisition Program would provide willing sellers with the opportunity to sell or lease their privately owned water rights if they choose to do so. The goal of the Acquisition Program is not to provide water for recreational opportunities at Walker Lake, although that would be a beneficial impact of the program. The objectives are to comply with the various Desert Terminal Lakes laws to provide water to Walker Lake, an at-risk desert terminal lake.

L01-22

It is unclear what is wrong with community listings and the commenter did not provide any specifics for Reclamation to address their concern. The information on business and industrial areas was based on maps provided by Lyon County. The reference in the text was corrected to reflect the Smith Valley Master Plan (Lyon County 2006).

L01-23

In cases where errors and omissions where provided to Reclamation, they were evaluated and changes incorporated into the Revised DEIS as determined appropriate. Reclamation provided Cooperating

Agencies an opportunity to review the Administrative DEIS in small, manageable pieces over an approximate 6-month period to allow them to provide their local expertise in assisting with adequately disclosing impacts of the Acquisition Program. Another 2-month (73-day) comment period was provided to Cooperating Agencies and the public for review of the Public DEIS.

L01-24

Comment acknowledged. Potential adverse impacts on Lyon County, Mason Valley, and Smith Valley were disclosed in the Revised DEIS. See Standard Response 7, No Bias in NEPA Impacts Analysis.

L01-25

Comment acknowledged.

Comment Letter L-02 (Bill Reid, County of Mono, Board of Supervisors, October 5, 2009)

BOARD OF SUPERVISORS
COUNTY OF MONO
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Letter L-02

October 5, 2009

Caryn Huntt DeCarlo, Walker EIS Project Lead
Bureau of Reclamation
705 N. Plaza Street, Room 320
Carson City, NV 89701

Re: Draft EIS regarding the Walker River Basin Acquisition Program

Dear Ms. Huntt DeCarlo:

The County of Mono has the following comments on the Draft Environmental Impact Statement (DEIS) for the Walker River Basin Acquisition Program which was released by the Bureau of Reclamation in July of 2009. Note that, notwithstanding the Bureau's conclusion to the contrary, Mono County believes that the Acquisition Program is subject to NEPA by law (as discussed in Section 2). Thus this letter raises issues related to the Bureau's compliance with NEPA, in addition to other issues. L02-1

1. The DEIS does not adequately address potential impacts to Bridgeport and Topaz Reservoirs.

   a. *The DEIS is vague and lacks meaningful analysis regarding impacts on Bridgeport and Topaz Reservoirs*

Chapter 2 of the DEIS contains a section entitled "Reservoir Operations." This section provides that "[u]nder all action alternatives, Bridgeport Reservoir and Topaz Lake Reservoir operations would not change significantly because acquired storage water rights would *still be expected* to be exercised during the irrigation season in accordance with past patterns of use." (DEIS, at p. 2-4, emphasis added.) Thus, the DEIS specifically acknowledges that the Program will involve the acquisition of storage water rights from Bridgeport and/or Topaz Reservoirs. L02-2

Bridgeport and Topaz reservoirs are critical components of Mono County's economic and environmental health. Not only do they support thriving trout fisheries, they attract and nourish migratory birds and other wildlife, provide scenic vistas to Mono County residents, visitors, and motorists along Highway 395 (a State Scenic Byway), and they attract thousands of recreational users each year, contributing significantly to the economic health and vitality of Mono County. L02-2 con't

Given the critical importance of Bridgeport and Topaz reservoirs, the DEIS should not rely on speculation regarding how acquired storage rights would be exercised, but should specifically state whether (and if so, in what ways) reservoir operations will be affected. Moreover, the only support for the DEIS's conclusion that reservoir operations would not change significantly appears to be the assertion that the WRID Operations Manual, California water rights licenses and the Decree would continue to apply. The DEIS does not explain how the continued applicability of these regulatory mechanisms ensures that reservoir operations will not change. In fact, it is not hard to imagine that reservoir operations could be altered significantly, while still complying with the WRID Operations Manual, California water rights licenses, and the Decree. More detail on this critical issue is needed.

   b. *The DEIS does not discuss the process for changing a California water storage right through the SWRCB nor compliance with the California Environmental Quality Act*

NEPA requires that the lead agency coordinate with State and local government entities to reduce duplication between NEPA and similar State and local requirements. (*See* 40 CFR 1506.2 (c): "Agencies shall cooperate with State and local agencies to the fullest extent possible to reduce duplication between NEPA and comparable State and local requirements . . . such cooperation shall to the fullest extent possible include joint environmental impact statements.") L02-3

Amendments to storage water rights licenses for water stored in Bridgeport and Topaz reservoirs will require approval by the California State Water Resources Control Board ("SWRCB"). Such approval is discretionary in the Board, and constitutes a "project" under CEQA. Thus, environmental review and analysis will need to be conducted by the SWRCB. Yet the DEIS does not address (or even mention) the CEQA process – stating only that approval by the SWRCB will be required in conjunction with the acquisition of California storage water rights. It seems clear that no coordination has or will occur.

Comment Letter L-02 Continued (Bill Reid, County of Mono, Board of Supervisors, October 5, 2009)

2. The DEIS does not adequately discuss the effects of changes to water rights in Nevada on in-stream flows in California.

The DEIS generally alludes to beneficial impacts on in-stream flow in the Walker River resulting from the acquisition of water rights, but does not explain in any detail how changes in the place of use and/or timing of flows will actually affect the River. This issue is of critical importance – as both the East and West Walker Rivers are significant environmental and recreational resources in Mono County. Because of the possibility that changes the in water rights could affect the flow of the river and its fishery (whether positively or negatively), the DEIS should specifically discuss how the flow of the river will be altered and how such altered flows will affect the health of the river and its fisheries. L02-4

3. The Acquisition Program is subject to NEPA by law.

a. *Department of Interior Regulation 46 C.F. R. § 46.100 is inconsistent with NEPA and the CEQ Regulations and is therefore invalid*

The Council on Environmental Quality (CEQ) is charged with adopting regulations to implement NEPA. The regulations adopted by CEQ direct federal agencies to develop their own NEPA procedures. The only restriction on federal agencies in developing those procedures is that they must be compliant with the Regulations, unless compliance would be inconsistent with statutory requirements. (*See* 40 C.F.R. § 1507.3 (b).) It is axiomatic that the CEQ Regulations and any agency procedures for NEPA compliance must comply with the statute.

In October of 2008, the Department of Interior adopted 43 C.F.R. § 46.100. Citing CEQ Regulation 40 C.F.R. § 1508.18, the new procedure provides that a Bureau of Reclamation-proposed action is subject to the procedural requirements of NEPA only if it would cause effects on the human environment, and "is subject to bureau control and responsibility." (43 C.F.R. § 46.100 (a).) This language is inconsistent with the actual language of section 1508.18, which defines Major Federal Actions as actions with effects that may be major (i.e., significant) and which are "*potentially* subject to Federal control and responsibility." (40 C.F.R. § 1508.18, emphasis added.) Thus there is a lower threshold for NEPA applicability under the CEQ Regulation than in the new DOI procedure. L02-5

The new procedure is likewise inconsistent with NEPA. The statute requires the preparation of an EIS for every major Federal action significantly affecting the quality of the human environment. (*See* 42 U.S.C. § 4332 (C).) The term "action" includes projects and programs entirely or partly financed, assisted, regulated, or approved by federal agencies. (*See* 40 C.F.R. § 1508.18 (a).) Here, the appropriation was made to the Department of Interior, Bureau of

3

Reclamation – not to the University. It is thus the Department which will be financing the Program and, as discussed below, will – and indeed already has – exercised control over how the Program is carried out. L02-5 con't

b. *The Department does in fact have control over and responsibility for the Walker River Basin Acquisition Program*

Section 208(a) of Public Law 109-103 provides that the Secretary shall provide *not more than* $70,000,000 to the University of Nevada for the acquisition of land, water appurtenant to land, and related interests in the Walker River Basin, Nevada, among other expenditures. Clearly, by the very words of the appropriation, the Secretary has discretion as to how much money to provide to the University for the Acquisition Program – and in that regard exercises the highest level of control available over the Project – control of the purse strings. It is hard to imagine that if the University sought $69,000,000 (out of the original $70,000,000) from the Bureau for the purpose of establishing and administering an agricultural and natural resources center as authorized by Section 208, that the Bureau would not exercise its "control" over the Program by denying all or a portion of that request. Given this discretion, it is difficult to conclude that the Bureau does not, or cannot, exercise any control over, or does not have responsibility for, the Program. L02-6

Moreover, the Bureau has already exercised significant control over and responsibility for the Program, as stated in the DEIS. The Bureau has "evaluated whether a NEPA document was required for the action . . . Reclamation decided that developing and EIS was appropriate to disclose potential adverse and beneficial impacts of the proposed Acquisition Program . . ." (*See* DEIS, at p. 1-5.) Moreover, by selecting the alternatives analyzed in the DEIS, choosing the consultants who would prepare the document, and directing and overseeing their contributions to the final draft, Reclamation has already substantially set the course of the Program. To claim now that the action is not subject to NEPA because it is not subject to Bureau control or responsibility is counter to reality. Thus, even if 46 C.F.R. § 46.100 were valid in certain circumstances, it is not applicable to the present Program.

c. *The Department's determination that the Acquisition Program is not subject to NEPA amounts to an improper end-run around the requirements of that statute*

Proposals for appropriations – as opposed to proposals for legislation – are generally not subject to NEPA. (*See Andrus v. Sierra Club*, 442 U.S. 347, 360-361 (1979).) The justification for such non-coverage is that appropriations have only a limited purpose – to provide funds for otherwise-authorized programs which, themselves, would have been analyzed pursuant to NEPA. As noted by the Supreme Court in *Andrus*, NEPA is directed at the processes of planning and L02-7

4

Comment Letter L-02 Continued (Bill Reid, County of Mono, Board of Supervisors, October 5, 2009)

decision making associated with the enactment of the underlying legislation – not with the later appropriation of funds to carry out such legislation. (*See id.*) L02-7 con't

Here Congress has appropriated funds for a program that is established nowhere else except in the appropriations acts themselves. There is little doubt that the Walker River Basin Acquisition Program is a major federal action having a significant effect on the environment as defined by NEPA – the DEIS confirms this. Yet no environmental review was conducted in conjunction with the approval of the appropriations which "established" the Program and, now, when the Program is actually to be carried out, the Department asserts that its implementation is likewise not subject to NEPA.

The result of these two actions (the creation of the Program solely through appropriations and the subsequent determination that NEPA does not apply to its implementation by the Bureau and the University) is that a Major Federal Action which significantly affects the quality of the human environment will be implemented without any of the procedural safeguards imposed by NEPA.

This is troubling enough on its own. However, in light of legislation recently approved by both houses of Congress, and discussed below (H.R. 3183), which would extend the Program into California (i.e., make the funds available for the acquisition of land, water, and associated interests in the California portions of the Walker River Basin), this lack of environmental oversight is even more troubling. While at least some level of NEPA review was conducted with respect to the Program as it impacts the State of Nevada, according to the Bureau's interpretation, absolutely no NEPA compliance would be required as to the Program as it impacts California. This is absolutely unacceptable to Mono County.

4. Mono County opposes the expansion of the Acquisition Program into California, however, should the expansion nevertheless occur, the impacts on Mono County's environment and economy must be analyzed pursuant to NEPA.

As noted above, H.R. 3183 is currently in conference. This third "appropriations" act would delete a restriction in the Energy and Water Development Appropriations Act of 2006 (P.L. 109-103), essentially establishing an Acquisition Program in California. It would also authorize the establishment of a three year leasing demonstration program in both Nevada and California none of which, according to the Bureau's interpretation, would be subject to NEPA. L02-8

It cannot be presumed that the Bureau, because it prepared a DEIS for the Acquisition Program in Nevada (prior to the enactment of 46 CFR § 46.100) will necessarily do the same for the Program as extended into California now that

5

that regulation is in place. In fact, the DEIS makes clear that the Bureau, while unsure previously, is now certain that the Acquisition Program is not subject to NEPA. This is of great concern to Mono County as it anticipates the Acquisition Program being extended into Bridgeport and Antelope Valleys. L02-8 con't

Thank you for considering the County of Mono's Comments regarding the Draft Environmental Impact Statement for the Walker River Basin Acquisition Program. Should you have any questions or need additional information, please contact Stacey Simon, Assistant County Counsel, at 760-924-1704.

Sincerely yours,

Bill Reid, Chairman and District 5 Supervisor

Tom Farnetti, Supervisor, District 1 Supervisor

Duane "Hap" Hazard, District 2 Supervisor

Vikki Bauer, District 3 Supervisor

Byng Hunt, District 4 Supervisor

6

Responses to Comments of Letter L-02 (Bill Reid, County of Mono, Board of Supervisors, October 5, 2009)

L02-1

A detailed explanation of why Reclamation has determined that NEPA is not required for the Acquisition Program is provided in Chapter 1 of the Revised DEIS under EIS Process, and in Standard Response 3, No FEIS/No ROD.

L02-2

See Standard Response 12, Topaz Lake and Bridgeport Reservoirs. As noted, it is an assumption of the Revised DEIS that the reservoir operations would not change from past use. However, if any proposal is pursued that would be outside of past use patterns, a CEQA process would be required to ensure that potential impacts in California are adequately addressed (see Standard Response 4, CEQA Requirements).

L02-3

See Standard Response 4, CEQA Requirements, and Response to Comment LO2-2.

L02-4

See Standard Response 4, CEQA Requirements, and Response to Comment LO2-2. Since it is assumed in the Revised DEIS that upstream reservoir operations would not change from past use, changes to the Walker River are not anticipated above where acquisitions occur in Nevada; therefore, no impacts on the river are expected in California.

L02-5

This comment pertains to the legality of the Department of the Interior (DOI) NEPA regulations adopted in October 2008 and, therefore, refers to an issue outside the scope of the substantive issues addressed by Reclamation in the Revised DEIS. The use and application of DOI's NEPA regulations is a requirement for NEPA compliance for all agencies within the DOI, including Reclamation, and it is not within Reclamation's discretion to choose to ignore them for any reason. It should be noted that the DOI NEPA Regulations, including 46 CFR 46.100, regarding when NEPA compliance is not necessary, were issued for public notice and comment prior to final adoption in October 2008 and, as part of that process, were reviewed and approved by CEQ. Neither CEQ nor EPA had any issues with the regulations as adopted, including whether the regulations were in compliance and consistent with NEPA and CEQ's NEPA regulations. No legal action was taken by any parties to challenge these regulations, which have now been in effect for over a year.

L02-6

Based on the language in PL 109-103, as well as NEPA, CEQ's NEPA Regulations, DOI's NEPA Regulations, and U.S. Supreme Court interpretation of federal agency control and responsibility related to NEPA compliance, compliance with NEPA was not required for Reclamation's involvement in the Acquisition Program. Simply stated, NEPA is required only when the federal agency has enough discretion to apply control and responsibility over the implementation of the action pursuant to possible environmental issues as disclosed in NEPA's environmental analysis. Reclamation determined that the language in the public law does not provide Reclamation with sufficient control and responsibility over the application of the funding in the Acquisition Program, and therefore issuance of a ROD in completion of the NEPA process is not required. In addition, language in PL 109-103 (*(d) For each day after June 30, 2006, on which the Bureau of Reclamation fails to comply with subsections (a), (b), and (c), the total amount made available for salaries and expenses of the Bureau of Reclamation*

shall be reduced by $100,000 per day) required Reclamation to provide the advance funding within a short time frame, which also precluded Reclamation control and discretion over the Acquisition Program. The Reclamation activities that the commenter refers to do not provide any discretion over the use of funds in the Acquisition Program and are merely activities Reclamation undertook from an administrative standpoint in preparing an EIS for disclosure purposes only.

L02-7

The commenter noted that NEPA is required for a major federal action. The CEQ NEPA regulations define major federal action as ones "subject to Federal control and responsibility" (40 CFR 1508.18), meaning major federal discretionary actions. Reclamation's position as outlined in detail in Chapter 1 and in Standard Response 3, No FEIS/No ROD, is that the agency does not have discretion or decision making authority for the Acquisition Program; Reclamation's role is to provide the funding as directed in the related public laws, without any significant control or responsibility over the expenditures of funds.

The environmental analysis contained in Reclamation's DEIS is consistent with the comment that the Acquisition Program would have potential adverse environmental impacts on the human environment; an EIS was prepared specifically because significant adverse effects were expected. The DEIS was prepared to disclose those impacts and to allow for public and agency review and comment. Where appropriate, changes were made to the Revised DEIS as a part of responses to comment. Reclamation, however, is not the decision-maker on the Acquisition Program beyond ensuring the funding is used for authorized purposes; the applicable public laws have designated NFWF or the University as the decision- maker for the Acquisition Program (and the University has subsequently transferred their responsibility for the Acquisition Program to NFWF).

Other comments regarding concerns about the Acquisition Program being extended into California were addressed in the Response to Comments LO2-4 and L02-8.

L02-8

Comment acknowledged. Mono County Board of Supervisors' comment letter on the DEIS was prepared and submitted prior to passage of PL 111-85. As Mono County is now aware, the restriction regarding acquisitions only being allowed in Nevada for the Acquisition Program was not deleted in PL 111-85. No land in California, water appurtenant to that land, or related interests would be acquired through the Acquisition Program; however, WRID's rights to stored water in California, which are appurtenant to and used on lands in Nevada, may be included in the Acquisition Program if offered by willing sellers. The 3-year WRID demonstration water leasing program authorized separately by PL 111-85 will be funded through a grant agreement with NFWF. WRID's pilot project may or may not be different from the Leasing Alternative analyzed in the DEIS and is not formally part of the Acquisition Program being analyzed in this Revised DEIS. If WRID's demonstration program did include California, CEQA analysis would be required (see Standard Response 4, CEQA Requirements). Reclamation believes that concerns regarding NEPA and extension of the Acquisition Program into California as stated in the letter are no longer applicable related to the Acquisition Program analyzed in the Revised DEIS.

Comment Letter L-03 (Michelle Langsdorf, Mason and Smith Valley Conservation District, October 1, 2009)

Letter L-03

October 1, 2009

Caryn Hunt-DeCarlo
Bureau of Reclamation
705 N Plaza St Suite 325
Carson City NV 89701-4069

RE: Walker River Basin Acquisition Program Draft EIS comments

Dear Caryn Hunt-DeCarlo,

The following are Mason and Smith Valley Conservation Districts comments to the Walker River Basin Acquisition Program Draft Environmental Impact Statement.

Concern/Comment 1: The EIS does not clearly state why mediation recommendations were not addressed.

Residents of Mason and Smith Valleys are concerned about the negative economic and environmental ramifications of purchasing water in these valleys; therefore, the University should be required to address mediation recommendations for their program without regard for NEPA compliance requirements. L03-1

Concern/Comment 2: What was the logic using the estimate of 50,000 af/yr from the Thomas 1995 report without the initial 700,000 ac/ft "slug" of water to improved water quality at Walker Lake? L03-2

Concern/Comment 3: 4-14 states irrigation canals support narrow and patchy riparian habitat when compared to native communities and increased surface flows will increase riparian habitat along the mainstem Walker River.

While an increase in surface flows may increase riparian habitat, this is dependent on land management techniques used for each individual parcel along the mainstem; therefore, any increase in riparian habitat along the mainstem may also have the same narrow and patchy characteristics. L03-3

Concern/Comment 4: 4-17 states irrigation canals can contribute to increased infestations of perennial pepperweed. This statement is misleading for several reasons.

First, there are other weed species of concern in the basin besides perennial pepperweed infesting the irrigation canals such as hoary cress and tamarisk. This is addressed in Impact VEG-8 on page 4-18; however, the wording on 4-17 focuses solely on perennial pepperweed. L03-4

Second, Walker River and its tributaries transport noxious weed reproductive parts throughout the system including canals, ditches and the riparian corridor. Noxious weeds tend to be opportunistic becoming established in disturbed sites. An increase in river flows may change the corridor to those characteristics expected of "natural" channel; however, the water management change will result in new disturbances within the corridor and thus increasing the possibility of new noxious weed infestations of all species found in the system.

Third, reducing or removing water from irrigation canals can also contribute to establishment of other noxious weeds that do not require the same conditions as perennial pepperweed such as various thistles or knapweeds. In addition, moving water away from canals and agricultural fields would result in yet another disturbance allowing for different noxious weeds to become established may also increase infestations of different noxious weeds

Concern/Comment 5: Impact VEG-8 page 4-18 states an increased spread of tamarisk caused by increase flow in Walker River will be a minor impact.

According to the Desert Terminal Lake legislation clearly identifies tamarisk eradication as a primary goal of the program. Any increase in tamarisk would be contradictory to the program's intent. L03-5

Please do not hesitate to contact us at (775) 463-2265 x 106 or michelle.langsdorf@nv.nacdnet.net for additional information or further clarification.

Sincerely,

Michelle Langsdorf

Responses to Comments of Letter L-03 (Michelle Langsdorf, Mason and Smith Valley Conservation District, October 1, 2009)

L03-1

See Standard Response 5, No Mitigation in EIS.

L03-2

A particular average lake inflow will eventually result in a particular lake level. An initial slug of additional water would help the lake reach its new equilibrium level faster. However, it would be difficult (and expensive) to acquire a slug of 700,000 af.

L03-3

Although the analysis states that riparian habitat is likely to increase, the extent of the increase is not quantified because the results depend on variables such as timing and amount of flow, as well as land management techniques in the adjacent lands. Impact VEG-2 was modified to include disclosure of the possible effect of land management on the extent of riparian habitat increase.

L03-4

The example of perennial pepperweed was removed to avoid the inference that it would be the only noxious weed that could spread. The text was revised to incorporate information provided indicating that upland noxious weeds could also increase.

L03-5

Thank you for pointing out this issue. While there are overall major environmental benefits of providing water to Walker Lake, there are some adverse impacts as well. The increased flows may have minor impacts on spread of tamarisk; however, tamarisk removal remains a priority for the various entities working in the Walker Basin and tamarisk treatment is expected to continue and possibly increase as additional funding becomes available. With continued efforts on tamarisk removal for a variety of entities, it is possible that there will be a net overall reduction in tamarisk that offsets the minor amount of possible increase related to increased flows in the Walker River. It is also important to note that the spread of noxious weeds including tamarisk is already an issue in the Walker River system and noxious weeds will continue to spread even without increased flows under the Acquisition Program.

Comment Letter L-04 (Gordon H. DePaoli, Woodburn and Wedge, October 5, 2009)

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October 5, 2009

Via U.S. Mail and Electronic Mail to "chunttdecarlo@usbr.gov"

Letter L-04

Caryn Huntt DeCarlo
Bureau of Reclamation
705 North Plaza Street, Room 320
Carson City, Nevada 89701

Re: **Comments of the Walker River Irrigation District to the Draft Walker River Basin Acquisition Program Environmental Impact Statement**

Dear Ms. Huntt DeCarlo:

The Bureau of Reclamation ("BOR") released the Draft Environmental Impact Statement for the Walker River Basin Acquisition Program (the "DEIS") for public review and comment in late July. Initially, the BOR selected September 14, 2008 as the deadline for the submission of written comments. That deadline was subsequently extended to October 5, 2009.

The Walker River Irrigation District (the "District") hereby submits its written comments to the DEIS. The District's comments contain a general discussion concerning issues related to the DEIS followed by specific comments to portions of the DEIS. The District's comments also rely upon memorandums prepared by Sound Watershed Consulting (the "SWC Memorandum") and MBK Engineers (the "MBK Memorandum"). Those memorandums are attached to this letter and incorporated fully herein for purposes of providing the District's comments to the DEIS.

General Comments

1. **The BOR Must Either Discontinue the DEIS Process, If It Concludes That It Is Not Required to Prepare an Environmental Impact Statement, or, It Must Fully Comply with the National Environmental Policy Act ("NEPA") If It Is Required to Prepare One** L04-1

Based upon 43 C.F.R. § 46.100, the BOR has determined that issuing a record of decision ("ROD") for the DEIS "as part of the NEPA process is neither required nor

appropriate." DEIS at ES-3. As a result, "[m]itigation measures for adverse impacts were not developed for the DEIS." *Id.* at 1-4. Nevertheless, BOR has "decided that completing the EIS would be responsible given the high level of public interest and the commitment by Reclamation throughout the EIS process to disclose potential impacts and provide the opportunity for public comment." DEIS at ES-3. BOR's position is untenable. Assuming for the sake of argument that BOR is correct and NEPA compliance is not required, there is no "NEPA process" and the DEIS must be shelved. Alternatively, if NEPA applies, the BOR must adhere to the relevant law and issue a ROD. BOR cannot have it both ways. It cannot prevent parties from challenging the adequacy of any final EIS in a judicial proceeding by issuing a final EIS but no ROD. L04-1 con't

The powers of administrative agencies are wholly derived from, and defined and limited by, constitution, statute, or other legislative or organic enactment. See, *Food and Drug Administration v. Brown & Williamson Tobacco Corp.*, 529 U.S. 120, 125, 120 S.Ct. 1291 (2000). NEPA requires a federal agency to comply with its procedures, including all environmental impact statement requirements, whenever it conducts "major Federal action[s] significantly affecting the … human environment." 42 U.S.C. §4332 (2008); See, *Brown & Williamson Tobacco*, 529 U.S. 120, 120 S.Ct. 1291. NEPA also requires the agency to issue a ROD in cases requiring environmental impact statements. 40 C.F.R. §1505.2 (September 14, 2009). If NEPA is applicable to the Walker River Basin Acquisition Program then BOR must comply with all NEPA requirements, including the consideration of mitigation measures and the issuance of a ROD.

Alternatively, if NEPA does not apply as asserted by BOR, there is no statutory authority for BOR to conduct NEPA analysis. BOR's power to prepare environmental impact statements is wholly derived from, as well as defined and limited by, NEPA itself. *See, Food and Drug Administration v. Brown & Williamson Tobacco Corp.*, 529 U.S. 120, 125, 120 S.Ct. 1291 (2000). Regardless of the gravity or magnitude of BOR's commitment to disclose impacts and involve the public, the Agency may not "exercise its authority 'in a manner that is inconsistent with the administrative structure that Congress enacted into law'" in NEPA. *Brown & Williamson Tobacco Corp.*, 529 U.S. at 125 [quoting, *ETSI Pipeline Project v. Missouri*, 484 U.S. 495, 517, 108 S.Ct. 805 (1988)]. Here, BOR's actions related to the preparation of any EIS in connection with the Walker River Basin Acquisition Program must be discontinued because they are not in accordance with law. 5 U.S.C.S. § 706(2)(A); *Or. Nat. Res. Defense Counsel v. Brong*, 492 F.3d 1120, at 1124-1125 (9th Cir. 2007).

Furthermore, the preparation of an EIS coupled with no release of the ROD is unacceptable as a practical matter. It leaves parties that will be impacted by the actions contemplated under the EIS with no ability to challenge the content of that EIS. Those parties will spend significant sums of money in attending public hearings, reviewing draft documents and providing comments thereto. Nevertheless, they will not be afforded any opportunity to challenge the adequacy of the analysis contained within the final EIS. Under these circumstances, the BOR will have complete control over the content of the

Comment Letter L-04 Continued (Gordon H. DePaoli, Woodburn and Wedge, October 5, 2009)

final document without subjecting its analysis to any form of review for adequacy. This is simply an unacceptable result that is clearly not supported by the law.

In summary, the BOR must discontinue any further action with respect to the DEIS if it takes the position that NEPA compliance is not required.

2. The DEIS Fails to Consider the Potential Impact That Pending Litigation May Have On the Alternatives Analyzed L04-2

There is currently litigation pending in the United States District Court for the District of Nevada in the action involving the Walker River Decree that may dramatically impact any analysis concerning water right acquisitions. The Walker River Paiute Tribe ("Tribe") has claims pending for a right to store water in Weber Reservoir, to use water on lands included in the Reservation in 1936 and for the use of underground water. The United States has claims pending for the use of surface and underground water for numerous federal enclaves throughout the Walker River Basin. Finally, Mineral County, Nevada has moved to intervene in the Walker River Action to assert a claim under the public trust doctrine that seeks "an adjudication and reallocation of the waters of the Walker River to preserve minimum levels in Walker Lake."

There can be no adequate environmental analysis of water right acquisitions on the Walker River system until this pending litigation has been resolved. The potential reallocation of water and water rights contemplated by the litigation may render as meaningless any environmental analysis concerning water right purchases made to increase Walker Lake inflows. The DEIS completely fails to acknowledge the impact that the pending litigation may have on the Alternatives analyzed and is therefore inadequate in this regard.

Executive Summary

At page ES–2, the DEIS states that "diversions from the river, primarily for upstream irrigated agriculture, have resulted in a 149-foot drop in the lake's surface elevation . . . As a result, in most years there is little or no inflow into Walker Lake." This statement ignores the impact of climate changes and the fact that Walker Lake has been dry before and subsequently recovered. *See* DEIS at p. 3–3. Also, Walker Lake receives huge volumes of water in some years due to floods. Finally, the DEIS should recognize that the delivery of a fixed volume of additional water to Walker Lake, alone, will not, over the long term, sustain reduced TDS levels. L04-3

At page ES-4, the DEIS states that "acquisitions would occur only in the portion of the Walker River Basin located in Nevada." The rights to stored water held by the District and appurtenant to and used upon lands located in Nevada are actually California water rights. As a result, this "in Nevada" limitation may impair any proposal to acquire L04-4

or lease stored waters or use District Reservoirs to enhance the use and/or delivery of water. This issue should be analyzed in the DEIS L04-4 con't

As appropriate, any additional comments to the Executive summary are contained within the District's comments to other sections of the DEIS and in the SWC and MBK Memorandums.

Chapter 1 – Purpose of and Need for Action

The DEIS contains the following statement of purpose and need:

> The purpose of the Walker River Basin Acquisition Program is to provide water to Walker Lake, an at-risk natural desert terminal lake in Nevada, by acquiring, from willing sellers, land, water appurtenant to the land, and related interests in the Walker River Basin in Nevada; and to make acquisitions that are the most beneficial to environmental restoration in the Walker River Basin. The Acquisition Program is needed to implement section 208(a) of P.L. 109-103 in accordance with section 2507 of P.L. 101-171 (as amended) and section 207(a)(1) of P.L. 108-7.

DEIS at 1-3.

The statement of purpose and need is too narrow. It must be expanded to accommodate the entire statutory scheme which involves environmental restoration throughout the Walker River Basin, not just increased delivery of water to Walker Lake through acquisitions.

The purpose and need statement focuses exclusively on acquisitions because it fails to consider all of the provisions of and the express language contained in the statutory scheme that comprises Section 208(a) of P.L. 109-103. That failure has excluded the Agricultural and Natural Resources Research Center contemplated by Sections 208(a)(1)(B) and 208(a)(2)(A) from consideration in formulating the purposed action. It has also excluded alternatives involving "innovative agricultural water conservation" and "cooperative programs for environmental restoration" throughout the Walker River Basin from being considered. In essence, the statement of purpose and need merely restates the proposed action and therefore mandates its selection as the preferred alternative while simultaneously excluding other reasonable alternatives from analysis and consideration. The DEIS is inadequate in this regard. L04-5

Chapter 2 - Alternatives

Project alternatives derive from the "purpose and need" section of the EIS. *Westlands Water District v. Dept. of Interior*, 376 F.3d 853, 865 (9th Cir. 2004); *City of*

Comment Letter L-04 Continued (Gordon H. DePaoli, Woodburn and Wedge, October 5, 2009)

Carmel-By-the-Sea v. Dept. of Transportation, 123 F.3d 1142, 1155 (9th Cir. 1997). Because the purpose and need statement is inadequate, the discussion of alternatives in the DEIS categorizes several reasonable alternatives as "eliminated from detailed analysis" because they did not meet the purpose and need of providing water to Walker Lake through acquisitions. DEIS at 2-15. These alternatives include, among others, oxygenation, desalination, importation of groundwater from other basins and cloud seeding. The DEIS should not eliminate alternatives from consideration because they do not involve an acquisition component. L04-6

Geographic Distribution of Acquisitions (p. 2–2) – The percentages described in the DEIS were estimated, in part, using "satellite imagery collected periodically between 1986 and 2002" to estimate the acreage of irrigated lands located in each of the following areas: Mason Valley; Smith Valley; East Walker . It would be important to know how many acres of land within each of those regions have appurtenant surface or underground water rights, the nature of those rights (primary / supplemental) and how those numbers compare to the acres of irrigated land. This information is needed to calculate quantities of water available for acquisition in each region. As described in subsequent sections this letter, any analysis of water available for acquisition must begin with the water rights involved. L04-7

The DEIS also considers location of lands "that have been the subject of discussions with and offers by potential willing sellers to date." As demonstrated by Appendix 2A of the DEIS, however, all option agreements have been located in Mason Valley. Therefore, consideration of lands forming the subject of discussions and offers appears to be irrelevant to any exercise that attempts to estimate the geographic distribution of acquisitions by region. L04-8

Acquisition Considerations (p. 2-3) – The DEIS states that one factor to be considered in acquisitions is the "potential for conversion from agricultural to urban land uses within one year of acquisition of appurtenant water rights." Consideration should also be given to lands that have previously been converted from agricultural to urban use with appurtenant water rights no longer used for irrigation purposes. L04-9

Change in Point of Diversion, Place, or Purpose of Use (p. 2–3) – The DEIS states that "[c]hanges for storage water would likely require WRID, NSE, and federal court approvals as well as California State Water Resources Control Board (SWRCB) approvals." Changes to waters stored in Bridgeport and Topaz Reservoirs will not require the approval of the Nevada State Engineer. L04-10

Reservoir Operations (p. 2–4) – The DEIS states that "[u]nder all action alternatives, Bridgeport Reservoir and Topaz Lake Reservoir operations would not change significantly because acquired storage water rights would still be expected to be exercised during the irrigation season in accordance with past patterns of use." If water from Bridgeport or Topaz Reservoir is intended to be used at Walker Lake, those L04-11

Reservoirs will not continue to operate as required by existing water rights licenses issued with irrigation as the purpose of use. Furthermore, in some instances it may be advantageous to deliver water to Walker Lake outside of the irrigation season, for example, to reduce conveyance losses. The DEIS is inadequate in its analysis of these considerations. L04-11 con't

At page 2–4, the DEIS states that coordination or agreements and an operation agreement for Weber Reservoir would be required to manage acquired water rights "from the expected point of delivery at the Wabuska gage to the lower Walker River and Walker Lake." In the judgment of the District, once a surface water right subject to the provisions of the Water River Decree is properly changed for use at Walker Lake, the United States District Court for the District of Nevada in the Walker River Action will have full and complete jurisdiction to ensure that water from the consumptive portion of such changed water right is delivered to Walker Lake. There will be no need for any agreement with any party, including the Bureau of Indian Affairs and the Walker River Paiute Tribe. The non-consumptive portion will be available to meet other water rights, including the Tribe's water right. L04-12

Types of Water Rights that Could Be Acquired – (p. 2–6)

It is the District's position that the approximately 40,000 acres of land with appurtenant water rights located in Bridgeport and Antelope Valley in California should not be excluded from consideration here. L04-13

It is the District's position that storage rights, both supplemental and new land, are California water rights. Such water rights cannot be changed without participation by the District. L04-14

The DEIS indicates that supplemental and primary groundwater rights will be acquired to meet the purpose. The DEIS should explain how supplemental and primary groundwater rights will be used to provide water to Walker Lake. L04-15

The DEIS makes reference to District permits. The DEIS should clearly state that water covered by District permits cannot be changed without the District's participation. L04-16

Option Agreements (p. 2–6); Appendix 2A

With respect to natural flow water rights, the description is limited to a diversion flow rate from the Walker River. The description of the option agreements does not provide any information about the number of acres with appurtenant water rights. As explained below, it is crucial for a number of reasons to associate water quantities with the number of irrigated acres to which water is appurtenant. L04-17

Comment Letter L-04 Continued (Gordon H. DePaoli, Woodburn and Wedge, October 5, 2009)

Walker Lake Inflow Associated with Acquisitions and Funding (p. 2–7)

The DEIS makes the following statement:

> As discussed in Chapter 3, Water Resources, it is estimated that, on average, approximately 82,000 af/yr of surface water would need to be acquired from willing sellers in Mason Valley, Smith Valley, and the East Walker area in order to provide, on average, 50,000 af/yr of additional inflow to Walker Lake. The difference of 32,000 ac/yr represents the combined effects of hydrologic losses (e.g., reduced contributions from groundwater, losses to riparian vegetation, and channel losses).

This statement (the "Acquisition Statement") and the assumptions related to it form the basis for the entire analysis contained within the DEIS. Those assumptions, however, are in most instances incorrect, as explained below. As a result, for the most part the entire analysis contained within the DEIS is completely inadequate. L04-18

The Acquisition Statement states that "82,000 af/yr of surface water would need to be acquired." It is important to note that this 82,000 af/yr is "wet" water or an actual quantity of water. This number does not represent a quantity of water rights. In fact, in analyzing impacts to areas located upstream of Wabuska, or the "upstream analysis," the DEIS states that consideration "of the conversion between water rights and actual water" is unnecessary. DEIS at 3A-51. This statement is substantially inaccurate.

Instead, the upstream analysis relies upon "the baseline water balance" and an estimate of surface water diversions to determine "how much water may be available for purchase." DEIS at 3-14, 3-38, 3A-17. It states that: L04-19

> The analysis does not separately account for the different types of surface and groundwater rights that may be appurtenant to irrigated lands, but is instead based on analysis of average total surface water diversion, average total groundwater withdrawals, and average total irrigated land within each valley.

DEIS at 3-38. The Draft Report acknowledges that "[t]he upstream analysis (Chapter 3, Water Resources) is based on volumes of available water, which are generally less than the face value of water rights." DEIS at 2B-1. Furthermore, the Full Transfer Scenario under the upstream analysis assumes that the full diversion rate associated with acquired water rights could be left in the river to flow downstream. DEIS 3-41; 3A-54. As discussed below, the analysis of surface water available for acquisition must begin with the water rights involved, not with flows in the Walker River and rates of flow associated with diversions from the River. L04-20

In the upstream analysis, the DEIS also applies certain percentages to limit the quantity of water to be acquired from and number of acres to be retired in each valley. The end result from application of these assumptions and percentages is as follows:

Valley	Water Acquired (af/yr)	Reduction in Irrigated Land (acres)
East Walker	6,000	1,100
Smith Valley	20,000	4,200
Mason Valley	56,000	9,500
Total:	82,000	14,800

DEIS at 3-46, 3A-67. As discussed below, the assumptions used in the DEIS for the upstream analysis are incorrect. As a result, the analysis is faulty and the conclusions reached to evaluate impacts are of no use whatsoever.

Any analysis concerning the acquisition of "water" to increase flows to Walker Lake must begin with the "water rights" involved. The water rights provide the legal right for their owner to divert a certain quantity of water from its source at a specific location for a specific purpose. In the Walker River Basin, the water rights are currently used for irrigation purposes and are appurtenant to specific tracts of land. These water rights and the acres of land to which they are appurtenant must form the basis for any analysis of the impacts that may result from an attempt to increase average annual flows into Walker Lake by 50,000 acre feet. L04-20 con't

Water rights may be changed to a different place of use, manner of use and/or point of diversion. Those changes will be necessary here if water rights currently used for irrigation purposes are to be acquired for some use that involves increased flows to Walker Lake. As a result, the change process is vitally important to any correct analysis under the DEIS. L04-21

In this change process, the Nevada State Engineer and the U.S. District Court will not allow the transfer of the full amount of the available water represented by the water rights, as assumed by the DEIS. First, each water right acre is not, and never has been, irrigated 24 hours per day during each and every day of the irrigation season, as implied by the DEIS. In order to ensure that a change will not conflict with existing rights, changes to natural flow rights will be limited to a consumptive use component by the Nevada State Engineer and the Walker River Court. *See*, N.R.S. 533.370(5); 533.3703; *see also*, *United States v. Alpine Land & Reservoir Co.*, 503 F.Supp. 877, 893 (D. Nev. 1980). The consumptive use component will be the amount of applied water which was consumed each year by the principal historic crop, most likely alfalfa. The DEIS estimates agricultural consumptive use at approximately 2.77 acre feet per acre per year. DEIS 3-48 through 49. L04-22 L04-23

Comment Letter L-04 Continued (Gordon H. DePaoli, Woodburn and Wedge, October 5, 2009)

The DEIS also acknowledges that the expected yield from acquired water rights will be far less than the face value of those rights. It states:

> Surface water rights in the Walker River Basin do not typically yield the maximum amount specified by the face value of those rights because of the varying availability of water for diversion, limitations on the ability to put water to beneficial use, and the exercise of other water rights with more senior dates of priority.

DEIS at 2B-2. As a result of these and other factors, the DEIS estimates the expected yield (or water availability factor) of a water right to be approximately 50% of its face value. DEIS at 2B-4, 2-7.

The acquired water will also suffer transportation losses when being conveyed from its original point of diversion to Walker Lake. The Acquisition Statement acknowledges this fact by stating that the "difference of 32,000 ac/yr [82,000 minus 50,000] represents the combined effects of hydrologic losses (e.g., reduced contributions from groundwater, losses to riparian vegetation, and channel losses)." In other words, approximately 39% of the acquired water would be lost in transportation from its original point of diversion to the inlet at Walker Lake. DEIS at 3-12, 3-13, 3-40, 3-47. This rate is appropriate for water moving through the river and ditch network, but is an overestimate of the losses associated with the river alone. For the purposes of this analysis, the District recommends using a river loss value of approximately 16%, as set forth in the memorandum prepared by Sound Watershed Consulting. SWC Memorandum at pages 4,5. L04-24

Using a consumptive use factor of 2.77 acre feet per acre per year, an expected yield or water availability value of approximately 50% of the amount allowed for transfer, and a river transportation loss factor of 16%, a total of 41,524 irrigated acres of land with appurtenant water rights would be needed to increase average annual inflows to Walker Lake by 50,000 acre feet. SWC Memorandum at 4, 5. Assuming the values set forth in the DEIS, approximately 39,179 acres of irrigated land would be needed to deliver 50,000 acre feet of water to Walker Lake on average per year. *Id.*

Furthermore, using the numbers set forth in the SWC Memorandum, the 14,800 acres assumed to be needed by the DEIS to increase flows to Walker Lake by 50,000 acre feet per year would actually increase inflows to Walker Lake by only 17,821 acre feet. *Id.* L04-25

As demonstrated, it would take almost three times the number of irrigated acres stated in the DEIS to deliver, on average, 50,000 af/yr of additional inflow to Walker Lake. As a result of this error, the vast majority of the analysis contained within the DEIS is erroneous. A few examples of that flawed analysis are set forth below.

At page 2-7, the DEIS estimates that existing funding would secure approximately 11,900 af/yr for transfer to Walker Lake under the Full Transfer Scenario. This estimate assumes that the Nevada State Engineer "would allow the transfer of up to the average amount of water historically diverted." As explained above, the transferrable amount will be limited to the consumptive use amount and, as a result, the 11,900 af/yr amount is clearly erroneous. L04-25 con't

At page 2-8, the DEIS estimates that existing funding would secure approximately 11,500 af/yr for transfer to Walker Lake under the 33% Scenario. This estimate, however, is based upon the incorrect assumptions discussed above and is therefore erroneous.

At page 2-8, the DEIS estimates that approximately $385 million would be needed to increase Walker Lake inflow by an average of 50,000 af/yr. The DEIS refers to this estimate as "full funding." Once again, this estimate is based on the incorrect assumptions discussed above and is therefore erroneous.

Limit on Reduction in Irrigated Lands – (p. 2-8) The DEIS limits the reduction in irrigated acreage in Mason Valley, Smith Valley and the East Walker area to no more than 33% of the total irrigated acreage within each of these geographic areas. In table 2-1, the DEIS estimates the total acreage of irrigated land to be 56,439 acres. As discussed above, it would take approximately 41,524 acres of water righted land to maintain on average 50,000 af/yr of increased inflow to Walker Lake. As a result, the 33% limitation is completely infeasible. L04-26

Alternative 2 (Leasing Alternative) – (p.2-9) The District lease program contemplates establishment of a fund which is invested so as to fund the lease program in perpetuity. Fund principal would grow by allocating a portion of the income to the principal annually, and allowing the remainder of the income to fund year to year payments and other expenses associated with the program. Payments would be made only for water delivered. In response to this proposal, the DEIS states that lease program funding will "be driven by federal appropriations, which are only available for expenditure as authorized, so the use of financial arrangements to perpetuate funding into the future, as has been suggested, has not been analyzed in this DEIS." DEIS at p. 2-10. Acquisition funding will also be driven by authorized appropriations, nevertheless, "full funding" for acquisitions has been extensively analyzed. In addition, the full funding amount, $385 million, has been analyzed for purposes of estimating that the lease program could last for approximately 20 years. No reasonable explanation, however, is given as to why the analysis could not include the discussion of a fund established with the $385 million. L04-27

At page 2-9, water banking is summarily dismissed because of alleged uncertainties in how it could be implemented. Water banking may be extremely important in the delivery of water to Walker Lake. For instance, it could foster deliveries L04-28

Comment Letter L-04 Continued (Gordon H. DePaoli, Woodburn and Wedge, October 5, 2009)

outside of the irrigation season when losses are likely to be lower. A well-developed water banking program could also reduce ecological impacts associated with river functions, and could be used to promote channel maintenance flows. It should not be dismissed without any analysis whatsoever. L04-28 con't

Alternative 3 (Efficiency Alternative) – (p.2-12) The District agrees that this alternative should be included in the DEIS. However, the DEIS should recognize that implementation of this alternative, as contemplated, will require a change in Nevada law. Under Nevada law, water made available by efficiency improvements is water which accrues to the benefit of the system, not to individual water users. L04-29

Alternatives Proposed During Scoping – (p. 2-15) As stated above, the District does not believe that many of the alternatives stated here should have been eliminated from consideration in the DEIS merely because they do not involve an acquisition component. L04-30

Appendix 2B – Estimated Yield and Associated Funding

Using the right information is important for purposes of analyzing impacts required to be analyzed under the National Environmental Policy Act, and to understanding how much water could actually be changed to use at Walker Lake. It is also critical to make a fair comparison between alternatives, and for understanding the cost per acre foot of water to be delivered to Walker Lake. It is also critical to an understanding of what will be accomplished with current funding, and what is really required for full funding. The table and narrative which follow provide the latter information based upon the analysis discussed above and contained within the Sound Watershed Consulting Memorandum at pages 4 and 5. L04-31

Cost of Optioned Water Rights

Irrigated Acres to Which Optioned Water Rights Are Appurtenant	Cost	Net Average Water Delivery to Walker Lake	Cost Per Acre Foot of Net Average Water Delivery to Walker Lake
3,634[1]	$ 39,500,000	4,376 ac.ft.	$9,027

[1] As discussed above, the DEIS does not reveal how many water righted acres have been optioned pursuant to the option agreements. *See* DEIS at Appendix 2A. It does state that approximately 43.6 cfs have been optioned for 39.5 million dollars. DEIS at Table 2A-1. Typically, the Walker River Decree states the diversion rate at 1.2 cfs per 100 acres of water righted land. Therefore, the District has calculated the number of water righted acres as 3,634 as follows: (43.603 / 1.2) X 100.

Multiplying the cost per acre foot of Net Average Water Delivery to Walker Lake by 50,000 acre feet leads to the conclusion that $ 451,350,000 in 2008 dollars would be required to purchase enough water rights to result in an average increase in Walker Lake inflow of 50,000 acre feet per year. L04-31 con't

In contrast, in 2008 dollars, again using your estimate of $200.00 per acre foot, the District leasing program would deliver an average increase of inflow to Walker Lake of 50,000 acre feet per year for $11,735,100 per year. An investment of the full funding amount of $451,350,000 at 2.6% would provide sufficient income to deliver that amount of water. L04-32

Chapter 3 Water Resources

The District's comments are set forth in the SWC Memorandum and MBK MBK Memorandum attached hereto.

Chapter 4 Biological Resources – Vegetation and Wetlands

The District's comments are set forth in the SWC Memorandum attached hereto.

Chapter 5 Biological Resources - Fish

The District's comments are set forth in the SWC Memorandum attached hereto.

Chapter 10 – Socioeconomics

The District's comments are set forth in the SWC Memorandum attached hereto.

Chapter 11 – Recreation

Affected Environment

The DEIS states the following:

> California and Douglas County, Nevada, were not included in the study area. Although the Walker River watershed originates in Mono County, California, the Proposed Project would not change any operations of acquire[sic] land, water appurtenant to the land, and related interests in California or Douglas County. Operating criteria for upstream reservoirs would not be changed . . .
>
> Under all action alternatives, Topaz Lake Reservoir would continue to operate as required by existing water rights licenses, permits, and

Comment Letter L-04 Continued (Gordon H. DePaoli, Woodburn and Wedge, October 5, 2009)

agreements; therefore, this reservoir has been excluded from the study area.

DEIS at 11-1. These conclusions are clearly incorrect. Bridgeport and Topaz Reservoirs will not continue to operate as they currently do under existing water rights licenses if stored water is used at Walker Lake.[2] Water is currently stored in those Reservoirs for irrigation purposes and, as a result, any release of stored water is made as necessary to accommodate irrigation. Among other things, the timing and quantity of releases will change if the purpose of use for stored waters is changed from irrigation to wildlife use at Walker Lake. As a result of these changes, storage levels and operating criteria for Bridgeport and Topaz Reservoirs will also change. L04-33

The DEIS fails to address the impact that these changes will have on recreational opportunities at Bridgeport and Topaz Reservoirs. These Reservoirs are important recreational features of the Walker River Basin and any impacts to them resulting from the proposed Alternatives should be included in the analysis contained in this section of the DEIS. The DEIS is completely inadequate in this regard.

Chapter 14 – Cumulative Impacts

The District's comments are set forth in the SWC Memorandum attached hereto.

Chapter 15 – Climate and Climate Change

The District's comments are set forth in the SWC Memorandum attached hereto.

Conclusion

The process and analysis followed here by BOR has been fundamentally flawed from the very beginning. Not surprisingly, the result is a DEIS which is anything but the hard look at environmental consequences which the law requires for informed decision making and informed public participation. Now, BOR has concluded that it had no obligation to prepare an environmental impact statement and has no obligation to complete it in a manner in which it can be held accountable for its failure to comply with the applicable law.

Nevertheless, BOR proposes to give the DEIS the "Final Environmental Impact Statement" label because of the level of public interest and out of a commitment to disclose potential impacts. Under the circumstances present here, it is a disservice to the interested public and to any commitment to disclose potential impacts to do anything

[2] The University of Nevada has acquired options to purchase stored waters and the DEIS clearly anticipates the use of stored waters to increase flows to Walker Lake. *See* Appendix 2A.

with this DEIS except either to place it on the same shelf with the December 10, 2001, Administrative Draft of the Walker River Basin Environmental Impact Statement prepared by the Bureau of Land Management, or to begin the process anew and fully comply with the applicable law.

Sincerely,

Dale E. Ferguson

Gordon H. DePaoli
Dale E. Ferguson

DEF:clm
Enclosures

cc: Ken Spooner

Comment Letter L-04 Continued (Gordon H. DePaoli, Woodburn and Wedge, October 5, 2009)

Sound Watershed Consulting
Creating Functional Water Environments

MEMORANDUM

TO: KEN SPOONER, GORDON DEPAOLI, DALE FERGUSON

FROM: MIKE LIQUORI, JEFF PRANCEVIC (SWC)

SUBJECT: REVISED WALKER RIVER BASIN ACQUISITION PROGRAM DRAFT EIS COMMENTS

DATE: 10/01/09

CC: LEE BERGFELD (MBK ENGINEERS)

This memo summarizes our comments on the Walker River Basin Acquisition Program Draft Environmental Impact Statement (DEIS) dated July 2009. Our review focused on select items discussed during our August 13th and September 1st conference calls. We also have reviewed the Technical Memorandum provided by MBK Engineers, and we generally agree with those comments. We did not restate those comments here to avoid duplication.

Our comments are organized into 1) General Comments, and 2) specific comments organized by chapter in the DEIS document. In addition to our best professional judgment, we've also relied on existing data and previous analysis to support our comments.

GENERAL COMMENTS

The DEIS consistently mis-represents the Leasing Option by a) assuming that it will not run in perpetuity, and b) that it will otherwise operate in a manner similar to an acquisition program. Neither of these are valid assumptions based on our understanding of the proposed Leasing Program. L04-SWC-1

The DEIS does not appear to address the infrastructure impacts (e.g. maintenance of ditches, drains, diversion structures, monitoring equipment, etc.)

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associated with the different alternatives. Water delivery infrastructure costs are typically shared among all water users on a given ditch system. As the number of users decreases, the incremental costs for each remaining user will increase. Costs usually include the cost of ditch maintenance, gates, weirs, etc. Alternative 1 is likely to result in a gradual decay in the water delivery infrastructure in those systems with marginal economic returns that may result in additional losses over time. Alternative 1 will also result in an overall increase in unit costs to maintain infrastructure across all ditch systems in which lands are retired. By contrast, Alternative 2 (the Lease Option) maintains revenues to users that can be used to sustain water delivery infrastructure. These impacts to non-sellers should be more fully described by the DEIS. L04-SWC-2

The impacts associated with Alternative 3 ignore the effect of lowered groundwater levels (and associated increases in loss coefficients) due to reduced infiltration. The technical basis for how Alternative 3 (Conservation Option) would provide more water to the lake is not clear. Conservation practices in the Walker could benefit individual farmers by reducing farm conveyance losses. But most of those "losses" are actually gains to the system, as they result in increased groundwater supply. Thus increasing conservation practices by reducing losses to groundwater will lower the groundwater surface elevations, resulting in reduced return flows, increased infiltration losses from the river, overall increased irrigation demand, and thus a net reduction in water available to the lake. L04-SWC-3

The DEIS does not sufficiently identify differences in the benefits and impacts associated with the current funding level. All impacts stated throughout the document assume the project is fully funded. However, under the current funding level, the resultant benefits and impacts are substantially different between Alternative 1 and 2. For example, the Leasing Option (Alternative 2) would provide substantially more water to the lake under the existing funding level than could the acquisition option (Alternative 1). L04-SWC-4

The DEIS does not sufficiently describe the effects of natural variation in river flows that are likely to occur over time. Throughout the document, the statement is made that the acquisition alternative will result in 50,000 ac-ft PER YEAR of water delivered to lake. In reality, the delivery of water will AVERAGE 50,000 ac-ft/yr. Based on historic variation from 2001 through 2007, the actual increase in deliveries associated with a 50,000 ac-ft/yr average is likely to range from a low of 23,400 ± 2700 ac-ft to a high of 126,000 ± 14,100* ac-ft in any given year. This fluctuation is likely to have a substantial influence on the expected response of L04-SWC-5

** Based on loss rates derived from Boyle et al (2009) and a Monte Carlo simulation model of annual variation in actual diversions from 2001 thru 2007 developed by Sound Watershed.*

Comment Letter L-04 Continued (Gordon H. DePaoli, Woodburn and Wedge, October 5, 2009)

the lake and associated environmental conditions. The DEIS should describe the likely environmental and economic impacts on such fluctuations instead of assuming a static average. For example, such variations could affect conveyance losses, flood risks, infrastructure requirements, habitat conditions, and geomorphic channel conditions along the river. L04-SWC-5 con't

The DEIS should also describe in more detail the ability of each alternative to compensate for this likely range in additional flows. For example, we suspect that the leasing alternative will be better positioned to reduce such variations than will the acquisition or conservation options. L04-SWC-6

The impacts associated with Alternative 2 are inaccurate, as the assumptions underlying the Leasing Alternative are incorrect. The intent of the WRID leasing option is to operate in perpetuity by operating as a trust or endowment. Even if less than fully funded, the leasing option will generate a substantially larger volume of water for the same money as the acquisition option. Additionally, the leasing option allows for greater flexibility in the timing and nature of deliveries, potentially reducing conveyance losses, resulting in more efficient delivery to the lake and potentially more efficient water deliveries to other users. This issue requires a re-evaluation of impacts under ALL of the resource chapters in the DEIS. L04-SWC-7 L04-SWC-8

Its not clear why the DEIS doesn't consider acquisition (or lease) of groundwater rights. Reducing groundwater demand would reduce the losses from incidental groundwater recharge and return and could help to maintain surface flows and reduce conveyance losses. The water budget provided in the DEIS suggests that groundwater recharge and return accounts for 62% of the total volume lost from diversion throughout the system. L04-SWC-9

SPECIFIC COMMENTS

WATER RESOURCES (CHAPTER 3 & APPENDICES 2B & 3A)

We generally found the division of these sections into Chapter 3 and Appendix 3A to be confusing. There was often nearly identical language in both sections of the DEIS, and its not always clear where the discussion diverges. More clarity between these chapters would greatly benefit the reader. While we briefly reviewed Appendix 3A, we mostly focused on Chapter 3 in this review section. The following represent the core issues we identified: L04-SWC-10

There appear to be substantial errors in the calculations provided by the DEIS related to how much water right (and associated land) is required to deliver an average of 50,000 ac-ft/year to Walker Lake. These errors can be summarized as follows:

1. *The DEIS calculations do not account for the difference in the maximum face value and the available wet water from any given water right.* The DEIS states (p 2-7) that "Acquired surface water rights would yield, on average, approximately 50%[†] of their maximum face value across all types and priorities at existing points of diversion". Yet, this assumption appears to be absent from the calculations made in the DEIS. L04-SWC-10 con't

2. *The DEIS calculations appears to assume that 100% of the available water can be transferred.* In our opinion, it is likely that the State Engineers Office will only allow for the transfer of the consumptive use component. This will reduce the water available to Walker Lake to only 2.77 ac-ft/acre of land acquired (based on the DEIS), minus any associated transmission losses from the river below the point of diversion (e.g. riparian ET, net losses to groundwater, etc). L04-SWC-11

The DEIS should be made more clear that approximately 164,000 ac-ft of water rights will need to be acquired to result in an average of 82,000/year of wet water (at the point of diversion), which will thus produce the objective of an average of 50,000 ac-ft/year delivered to the lake (assuming the full water right is transferred and no consumptive use component is applied). L04-SWC-12

The following table represents a more accurate estimate of the water rights, associated lands, wet water, delivery to Wabuska, and net delivery to Walker Lake. It clearly demonstrates that the assumed acquisition of 14,800 acres within the DEIS will only deliver approximately 19,000 ac-ft of water to Walker Lake. By part of: L04-SWC-15

[†] *One of the glaring deficiencies of the DEIS is the assumption that all water acquired would be available for delivery to Walker Lake. This assumption ignores the fact that in most years, only a portion of available water right is available given the demands of the system.* L04-SWC-13

Sound Watershed compiled a spreadsheet model to evaluate the potential water delivery to Walker Lake based on actual diversions between 2001 and 2007. By empirically using actual diversion data, our approach appears to offer a method that is more consistent with legal and operational constraints on the actual delivery of water. In this model, we assumed a random selection of water users would have their rights acquired over this period. We used a Monte Carlo simulation to estimate the average potential water available for delivery over time, among other factors.

Our results suggest that only about 1/3 of water right holders consistently divert flows each year, and that 40% of water right holders divert water only about once every 3 years. On average, only 50.7% of the maximum water right is actually diverted over the period 2001-2007 (i.e. the actual water available is likely to be only 50.7% of the face-value of the water right). L04-SWC-14

Comment Letter L-04 Continued (Gordon H. DePaoli, Woodburn and Wedge, October 5, 2009)

PG 5 OF 9

our calculations, the actual land acquisition required to deliver an average of 50,000 ac-ft/year to Walker Lake is closer to 42,000 acres, an increase by a factor of over 2.8 as compared to the DEIS. This corrected value of land acreage should have a dramatic influence on the entire impact analysis, including the socio-economic and environmental impacts, among others. L04-SWC-15

Loss Factor	DEIS Values	SWC Values	Notes
Consumptive Use Component (ft)[1]	n/a	2.77	Average annual consumptive use per surface irrigated acre
Water Availability Factor[2]	50.0%	50.7%	Accounts for annual variability in average water user's right to wet water based on seniority of decree and/or storage rights
Loss rate from point of diversion to Wabuska[3]	29%	7.1%	Estimated river losses from the point of diversion
Loss rate from Wabuska to Lake[4]	10%	8.9%	ET and groundwater losses (includes losses from ditches, drains, weber evaporation, and river infiltration)

Water Righted Lands (acres)	Average Annual Area of Surface Irrigated Lands with Available Water Rights (acres)	Wet Water at Point of Diversion (ac-ft)	Water Delivered to Wabuska (ac-ft)	Net Average Water Delivery to Lake (ac-ft)
DEIS Method (*corrected*)				
14,800	7,400	29,600	20,986	18,888
18,600	9,300	37,200	26,375	23,737
39,179	19,590	78,358	55,556	50,000
SWC Method				
14,800	7,504	20,785	19,407	17,821
41,524	21,053	58,316	54,450	50,000

Notes:
1) Recognizes that only the Consumptive Use component is likely to be available for transfer. SWC uses the value provided in the DEIS. For the Estimate using the DEIS values, the transfer is not limited to consumptive use, in keeping with the method described in the DEIS.
2) SWC value derived from a Monte Carlo simulation of actual diversion records for the period 2000-2007. See footnote on page 4.
3) SWC value derived this loss adjustment from a weighted average of non-Ag ET using data from Boyle et al (2009). It assumes that the non-consumptive use component will be reserved for conveyance losses within the ditch network and other existing losses (e.g. Reservoir ET, etc).
4) SWC value is derived from the weighted average of observed water losses between Wabuska and Walker Lake from 1995-2004 (inclusive), using USGS gage data.

The water budget presented in the DEIS could be subject to debate. Several values in table 3-8 vary from observation drawn from USGS data, or reported in other studies (e.g. Boyle et al 2009). We recognize that these variations reflect differences in data sources and methodologies. However, some substantial trends are lost in the use of long-term averages that may affect the calculations within the DEIS used to estimate losses. These suggest the need for a more careful selection of key values. For example: L04-SWC-16 L04-SWC-17

> Sound Watershed's analysis of USGS gage records indicates that the Walker River through Mason Valley was clearly a gaining river prior to 1986, and has been a losing river in most years since 1986. The average annual loss since 1986 is 14,000 ac-ft, and has been as high as 39,000 ac-ft (in 1995). The DEIS suggests that losses from Mason Valley are slight (~3,000 ac-ft/yr). We suspect that the averaging effect of including data prior to 1986 may significantly underestimate the likely water losses from Mason Valley, and thus may affect the calculation of wet water needed to deliver 50,000 ac-ft. L04-SWC-18

5

PG 6 OF 9

> Also note the math error in Table 3A-7: Mason valley flow change within reach should be -2000 (not -3000). L04-SWC-18 con't

The comparison between Alternative 1 and 2 is inconsistent with regard to the level of current funding. The DEIS states that the current level of funding for Alternative 1 would only produce 11,900 ac-ft of acquired water (resulting in delivery of 7,300 ac-ft). If the leasing alternative (Alternative 2) were to deliver similar results, it could extend for at least 34.5 years with the currently available funding, not the 3 years suggested by the DEIS. It appears inappropriate to consider the impacts for the leasing program (at 50,000 ac-ft delivered) to the acquisition program (at 7,300 ac-ft delivered) to be similar. L04-SWC-19

The DEIS text incorrectly states that an efficiency acquisition (Alternative 3) of 102 ac-ft/yr would be required to deliver 32,300 ac-ft/yr to Walker Lake (p3-47). We assume this is an error, and the real value is 102,000 ac-ft/yr of efficiency improvement acquisitions. L04-SWC-20

The DEIS incorrectly suggests that losses below Wabuska are not a function of flow. Flow losses in Reservation Reach (p3A-12) are influenced by channel avulsion and flooding that occurs upstream of Weber, which increases ET losses. Transpiration losses may be constant, but increased overbank flooding can increase transmission losses from evaporation and infiltration, especially during late fall and winter periods (when flows will most likely be delivered?). Also, flows following wet years experience substantially lower losses than flows following dry years. So, while there may not be a direct correlation (due to the threshold required for flooding and the dependence on the previous years flow), there is a relationship between losses below Wabuska and flow. L04-SWC-21

The extrapolation of TDS to year 2200 is un-necessarily speculative, given uncertainties in climate signals over the next 200 years. Using historical climate patterns as a guide (and the associated variation in actual water deliveries year to year), an average input of 50,000 ac-ft/yr will reach an approximate steady state of 10,000 – 12,000 TDS in Walker Lake within approximately 40-60 years. L04-SWC-22 L04-SWC-23

6

Comment Letter L-04 Continued (Gordon H. DePaoli, Woodburn and Wedge, October 5, 2009)

PG 7 OF 9

VEGETATION & WETLANDS (CHAPTER 4 & APPENDIX 4A)

There is no technical basis provided for the assumption that tamarisk is likely to expand under the no action alternative. Tamarisk colonization and expansion are not related to deliveries of water, but to other factors. L04-SWC-24

BIOLOGICAL RESOURCES – FISH (CHAPTER 5)

There is no technical support provided for the statement that "*Regulated flow in the Walker River Basin has disrupted the natural channel forming processes that create and maintain river and stream habitats*" (p5-2). While there is some evidence of localized channel impacts associated with land-use practices within the basin, many of these impacts are associated with a wide range of cumulative activities and structures, and are not solely associated with regulated river flow. In fact, the regulated flows in the Walker River, while somewhat diminished relative to natural flows, generally follow many of the important ecological characteristics of a natural hydrograph as described by Poff et al (1997).

Its not clear that water temperatures will decrease in response to increased flows (Impact FISH-3). Water temperatures are controlled by the laws of thermodynamics. Typically, fluvial water bodies achieve a temperature equilibrium in response to the balance between many factors, among them are incoming solar radiation (regulated by canopy cover over the stream), and water depth (Adams and Sullivan 1990). While deeper water is less likely to heat over the course of a day, it is more likely to retain cumulative heat over time. Other factors, like the dynamics in hyporheic exchange also have substantial influence on water temperatures (e.g. Hancock 2002). In short, any temperature response is somewhat speculative, and should be justified by a sound technical basis. L04-SWC-25

SOCIO-ECONOMICS (CHAPTER 10)

The DEIS uses a dry water year as the basis for economic impacts. We note that many of the economic statistics used in this section report values for 2007, which was a very dry water year, and therefore likely produced low economic returns for agriculture. As a result the data appears to underestimate the overall economic impact. The use of wet years (e.g. 2005 or 2006) and/or longer-term trends would seem to be warranted to fully and fairly evaluate the economic impacts. L04-SWC-26

7

PG 8 OF 9

The DEIS does not correctly compare the cost/benefits between Alternatives 1 and 2. Based on information provided in Section 2, the estimated average purchase value of wet water is $4,700/ac-ft (Alternative 1) and $200/ac-ft (Alternative 2). The economic cost-benefit associated with these two options is not fairly represented. At the current funding level, Alternative 2 can perpetually deliver approximately 11,600 ac-ft of water delivery (assuming a 5% bond rate and 31% losses) whereas Alternative 1 can only provide 7,300 ac-ft, or about 63% of the volume delivered under Alternative 2. Also, given the error in the calculations described above, the fully funded cost/benefit should also be reconsidered. L04-SWC-27

The DEIS is not sufficiently explicit about the difference between acquired water (wet water) and acquired water RIGHT. Throughout the document, there is reference to the need to acquire 82,000 ac-ft of water to deliver 50,000 ac-ft to the lake. However, such acquisitions actually require nearly 164,000 ac-ft of water **right**, or approximately **42,000 acres of land**. This distinction is buried in the technical detail of Appendix 2B. As presented in the DEIS, it is somewhat misleading. L04-SWC-28 L04-SWC-29

The DEIS overstates the offset associated with reinvested monies. We find the following statement from the Impact Sections of this chapter a bit unsubstantiated: "*The loss in employment could be offset if landowners receiving payments choose to invest all or a part of those payments locally. This could include raising and/or processing alternative crops, dry farming, or other enterprises*" This statement shows up in response to most of the impacts identified in the Socioeconomics chapter. It conflicts with a statement made on page 10-10 "*However, these expenditures are not typically large enough to offset the adverse socioeconomic impacts of lands withdrawn from agricultural production.*" L04-SWC-30

CUMULATIVE IMPACTS (CHAPTER 14)

The DEIS suggests that projects funded under PL 109-103 Section 208(c) would benefit water supply and water quality. The document claims that the $10 million earmarked for restoration activities in the Walker River Basin would "likely result in beneficial impacts on wildlife habitat, water quality, and water supply" (p14-7 Paragraph 1). This statement seems overstated. Most projects done to date with this funding have been directed toward ecological restoration of dubious value to water quality or water supply to the lake. L04-SWC-31

It is debatable that water efficiency measures would increase water availability for the benefit of Walker Lake (p14-13 Paragraph 2). While efficiencies may L04-SWC-32

8

Comment Letter L-04 Continued (Gordon H. DePaoli, Woodburn and Wedge, October 5, 2009)

benefit individual water-right holders by reducing conveyance and ditch losses, such "losses" would actually reduce recharge to groundwater, thus reducing water available to the entire system. The DEIS should clearly demonstrate how conservation measures would affect the entire water budget, and how such changes would directly benefit the lake. In our opinion, promoting conservation measures increases the risk of *reducing* water availability for Walker Lake. L04-SWC-32 con't

The hydrologic benefit attributed to Tamarisk removal is drastically overstated. According to our calculations (based on USGS data), the removal of 2,000 acres of fully-stocked tamarisk would have a net benefit of approximately 300 ac-ft/year of water, the equivalent of which is evaporated from the lake in about 1/2 day. L04-SWC-33

CLIMATE (CHAPTER 15 & APPENDIX 15A)

Much of the discussion in this section is speculative and not very relevant to any of the alternatives. The purported impacts described in this section are likely to be trivial to non-existent. L04-SWC-34

REFERENCES

Adams, T.N. and Sullivan, K., 1990. The physics of stream heating: Part I - A simple model. TFW-WQ3-90-007, Washington Department of Natural Resources, Olympia, WA.

Boyle, D., G. Pohll, S. Bassett, T. Minor, C. Garner, R. Carroll, D. McGraw, A. Knust, and C. Barth. 2009. Project F: Development of a Decision Support Tool in Support of Water Right Acquisitions in the Walker River Basin in Restoration of a Desert Lake in an Agriculturally Dominated Watershed: The Walker Lake Basin. Michael W. Collopy and James M. Thomas Project Directors. Final. Reno, NV. Prepared by the Nevada System of Higher Learning and the Desert Research Institute.

Hancock, P.J. 2002. Human Impacts on the Stream-Groundwater Exchange Zone. Environmental Management Vol.29 No. 6 pp763-781.

Myers, T. 2001a. Hydrogeology and Water Balance, Smith Valley, Nevada – Impacts of Water Rights Transfers. Prepared for the U.S. Bureau of Land Management and Public Resource Associates, July 2001.

Myers, T. 2001b. An Assessment of Diversions and Water Rights Smith and Mason Valleys, NV. Prepared for the U.S. Bureau of Land Management and Public Resource Associates, July 2001.

Poff, N. L. Poff; J. David Allan; Mark B. Bain; James R. Karr; Karen L. Prestegaard; Brian D. Richter; Richard E. Sparks; Julie C. Stromberg. 1997. The Natural Flow Regime. BioScience, Vol. 47, No. 11., pp. 769-784.

Yardas, D. 2007. Great Basin Land & Water Study: Issues and Opportunities for Acquiring Water from Willing Sellers to Increase Walker Lake Inflows. April. Great Basin Land & Water, Truckee, CA. Submitted to the Natural Resource Conservation Service, U.S. Department of Agriculture, Reno, Nevada, Grant Agreement No. 68-9327-5-08.

Mike Liquori
Principal

OBJECTIVE

To help lead innovative natural resource policies that enhance and restore the environment in ways that are economically and socially constructive

SUMMARY OF QUALIFICATIONS

- Sustainable Natural Resource Management & Policy Expert
- Robust Interdisciplinary Scientific Expertise
- Proven Skills in Project Management, Facilitation & Strategic Planning
- Extensive Leadership, Management & Entrepreneurial Experience
- Communicates Clearly Across Disciplines and Backgrounds

RELEVANT CONSULTING & MANAGEMENT EXPERIENCE

Natural Resource Policy & Management

I provide objective technical expertise to develop strategic approaches to natural resource management and policy issues. This typically involves collaborative work with various local, state and federal agencies, corporations, and advisory bodies to develop comprehensive, science-based management systems. Established industry-wide standards for over a dozen management protocols, and have developed several comprehensive framework approaches for integrating adaptive management principles into management and regulatory systems. Example projects include:

- ✓ California Board of Forestry Riparian Literature Review (see www.soundwatershed.com/BOF.htm)
- ✓ Washington State Forests & Fish Plan
- ✓ Walker River Federal Mediation Process
- ✓ Watershed-Wide Wastewater Discharge Requirements
- ✓ Kapowsin Tree Farm Riparian Management Policy
- ✓ Washington State Water Typing Program

Integrated Environmental Management Planning

I lead and/or facilitate collaborative, stakeholder-driven integrated management planning projects, often including ecological, economic and social objectives. Successfully negotiated 13+ significant environmental conservation and management plans with landowners, regulatory agencies, tribal governments and environmental groups. Plans are typically developed at large-scales (usually from 30,000 to several millions acres). My experience working with operational and planning elements in managed landscapes supports my ability to develop widely supported management prescriptions. Example projects include:

- ✓ Pilarcitos Integrated Watershed Management Plan
- ✓ Supplemental Carmel River Watershed Action Plan
- ✓ Santa Clara Valley Water District Watershed Asset Management Plan
- ✓ Mattole Watershed Analysis Review
- ✓ Champion Watershed Asset Data Inventory System

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Comment Letter L-04 Continued (Gordon H. DePaoli, Woodburn and Wedge, October 5, 2009)

- ✓ Klickitat Habitat Conservation Plan
- ✓ Champion Pacific Timberland Long-term Forest Management Plan
- ✓ Road Maintenance & Abandonment Programs
- ✓ Eight (8) Watershed Analysis Prescription Teams

Creek and Watershed Restoration

I enjoy developing and managing technical analysis and design projects in support of creek and watershed restoration. Projects typically include detailed site assessment, data collection, diagnosis and design. These activities provide the technical basis for restoration strategies after coordinating with other scientists and engineers to identify technical project opportunities and constraints. Projects often require facilitating resolution of complex issues with key stakeholders and regulators as projects unfold. Projects range from small local projects to major, multi-million dollar projects. Example projects include:

- ✓ Lower Squaw Creek Concept Design (see www.soundwatershed.com/Squaw.htm)
- ✓ Napa River Yountville Concept Design
- ✓ Bear Creek Concept Design
- ✓ Yosemite Marsh
- ✓ Upper Truckee River Restoration – Golf Course Reach
- ✓ Northstar Highlands Mitigation Design
- ✓ Oak Knoll Redevelopment Channel Design
- ✓ Upper Truckee River Middle Reach Restoration
- ✓ Puyallup Confluence Stabilization Project
- ✓ Christmas Valley Erosion Control Project
- ✓ Dry Creek Dam Removal & Channel Restoration Design
- ✓ Mill Creek Fish Passage Design
- ✓ Fox Creek Canyon Wetland Design
- ✓ San Lorenzo River Fish Passage Assessment
- ✓ Oak Knoll Site Development Plan

Environmental Analysis

I've led numerous scientific analysis and synthesis projects describing existing environmental conditions to identify opportunities and constraints for improvement projects and strategies. I've led over 28 scientific research studies, several of which resulted in significant regulatory improvements. Analyzed and evaluated cumulative watershed management activities on 13 projects to identify existing and legacy impacts on fish and water quality. Conducted detailed analysis of stream channels, aquatic habitat, landslide risks, riparian conditions, hydrology, and road erosion issues, among others. I'm particularly strong at synthesizing information from various assessments into a coherent management framework. Example projects include:

- ✓ Over 15 watershed analysis projects
- ✓ Weyerhaeuser Regional Landslide Inventory
- ✓ Hancock Timber Management Channel Migration Zone Delineation
- ✓ Milwaukee Tree Farm (Hoh River) Channel Migration Assessment
- ✓ Kapowsin Riparian Zone Effectiveness Study
- ✓ Big Creek Road Sediment Erosion Assessment Project
- ✓ Hillslope Hydrology Studies
- ✓ Perennial Stream Initiation Mapping Project
- ✓ Stream Gage Monitoring Projects (many)

APPOINTMENTS & PUBLIC POLICY EXPERIENCE

I've been appointed or selected to participate on 12 committees, boards, and advisory groups addressing public natural resource management issues, often associated with streams, watersheds and forests. These groups represent a wide array of local, state-wide, regional and national issues of significance. Projects include:

- ✓ Jackson Demonstration State Forest Advisory Group
- ✓ Jackson DSF Research Committee CHAIR
- ✓ Walker River Advisory Group (*formerly Steering Committee*)

Mike Liquori **Principal**

- ✓ Quincy Library Group Expert Peer Review Panel
- ✓ CA Board of Forestry Technical Expert Forum – Riparian Management
- ✓ Cooperative Monitoring Evaluation & Research Committee
- ✓ Forests & Fish Adaptive Management Program
- ✓ Forest Watershed Task Group
- ✓ Upland Process Science Advisory Committee CHAIR
- ✓ Stream Temperature Workshop FACILITATOR
- ✓ Washington State Forests & Fish Plan Development Team
- ✓ Watershed Analysis Design Team

EDUCATION & CERTIFICATIONS

Academic Training

- ❖ Ph.D. Program (1999-2005) Forest Engineering and Hydrology, University of Washington, Center for Water & Watershed Studies, College of Forest Resources, Seattle, Washington.
- ❖ MS Geology (1995) Colorado State University, Department of Earth Resources, Fort Collins, Colorado
- ❖ BS Geology (1993) University of California, Department of Earth Sciences, Santa Cruz, California

Formal Professional Development Training

- ❖ Participated in over 50 professional and leadership development programs
- ❖ Worked as event staff for 6 national seminar training companies

Certifications & Licenses

- Licensed Engineering Geologist – Washington State
- Certified Trainer (Level 2)
- Qualified Facilitator
- Certified Advanced Negotiator

TESTIMONIALS

"My work with Mike on the Scientific Literature Review Project was the highlight of my year. His professionalism and positive attitude, along with the intellect brought by him and the TAC, really made for a satisfying work experience that I will value for a long time. Thank you again for the hard work and perseverance on this project; it was a great contribution to public service."

Chris Zimny
Regulations Coordinator
California Board of Forestry & Fire Protection

"In addition to being a strong scientist (both in the field and lab), Mike is a very capable public spokesperson. I have watched him describe very complex (physically, biologically, and politically) data to fellow scientists, attorneys and policy makers, state and federal regulators, and the public alike and have them understand and accept what he was presenting."

Dr. James Sweeney
Associate Dean
University of Georgia, Warnell School of Forestry

Comment Letter L-04 Continued (Gordon H. DePaoli, Woodburn and Wedge, October 5, 2009)

Mike Liquori **Principal**

PAST CLIENTS

- ✓ CALFIRE
- ✓ Mattole Salmonid Group
- ✓ San Mateo Resource Conservation District
- ✓ City of San Francisco Recreation & Parks Department
- ✓ Friends of Squaw Creek
- ✓ Placer County
- ✓ Mattole Restoration Council
- ✓ US Forest Service
- ✓ Pinchot Institute
- ✓ California State Parks
- ✓ San Francisco Public Utilities Commission
- ✓ California Stewardship Institute
- ✓ Rogal, Walsh & Mol
- ✓ City of Santa Cruz
- ✓ Napa Resource Conservation District
- ✓ East-West Partners
- ✓ Environmental Protection Information Center
- ✓ Walker River Irrigation District
- ✓ Champion Pacific Timberlands
- ✓ Truckee River Watershed Council
- ✓ California Board of Forestry & Fire Protection
- ✓ International Paper
- ✓ Weyerhaeuser
- ✓ Timber, Fish & Wildlife Cooperative
- ✓ Mattole Restoration Council
- ✓ Hancock Forest Management
- ✓ Campbell Timberland Management
- ✓ Washington Forest Protection Association
- ✓ Boise Cascade
- ✓ Price Waterhouse Coopers
- ✓ Plum Creek
- ✓ Merrill & Ring
- ✓ Gleason Skok
- ✓ Washington State Rural Technology Initiative
- ✓ University of Washington
- ✓ Washington State Department of Natural Resources
- ✓ Washington State Forest Practices Board
- ✓ Cooperative Monitoring, Evaluation & Research
- ✓ American Forest & Paper Association
- ✓ National Council for Air & Stream Improvement
- ✓ SunCal

PROFESSIONAL AFFILIATIONS

- American Water Resources Association
- Society of American Foresters
- Society for Ecological Restoration
- American Geophysical Union
- Geological Society of America

EMPLOYMENT HISTORY

Sound Watershed Consulting - Oakland, California — 2007-Present
Principal – www.soundwatershed.com

Philip Williams & Associates - San Francisco, California — 2005-2007
Senior Associate

Entrix Environmental Consultants - Walnut Creek, California — 2003-2005
Senior Associate

Sound Watershed Sciences - Seattle, Washington — 2001-2003
President

University of Washington - Seattle, Washington — 2000-2003
Lecturer (part-time) – see Curriculum Vitae

The Campbell Group - Portland, Oregon — 2001-2002
Watershed Scientist/Manager

Champion/IP Pacific Timberlands - Puyallup, Washington — 1995-2002
Watershed Scientist/Manager

Others Available Upon Request

Mike Liquori
Principal

Curriculum Vitae

COURSES TAUGHT

University of Washington
- ❑ Forests & Fisheries Interactions – 300 Level
- ❑ Wildland Hydrology – 400 Level
- ❑ River Ecology – 500 Level

Colorado State University
- ❑ Geomorphology Lab – 500 Level
- ❑ Field Geology – 500 Level
- ❑ Introduction to Geology – 100/200 Levels
- ❑ Geology for Scientists & Engineers – 300 Level

University of California Santa Cruz
- ❑ Introduction to Geology – 100/200 Level

PUBLISHED PAPERS AND SCIENTIFIC CONFERENCE PROCEEDINGS

Liquori, M.K. A Channel Expansion Model for Sub-Alpine Meadows (2008). 4th Biennial Tahoe Basin Science Conference, "Science as a Tool in Lake Tahoe Basin Management: Making Sense of Complexity", March 17-19, 2008, Incline Village, Nevada

Liquori, M.K. and Parris, A.P. (2007) Climate Influences on the Geomorphic Evolution of Sub-Alpine Channels and Floodplains: The Shifting Role of Snowmelt. Floodplain Managers Association 2007 Annual Conference. Collaborative Approaches to Integrated Floodplain Management., South Lake Tahoe, CA

Liquori, M.K., Bowles, C, Parris, A, Heins, A, Stofleth, J, Wickland, M (2006) Sub-Alpine Channel and Floodplain Dynamics in the Lake Tahoe Region, California. American Geophysical Union Annual Meeting, San Francisco, CA

Liquori, M.K. (in prep) Patterns in the Distribution of Perennial and Intermittent Stream Initiation Points in Forested Headwater Streams. Journal of Hydrology

Liquori, M.K. (2006) Post-Harvest Riparian Buffer Response: Implications for Wood Recruitment Modeling And Buffer Design. Journal of American Water Resources Association, vol 42

J Blomberg, A Borgonovo, C. Bowles, A. Collison, M. Liquori (2006) Sustainable Creek and River Restoration using Biotechnical Methods: Engineered Log Structures. Ecosis, Summer 2006, Volume 16 Issue 2

Liquori, M.K. (2004) Wind-Driven Treefall from Post-Harvest Riparian Buffers in Managed Pacific Northwest Forests: Implications for Large Woody Debris Recruitment Modeling and Buffer Design. American Water Resources Association Summer Specialty Conference, Riparian Ecosystems and Buffers: Multi-Scale Structure, Function, and Management. June 28-30, 2004

Liquori, M.K. (2003) Expressions of variability in perennial flow initiation. University of Washington Center for Water and Watershed Studies Annual Review, Seattle, WA, February 6, 2003.

2201 Melvin Road, Oakland, CA 94602
(510) 927-2099
www.soundwatershed.com

Hydrology
Geomorphology
River Ecology
Restoration Design
Sustainable Forestry
Integrated Watershed Management

Comment Letter L-04 Continued (Gordon H. DePaoli, Woodburn and Wedge, October 5, 2009)

Liquori, M.K. (2003) Riparian buffer response to timber harvest and applications to functional modeling. Rural Technology Initiative Annual Meeting, Seattle, Washington. January 30-31, 2003

Liquori, M.K. and C.R. Jackson (2003) Exploring wood functions in headwater streams. Headwater Stream Ecology Research Forum, Oregon Headwaters Research Cooperative, Corvallis, Oregon. January 16, 2003

Liquori, M.K. (2003) Wetland Identification Handbook – A Guide for Pacific Northwest Forestlands. Sound Watershed Sciences, Seattle, WA. 92 pages.

Liquori, M.K. (2002) Observations on the morphology of headwater channels. Proceedings of the Symposium on Small Stream Channels and their Riparian Zones: Their Form, Function and Ecological Importance in a Watershed Context. University of British Columbia, Vancouver, BC Canada, February 18-20, 2002.

Liquori, MK and Jackson, CR (2001) Channel Response from Shrub Dominated Riparian Communities Associated Effects on Salmonid Habitat. Journal of American Water Resources Association v.37, no. 6 pp 1639-1651

Liquori, M.K. (2001) Riparian processes associated with buffer edges and longitudinal channel variation: Implications for predicting functional response. American Geophysical Union Annual Meeting, San Francisco, CA

Liquori, M.K., Jackson, C.R. (2001) Channel morphology in Eastside Shrub-dominated Headwater Channels. Proceedings of the Society for Ecological Restoration Conference Restoration and Recovery: Beyond Good Intentions, April 2-6, 2001

Liquori, M.K., Sullivan, K (2000) Constraints and Opportunities for Modeling Future Large Woody Debris Recruitment from Forested Riparian Communities. First International Conference on Wood In World Rivers, Corvallis OR, October 2000.

Liquori, M. K. (2000) Riparian Buffer Structure and Functional Dynamics: Considerations for Riparian Design. Proceedings of the International Conference on Riparian Ecology and Management in Multi-Land Use Watersheds, American Water Resources Specialty Conference, August 2000. pp 411-416

Liquori, M. K., Fridley, J., Damian, F. (2000) Consideration of Forests & Fish Rules in a Design Context. Third Annual Hydrogeology Symposium of Washington State. Tacoma, Washington.

Liquori, M. (1999). Applying disturbance pattern logic to riparian management. Watershed Management to Protect Declining Species, Seattle, WA, American Water Resources Association.

Liquori, M. K. (1998). The influence of riparian condition on geomorphic and habitat features within headwater channels. American Geophysical Union Annual Meeting, San Francisco.

Liquori, M. K. (1998). A Geomorphic Approach to Riparian Management - Linking Riparian Stands, Channel Dynamics and Aquatic Communities. Ecosystem Considerations in Fisheries Management, Western Division American Fisheries Society, Anchorage AK,

Liquori, M. and S. Barry (1997). Life at the edge; discovering how and where geomorphology drives fish-use in headwater streams. Geological Society of America Annual Meeting, Salt Lake City, Geological Society of America

Liquori, M. K. (1995) Coarse Clast Delivery and Transport Processes in the Black Canyon of the Gunnison River, Colorado. Master's Thesis, Department of Earth Resources, Colorado State University, Fort Collins, CO

SCIENTIFIC POSTERS PRESENTED AT PROFESSIONAL MEETINGS

Liquori, M.K., D. Martin, R. Coats, L. Benda, D. Ganz (2008) Scientific Literature Review of Forest Management Effects on Riparian Functions for Anadromous Salmonids. For the California State Board of Forestry and Fire Protection. Society of American Foresters Annual Meeting. Available at www.soundwatershed.com/BOF.htm

Liquori, M.K. (2002) Characteristics of headwater channels in Pacific Northwest Forests. American Geophysical Union Annual Meeting, San Francisco. December 2002

Liquori, M.K. (2002) Post-harvest tree fall patterns from riparian buffers. University of Washington Center for Streamside Studies Annual Review, Seattle, WA, February 6, 2002.

Liquori, M.K., Jackson, C. R., Montgomery, D.R., Bolton, S. (2000) An Examination of Montgomery & Buffington Channel Classes as Applied to Headwater Streams. American Geophysical Union Annual Meeting, San Francisco.

Appointments & Public Policy Project Summary for Mike Liquori

Liquori, M. K. (2000) A Preliminary Examination of the Controls on Small Headwater Channel Morphology and Habitat Influence in Managed Forests, University of Washington Center for Streamside Studies Annual Review, Seattle WA

Liquori, M. K. (1994) Coarse sediment delivery onto fluvially accreted fan deposits in the Black Canyon of the Gunnison River, Colorado. Geological Society of America Annual Meeting, Seattle, WA.

UNPUBLISHED REPORTS

(A sample of lead author papers…)

Liquori, M.K., D. Martin, R. Coats, L. Benda, D. Ganz (2008) Scientific Literature Review of Forest Management Effects on Riparian Functions for Anadromous Salmonids. For the California State Board of Forestry and Fire Protection. 325pp. Available at www.soundwatershed.com/BOF.htm

PWA (2008) Pilarcitos Integrated Watershed Management Plan. For the San Mateo County Resource Conservation District and San Francisco Public Utility Commission. 256pp. Available at

PWA (2006) Preliminary Report on Fish Barrier Removal Alternatives for a Sill Structure on Dry Creek, Napa County, California. Prepared for the Napa County Resources Conservation District. December 2006. 51pp

PWA (2006) Lower Squaw Creek Conceptual Restoration Plan. Prepared for Placer County Planning Department, January 2007.

PWA (2006) Supplemental Carmel River Watershed Action Plan. Revised Draft submitted to Planning & Conservation League Foundation. December 2006. 57pp

Bredehoeft, J., A. Kersich, and M. Liquori (2005) Water Availability to Walker Lake, and Lake Salinity Scenarios. Report to the Walker River Mediation Group. Feb 9, 2005. 15pp

Liquori, M.K. (2004) Channel Migration Zone Delineation For The Tolt and Snoqualmie Rivers, Snoqualmie Tree Farm, King County, Washington. Report to Hancock Forest Management, Enumclaw, Washington. 37 pages

Liquori, M.K. and Toth, E.S. (2003) An Evaluation of Channel Migration Potential on the Splitshot Harvest Unit, Pierce County, Washington. Report to Rainier Timber Company, Orting, Washington. 14pp

Lamanna, J and M. Liquori (2002) Geotechnical Report, Proposed Wide Reach Harvest Unit, Pierce County, Washington. June 26, 2002

Liquori, M. (2001) Observations on the location of perennial and intermittent stream initiation points in forested headwater streams. Report to the Cooperative Monitoring, Evaluation & Research committee Np Working Group, October 22, 2001. 27 pp

Champion Pacific Timberlands (2000). Habitat Conservation Plan and Environmental Assessment for Klickitat East Block Lands within the Yakama Indian Reservation, Yakima and Klickitat Counties, Washington, Glenwood, WA

Liquori, M. (1999). Estimating large woody debris recruitment from riparian management zones - a process-based budgeting approach. Geotechnical Report Series, Champion Pacific Timberlands, Inc, Puyallup, WA

Liquori, M. and J. Bower (1999). Report on the Geomorphic Risks Associated With Proposed Harvest Near Typed Waters at Rolling Ground 99 Unit, Geotechnical Report Series, Champion Pacific Timberlands, Inc, Puyallup, WA

Liquori, M. (1999). Report on Aquatic Resource Impacts Associated with Thinning Harvest of the Deer Creek Thinning Unit, Geotechnical Report Series, Champion Pacific Timberlands, Inc, Puyallup, WA

Liquori, M. (1999). Report on Impacts Associated with Riparian Management Utilizing Champion Pacific Timberlands Rainier District Riparian Policy, Geotechnical Report Series, Champion Pacific Timberlands, Inc., Puyallup, WA

Liquori, M. (1999). Sulfur Creek North Harvest Unit Geotechnical Report, Geotechnical Report Series, Champion Pacific Timberlands, Inc, Puyallup, WA

Liquori, M. (1999). Lander's Creek Road Abandonment and Wetland Restoration Geomorphic Review Report, Geotechnical Report Series, Champion Pacific Timberlands, Inc, Puyallup, WA

Liquori, M. and J. Bower (1999). Report on the Potential for Fish Habitat Condition Improvement Along A Fish-Bearing Road Ditch Draining to a Tributary to Woods Creek, Lewis County, Washington, Geotechnical Report Series, Champion Pacific Timberlands, Inc, Puyallup, WA

Comment Letter L-04 Continued (Gordon H. DePaoli, Woodburn and Wedge, October 5, 2009)

Liquori, M. and J. Kirtland (1997). Sulfur Creek Harvest Unit Geotechnical Review, Geotechnical Report Series, Champion Pacific Timberlands, Puyallup, WA

Campbell, R., J. Dieu, D. Glass, B. Gustavson, J. Thompson, J. Light, M. Liquori, K. Sullivan and B. Rowe (1997). Habitat Status of Streams on State and Private Lands in the State of Washington, Washington Forest Protection Association, Olympia

Sullivan, K., M. Liquori, P. Russell, D. Glass and J. Liqht (1997). Protocol for Surveying the Physical Characteristics of Small Streams, Washington Forest Protection Association, Olympia, WA

Appointments & Public Policy Project Summary for Mike Liquori

Liquori, M. and J. Kirtland (1997). Sulfur Creek Harvest Unit Geotechnical Review, Geotechnical Report Series, Champion Pacific Timberlands, Puyallup, WA

Campbell, R., J. Dieu, D. Glass, B. Gustavson, J. Thompson, J. Light, M. Liquori, K. Sullivan and B. Rowe (1997). Habitat Status of Streams on State and Private Lands in the State of Washington, Washington Forest Protection Association, Olympia

Sullivan, K., M. Liquori, P. Russell, D. Glass and J. Liqht (1997). Protocol for Surveying the Physical Characteristics of Small Streams, Washington Forest Protection Association, Olympia, WA

pg. 8

Comment Letter L-04 Continued (Gordon H. DePaoli, Woodburn and Wedge, October 5, 2009)

acknowledges that the lack of defined agreements limits the ability to conduct impact analysis on page 3A-58, when discussing potential changes in river flows that may result from changes in groundwater levels.

"The exact reduction in river flows cannot be predetermined, especially because the location of all the farmland to be affected is currently unknown."

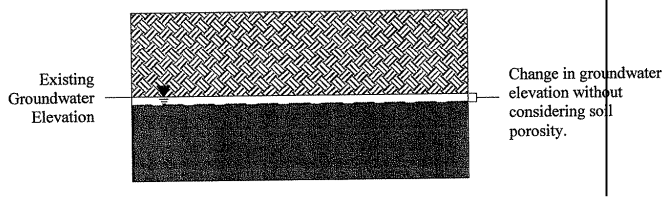
This is one instance, of many throughout the DEIS, where impacts cannot be quantified because specific agreements that define the project are unknown. L04-MBK-1 con't

A second example of the general lack of detail is the description and analysis of potential water savings from increased efficiency under Alternative 3. An estimate of the water developed from improvements in conveyance and on-farm irrigation efficiency is made based on estimated gross water budgets for the East Walker, Smith, and Mason Valleys. It is stated that this water may be conserved from improvements in conveyance infrastructure and on-farm irrigation techniques. The DEIS offers no details such as how many miles of canals currently exist, estimates of current canal losses, or how those losses may be reduced through lining or piping projects. Similarly, the DEIS does not explain current irrigation practices or what types of technology may be economically implemented to improve irrigation efficiency. Application efficiency rates used in the DEIS of 80 to 85% are questionable for alfalfa. L04-MBK-2 L04-MBK-3

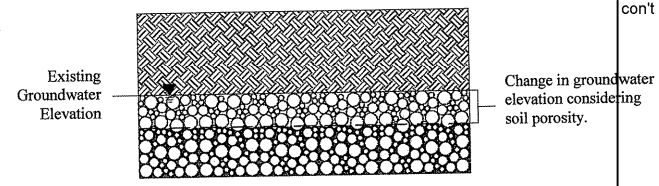
SPECIFIC COMMENTS

Groundwater Level Decline

Estimated average rates of groundwater level decline associated with the project, as described on page 3A-71, are calculated incorrectly. Long-term average annual reduction in net groundwater recharge for each valley was divided by the total land surface of the valley to calculate groundwater level decline. The DEIS method, illustrated in the following figure, assumes the aquifer is similar to an underground lake, i.e. the entire aquifer volume is filled with only water. L04-MBK-4



In reality, aquifers are not underground lakes and the majority of the aquifer volume is filled with soil, not water. Water in aquifers is stored in soil pore spaces, as illustrated in the following figure. Soil porosity must be considered to estimate groundwater level decline. L04-MBK-4 con't



Applying a typical effective soil porosity of 0.25 would tend to increase groundwater level declines by four times those estimated in the DEIS.

Additionally, estimates of reduced groundwater recharge under various project alternatives assume the Walker River will compensate for a majority of the reductions through increased infiltration to the aquifer. This may or may not be true and ignores many of the physical processes that govern groundwater flow and stream-groundwater interaction. L04-MBK-5

Percent of Diversion and Pumping Used Consumptively in the East Walker Subarea

The percent of diversions and groundwater pumping used consumptively in the East Walker Subarea presented in Table 3-8 and other locations in the DEIS appears to be incorrect, based on the method to calculate this value and the values reported for the other two subareas. Using diversion, groundwater pumping, and consumptive use data reported in Table 3-8; the value should be 55% not 53%. L04-MBK-6

Purchase of Geothermal Water

One option currently under evaluation is the purchase of geothermal groundwater effluent from the Homestretch Geothermal energy generating facility. The DEIS addresses potential water quality impacts to the Walker River of introducing this water, but it does not address the fact that this water would not provide the same reduction in the concentration of Total Dissolved Solids (TDS) in Walker Lake. L04-MBK-7

The DEIS states TDS concentrations in geothermal groundwater effluent are approximately 1,000 mg/L, compared to 240 mg/L for the Walker River. The DEIS also states that up to 7,000 AF per year of geothermal water may be purchased. Including 7,000 AF of geothermal water with 48,555 AF of Walker River water to provide a total of 55,555 AF at Wabuska, and therefore 50,000 AF at Walker Lake, would increase the TDS concentration from 240 mg/L (if all water came from the Walker River) to approximately 335 mg/L. The DEIS does

Comment Letter L-04 Continued (Gordon H. DePaoli, Woodburn and Wedge, October 5, 2009)

not evaluate the increase in Walker Lake TDS concentrations if using geothermal groundwater effluent as part of the increased inflow to Walker Lake. L04-MBK-7 con't

OBSERVATIONS ON WATER ACQUISITION/TRANSFER PROGRAMS

MBK has participated in numerous water transfer/acquisition programs at various levels of involvement in several different watersheds. While each program is unique, there are some issues that are common to most programs. These issues may or may not apply in the Walker River Basin or may be more applicable to one Alternative than others.

Baseline Determination

Baselines may need to be determined for several different factors such as irrigated acres, crop mix, surface water diversions, groundwater pumping, groundwater levels, stream flows, lake levels, etc. Baselines provide a method for measuring both project impacts, such as lower groundwater levels, and project benefits such as increased lake inflow. They also provide a basis for lease/purchase agreements.

Quantification and Pattern of Consumptive Use

Consumptive use must be quantified for crops historically grown under any transferred water rights and a pattern of consumptive use should be developed. Seasonal consumptive use must be quantified to establish the volume of water that can be transferred. A pattern of consumptive use is necessary to determine when water is made available for transfer. For example, the seasonal consumptive use may total 3.0 acre-feet per acre and that quantity may be spread across the growing season on the following pattern.

	Apr	May	Jun	Jul	Aug	Sep	Oct	Total
Percent of Seasonal CU	5	15	19	21	19	14	7	100
Monthly acre-feet/acre	0.15	0.45	0.57	0.63	0.57	0.42	0.21	3.00

The consumptive use pattern limits the quantity of water available for transfer in any given month, unless it is possible to change the timing by storing the water in a reservoir. The DEIS assumes no significant changes in upstream reservoir operations, which implies the transferred water will be provided to Walker Lake on the same pattern it was consumed when used for irrigation.

Land Use and Weed Control

Plans should be established for the disposition of lands taken out of production either temporarily or in perpetuity. Plans may need to be developed for weed control to help prevent the spread of weeds to nearby lands and reduce water use on lands no longer in production. L04-MBK-8

Third-Party Impacts

Third-party impacts encompass a wide range of topics, including impacts to specific sectors of the local economy that supply agriculture, other groundwater users, upstream and downstream water right holders, irrigation district members, etc.

Endangered Species Issues

Water transfers have the potential to directly affect Endangered Species and alter their habitat.

Verification of Water Made Available

Methods to verify and account for the water made available under the transfer should be established, including specifying a point of measurement, defining a baseline, and defining a method for reporting. L04-MBK-9

Groundwater/Surface Water Interaction

The effect of transfers on groundwater/surface water interactions is typically difficult to determine and can be a contentious issue. Data are not typically available to develop models that can adequately address these issues. However, models are frequently used to estimate effects, either with or without acknowledgment of their limitations.

Monitoring and Mitigation Plans

Monitoring and mitigation plans may need to be developed for many of the issues in this list, such as groundwater levels, weed control, effects on certain species, etc.

Reservoir Operations to Facilitate Transfers

Under some instances it can be advantageous to modify reservoir operations to facilitate water transfers by changing the timing of when water is made available. The DEIS states the acquisition program will not significantly change upstream reservoir operations. This may or may not be the case; and there may be value to considering changes in reservoir operations. Changes in reservoir operations can have additional effects on lake levels, streamflow, water supply, reservoir spills, hydropower generation, etc. that must be addressed. L04-MBK-10

Lee G. Bergfeld, P.E.

LB/pp
5280/2009-10-1 COMMENTS ON ACQUISITION DEIS

cc: Mr. Kenneth Spooner
Mr. Mike Liquori

Comment Letter L-04 Continued (Gordon H. DePaoli, Woodburn and Wedge, October 5, 2009)

MBK ENGINEERS

LEE G. BERGFELD

EDUCATION

- University of California, Davis
  MS in Civil Engineering, 2005
- United States Air Force Academy, Colorado Springs, CO
  BS in Civil Engineering, 1995

PROFESSIONAL LICENSES AND SOCIETIES

- Registered Civil Engineer in California
- Registered Civil Engineer in Nevada
- Member, American Society of Civil Engineers

EXPERIENCE

11/05- Present MBK Engineers, Sacramento, CA
Civil Engineer
Projects:
CALSIM III Hydrology - Develop and quantify current and future agricultural, urban, and environmental water demands throughout Sacramento Valley for implementation in CALSIM III. Develop models of rice and waterfowl refuge operations to calculate demand, deep percolation, and surface water return flows. Verify calculated demands by comparison with recent historical surface water diversion records. Utilize GIS land use and water source data and IWFM Demand Calculator to calculate agricultural water demands.

Upper San Joaquin River Basin Storage Investigation - Assist in development and use of water operations models to evaluate surface and groundwater storage alternatives for the upper San Joaquin River. Develop analytical tools and perform hydrologic analysis for reservoir operations and conjunctive management of Friant water supply. Evaluate effects of new storage on local, regional, and statewide water system using CalSim II.

Merced Irrigation District Operations Models – Develop daily and monthly time-step models to simulate and forecast water and hydropower operations on the Merced River. Analyze water supply risks associated with water transfers and operations. Develop models for use during upcoming FERC re-licensing.

Friant-Metropolitan Partnership – Partnership investigates exchanges between the Friant Division of CVP and Metropolitan's SWP supplies to improve water quality in Metropolitan and water supply reliability in Friant. Perform studies and analyze results from spreadsheet and WRIMS models of Partnership operations.

CALSIM II Plan Formulation Common Model Package - Assisted in development of agricultural and environmental demands and operational logic to improve Colusa Basin representation for use in CALFED Surface Storage Investigations.

Sacramento Valley Conjunctive Management Study – Developed gaming model to evaluate performance of conjunctive management sites throughout Sacramento Valley. Developed detailed monthly water budgets to estimate groundwater pumping and deep percolation for groundwater model. Integrated environmental objectives, groundwater response, and operation of Sacramento Valley reservoirs in gaming model to evaluate various projects and operational scenarios.

Friant Water Users Authority – Analyze regional and statewide water supply effects of recent San Joaquin Restoration Settlement.

Browns Valley Irrigation District – Develop local water supply model of Merle Collins reservoir and Browns Valley Yuba River water supplies and perform water supply analysis.

Klamath Water Users Association – Analyze operations and model results during on-going Klamath River settlement discussions.

Develop and utilize models for the evaluation of water supply, water rights, transfers, hydropower, and environmental requirements for irrigation and water districts in California, Nevada, and Oregon.

06/03-10/05 Science Applications International Corporation, Sacramento, CA
Civil Engineer
Performed reservoir modeling in support of a water right application and accompanying environmental documentation filed on the Santa Ana River. Analyzed flow records of diversion structures to develop rating curves and provide recommendations to improve data collection and calibration. Assisted in the economic analysis of the purchase of a half interest in an existing power plant. Provided engineering support for water exchange agreements, water rights litigation, water resources planning, and hydrologic analyses on various rivers in California, Nevada, and Arizona.

10/02 – 12/03 U.S. Army Corps of Engineers, Hydrologic Engineering Center, Davis, CA
Civil Engineer/Graduate Student Intern
Verified the accuracy of the calculations and processes of the Corps' reservoir simulation software, HEC-ResSim. Developed a ResSim model for Lake Winnebago, WI and integrated an existing hydrologic model of the watershed into the Corps' Water Management System for use in real-time flood forecasting.

05/02 – 09/02 U.S. Geological Survey, Sacramento, CA
Civil Engineer
Performed detailed data analysis and comparison of water temperature, salinity, and sediment concentration data to determine the temporal and spatial variation within the Bay/Delta. Helped develop and implement a method using an acoustic Doppler profiler with a global positioning system to create detailed bathymetry of large salt ponds.

Comment Letter L-04 Continued (Gordon H. DePaoli, Woodburn and Wedge, October 5, 2009)

08/95 – 12/00 U.S. Air Force, McClellan & Beale AFB, CA
Civil Engineer
Worked on a wide variety of infrastructure and facility construction projects serving in the roles of inspector, project engineer, and project manager for all phases of the project from conception through closeout. Projects included water mains, back-flow preventers, storm drain renovation, road construction, runway repair, roof replacement, landscaping, interior remodels, and new facility construction. Deployed for four months to Saudi Arabia as the engineering team leader of project design and construction unit.

PUBLICATIONS

- Bergfeld, L.G. 2005. Investigative Study of Conjunctive Use Opportunities in the Stony Creek Fan Aquifer. M.S. Thesis, University of California, Davis.
- Bergfeld, L.G. and Schoelhammer D.H. 2003. "Comparison of Salinity and Temperature at Continuous Monitoring Stations and Nearby Monthly Measurement Sites in San Francisco Bay." *Interagency Ecological Program for the San Francisco Bay Newsletter*, Vol. 16, Number 5.

Responses to Comments of Letter L-04 (Gordon H. DePaoli, Woodburn and Wedge, October 5, 2009)

L04-1

Comment acknowledged. Reclamation has considered comments received and decided the appropriate course is to issue a Revised DEIS rather than an FEIS. Reclamation does not concur that discontinuing the DEIS process as suggested, while allowable, is the appropriate way to proceed. The Revised DEIS allows for disclosure of all impacts, documentation of comments and responses, and resulting incorporation of appropriate changes into the Revised DEIS. The Revised DEIS provides information on the Acquisition Program for both the public and for those implementing the Acquisition Program. Chapter 1 documents in detail Reclamation's position on their responsibilities related to NEPA and agency direction in the various Desert Terminal Lakes Public Laws.

L04-2

Reclamation agrees that the pending litigation should have been discussed in the DEIS and it will be added to the text of the Revised DEIS. However, Reclamation's position is that attempting to predict the outcome of the litigation and any environmental impacts that may result is purely speculative and would not be meaningful.

L04-3

As noted in Revised DEIS Chapter 15, Climate and Climate Change, both Milne (1987) and Sharpe et al. (2008) report that agricultural development, not drought (or climate change), account for net declines in Walker Lake's elevation since 1882. The fact that Walker Lake has been dry before and subsequently recovered would not change their findings for the period since 1882. While it is true that Walker Lake receives large volumes of flood water in some years, it is also true that in many years there is little or no inflow into the lake; all such annual variations in flow are reflected in the long-term annual averages used in the Chapter 3, Water Resources analysis. The Revised DEIS does recognize that delivery of a fixed volume of additional water to Walker Lake, alone, will not sustain reduced TDS levels over the long term (see Chapter 3, Figures 19 and 20, and note the long-term gradual increase in TDS).

L04-4

As noted in WRID's comments, rights to stored water held by WRID are "appurtenant to and used upon lands located in Nevada" and are therefore eligible for acquisition (per the legislation) even though they "are actually California water rights." This text in the Executive Summary has been revised.

L04-5

The public laws governing the Acquisition Program directs the University or NFWF to make acquisitions that they determine are the most beneficial to environmental restoration in the Walker River Basin. The University and NFWF both determined that acquisitions that provide water for Walker Lake are the most beneficial to environmental restoration in the Basin. As allowed by the law, the University also made determinations on their concept of the Agricultural and Natural Resources Research Center and have subsequently implemented an extensive research efforts in the Walker River Basin. Innovative agricultural water conservation and cooperative programs for environmental restoration can be considered by NFWF (which has accepted responsibility for administration of the Acquisition Program as shown in the agreement in Appendix 1A of the Revised DEIS), and PL 111-85 includes funding for some of these types of programs.

For clarification, over the course of development of the DEIS, it has become apparent that all three DEIS alternatives have value and it is Reclamation's understanding that a combination would likely be

considered for implementation by NFWF and the University, and leasing, conservation and stewardship and acquisitions are all authorized and funded in PL 111-85. The Revised DEIS does not direct the actions to be taken by NFWF or the University; rather, it provides information for consideration. Since all three acquisition alternatives are considered viable, the Proposed Project has therefore been changed to the Purchase Alternative; all three alternatives are considered to meet the "acquisitions" language in the various public laws discussed in the DEIS. All three alternatives are acquisitions that meet the Purpose and Need for the EIS. Reclamation does not agree that the Purpose and Need is too narrow; rather, the Purpose and Need as stated complies with the various public laws authorizing the Acquisition Program. Text has been revised in Chapter 2 of the Revised DEIS to note that alternatives other than acquisitions could possibly be pursued in the future if authorizing legislation and funding from Congress or funding from another source becomes available.

L04-6

The EIS scope is to analyze provisions in the public law for Reclamation to provide funding for acquisitions as follows: "...to acquire from willing sellers land, water appurtenant to the land, and related interests in the Walker River Basin, Nevada;...". This language defined the Purpose and Need for Reclamation's federal role (funding) and the EIS analysis (acquisitions).

L04-7

Reclamation agrees that inclusion of water-righted acres would be helpful, as would details from WRID regarding the distribution of New Land acres by ditch and duty alike. Chapter 2 has been revised to include this information in Table 2-1, distribution of irrigated lands and water-righted acres. The information is also in Table 3-4.

L04-8

NSHE entered into an option agreement with a willing seller in the Smith Valley shortly after public release of the DEIS (see Option 8 in revised Table 2-2, as well as Appendix 2A). Moreover, because the Revised DEIS analysis anticipates acquisitions well beyond current funding levels, it is appropriate and necessary to look beyond existing option agreements to analyze the potential impacts of the program. Finally, WRID has itself proposed a water leasing program with broad geographic participation, so it is considered appropriate for the analysis (within the bounds of existing authority) to consider acquisitions of all types distributed broadly, at least within WRID boundaries.

L04-9

Reclamation agrees with this comment-- if offered by willing sellers, affirmative consideration will be given to the acquisition of water rights appurtenant to lands that have already been converted to urban uses. Text has been revised to include this under Acquisition Considerations in Chapter 2.

L04-10

Because rights to stored water held by WRID are appurtenant to and used on lands located in Nevada (see Response to Comment L04-4), and because the anticipated changes would involve places of use in Nevada which lie outside WRID boundaries, it is entirely likely that anticipated changes to those water rights would require approvals not only from the California SWRCB, WRID, and the federal court, but from the NSE as well.

L04-11

Changes in the place and purpose of acquired storage water rights could be conditioned to ensure that Bridgeport and Topaz Lake Reservoirs would continue to be operated in accordance with past patterns of use. As noted, it is an assumption of the Revised DEIS

that the reservoir operations would not change from past use. However, if any proposal is pursued that would be outside of past use patterns, a CEQA process would be required to ensure that potential impacts in California are adequately addressed (see Standard Response 4, CEQA Requirements and Standard Response 12, Topaz Lake and Bridgeport Reservoirs).

L04-12

Effective implementation of the Acquisition Program would require development of an operating agreement for Weber Reservoir and related facilities to manage both acquired and other water (including water associated with WRPT's decreed water rights and any excess flows) from the expected point of delivery at the Wabuska gage to the lower Walker River and Walker Lake. The agreement would provide assurance that water rights associated with the Walker River Indian Irrigation Project are not impaired, proper water accounting, and protection of the safety of the downstream community.

It is anticipated that such an agreement would address a number of factors, including but not limited to the amount and timing of deliveries of acquired water to the Wabuska gage; reservoir operations criteria; physical losses between the Wabuska gage and Weber Reservoir; physical losses in Weber Reservoir as well as diversions into and releases from storage; physical losses and diversions between Weber Reservoir and Walker Lake; physical and safety constraints of hydraulic infrastructure and the downstream river channel; dam safety and flood control operating criteria; storage targets for irrigation season; and coordination, communication, and governance among affected parties for water measurement, delivery, storage, and release (Strekal pers. comm.). More information on the agreement has been added to the text of the Revised DEIS in Chapter 2 under Reservoir Operations.

L04-13

PL 109-103 Section 208 states "(A i) to acquire from willing sellers land, water appurtenant to the land, and related interests in the Walker River Basin, Nevada..." Under the law, acquisitions analyzed in the Revised DEIS are only authorized in Nevada. PL 111-85 referenced this same language in PL 109-103. The Acquisition Program complies with these laws. The California portion of the basin is not part of the project area or included in the Acquisition Program. No land in California, water appurtenant to that land, or related interests would be acquired through the Acquisition Program; however, WRID's rights to stored water in California, which are appurtenant to and used on lands in Nevada, may be included in the Acquisition Program if offered by willing sellers. As you know, PL 111-85 also included funding for a WRID 3-year leasing demonstration project that could include California, but it is not specifically analyzed in the Revised DEIS.

L04-14

Reclamation agrees that storage water rights licensed to WRID in California cannot be changed without participation by WRID.

L04-15

Acquired supplemental and/or primary groundwater rights could be used to provide water to Walker Lake both directly (e.g., through pumping and discharge of groundwater into drains or the river itself, as is currently being evaluated for geothermal ground water effluent in the Homestretch Geothermal Pilot Project EA) and indirectly (e.g., through an exchange of groundwater rights for surface water rights, or in support of "full credit" for the consumptive use portion of an acquired surface water right that has previously been used in conjunction with a supplemental groundwater right). Groundwater rights could also be used (i.e., acquired and retired) to address or mitigate potential reductions in incidental groundwater recharge associated with the acquisition and transfer of surface water rights, or simply to take pressure off an over-allocated surface-groundwater

system. Acquired groundwater rights could also provide a flexible source of water for the temporary irrigation (for stewardship purposes) of lands previously irrigated with surface water rights. Finally, acquired groundwater rights could be resold if necessary to provide funding for additional surface water acquisitions, for the payment of assessments, or for other program needs.

L04-16

Reclamation agrees that water covered by WRID permits issued by the NSE cannot be changed without WRID's participation.

L04-17

Tables 2-2 and 2A-1, as presented in the DEIS and as revised in the Revised DEIS include the decree acres and New Land acres associated with each option agreement.

L04-18

The Revised DEIS, Chapter 3, Water Resources analysis uses reported or estimated water diversions, groundwater withdrawals, and irrigated acres (as well as other pertinent information as documented) as the basis for analyzing potential impacts relative to actual historic conditions. Given ongoing uncertainties over the specific limitations that may be part of future change approvals by the NSE and/or other authorities where proposed instream uses are involved, the water resources analysis in the Revised DEIS includes new Consumptive Use Scenarios that illustrate potential impacts based on water-righted (rather than irrigated) acres and assumed consumptive use limits.

L04-19

The referenced statement in the DEIS -- that consideration "of the conversion between water rights and actual water" is unnecessary -- pertains only to the analysis of impacts relative to actual historic conditions; the conversion to water rights is then made separately through application of the water rights yield analysis, as described in Appendix 2B.

L04-20

See Response to Comment L04-18.

L04-21

The process to change water rights will be an important part of the Acquisition Program. However, not all details need to (or can) be worked out ahead of time in order to estimate a reasonable range of expected impacts. The impact assessment is therefore based on the assumption that it will be possible to transfer water rights at up to the average amounts of water historically used on a per-acre basis, and the Revised DEIS contains additional evaluation of potential consumptive use limits that may be placed on the transfer of water by the NSE. Developing assumptions where necessary, and explaining them, is common in an environmental analysis to estimate impacts.

L04-22

In Chapter 3, Water Resources, under the Full Transfer Scenario it is assumed that "all acquired water could be left in the river to flow downstream [to Walker Lake]." This does not assume that the NSE would allow the "full transfer" of acquired water rights based on their continuous use for 24 hours per day for each and every day of the irrigation season. Rather, this scenario assumes that the NSE might approve transfers to instream use at existing points of diversion in amounts up to the average amount of recent water use per acre within each sub-area (i.e., during a typical irrigation season).

L04-23

The NSE may or may not limit changes to natural flow rights in the Walker River Basin to a consumptive use component in order to avoid potential conflicts with other existing rights (or to satisfy other

provisions of subsection 5 of NRS 533.370). Such determinations would occur on a case-by-case basis, and there is no provision in the Walker River Decree (Decree C-125) comparable to that in the Alpine Decree, which automatically limits such changes to a decreed consumptive use duty. In addition, the NSE currently uses 3.1 feet as the computed estimate of net consumptive use for alfalfa for both Mason and Smith Valleys. While use of this figure in conjunction with future change applications is likely, "specific circumstances may require other considerations" (Felling pers. comm., November 30, 2009). Given these uncertainties, the Consumptive Use Scenario included in Chapter 3 of the Revised DEIS examines two possible variations: a "full" consumptive use rate of 3.1 feet; and a "partial" rate of 2.37 feet.

L04-24

Using a revised transportation loss rate of 16% (rather than the 39% assumed in the Revised DEIS) to convey acquired water from existing points of diversion to Walker Lake would significantly reduce the amount of water needed from upstream sources to meet a particular increased inflow objective. Moreover, as noted in Revised DEIS Chapter 3, Water Resources, if transfers are limited to a consumptive use component, even lower loss rates would be appropriate. In the Revised DEIS, the high transit losses continue to be used for the Full Transfer Scenario (to represent increased river infiltration associated with reduced incidental groundwater recharge), but a lower transit loss is used for the Consumptive Use Scenarios. Estimated transit losses for increases in flow do not include the losses that typically already occur under base flows.

L04-25

See Responses to Comments L04-SWC-15 and L04-WRID-26.

L04-26

In the DEIS, irrigated acres are used as the basis for the assumed 33% limit because irrigated acres (and historic water diversions) are fundamental to the water resources analysis (see Response to Comment L04-18). WRID, by comparison, uses water-righted acres as the basis for its analysis, but then compares the result against average irrigated acres to conclude that the 33% limit "is completely infeasible." At a minimum, WRID's calculations must be revised to evaluate potential impacts based on an "apples to apples" comparison (i.e., number of water righted acres acquired as a percent of total water righted acres). Please see the description of the Consumptive Use Scenarios in the Revised DEIS, which incorporates some of the comments received by WRID. These scenarios indicate that 33% is feasible.

L04-27

DOI regulations and existing federal law generally do not allow nonfederal entities to earn interest on federal grant funds, particularly in the form of an interest-bearing endowment, unless specifically authorized by Congress. Although it is possible that such a mechanism could be established in a future act of Congress (as part of a comprehensive basin-wide water settlement, for example), the DEIS "full funding" estimate merely assumes that additional funds would be provided under existing federal authority, without speculation as to the myriad ways that such authority might change in the future. WRID can pursue this possibility, but Reclamation is prohibited from doing so, as is any executive branch agency.

L04-28

There could well be benefits associated with various forms of water banking used in conjunction with the implementation of each acquisition alternative (and/or a combination of alternatives). There are, however, myriad uncertainties associated with any such a program that makes it impractical to consider at this time. These include potential impacts on reservoir operations and streamflows in

California; the need for reservoir modeling tools that go well beyond the Revised DEIS's focus on average annual water budgets; expected tradeoffs between the management of reservoirs to optimize the conveyance of water to Walker Lake vs. the instream and riparian needs of the Walker River and the use of the reservoirs themselves for recreation and other purposes; the associated need for a multi-party operating agreement or adaptive management plan; and the likelihood that it could take many years (if not decades) to develop and implement such a program. Water banking might best be considered as a possible management improvement under a future phase of Acquisition Program implementation, perhaps as part of the CEQA process that is mentioned in response to comment L04-11 and Standard Response 4.

L04-29

Potential efficiency measures include both on-farm and system improvements. Depending on the particulars, at least some of the per-acre water savings associated with on-farm measures could be acquired and transferred to Walker Lake in a manner consistent with Nevada law. Changes to Nevada law, a basin-wide water settlement agreement, or improved water measurement capabilities would all help to ensure that other efficiency-based improvements result in water savings that accrue to the ultimate benefit of Walker Lake.

The NSE would typically limit proposed transfers to a consumptive use amount, though exceptions do occur on a case-by-case basis. For Alternative 3 to work, the NSE would have to allow the transfer of conserved water. The NSE makes decisions about water transfers on a case-by-case basis. For the transfer of conserved water to occur, Nevada law would have to change or, alternatively, untraditional transfer methods could be used under existing law. For example, the NSE could permit conserved water to be transferred by stripping water rights from a fraction of the water-righted land (e.g., from the land between drip rows for vineyards). An alternative method would be to split the flow rate duty when a water right was in priority. The split would depend on the amount of water saved. Also see Chapter 2 (Alternative 3, Required Applications, Agreements, and Approvals).

L04-30

See Response to Comment L04-6.

L04-31

See Response to Comment L04-26.

L04-32

See Response to Comment L04-27.

L04-33

See Responses to Comment L04-11 and L04-28 and Standard Response 12, Topaz Lake and Bridgeport Reservoirs.

SWC-1

The DEIS does not purport to "represent" WRID's proposed water leasing program; rather, the Leasing Alternative is "adapted from a program described conceptually by WRID" but also differs from that program in a number of ways (e.g., potential leasing in California), as specifically described in DEIS Chapter 2. Chapter 1 clarifies that the WRID 3-year demonstration leasing program is not specifically analyzed in the Revised DEIS. See also Responses to Comments L04-27 and L04-28.

SWC-2

Under Alternative 1, NFWF will enter into assessment agreements with the relevant ditch companies, USBWC, and/or WRID, and thus will continue to pay the apportioned share of ongoing operation and maintenance costs for all water rights acquired. In addition, under section 1(b) of NRS 533.370, the NSE cannot approve a proposed change within an irrigation district if doing so would adversely affect the cost of water for other holders of water rights in the district or lessen the efficiency of the district in its delivery or use of water.

SWC-3

These impacts are not ignored; see Revised DEIS Chapter 3 Impact WI-8: Reduce Groundwater Recharge and Elevation as a Result of Reduced Infiltration from Fields and Canals or from Transfer of Geothermal Water to Walker River (Adverse, Beneficial, or No Impact).

SWC-4

It is true that, under current funding, water leasing would provide "substantially more" water to Walker Lake in the near term than would the acquisition of water rights, but only for as long as current funding lasts.

SWC-5

The Acquisition Program would restore, at best, a fraction of unimpaired flows to the Walker River system. Such flows, and their consequences, are naturally variable and would have little or no effect on conditions at Walker Lake, which would be dominated by the net improvements associated with increased average inflows over time.

SWC-6

Given that flows are naturally variable, it is not necessarily the case that reducing such variability would be beneficial; nor is it clear that, in practice, water leasing would be best able to "compensate for [the] likely range of additional flows" if only because annual participation agreements would have to be secured well before actual hydrologic conditions were known. Moreover, because all three alternatives will likely be included in the Acquisition Program going forward, it is not a situation of one versus the other but of how the alternatives can best be blended to address a variety of objectives and concerns. Finally, while water banking is not included in this Revised DEIS, if it is pursued in the future as a water management tool in order to address such concerns there is no reason it could not be used to manage both acquired water rights and annual leased water supplies.

The Acquisition Program will restore, at best, a fraction of unimpaired flows to the Walker River system. Such flows, and their consequences, are naturally variable and will have little or no effect on conditions at Walker Lake, which will be dominated by the net improvements associated with increased average inflows over time. In response to this comment, some text was added to Chapter 3 under the Additional Losses section (Alternative 1 descriptions of HC-3 [change in flows] and WI-4 [flooding]).

SWC-7

See Response to Comment L04-27. Even if it were possible, "perpetual funding" of a water lease program via interest earnings on

an endowment fund would not automatically translate into continuing participation by willing sellers at assured or even assumed enrollment levels; nor is sustained, perpetual management and administration of the water lease program assured.

SWC-8

See Response to Comment SWC-6.

SWC-9

The DEIS does consider acquisition or lease of groundwater rights. See Revised DEIS, Chapter 2, Types of Water Rights That Could Be Acquired, third bullet ("primary or supplemental ground water rights…"); see also Response to Comment L04-15.

SWC-10

(a) The DEIS Chapter 3 and Appendix 3A have been combined in the Revised DEIS. (b) DEIS Chapter 3, Water Resources, is based on an average annual water budget analysis (see Response to Comment L04-18); results from the water budget analysis were then used in conjunction with projections of estimated yield and negotiated acquisition costs (Appendix 2B) to convert from water to water rights, and from water rights to anticipated program costs. (See also Response to Comment L04-22.) It is noteworthy that the commenter's own estimate of average water rights yield (i.e., "50.7 percent of the [maximum] face value" based on a Monte Carlo simulation method) aligns very closely with the Revised DEIS reported average of "approximately 51% of...maximum face value" based on evaluation of all water cards and water rights types under option as of June 2008 (Appendix 2B).

SWC-11

See Response to Comment L04-23.

SWC-12

At an average expected yield of 51% of maximum face value (see Response to Comment SWC-10), the acquisition of 82,000 af/year of "wet water" [ref] would equate to approximately 161,000 af of associated surface water rights. Calculated the same way, the maximum face value of surface water rights in the Walker River basin is approximately 783,000 af based on 1,575 cfs of decreed natural flow rights and an estimated 62,100 af of New Land storage rights.

SWC-13

See Response to Comment SWC-10.

SWC-14

See Response to Comment SWC-10.

SWC-15

The Revised DEIS describes alternative Consumptive Use Scenarios that use water-righted acres, a range of transferrable consumptive use estimates (i.e., what the NSE might allow, consistent with this method), and other conforming assumptions as documented to conclude that approximately 21,000 to 26,900 water- righted acres would need to be acquired to provide, on average, an additional 50,000 af/year of surface water inflow at Walker Lake. These amounts represent approximately 26 to 33% of the roughly 80,000 acres of appurtenant surface water rights (exclusive of flood water rights) in the three subareas. Concurrent reductions in irrigated land would involve similar fractions (26 to 33%) of the assumed baseline average of 56,400 acres, or roughly 14,500 to 18,600 acres.

SWC-16

Such differences are likely a result of differences in data sources, periods of evaluation, or methods.

SWC-17

Existing river losses (from ET of riverine riparian vegetation, evaporation, and infiltration to groundwater) are largely provided for with base flows. The key question is how losses might increase with increases in flow. Increased losses were not estimated with the values presented in Figure 3-15 of the DEIS. Estimated increases in losses resulting from increases in flow were based on recent data. Data from water years 1998 through 2007 were used to assess increased losses downstream of Wabuska. For the full transfer scenario, increased losses upstream of Wabuska were based on the large and uncertain value for increased river infiltration resulting from a reduction in groundwater recharge. For the 33% scenario, increased losses upstream of Wabuska were based on a very weak trend of increasing losses with increasing river flow, which was based on data from water years 1995-2007. The Response to Comment T02-5 is also pertinent.

SWC-18

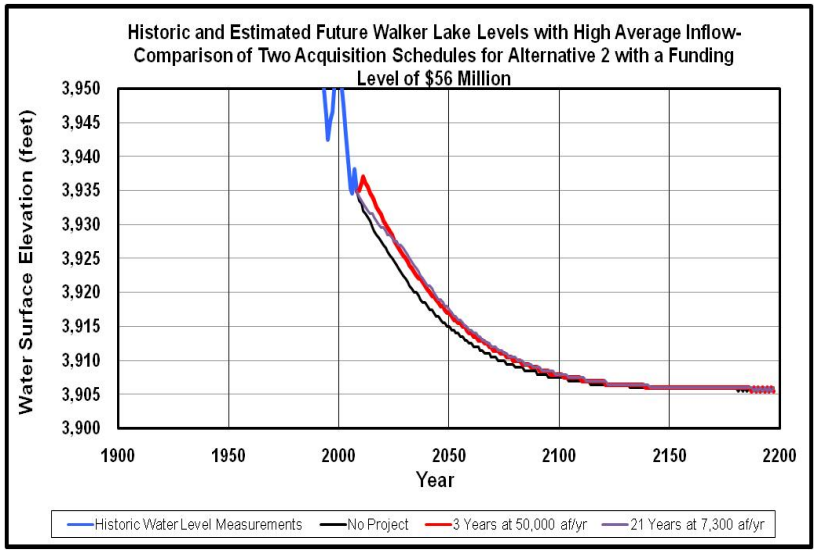
See to the Response to Comment L04-SWC-17.

SWC-18b

This is a rounding issue (see footnote *d* of Table 3-8 in the Revised DEIS). The footnote was modified to say "Water volumes are rounded to the nearest 1,000 af. As a result, some calculations may appear to be imprecise."

SWC-19

The following text was added to the Revised DEIS: "With the $56 million level of funding, Alternative 2 could have been evaluated by assuming a lower level of flow augmentation (average of 7,300 af/yr), spread out over a longer period (20 years). However, the method selected for assessing Alternative 2 with a funding level of $56 million makes little difference. Both methods result in only small differences from the No Action Alternative. The method selected has a greater improvement in lake level compared to the No Action Alternative, although for a shorter period of time." The differences between the two approaches can be seen in the graph below, which was not included in the Revised DEIS.



SWC-20

Text was corrected.

SWC-21

The flow does affect river losses and determining the effect of flow on loss is complex. Percent loss decreases as flow increases (see Figure 3-12 of the DEIS), but total volume of water lost increases with flow. Procedure for estimating a 10% increase in losses associated with increases in flow is described on pages 3A-63 and 3A-64 of Appendix 3A of the DEIS. Text from DEIS Appendix 3A, page 3A-13 was modified in consideration of this comment. These sections are now included in Chapter 3, Water Resources, of the Revised DEIS.

SWC-22

We do not agree with the comment. The TDS load will eventually have an effect on TDS concentration in the lake.

SWC-23

See to the Response to Comment L04-SWC-22.

SWC-24

The text of Chapter 4 was revised to add to the description of tamarisk description in the study area and to the No Action Alternative discussion Tamarisk can out-compete native riparian vegetation under saline, depressed water table, and increased erosion conditions, which are predicted to occur without the Acquisition Program.

SWC-25

The citations at the end of the paragraph had this information in the text. A decrease in water temperature is speculative but could possibly occur with an increase in flows.

SWC-26

Potential socioeconomic consequences of implementing the Acquisition Program are described in Chapter 10 of the Revised DEIS. The primary method for quantifying the socioeconomic impacts was based on the use of employment and personal income multipliers developed by UNR (Bartholet et. al. 2009). The impact analysis did not make findings regarding changes in gross agricultural production value. A range of gross agricultural production values generated in Lyon County (1987 and 2007) was presented in the affected environment section of Chapter 10, Socioeconomics. Data for 2007 was included in the DEIS because it was the most recent data reported by the USDA at the time the analysis was conducted.

SWC-27

Based on the average cost and expected water yield assumptions and results described in Revised DEIS Table 2A-1, the expected cost of "wet water" associated with acquired water rights will range from $3,700 to 4,150 per af at existing points of diversion. (The low range estimate includes optioned geothermal groundwater effluent; the high-range estimate does not.) These values would equate to an expected equivalent annual lease price of anywhere from $148 to $249 per af, i.e., from 4 to 6% of the aforementioned purchase prices based on experience from other regions where both leases and purchases are taking place (Seeley pers.comm.). The $200/af DEIS assumption for lease costs lies almost exactly at the midpoint of this range, and as such seems quite reasonable for present calculation purposes. With regard to the commenter's assertion that a cost-benefit comparison should be done assuming perpetual deliveries and a 5% bond rate, please see Response to Comment SWC-7.

SWC-28

Appendix 2B provides a detailed discussion of the methods and calculations used to determine the "maximum face value" of acquired water rights vs. the "expected average yield" of those rights; see also Response to Comment SWC-12.

SWC-29

See Response to Comment SWC-15.

SWC-30

The intent of the discussion was to indicate that there may be opportunities to continue agricultural production on lands that would be directly affected by the Acquisition Program by raising crops that use less water. This was based on the conclusions of the UNR study that addressed socioeconomic effects (Batholet et. al. 2009) and evaluated the feasibility of raising alternatives crops (Curtis et al. 2009) The intent was not to suggest that the adverse impacts on

employment, personal income, tax revenues, and property values would be fully offset. The text was revised in several places to say "could be slightly offset".

SWC-31

Tamarisk removal and restoration projects have occurred and remaining work will focus on physical projects that will benefit water quality and water supply in the long run. It is well known that a reduction in tamarisk corresponds to less evapotranspiration and therefore higher instream flows. Noxious weeds also have taproots rather than fibrous roots of natives that better hold soil; native plants will reduce sedimentation into the river. Additionally, land acquisitions and conservation easements would be structured to improve stream and wildlife habitat and reduce sedimentation from actions such as grazing and development. Reducing invasive plant populations improves wildlife habitat.

SWC-32

The potential groundwater impacts associated with Alternative 3 are analyzed and discussed in Chapter 3 of the Revised DEIS. See Response to Comments S01-12, S01-14, PHR-10, and L04-29 for additional information regarding the conservation alternative. If the conservation measures discussed in the Chapter 14, Cumulative Impacts, include assurances that saved water would reach Walker Lake, then their net effect would be an increase in lake inflow. However, as the commenter notes, it is possible that the water saved as a result of other conservation measures discussed in Chapter 14 could result in more water availability for water rights holders and a possible reduction in groundwater levels, which could result in reduced river flow.

SWC-33

Comment acknowledged. If the commenter's calculations are correct, there would be an additional inflow to the lake of 300 af of water, which supports the conclusion that "The types of actions included for funding will likely result in beneficial impacts on wildlife habitat, water quality, and water supply."

SWC-34

Comment acknowledged. The text clearly states "The assessment methods used in this analysis are qualitative because of the many uncertainties and lack of data related to climate change." The commenter did not provide any information to refute or improve the analysis.

MBK-1

Reclamation acknowledges this comment. It is Reclamation's position that the Revised DEIS use all known available science and data to perform the analysis. It is necessary, and occurs in all EIS documents, to make assumptions based on the best available information. Assumptions are necessary because what exactly will occur is not known until project implementation (e.g., how the NSE will choose to handle the water right transfers and which willing sellers will offer their water rights). Stated another way, it would not be useful to wait to describe impacts until after they occur. The goal is to describe potential impacts for public disclosure before implementation and also to help with decisions during implementation. Waiting until project implementation to describe exact impacts is not useful to the goal of disclosure and decision making. Additional research and monitoring of the Acquisition Program will provide a more accurate picture of expected impacts.

MBK-2

Reclamation agrees that Alternative 3 is not fully developed. This is in part because it is not known what actions would eventually be taken. Actions would depend on farmer participation and further assessment of methods to save water. The UNR/DRI studies provide some information about current agricultural practices and potential ways to save water through crop switching (Bartholet et al. 2009, Curtis et al. 2009). Please also see Responses to Comments MBK-3 and F001-11.

MBK-3

The following text was added to Chapter 3, Water Resources, under Methods - Alternative 3: "This assessment is somewhat theoretical because it is unlikely that all farmers would want to participate in this program and unlikely that overall efficiency of 75% could be attained everywhere. Even on a single field, attainment of 75% efficiency could be difficult; open canals would probably have to be converted to pipes and typical sprinkler efficiency for alfalfa of 75% (Miller pers. comm.) would have to be increased to about 80% (perhaps with drip irrigation)."

MBK-4

The result has been revised to include soil porosity.

MBK-5

The river compensation for reduction in GW recharge was based largely upon the groundwater modeling work by Myers (2001a, b). The strong connection between river flow and status of the groundwater aquifer was corroborated by the recent UNR/DRI studies (2009) and by comments received from the office of the NSE.

MBK-6

This is a rounding issue (see footnote *d* of Table 3-8 in the DEIS). The footnote has been modified to say "Water volumes are rounded to the nearest 1,000 af. As a result, some calculations may appear to be imprecise."

MBK-7

The Revised DEIS does not assume that Homestretch Geothermal water would necessarily be included, only that doing so would reduce the need to acquire agricultural water rights. The specific analysis of Homestretch Geothermal water quality issues will be provided in Reclamation's EA for the Homestretch Geothermal Pilot Project, which is expected to be completed in 2010. There is some discussion of Homestretch Geothermal TDS compared with river TDS in Chapter 3 (Alternative 1, Impact WI-6).

MBK-8

Decisions related to how private lands will be used and managed are up to the individual landowners.

MBK-9

Reclamation agrees; however it will be up to NFWF (or to NFWF and WRID in the case of demonstration water leasing under PL 111-85), with support from USGS, the federal water master, the NSE, WRPT, UNR, DRI, USFWS, NRCS, and/or others, to develop and implement appropriate monitoring and mitigation plans. See Standard Responses 4, No Mitigation in EIS and 8, Measurement and Enforcement.

MBK-10

See Response to Comment L04-28.

Comment Letter L-05 (Simeon Herskovitz, Advocates for Community and Environment, October 5, 2009)

Letter L-05

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October 5, 2009

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Re: Walker River Basin Project Draft Environmental Impact Statement Comments

Dear Ms. Huntt DeCarlo:

Thank you for providing this opportunity to comment on the Bureau of Reclamation's ("Reclamation's") Draft Environmental Impact Statement for the Walker River Basin Project ("DEIS"). We are submitting these substantive comments on behalf of Mineral County ("MC"), Nevada. Mineral County commends Reclamation for taking the lead in addressing the serious condition at Walker Lake. MC therefore strongly supports Alternative 1 outlined in the DEIS. L05-1

Mineral County is a political subdivision of the State of Nevada which contains the lower portion of the Walker River Basin including all of Walker Lake. Mineral County's economy, tax base, and residents depend largely on the health of Walker Lake. Mineral County has a direct stake in the future of Walker Lake and the health of the Walker River system. L05-2

Since the late 1800s, the State of Nevada has authorized the appropriation of water from the Walker River system above Walker Lake for use in irrigated agriculture. Currently, approximately 143% of the water in the Walker River system is appropriated to out-of-stream uses. Since the 1960s, groundwater pumping in the Walker River Basin has dramatically increased, thereby increasing the draw on an already over-allocated system. Since 1960, groundwater pumping in the Smith and Mason Valleys has diminished flows in the Walker River by at least 10%. As noted in the DEIS, due to the increased development of groundwater, the State Engineer has classified three valleys within the Walker River Basin as "designated" under state law. L05-3

As a result of over-appropriation, in the past century, the surface elevation of Walker Lake has decreased over 100 feet, its depth has decreased from 224 feet to 90 feet, and its total volume is down to 2.06 million acre-feet from over 9 million acre-feet in 1882. Between 1986 and 1993, groundwater elevations dropped as much as 80 feet in Smith Valley and 40 feet in Mason Valley. River flows further decreased as a result of the groundwater pumping, as 161,000 acre feet of water were removed from the Walker River to replenish groundwater drawdown areas in Smith and Mason Valleys. Between the years of 1987 and 1994, virtually no water flowed from the L05-4

Walker River into Walker Lake, a condition that has repeated itself with some frequency during the past decade. The results have been environmentally disastrous: current TDS levels exceed 16,000 mg/l, native fish populations are no longer able to reproduce, and wildlife that once depended on the lake are disappearing. The Lake is dying. L05-4 con't

Of the alternatives included in the DEIS, Alternative 1 would best protect and restore Walker Lake by providing a permanent additional 50,000 afa to the Lake. Although more than 50,000 afa is needed to restore the Lake to a truly healthy ecological condition, Alternative 1 provides sufficient water to begin restoring native fish habitat and opportunities for recreation at Walker Lake that would significantly benefit Mineral County's economy. L05-5

Any administration of an acquisition program should be performed by an entity directed toward the restoration of Walker Lake above any other goal. L05-6

Any potential for increased dust emissions resulting from the acquisition program could be mitigated by the planting of native plants and grasses on fallowed land, including Indian ricegrass, Basin wildrye, Beardless wheatgrass, Western wheatgrass, and Inland saltgrass. *See* Wally Miller & Erin Carroll-Moore, Project C: Plant, Soil, and Water Interactions, Effects of Alternative Agriculture in Western Nevada on Plant, Soil, and Water Interactions *in* Restoration of a Desert Lake in an Agriculturally Dominated Watershed: The Walker Lake Basin (Michael W. Collopy and James M. Thomas, Project Directors) 15 (2009). L05-7

We strongly urge Reclamation not to adopt the DEIS's No Action Alternative. The No Action Alternative would result in further degradation of Walker Lake, including lower water levels, increased TDS levels, fish die off, and decreased migratory bird use of the Lake. By extension the No Action Alternative would cause severe additional harm to public health in the region containing the windshed of Walker Lake due to increased dust emissions from further reliction of the Lake and exposure of its bed to winds. In short, the No Action alternative simply is not a reasonable alternative because it would ensure environmental and socio-economic disaster in and around Walker Lake. L05-8

MC believes a leasing program such as that outlined in Alternative II should be implemented as a secondary and transitional component of an approach that is focused primarily on water rights acquisitions, as described in Alternative I. MC would only support a leasing program managed by a neutral party or some entity whose mission is to promote the maximum transfer of water to Walker Lake in order to restore the Lake's ecological health and economic value as a recreational resource. MC is strongly opposed to a leasing program managed by WRID, because WRID has a long track record of opposing and subverting all efforts to protect and restore Walker Lake. L05-9

In general, the MC is strongly in favor of increased conservation and efficiency measures such as those being considered under Alternative III. In MC's opinion, however, such measures can only form one component of an approach that focuses primarily on water rights acquisitions to ensure the long-term ecological health of Walker Lake and the Walker River system. Further, MC is concerned that Reclamation has not included any form of crop conversion as part of Alternative III because of stated feasibility problems. MC believes that there are in fact a number of viable crop conversion possibilities for the Walker River basin, which would substitute less water intensive and more drought resistant crops for the alfalfa that currently dominates irrigated agriculture in the basin. Alfalfa, which makes up the majority of crop L05-10

Comment Letter L-05 Continued (Simeon Herskovitz, Advocates for Community and Environment, October 5, 2009)

acreage in Smith and Mason Valley, is a highly water intensive crop. There is a wide variety of alternative crops that could be economically viable and that would not require as much water as alfalfa. Replacing alfalfa with one of these crops, for example, onions or garlic, two crops that have already been introduced to the basin, combined with an accounting program, would be an effective way to ensure greater water delivery to Walker Lake. The Walker Basin Project is currently studying the suitability of Tall fescue, Basin wild rye, Buckwheat, Amaranth, Tef, Pearl millet, Indiangrass, sand bluestem, old world bluestem, and Mammoth wild rye. Erin Espeland et al., University of Nevada, Reno, Project B: Alternative Agriculture and Vegetation Management in the Walker River Basin, in Restoration of a Desert Lake in an Agriculturally Dominated Watershed: The Walker Lake Basin (Michael W. Collopy and James M. Thomas, Project Directors) 22-26 (2009); John A. Arnone III et al, Project B: Alternative Agriculture and Vegetation Management Water Use Efficiency and Productivity of Alternative Crops for Agriculture in Nevada U.S.A. Under Conditions of Low Water Availability, in Restoration of a Desert Lake in an Agriculturally Dominated Watershed: The Walker Lake Basin (Michael W. Collopy and James M. Thomas, Project Directors) 5 (2009). The suitability of wine grapes has also been studied with success in the area. NV Agricultural Experiment Station, University of Nevada, Reno, Nevada Dividends Impact Report, Alternative Crops: Developing Wine Grape Varieties Adapted to Nevada's Climate. We are unaware of any feasibility problems associated with such conversion. L05-10 con't

Mineral County believes that it is necessary to include in the EIS a method for assessing the success of any water delivery program. This method would include gauging and monitoring as well as modeling that would assist in assessing what percentage of water purchased, leased, or conserved, actually makes it to the Lake. This monitoring and modeling should not be controlled by WRID as WRID has interests that differ from the interests of the Lake. The gauging and monitoring should be performed by a separate entity the mission of which should be the restoration of Walker Lake above any other goal. L05-11

Enforcement and monitoring of water diversions was not considered in the DEIS. We believe that a comprehensive and reliable enforcement and monitoring system on the Walker River System is essential to ensuring that water purchased, leased, or conserved reaches Walker Lake. We also believe that significant additional water is improperly diverted from the Walker River System beyond that which is permitted, and that diversions and streamflows in the System should be monitored and managed in a manner that ensures that this additional amount of water is no longer improperly diverted but rather is allowed to flow into Walker Lake. L05-12

In addition, Mineral County strongly recommends opportunities for watershed restoration, which addresses the health, function and productivity of the watersheds themselves, be addressed as part of the efforts to restore Walker Lake. L05-13

Finally, as the political subdivision of the State that contains the lower portion of the Walker River System, including all of Walker Lake, and that is most directly affected by the Lake's condition, Mineral County should also be given a seat on the entity that oversees the Walker River Basin Program and all efforts to restore Walker Lake. L05-14

If you have any questions or comments, or wish to discuss the issues raised in these comments in greater detail, please do not hesitate to contact me. Thank you again for providing the opportunity for Mineral County to comment.

Sincerely,

Simeon Herskovits

On *behalf* of:

Mineral County, Nevada
P.O. Box 1450
Hawthorne, NV 89415-1450

Responses to Comments of Letter L-05 (Simeon Herskovitz, Advocates for Community and Environment, October 5, 2009)

L05-1

Comment acknowledged. See also Standard Response 6, Alternatives.

L05-2

Comment acknowledged.

L05-3

Comment acknowledged. We agree that water-rights holders often do not receive the full face value of their surface water rights and that groundwater pumping has probably reduced river flow.

L05-4

Comment acknowledged.

L05-5

Comment acknowledged. See Standard Response 6, Alternatives.

L05-6

Administration of the Acquisition Program is directed by law. PL 111-85 states that funding for acquisitions are to be provided to the University or NFWF. NFWF and the University entered into an Assignment and Delegation Agreement on December 24, 2009 (Appendix 1A of the Revised DEIS). Under this agreement the University assigned to NFWF all of the University's rights, interests, and obligations for the Acquisition Program. This includes all the option and purchase agreements previously entered into by the University. NFWF's role going forward will be to further develop and implement the Acquisition Program. The University's role will be to support such efforts through associated research, modeling, monitoring and evaluation.

L05-7

Comment acknowledged. NFWF, which will likely be implementing the Acquisition Program, is aware of this concern. See Standard Response 5, No Mitigation in EIS for more information on funding for conservation and stewardship available under PL 111-85. .

L05-8

Comment acknowledged. For clarification, Reclamation does not have authority to make decisions on the Acquisition Program and subsequently will not be selecting an alternative or combination of alternatives for implementation. See Standard Response 6, Alternatives.

L05-9

Comment acknowledged. See Standard Response 6, Alternatives. Also note, PL 111-85 directs funding to WRID for a 3-year pilot leasing demonstration project.

L05-10

Comment acknowledged. See Standard Response 6, Alternatives. Crop conversion is a potentially important part of Alternative 3. However, it was not included explicitly in the quantitative assessment. Alternative 3 is difficult to assess from a quantitative perspective because of the large uncertainties (in attainable efficiency levels, ability to transfer saved water to the lake, and farmer participation). The estimated increase in efficiency used for the Alternative 3 analysis (from approximately 50 to 75%) is somewhat hypothetical because 75% is fairly difficult to attain and

not all farmers would be willing participants. In reality, to attain the estimated increases in flows associated with Alternative 3, crop conversion would probably be necessary. If significant crop conversion were to occur, it is possible that lake inflow could be increased to the full goal of an average additional 50,000 af/yr. The main feasibility concern for crop conversion is that farmers would not be willing to switch to new crops with uncertain marketability.

The following text is included in Chapter 3 of the Revised DEIS in the results section for Alternative 3 under the description of the Upstream Analysis:

> *Crop switching could further increase lake inflow under Alternative 3. Total crop ET for the Mason Valley, Smith Valley, and East Walker River study areas is estimated to be 156,000 af/yr. A relatively small reduction in this number would be needed to bring the average increase in lake inflow from 32,300 af/yr to 50,000 af/yr. Because reductions in crop ET resulting from crop switching would minimally affect GRR flows, reductions in crop ET could make it to Walker Lake with very little loss. Applying a 10% loss rate (for Wabuska to Walker Lake), only an approximate 19,700 af/yr reduction in average crop ET (about 13% of the total estimated crop ET) would be needed to augment lake inflow by an average additional 17,700 af/yr to bring the average increase in lake inflow to 50,000 af/yr. However, because of feasibility concerns (particularly regarding market demand), crop switching was not included in the upstream analysis for Alternative 3.*

L05-11

Comment acknowledged. As outlined in the legislation, Reclamation is not responsible for implementation of the Acquisition Program. Methods for assessing the success of the Acquisition Program will be developed by NFWF, and Reclamation is not authorized to direct these aspects of the Acquisition Program. The information in this comment has been shared with NFWF for consideration. The University also will have a role in supporting NFWF's Acquisition Program administration efforts through associated research, modeling, monitoring, and evaluation.

L05-12

Comment acknowledged. See Standard Response 8, Measurement and Enforcement.

L05-13

PL 111-85 includes $10,000,000 in funding for NFWF for associated conservation and stewardship activities that could include mitigation activities associated with the Acquisition Program. In addition, other Desert Terminal Lakes funding has been provided for watershed level restoration, such as ongoing river and riparian restoration activities by the FWS, USGS modeling and gauging work, and NDOW water conservation projects and temporary water transfers to Walker Lake.

L05-14

Comment acknowledged. This request has been shared with NFWF for their consideration.