ENCLOSURE 6

17-0193

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

OCT 05 2007

Judith Unsicker
Lahontan Regional Water Quality Control Board
2501 Lake Tahoe Boulevard
South Lake Tahoe, CA 96150

Dear Ms. Unsicker:

The Lahontan Regional Water Quality Control Board (Regional Board) has scheduled a public hearing on November 14-15, 2007 to consider adoption of Basin Plan amendments proposed in the August 2007 *Draft Technical Staff Report for Revised Water Quality Standards for Surface Waters of the Antelope Hydrologic Unit* (Staff Report). We have reviewed the draft amendments and supporting documents.

The Staff Report states that the U.S. Army Corps of Engineers (USACE) has determined that the waters of Amargosa Creek, Piute Ponds and associated wetlands, and Rosamond Dry Lake, are not "waters of the United States" (*Id.*, p.7). On that basis, Regional Board staff indicates that EPA approval of the proposed Basin Plan amendments is not required. (*Draft Substitute Environmental Document for Revised Water Quality Standards for Surface Waters of the Antelope Hydrologic Unit*, p. 9.)

The proposed Basin Plan amendments would revise beneficial uses and water quality objectives for these waters that EPA has previously approved pursuant to Section 303(c) of the Clean Water Act, 33 U.S.C. §1313(c), and its implementing regulations, 40 C.F.R. Part 131. We believe, therefore, that EPA and the State (the Regional Board as well as the State Water Resources Control Board) should further discuss EPA's role in reviewing the changes to these EPA-approved standards.

Thank you for the opportunity to review the proposed amendments. We are available to discuss this further, as we have suggested. To schedule such discussions, or if you have any questions regarding EPA's comments, please contact Matt Mitchell of my staff, at (415) 972-3508, or Ann Nutt of the Office of Regional Counsel, at (415) 972-3930.

Sincerely,

Doug Eberhardt, Manager
CWA Standards and Permits Office

cc: Rik Rasmussen (SWRCB)

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17-0194

DEPARTMENT OF PUBLIC WORKS
FLOOD CONTROL • SOLID WASTE MGMT • SURVEYOR • TRANSPORTATION

COUNTY OF SAN BERNARDINO
PUBLIC AND SUPPORT
SERVICES GROUP

825 East Third Street • San Bernardino, CA 92415-0835 • (909) 387-8104
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VANA R. OLSON
Director of Public Works

October 5, 2007

File #10(ENV)-4.01

Ms. Judith Unsicker
California Regional Water Quality Control Board
Lahonton Region
2501 South Lake Tahoe, California 96150

RE: DRAFT SUBSTITUTE ENVIRONMENTAL DOCUMENT FOR BASIN PLAN AMENDMENTS

Dear Ms. Unsicker:

Thank you for giving the San Bernardino County Department of Public Works the opportunity to comment on the above-referenced document.

After reviewing the submitted document, our Department has determined that this project does not appear to affect or significantly impact any existing or future Flood Control District facilities or County roads. Therefore, we have no comments.

Sincerely,

MICHELE KIM, Senior Planner
Environmental Management Division

MK2:mb/CEQA Comments_CRWQCB Lahonton Basin PLan Amendments-No Impact.doc

cc: VRO/MK Reading File

17-0195

SOLID WASTE MANAGEMENT

COUNTY SANITATION DISTRICTS
OF LOS ANGELES COUNTY

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STEPHEN R. MAGUIN
Chief Engineer and General Manager

October 4, 2007
File No. 14-14.01-55

OCT 09 2007

Ms. Judith Unsicker,
Staff Environmental Scientist
California Regional Water Quality Control Board
Lahontan Region-Lake Tahoe Office
2501 Lake Tahoe Blvd.
South Lake Tahoe, CA 96150

Dear Ms. Unsicker:

Comments on Draft Basin Plan Amendments and Technical Staff Report for Revised Water Quality Standards for Surface Waters of the Antelope Hydrologic Unit
Lancaster Water Reclamation Plant (WRP) WDIDNO. 6B190107017

County Sanitation District No. 14 of Los Angeles County (District) submits this letter to provide comments on the Draft Proposed Amendments to the Water Quality Control Plan for the Lahontan Region (Basin Plan) and corresponding report "Draft Revised Water Quality Standards for Surface Waters of the Antelope Hydrologic Unit, August 2007" (Staff Report). The proposed Basin Plan amendments include revisions to beneficial uses (BUs) for Amargosa Creek, Paiute Ponds, Paiute Ponds Wetlands, and Rosamond Dry Lake (receiving waters). These water bodies receive effluent from the District's Lancaster Water Reclamation Plant.

The District appreciates and commends the considerable effort by staff of the Regional Water Quality Control Board, Lahontan Region (Regional Board) to establish appropriate BUs for the subject surface waters. The District supports the adoption of site-specific objectives for ammonia in Paiute Ponds and the de-designation of Municipal and Domestic Supply (MUN), Water Contact Recreation (REC-1), Commercial and Sportfishing (COMM) and Cold Freshwater Habitat (COLD) BU designations for these specific water bodies. Furthermore, the District supports the Regional Board staff's decision to consider future de-designation of Ground Water Recharge (GWR) and Agricultural Water Supply (AGR) for Paiute Ponds, Paiute Pond Wetlands and Rosamond Dry Lake (only GWR applied to Rosamond Dry Lake) as the District believes these beneficial uses do not exist for these receiving waters.

The District would, however, like to express its concern regarding the Regional Board staff's proposed application of the additional BUs of Freshwater Replenishment (FRSH), Rare, Threatened and Endangered Species (RARE), and Preservation of Biological Habitats of Special Significance (BIOL) to Paiute Ponds and Paiute Pond Wetlands. The District also disagrees with the designation of the Water Quality Enhancement (WQE) and Flood Peak Attenuation/Flood Water Storage (FLD) beneficial uses for Paiute Ponds Wetlands.

Finally, the District supports the adoption of site-specific objectives for ammonia, but understands that these objectives will be applicable to the District only after the Stage V Lancaster Water

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Reclamation Plant facilities providing tertiary treatment are operational. Until the tertiary treatment facilities are operational, the interim limitations specified in Board Order No. R6V-2002-053A1 will apply. If Regional Board staff intends a different regulatory approach, please contact the undersigned at your earliest convenience.

Attached with this letter are the following documents, which contain general comments on the proposed Basin Plan Amendments, and specific comments along with technical arguments regarding the inapplicability of the FRSH, RARE, BIOL, WQE, and FLD BUs:

1) Attachment 1 contains general and specific comments on the proposed Basin Plan amendments and Staff Report. These comments were also provided to the Regional Board staff on June 4, 2004 as comments on the original 2004 draft Basin Plan amendments.

2) Attachment 2 contains a report entitled "Beneficial Use Designation Report for Armagosa Creek, Paiute Ponds, and Rosamond Dry Lake, Addendum to Final Report," dated August 2004. This report was also submitted to the Regional Board staff on August 10, 2004, as part of the comments on the original 2004 draft Basin Plan amendments.

The District requests that the Regional Board staff provide the District with all comments received on the subject documents from other entities. If you have any questions, please call the undersigned at (562) 908-4288, extension 2801.

Very truly yours,

Stephen R. Maguin

Raymond Tremblay
Section Head
Monitoring Section

RT:NM:lmb
Attachments

cc: Chuck Curtis, Regional Board-Tahoe
Mike Plaziak, Regional Board, Victorville

ATTACHMENT 1

COMMENTS ON DRAFT BASIN PLAN AMENDMENTS AND STAFF REPORT

17-0198

COMMENTS ON DRAFT BASIN PLAN AMENDMENTS AND STAFF REPORT

General Comments:

1. Division of Basin Plan Amendments for Ammonia Site-Specific Objectives, the De-Designation of MUN, REC-1, COMM and COLD Beneficial Uses, and Designation of New Beneficial Uses for Purposes of Regional Board, State Board, and Office of Administrative Law Approval Process.

For purposes of the approval process by the Regional Board, State Water Resources Control Board (State Board) and Office of Administrative Law (OAL), the three separate actions being taken by the Regional Board should be segregated, and approved or disapproved as individual agenda items. The adoption of site-specific objectives for ammonia is a separate regulatory action from the designation and de-designation of beneficial uses. The de-designation of the MUN, REC-1, COMM, and COLD beneficial uses is a separate regulatory action from the designation of the FRSH, RARE, BIOL, FLD, and WQE beneficial uses. Each should be separately provided to the Regional Board, State Board, and OAL for purposes of review and approval. Separating the distinct action items may benefit the Regional Board in the future approval/disapproval processes - if the State Board were to remand one of the regulatory actions, the others would remain intact. *See, e.g.*, Water Code §13245.

2. Inappropriate Designation of New Beneficial Uses.

The District believes the designation of the new beneficial uses FRSH, RARE, BIOL, FLD, and WQE, is unwarranted, as these beneficial uses do not exist. Technical arguments on the inapplicability of these beneficial uses are presented below and in the attached report "Beneficial Use Designation Report for Amargosa Creek, Paiute Ponds, and Rosamond Dry Lake," dated August 2004.

3. Ground Water Recharge Beneficial Use.

While the District supports the Regional Board staff's decision to consider de-designation of the GWR beneficial use in the future, the District requests the Regional Board to include the following language in a footnote to the GWR beneficial use included in Table 2-1 of the Basin Plan for all receiving waters: "no new effluent limitations will be imposed for this beneficial use in Waste Discharge Requirements until studies are completed by the District and the Regional Board adopts a new Basin Plan amendment adopting or applying water quality objectives to protect the surface water GWR beneficial use."

4. Application of Criteria Protective of WARM Freshwater Habitat for Amargosa Creek and Paiute Ponds.

The District is not objecting to the designation of the WARM Freshwater Habitat (WARM) beneficial use to Amargosa Creek downstream of the District's discharge and Paiute Ponds and associated wetlands (as defined by the Regional Board). However, the District would like to note that, as discussed in the Regional Board Staff Report, a very limited array of aquatic species exist in Amargosa Creek and Paiute Ponds. For this reason, the District requests that when taking permitting actions, the Regional Board apply only those criteria necessary for protection of these species, or alternatively, adjust criteria developed based on more sensitive species to reflect the actual sensitivities of the species that are present in the receiving waters at issue here.

5. Use of Effluent and Ambient Water Quality for De-Designation and Designation of Specific Beneficial Uses.

Effluent and ambient water quality is irrelevant to the retention of the AGR beneficial use to Amargosa Creek and Paiute Ponds, the de-designation of the COMM and COLD uses for all receiving waters, and the designation of the FRSH, RARE, BIOL, FLD, and WQE beneficial uses to various receiving waters. Even if the Regional Board is using the federal beneficial use designation scheme set forth in 40 C.F.R. §131.10 as guidance for designating and de-designating beneficial uses, the only instance where water quality is relevant is where the Regional Board seeks to de-designate a non-existent beneficial use and must establish that attaining the beneficial use is not feasible because "naturally occurring pollutant concentrations prevent the attainment of the use," or "human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place." *See* 40 C.F.R. §131.10(g). This is not the case here.

In the present case, the de-designation of the COMM use is not related to water quality, but rather, is based on the lack of natural fish species in the area. The designation of the FRSH, RARE, BIOL, FLD, and WQE beneficial uses is also not related to water quality. The Regional Board staff's decision to retain the AGR beneficial use is unrelated to water quality, and is instead based on a past, informal communication between the District and Regional Board staff regarding various options the District may consider (but have no current plans to) to maintain water quality in Paiute Ponds. Finally, the retention of the WARM use and the de-designation of the COLD use are related solely to temperature, not levels of dissolved oxygen or pH in the waters. For this reason, the Regional Board should remove tables 9, and 11-14 from the Staff Report as irrelevant to the designation or de-designation of beneficial uses. Alternatively, if the Regional Board retains Tables 9 and 11-14, the Staff Report should reference that the Regional Board intended to depend upon an "Ecological Benefits Comparison" approach when developing beneficial uses and explain the basis and rationale for the "Ecological Benefits Comparison" approach. Note, Tables 11, 12, 14 also contain several errors as described under Specific Comments below.

6. Use of Federal Criteria for Purposes of Determining Ambient Water Quality and Future Permitting Actions.

In assessing the water quality of Paiute Ponds, Amargosa Creek, and Rosamond Dry Lake, the Regional Board compares ambient data to the California Toxics Rule (CTR), and the National Toxics Rule (NTR). Comparison of the Districts' data to the CTR and/or NTR is inappropriate, as the Regional Board properly acknowledged that these regulations apply only to waters of the United States. *See* Staff Report pages 7 and 8; 40 C.F.R. §§131.36 and 131.38. The U.S. Army Corps of Engineers and the Regional Board have already acknowledged that Paiute Ponds, Amargosa Creek, and Rosamond Dry Lake are not "waters of the U.S." Furthermore, the Basin Plan does not include the CTR or NTR in its list of federal and state guidance documents used to "interpret" the Basin Plan's narrative water quality objectives. *See* Basin Plan at 3-15.

7. Water Quality Standards Determination Process.

Currently the document is titled "Revised Water Quality Standards for Surface Waters of the Antelope Hydrographic Unit;" however, for nearly all of the newly added beneficial uses described, there are no corresponding water quality objectives identified to protect the uses. Without criteria or objectives based upon the beneficial uses, the document is not truly revising water quality standards. *See accord* 40 C.F.R. § 131.3(i)(describing water quality standards as provisions of state law consisting of a designated use and the water quality criteria for such waters based upon the use). Since the term "water quality standard" is not defined under state law, one can only assume

that the term is being used as defined under federal law. Therefore, the document should be revised to do one of the following: 1) rename the document as "Revised Beneficial Use Designations for Surface Waters of the Antelope Hydrographic Unit and Site Specific Objectives For Ammonia" or 2) specifically identify the water quality objectives that might apply to each existing or newly added beneficial use and include the requisite Water Code Section 13241 analysis and Section 13242 program of implementation for each of these new water quality standards.

8. Amargosa Creek, Paiute Ponds, Paiute Pond Wetlands, and Rosamond Dry Lake are Effluent Dominated Water Bodies, and Special Consideration Should be Provided By the Regional Board When Setting Water Quality Standards.

Amargosa Creek downstream of the District's discharge, Paiute Ponds, and Rosamond Dry Lake are effluent dominated water bodies, meaning that regulation generally applicable to water bodies with truly "natural" conditions should not be automatically applied to these water bodies. When considering the promulgation of water quality standards, preparation or necessity of site-specific objectives, and in requiring potentially costly studies and monitoring, the Regional Board should recognize the unique nature of the receiving waters.

Specific Comments

1. Page 8: The District disagrees that Amargosa Creek, Paiute Ponds and the associated wetlands, and Rosamond Dry Lake have designated beneficial uses under the categories of "Minor Surface Waters" and "Minor Wetlands" of the Antelope Hydrologic Unit (HU No. 626.00) and the Lancaster Hydrologic Area (HA No. 626.50). The Water Quality Control Plan for the Lahontan Region (Basin Plan) specifically discusses the appropriate beneficial uses of waters to which the Lancaster WRP discharge. The 1994 Basin Plan states: "Paiute Ponds is a marsh-like area that is located on Edwards Air Force Base (AFB) property and is used for duck hunting and wildlife viewing as well as wastewater disposal." (Page 4.4-12) Thus, the Basin Plan provides a specific description of the beneficial uses of Paiute Ponds, and the general BUs applied region-wide through the minor surface waters designation do not apply to the Lancaster WRP receiving waters.

2. Page 12: Regional Board staff states, "The evaporation rate (about 114 inches per year) greatly exceeds annual precipitation..." This estimated evaporation rate exceeds actual values and is likely data from a U.S. National Weather Service Class A pan gauge. This data is typically multiplied by a factor called a pan coefficient to reflect the fact that evaporation would likely be lower in a large body of water. Literature values for the pan coefficient range between 0.6 and 0.8. The District typically estimates evaporation using a coefficient of 0.7. For 114 inches measured on a Class A gauge, this would generate an estimated evaporation rate of 80 inches per year.

3. Page 15: In the second full paragraph, the following sentence should read: "Some of the secondary effluent is ~~disposed~~ reused/recycled at the Nebeker Ranch for irrigation of alfalfa."

4. Page 19: The Staff Report cites Orme (2004), which estimated the reach of Amargosa Creek that is affected by the discharge is 0.6 miles. The District estimates the distance between the discharge point at Amargosa Creek to the overflow location to Rosamond Dry Lake to be 1.5 miles.

5. Page 19: The Regional Board staff's basis for delineating between Paiute Ponds and Paiute Ponds Wetlands in Table 2-1 of the Basin Plan is unclear. The District requests that the Regional Board provide the basis (including any studies or other documents) for the Regional Board's decision.

6. Page 20: The Regional Board states that overflows from Paiute Ponds to Rosamond Dry Lake occur for up to nine months of the year. However, the interim agreement, which is reauthorized *annually*, between Edwards Air Force Base (EAFB) and the District allows for overflows to occur between November and April only (which amounts only to six months of the year), and historically, during many years, Paiute Ponds had the capacity to prevent overflows, except during storm events. Furthermore, on page 21, the Regional Board cites a U.S. Army Corps of Engineers study that found that playas on EAFB, which includes Rosamond Dry Lake, are estimated to have ponded with a frequency of 0.51, or every other year between 1942 and 2001. This finding seems to contradict with the earlier statement that Rosamond Dry Lake receives overflow from Paiute Ponds nine months out of every year.

7. Page 20: The Regional Board references the fact that overflow from Paiute Ponds to Rosamond Dry Lake are a "risk to aircraft landings." This statement seems to contradict the Regional Board's earlier statement on page 12 of the Staff Report that "Rosamond Dry Lake and the surrounding area are relatively undisturbed." Since the EAFB's intent to continue using Rosamond Dry Lake as a landing strip is the primary reason that EAFB has requested the cessation of overflows from Paiute Pond, the Regional Board should remove reference to Rosamond Dry Lake as a "relatively undisturbed" area.

8. Page 21: The statement that Rosamond Dry Lake is a hard playa "with little or no accumulation of evaporite salts" does not seem to be supported by the data provided in the Staff Report. *See* Staff Report at Table 7, demonstrating that Rosamond Dry Lake has very high levels of chloride, TDS, and other salt-related constituents. Thus, the words "little or no" should be removed and replaced by "some." Furthermore, the reference cited in the staff report pertains to playa surfaces in general on Edwards Air Force Base property and does not reflect the specific conditions on Rosamond Dry Lake which experiences seasonal flooding.

9. Page 23-24: To ensure consistency with 40 C.F.R. §131.10(h) (2), the second sentence of the first full paragraph should be revised as follows: "Beneficial uses also cannot be removed if they can be attained by implementing effluent limits required under sections 301(b) and 306 of the Clean Water Act [33 U.S.C. §§131 Kb) and 13161 and by implementing ~~for point sources of~~ cost effective and reasonable best management practices for nonpoint sources control."

10. Page 24: In describing California's beneficial use definitions/process, the Regional Board disregards several key provisions in the Water Code. Thus, the third full paragraph should be revised as follows:

"California's beneficial use definitions are broad; however, the Legislature has provided clear direction as to the extent to which beneficial uses need be protected. Water Code section 13000 states that "activities and factors which may affect the quality of the waters of the state shall be regulated to attain the highest water quality which is *reasonable*, considering all demands being made and to be made on those waters and the total values involved, beneficial and detrimental, economic and social, tangible and intangible." Further. Water Code section 13241 states that "[e]ach regional board shall establish such water quality objectives in water quality control plans as in its judgment will ensure the reasonable protection of beneficial uses and the prevention of nuisance; however, it is recognized that it may be possible for the quality of water to be changed to some degree without unreasonably affecting beneficial uses." ~~Although the Clean Water Act slogan refers to "fishable/swimmable" goals, the aquatic life uses include all types of aquatic plants, animals, and microorganisms as well as fish.~~ The Basin Plan (pages 2-3 to 2-4) recognizes that uses that did not exist, do not exist, and will not exist in the foreseeable future will not be required to be protected, and that some beneficial uses of surface water may occur only temporarily, but the Basin Plan does not specifically designate seasonal uses."

11. Page 24: The Regional Board staff states that "the Lahontan Basin Plan does not explicitly associate specific narrative or numeric water quality objectives with protection of beneficial uses. Many objectives are protective of multiple uses." The District questions this disjointed regulatory structure. Both federal and state law require that water quality objectives/criteria be adopted to specifically apply to a beneficial use, and are deemed to provide reasonable protection of the identified beneficial use(s). *See* Water Code §13050(h)("water quality objectives" are the limits established for the reasonable protection of beneficial uses of water); §13241 (each Regional Board to establish objectives in water quality control plans to ensure the reasonable protection of beneficial uses); 33 U.S.C. §1313(b)(2)(A)(revised or new water quality standard shall consist of the designated uses of the navigable waters involved and water quality criteria based upon such uses); 40 C.F.R. §131.3(i). For clarification, and because the permitting process is not the proper place to create water quality standards, the specific water quality objectives applicable to each beneficial use applicable to Amargosa Creek, Paiute Ponds, and Rosamond Dry Lake as a result of the Regional Board's regulatory action should be specified in the Staff Report to provide clarity in regulation and avoid conflict in the future over what are deemed applicable water quality objectives.

12. Page 24: The Regional Board staff states, "For example, numeric objectives for nutrients (particularly those for Sierra Nevada lakes and streams) are generally based on historical background quality. By preserving initially high water quality, numeric nutrient objectives maintain aquatic life, wildlife, and human recreational uses of water." The Regional Board staff should note that because Amargosa Creek, Paiute Ponds, and Rosamond Dry Lake are effluent-dominated water bodies, there is no "historical background quality" upon which to perform an anti-degradation or similar type analysis, and such analysis would not be reliable for purposes of current or future permitting actions. *See, accord,* Staff Report at page 42 ("As artificial water bodies, the Paiute Ponds and wetlands do not have "natural" background temperatures, and there are no comparable waters in the HU that could serve to define "reference" conditions").

13. Page 25: The second paragraph states "...ambient water quality will continue to be influenced by constituents of secondary effluent (e.g. phosphorous) that are stored in and may be released from the sediment.." The extent to which discharged constituents stored in the soil affect the Paiute Ponds water quality is somewhat unknown especially in relation to the effects of native constituents resulting from playa deposits. The District requests the above sentence be revised as such: "..ambient water quality ~~will continue to~~ may be influenced by constituents ~~of secondary in the effluent (e.g. phosphorous)~~ that are stored in and may be released from the sediment.." The statement, as is, also appears to be contradictory to the WQE beneficial use designation of Paiute Ponds Wetlands.

14. Page 26: The document currently states that "Ground waters of the Antelope Valley are also designated for the MUN use." Regional Board staff should clarify whether all waters are so designated or whether some waters cannot be so designated pursuant to the exceptions (for water quality concerns or other reasons) enunciated in Res. 88-63 and ostensibly incorporated into the Basin Plan in 1989.
In addition, the Regional Board's document should include additional text or at least a footnote after the sentence discussing Resolution 88-63 stating the following:

"On May 17, 1989, the Office of Administrative Law ("OAL") issued Determination No. 8, "In re: Request for Regulatory Determination filed by Blackwell Land Company, Inc.," concerning the SWRCB's Resolution No. 88-63. In this determination, the OAL found that the provisions of Res. No. 88-63 were "regulations," were subject to the requirements of the California Administrative Procedures Act (APA); were not adopted pursuant to the requirements of the APA; and, therefore, violated Government Code §11347.5(a). The OAL's decision thereby rendered Res. No. 88-63 an illegal and unenforceable Resolution."

15. Page 28, Comparison of Ambient Water Quality to Sodium value for Hypertensive Population: The Regional Board is comparing ambient water quality to the "USEPA Health Advisory value of 20 mg/L sodium in drinking water for persons who should restrict their sodium intake to prevent high blood pressure (hypertension)." First, the USEPA Health Advisory value is not a water quality standard and should not be used to assess water quality conditions. Second, the Regional Board's reasonable protection of beneficial uses (as enunciated in Water Code sections 13000 and 13241) should not extend so far as to compare surface water quality to informal guidance "criteria" associated with a small percentage of the population's health ailments that may be completely unrelated to uses occurring in the receiving waters (*i.e.*, MUN) and ambient water quality.

16. Page 28: Several changes need to be made to the text on this page and on pages 42 and 54:

A) For clarification, change the first sentence of the first full paragraph to read as follows:

"There have historically been two exceedances ~~multiple violations~~ of drinking water MCLs (iron and manganese which are secondary) ~~and other human criteria~~ at all of LACSD No. 14's ambient monitoring stations, and of other human health criteria, particularly in the RS4 and RS5 monitoring stations (see Tables 7 and 8)."

Table 7 demonstrates that only iron and manganese are exceeded at all receiving water monitoring stations, even those upstream of the LACSD discharge. A similar change needs to be made on page 42, as follows: "As discussed for the MUN use above, exceedances of drinking water MCLs for ~~a variety of~~ two chemical constituents occur at all of LACSD No. 14's ambient water monitoring stations (see Table 8)."

B) The Regional Board should refrain from characterizing the comparison between ambient water quality data and various non-regulatory water quality criteria as "violations" when the ambient water quality is greater than the "criteria" to which it is compared. The term "violation" should only be used in conjunction with discussion of actual effluent limitation requirements set forth in a permit issued to the District, as this word carries with it a particular meaning in terms of enforceability and liability. Instead, in this first sentence of the first full paragraph on page 28, the Regional Board should use the term "exceedance." A singular (or even multiple) exceedance of various criteria does not necessitate a determination that there is a "violation" of an applicable water quality objective. Thus, "violation" should be replaced with "exceedance" as was done by the Regional Board in Table 8's caption and on pages 28 ("In addition to the criteria exceedances..."), page 35 ("One or more goals are exceeded at each station..."); *see also* pages 60, 62, 66.

See also other pages using "violation" that should be changed - page 42 ("As discussed for the MUN use above, ~~violations~~ exceedances of drinking water MCLs..." and "Nevertheless, the MCL ~~violations~~ exceedances..."); and page 54 ("Table 13 shows ~~violations~~ exceedances of a number of USEPA aquatic life criteria).

C) The second and third sentences in the first full paragraph of text following number 2, should be revised as follows:

"The major source of some chemical constituents such as ~~aluminum and~~ chloroform ~~probably~~ may be the wastewater treatment process. Other constituents such as aluminum, arsenic, chloride, iron, manganese, sulfate, and TDS are probably from natural sources, including chemicals dissolved from former playa lakebed soils beneath the ponds and concentration through evaporation."

The tables referenced do not conclusively demonstrate that aluminum concentrations must be attributed to discharges from the District's treatment facility. Table 7 shows aluminum as non-detect (ND) in the effluent. Only the values at RS4 and RS5 exceed the primary MCL of 1000 ug/L that should be listed in Table 7, arsenic and the other constituents added to the sentence above show high levels in the upstream RS1 station and are likely naturally-occurring and concentrating in the system.

D) The Regional Board staff states, "A public health study of EAFB by the federal Agency for Toxic Substances and Disease Registry (2003) cites an ambient thallium level of 18 parts per billion (micrograms per liter) in Paiute Ponds; this is significantly higher than the current MCL of 2 micrograms per liter. Thallium is used in the aerospace industry, and the thallium in the ponds may have come from past industrial wastewater discharges, or from atmospheric deposition from industrial sources in the region." This discussion on thalium levels is based on one sample taken at an unknown location and erroneously reported in Table 11 to be from RS2. District measurements at all effluent and receiving water locations which were left off of Table 11 indicate that Thallium was not found in detectable amounts anywhere in the Paiute Ponds, Amargosa Creek and Rosamond Dry Lake.

17. Page 29 (MUN): For clarification, the first paragraph after section 3 should be amended as follows: "The Paiute Ponds were created by the modification of Amargosa Creek to collect treated wastewater and prevent it from ponding on Rosamond Dry Lake. While the ponds and wetlands were not specifically designed as "treatment wetlands," they may provide some additional treatment..."

The Regional Board staff should qualify this statement to reflect actual data. Attenuation of total nitrogen and some metals (zinc, copper) seems to take place when comparing RS2 and RS4 data but levels of other metals (arsenic) and salts increases significantly. Therefore, there is no justification for stating that additional treatment is taking place.

18. Pages 32-33 - MCLs Are Not Intended to Apply to Surface Water Discharges: The Regional Board references primary and secondary MCLs contained in Title 22 of the California Code of Regulations in Tables 7 and 8, but does not acknowledge that these drinking water criteria, as well as Action Levels and Public Health Goals, were intended only to apply to drinking water treatment facilities at the tap or point-of-use, not as ambient water quality objectives or as "end-of-pipe" effluent limitations for wastewater treatment facilities. *See* 22 C.C.R. §§64431 and 64444. The Regional Board also does not acknowledge that MCLs are intended to be applied as long term *(e.g.,* 12-month) averages, not instantaneous maximums. *See* 22 C.C.R. §64432. These important factual caveats should be referenced when comparing long-term average values to what are presumed to be single sample ambient water data.

19. Page 32, Table 7:

A) This table should specify whether the MCLs listed are primary MCLs or secondary MCLs.

B) Constituents lacking MCLs *(e.g.,* acrolein, chloroform, and lead) should be removed from this table.

C) The data included in this table should be consistent with the data in Table 6.

D) The text should recognize that the effluent in every case is below the listed MCL.

E) The RS1 sampling point upstream from the District's discharge is comprised of storm water. The direct application of federal numeric water quality criteria to storm water flows is inappropriate. *See, e.g.*, 33 U.S.C. §1342(p)(3)(B).

20. Page 33, Table 8:

A) The title of this table should be "Exceedances of Human Health Criteria Guidance at LACSD No. 14 Ambient Monitoring Stations." The Table should also include a footnote stating that the criteria values listed have not been formally adopted by the Regional Board as numeric water quality objectives, may not be applicable to "waters of the state," and are being used for general water quality comparison purposes only.

B) This Table (as with all tables) should identify the type of sample taken (grab versus composite) and which term is associated with the value. For example, many of the criteria listed are long-term annual average values set to protect a 70 kg person for 70 years of exposure drinking 2 liters of water from this source daily. This background is important and should be footnoted in the table. Similarly, the ambient value should specify if it represents the single highest value registered or if the value represents the average of the entire range of data. As it stands, the comparison seems like one of apples and oranges and the reader is not aware of the background information necessary to accurately compare the two values.

C) The table should include detection values, which often are lower than the criteria listed. The table should also include all MCLs (primary and secondary, where available) and informal criteria, not just the lowest, to show that there are a variety of informal and formal criteria to compare to the ambient water quality. The Regional Board should also note that many of the reference values cited are outdated *(e.g.,* 1976 304(a) criteria guidance) or are currently under review *(e.g.,* chloroform criteria guidance).

21. Page 34 (AGR): *See* comments herein discussing applicability of AGR beneficial use. For the reasons stated therein, the Regional Board should make the following changes:

A) In the paragraph regarding "Current Application," the Regional Board should specify that "It is thus a categorically designated use of Amargosa Creek..."

B) Because AGR is not a past, present or probable future use of Paiute Ponds, and Amargosa Creek downstream of LACSD No. 14's discharge, AGR should be removed.

22. Page 34 (AGR): It should be noted that the use of effluent for irrigation of alfalfa comes directly from the treatment plant, not from Paiute Ponds. Insertion of the word "direct" before the reference to "irrigation of alfalfa at the Nebeker Ranch" would clarify this fact. In addition, the fact that one or more of the agricultural water quality goals mentioned in the Staff Report are exceeded at each station, not just on Rosamond Dry Lake, would justify not designating AGR as a use. Finally, the Regional Board's discussion of "cattle ranching" being important in the "Leona Valley in the mid-19th century" is irrelevant for purposes of designating an AGR beneficial use for Amargosa Creek and the Paiute Ponds and wetlands. First, the Leona Valley is approximately fifteen (15) miles upstream of the District's discharge and separated from the Lancaster WRP receiving waters by numerous flood control structures, and therefore should not be relied upon as a basis for designations in these receiving waters. Second, even if an AGR beneficial use occurred in the 19th century, if that use was not existing as of 1968 (the date the Regional Board is using for purposes of determining an "existing use") or anytime after that date, the AGR beneficial use does not exist for purposes of the Basin Plan and permitting actions.

23. Page 34 (AGR): The same rationale used by the Regional Board to de-designate the MUN and REC-1 beneficial uses equally applies to de-designate the AGR beneficial use for Paiute Ponds and Amargosa Creek downstream of the District's discharge. No past[1], existing[2] or future probable AGR beneficial use exists in Amargosa Creek downstream of the District's discharge or Paiute Ponds, and the water quality conditions in Paiute Ponds does not support an unrestricted AGR beneficial use.

There is no current plan to provide agricultural users with ambient water in Paiute Ponds. Ambient water from Paiute Ponds is not suitable as irrigation water for agricultural uses due to salt levels and the presence of organic matter. Any water removed from Paiute Ponds and used for irrigation would have to be treated (salt removal and filtration of organic material) or blended with plant effluent to make it suitable for irrigation. Since the ambient water in-situ must be treated before used for agriculture, it is not an appropriate beneficial use. This would be the equivalent of placing a MUN beneficial use on ocean water because it may be desalinated for use in the public water supply. Furthermore, agricultural users cannot independently appropriate water from Paiute Ponds for purposes of agricultural irrigation.

Alternatively, if the Regional Board continues to designate Amargosa Creek downstream of the District's discharge and Paiute Ponds with an AGR beneficial use, at the very least, the District requests that the AGR beneficial use be more narrowly defined for these receiving waters, to exclude crops which may exhibit sensitivity to Paiute Ponds water quality (such as salt sensitivity) and livestock watering from inclusion in the use.

24. Page 36, Table 9: The ambient concentrations used in this table are not consistent with the values listed in Tables 4 and 7. All values used in Tables in the Staff Report should be internally consistent. Furthermore, UN Food and Agricultural Goals are not properly adopted water quality standards and should not be used for assessing water quality for purposes of regulation under the Porter-Cologne Water Quality Control Act.

25. Page 37 (GWR): To correspond to the requirements of the Water Code and a recent precedential decision by the State Board regarding the imposition of effluent limitations to protect the GWR beneficial use, the following sentence should be amended as shown:

"Designation of the GWR use for surface waters implies (1) that ground water recharge from surface sources occurs, and (2) that surface water quality should be reasonably protected so ~~that no adverse impacts on~~ ground water quality and beneficial uses ~~occur~~ are not unreasonably affected as a result of recharge. *See accord* Water Code §13000, §13050(h), §13050(*l*)(1), §13241; *see also* State Board Order WQO 2003-0013."

26. Page 38 (FRSH): The FRSH beneficial use is defined in the Basin Plan as "beneficial uses of waters used for natural or artificial maintenance of surface water quantity or quality." *See* Basin Plan at 2-1. By its very definition, neither Amargosa Creek nor Paiute Ponds possess a FRSH beneficial use. Both Paiute Ponds and Rosamond Dry Lake would be dry during most of the year without the

[1] The document states that "there is no definite information available on the historic or existing use of the creek for irrigation or stock watering..." The District has aerial photographs from the 1960's, which demonstrates no agricultural use from that time.

[2] The District's current practice with respect to providing reclaimed water to agricultural users is to provide the recycled water directly from the Lancaster WRP (either directly from plant or storage). Thus, the water currently provided for agricultural use is never discharged into Amargosa Creek or the Paiute Ponds system, and is governed by Title 22, not the Porter-Cologne Water Quality Control Act and/or Clean Water Act's water quality standards program. The District has no plans to pump water directly from Paiute Ponds for agricultural reuse.

District's discharge; therefore, the District's discharge to Amargosa Creek or Paiute Ponds cannot be considered "maintenance" of surface water quality or quantity, as neither Paiute Ponds, Paiute Pond Wetlands, nor Rosamond Dry Lake possess a natural surface water quality or quantity. For this reason, the FRSH beneficial use should be removed from Table 2-1 for Amargosa Creek, Paiute Ponds and Paiute Pond Wetlands.

27. Page 42: In the third full paragraph, the Regional Board should revise the following sentence: "During the duck hunting season as an added measure of caution which is not required in the by Department of Public Health, LACSD No. 14 ~~routinely~~ disinfects the water discharged to lower Amargosa Creek and Paiute Ponds to meet Title 22 secondary-2.2 requirements, ~~and increases the level of disinfection during the duck hunting season.~~

28. Page 48. Table 11: The title of this table should be amended to state: "LACSD No. 14 Monitoring Data Compared to Human ~~Fish Consumption Criteria~~ Health Criteria Guidance." Because the table includes both human health criteria guidance from the National Toxics Rule and EPA 304(a) guidance criteria for both drinking water and organism consumption, and for organism consumption only, the current title is too narrow. Further, this table does not recognize that the criteria included therein are merely guidance numbers, not numeric water quality objectives adopted by the Regional Board. Finally, the entries in Table 10 for manganese do not match their referenced source. Manganese levels of 1,089, 113, 81, 210, and 295 should be inserted for the existing entries for monitoring station nos. RS1, RS2, RS3, RS4, and RS5 respectively. Also, the Thallium level reported in the Table was from an unknown location and reported as RS2 data. The CDM (2003) reference contained thallium data for all sampling locations which were below detectable levels.

29. Page 47: The Regional Board should refrain from designating Rosamond Dry Lake as WARM in addition to the proposed new designation of an inland saline waters habitat (SAL) beneficial use. Warm fresh water habitat cannot also be saline. At most, the WARM use could be designated as intermittent, with the ultimate goal of no overflows and no WARM use. There are several justifications for not designating the WARM beneficial use for Rosamond Dry Lake as discussed below.

    A) Pursuant to federal law (in absence of state law guidance), if a beneficial use is merely intermittent, and natural, ephemeral, intermittent or low flow conditions or water levels prevent the attainment of the use, then the designation of this use is not feasible, or de-designation is proper. *See accord* 40 C.F.R. §131.10(g)(2).

    B) If designating the WARM beneficial use might require attainment of the use year-round - *i.e.*, maintaining enough dilute water on Rosamond Dry Lake for this use to exist – then justification exists to not encourage the maintenance of this use. At this time, the Regional Board is prohibiting discharge induced overflows from Paiute Ponds to Rosamond Dry Lake. Thus, the justification in 40 C.F.R. § 131.10(g)(3)(would cause more damage to correct) provides additional reasoning for de-designation of this use.

    C) The dams, diversions and other hydrological modifications associated with Paiute Ponds would preclude the full attainment of the WARM use on Rosamond Dry Lake. Therefore, the Regional Board could rely upon the justification in 40 C.F.R. §131.10(g)(4) to de-designate or not designate this use.

    D) In addition, physical conditions such as a lack of cover, flow and depth would preclude attainment of a viable WARM use and pursuant to 40 C.F.R. §131.10(g)(5) de-designation of this use is warranted.

In sum, the WARM beneficial use should be removed from Table 2-1 for Rosamond Dry Lake. Alternatively, at most, the WARM beneficial use for Rosamond Dry Lake should be set as seasonal or intermittent.

30. Page 52: Table 12 contains several errors when compared to the referenced source. Data for pH reported in the table should be corrected as follows:

Effluent:	Range	7.8-9.5, Mean 8.5
RS2:	Range	7.3-9.4, Mean 8.1
RS4:	Mean	8.8

31. Pages 53: The basis for statements regarding eutrophication are based on USEPA 1999 which references a document published in 1980 (Vollenweider, R.A. and J.J. Kerekes. 1980. *Background and summary results of the OECD cooperative program on eutrophication. In International Symposium on Inland Waters and Lake Restoration.* EPA 440/5-81-010. USEPA, Washington DC). This document cautions the use of an established classification system for comparative purposes: " Ideally, observed water quality values can be compared to these established classification systems to determine the trophic status of any particular waterbody. (This comparison assumes, of course, that trophic status can link directly to use impairment. For instance, many reservoirs in the southeastern United States are naturally borderline eutrophic). Note that much of the work conducted on trophic status classification systems has focused on northern, temperate lakes. Applying these systems to lakes in other regions, rivers, streams or reservoirs must therefore be done carefully." The applicability of the "eutrophication scale" to Paiute Ponds is unknown. Moreover, given that Paiute Ponds are shallow, effluent-dependent, created water bodies in a hot climate, the classification scheme published in USEPA 1999 likely provides an irrelevant comparison.

32. Page 54 (Toxicity) The Regional Board's citation to a public health study of EAFB by the federal Agency for Toxic Substances and Disease Registry (2003) does not provide any information on whether the rate of abnormalities referenced (5 of 50 or 10%) is typical or atypical. The underlying source of the quote is USGS 1996 (Trip Report, Edwards Air Force Base, 19-21 December 1996. Prepared by John J. Crayon, Biological Technician, Biological Resources Division, California Science Center), which could not be researched. The source of the second report citing USGS analysis of frog tissue is: USGS 2001. "Contaminant Residues and Their Effects on Reproductive Success of Aquatic Birds Nesting at Edwards Air Force Base: Preliminary Summary and Conclusions." Prepared by Roger L. Hothem, Biological Resources Division, Western Ecological Research Center, Davis Field Station. February 8, 2001. This report also could not be accessed to determine what the actual concentrations of metals and trace elements were and how these concentrations compared to national background contaminant levels. For this reason, the Regional Board should either provide more information to allow the reader to decipher the relative importance of the findings or omit the citation(s) altogether.

33. Page 56, Table 13:

A) The Table should be titled "LACSD No. 14 Monitoring Data Compared To Aquatic Life Criteria Guidance" since none of the criteria included have been adopted as numeric water quality objectives by the Regional Board.

B) The Table should also specify whether the criteria guidance and ambient values are both expressed in total recoverable form, or in dissolved form, so the reader can accurately compare the values.

C) The Table should specify that many of the criteria guidance used are hardness and pH dependent and have not been adjusted for the local hardness and pH values.

D) The Table should state that a Water Effects Ratio may be appropriately applied since the pH is between 6.5 and 9.

E) The chloride guidance criteria should specify that this value only applies to Sodium (Na) chloride.

F) The iron guidance criteria cited is from 1976 and may be outdated for use.

G) The Table compares data for RS1 (Amargosa Creek upstream from the District's discharge, comprised of storm water) with the 4-day average USEPA Freshwater Aquatic Life criterion *(i.e.,* chronic criterion). Given that the ambient data are storm water data, the applicability of the 4-day average criterion is inappropriate. *See* 33 U.S.C. §1342(p)(3)(B). Storm water runoff events in ephemeral streams typically result in only acute exposures, not chronic. Furthermore, the applicability of the EPA 4-day average criterion for aluminum is highly questionable. EPA's national guidance(http://epa.gov/waterscience/standards/wqcriteria.html), which includes the Table 13aluminum criterion, notes that this number may be inappropriate.

34. Page 51: The Regional Board states that no additional water quality objectives or criteria would be applied to Rosamond Dry Lake as a result of the designation of the SAL use. However, as noted above, since the ammonia site-specific objectives do not yet specifically extend to Rosamond Dry Lake, it is possible that saline water quality objectives for ammonia might apply as a result of the newly designated beneficial use, which are more stringent than the existing freshwater water quality ammonia site-specific objectives. For this reason, unless the Regional Board extends the application of the ammonia site-specific objectives to Rosamond Dry Lake, the Regional Board should consider the social, environmental, and economic impacts of the application of more stringent ammonia objectives in Rosamond Dry Lake.

35. Page 62: The last sentence in the third paragraph on page 62 should be removed. This sentence states that: "Antidegradation considerations, *aimed at protecting the natural range of water quality conditions and all beneficial uses,* would apply in Regional Board permitting and enforcement activities for discharges to Rosamond Dry Lake." (emphasis added). This statement contradicts an earlier finding by the Regional Board that: "As artificial water bodies, the Paiute Ponds and wetlands do not have "natural" background temperatures, and there are no comparable waters in the HU that could serve to define "reference" conditions." *See* Page 50. The statement on Page 42 is accurate, there are no "natural" background water quality data upon which to perform an anti-degradation analysis, and anti-degradation should not form the basis for future permit requirements. Therefore, this sentence on page 53 should be removed.

36. Page 62: In the last full paragraph, the statement is made that "Rosamond Dry Lake has probably received much higher loading of salts, nutrients and other constituents such as aluminum from wastewater than it would naturally have received from Amargosa Creek." This statement implies that the sole source of elevated concentrations of certain constituents is the District's discharge itself; it ignores that an important source may be upstream of the discharge. For example, the Staff Report shows aluminum exceeded the EPA chronic aquatic life standard at RS1, but was non-detect in the effluent.

37. Page 63: Table 14 contains two minor errors. The RL2N (North) sample was taken on 3/20/93 and the data listed as RL2N (North) obtained on 1/25/93 should be labeled as RL2S(South).

38. Page 66 (WILD): For clarification, the following sentence should be changed as follows:
"Water samples were within their respective applicable water quality standards or LACSD No. 14 effluent limitations for all contaminants. Only Thallium, whose maximum concentration was 18 ppb, exceeded the CTR human health criteria, but these criteria do not apply to the waters in question. *See* page 6 and sections on MUN, COMM. and REC-1 uses." The District also requests that this statement be footnoted to note that the thallium measurement of 18 ppb was taken in an unknown location and is not consistent with other sample data.
Even if the CTR criteria *were* applicable to the receiving waters, it is important to note that the CTR human health criteria were promulgated based on assumptions for long-term exposure levels, including drinking 2 liters of water and/or eating 6.5 grams of organisms from the water body in question each and every day for 70 years. *See* 65 Fed. Reg. 31693. The Regional Board has the discretion to use different exposures or risk factors to reflect the level of protection necessary for a specific water body or reasonably required to protect the beneficial uses. *See* 65 Fed.Reg. 31699; Water Code §13241(a).

Additionally, the Regional Board should not be applying informal guidance "criteria" for livestock drinking to protect a WILD use, as such "criteria" have not been adopted in the Basin Plan, as required by the Porter-Cologne Water Quality Act, as specifically applicable to protect the unique characteristics of the WILD beneficial use. *See* Water Code §13240-46, and 13263(a).

39. Pages 67-68 (RARE): Per the Basin Plan definition of RARE, the application of this use presumes that the habitat is *"necessary* for the survival and successful maintenance of [the] plant or animal species." Survival means that the water body is necessary for habitat, food, etc., and successful maintenance means the habitat is necessary for the reproduction of the species. Both of these components are required. While the species cited in the discussion, including Table 15, have been observed in or near Paiute Ponds, there is no documentation demonstrating that the Paiute Ponds and wetlands support habitat "necessary for the survival and successful maintenance" of any plant or animal species. Moreover, Paiute Ponds has not been designated critical habitat under federal law for any species, meaning that the federal government has not found that Paiute Ponds is necessary for the survival and successful maintenance of any of the federal threatened or endangered species observed at Paiute Ponds. Paiute Ponds and wetlands are created water bodies - and this fact further negates the argument that these waters are "necessary for the survival and successful maintenance" of any species.

Consistent with previous comments, the last sentence of this section should be amended to recognize the inapplicability of CTR criteria to the waters in question.

"The commitment to develop SSOs was made before the promulgation of the California Toxics Rule, and the toxics criteria in that rule if applicable to these waters might ~~probably~~ provide adequate protection based on current scientific knowledge. However, these criteria do not apply to the waters in question. *See* pages 7, 8, and sections on MUN, COMM, and REC-1 uses."

40. Pages 68-73 (BIOL): Per its definition, the BIOL beneficial use is established on water bodies that: (a) "support designated areas or habitats, such as established refuges, parks, sanctuaries, ecological reserves and Areas of Special Biological Significance" and (b) "where the preservation and enhancement of natural resources requires special protection." Neither of these elements has been fulfilled in a manner that supports the application of this beneficial use to Paiute Ponds and Paiute Ponds wetlands.

The study done by CDM 2003 was developed to identify the ecological benefits of the continued discharge of effluent to Amargosa Creek. Accordingly, it was appropriate to document how the created habitat may benefit a variety of species. However, it is important to consider that Paiute

Ponds and wetlands are not part of the natural aquatic habitat for these species. As such, the Regional Board cannot conclude that the Paiute Ponds and wetlands are necessary for survival or maintenance of any of these species. Furthermore, establishing such areas as "biological habitats of special significance" is contrary to the fact that the habitat is created.

The BIOL beneficial use is to be applied where "the preservation and enhancement of natural resources requires special protection." Paiute Ponds is not a "natural" resource. It is a created effluent-dependent habitat maintained solely for the purpose of wastewater disposal. If the District were to remove its discharge to Amargosa Creek, the Paiute Ponds and wetlands habitat would, for the most part, cease to exist.

The Staff Report states that "portions of the Amargosa Creek watershed and Rosamond Dry Lake have been designated, or are proposed for designation, as special areas in recognition of their ecological importance." The examples provided do not give rise to a BIOL use designation (as the term is defined in the Basin Plan): (i) The Fish and Game Department has recognized the value of the wetlands, but this support has included agreements with Ducks Unlimited to expand the wetlands to create more habitat which may be used by local duck hunters; (ii) the references to Significant Ecological Area designations are proposals only. No formal designation resulting from public input has occurred; (iii) the Audubon Society has certainly recognized Paiute Ponds and Rosamond Dry Lake as important bird areas. However, this designation has been established by a private organization. There has been no formal designation through a public process as would be the norm for establishing refuges, parks, sanctuaries, ecological reserves and Areas of Biological Significance.

41. Page 73-75 (WQE): The Basin Plan defines the WQE beneficial use as "beneficial uses of waters that support natural enhancement or improvement of water quality in or downstream of a water body including, but not limited to, erosion control, filtration and purification of naturally occurring water pollutants, streambank stabilization, maintenance of channel integrity, and siltation control." *See* Basin Plan at 2-2. The Paiute Ponds system does not "naturally enhance" or improve itself or Rosamond Dry Lake (as a "downstream" waterbody). Further, the Paiute Ponds system does not provide, nor is responsible for, erosion control, filtration and purification of naturally occurring water pollutants, streambank stablization, maintenance of channel integrity, and/or siltation control.

The Regional Board's justification for applying the WQE beneficial use fails to include or cite any site-specific data to support the assertion that Paiute Ponds wetlands provide water purification and/or treatment that equates to the "natural enhancement or improvement" of the water quality in Paiute Ponds. In fact, from the data provided in several of the tables set forth in the Staff Report, most notably Table 7, the water quality is not generally improved for many constituents by the presence of the Paiute Ponds wetlands, and the Regional Board has not provided technical justification to prove that such activity is occurring. Thus, the Regional Board staff cannot factually support the designation of the WQE beneficial use to the Paiute Ponds wetlands.

42. Pages 75-76 (FLD): The Regional Board's justification for applying the FLD beneficial use to the Paiute Ponds wetlands fails to include or cite any site-specific data to support the assertion that Paiute Ponds wetlands receive "natural surface drainage and buffer its passage to receiving waters," as is required per the definition of the FLD use in the Basin Plan.

The Basin Plan at 2-5 explains the purpose and intent of the FLD beneficial use as follows:

> "The beneficial use designation of "Flood Peak Attenuation/Flood Water Storage" (FLD) has been added to those riparian wetlands in flood plain areas and other wetlands that receive natural surface drainage and buffer its passage to receiving waters. These waters slow runoff and provide temporary storage of direct precipitation and runoff, serving to reduce the

heights of flood peaks in adjacent receiving waters and lengthen the periods of runoff supplied to them. This form of water storage is vital to a number of other beneficial uses, including agriculture and wildlife."

The Paiute Ponds wetlands are created and exist solely because of the construction of the C-dike in 1961, meant to prevent discharge to Rosamond Dry Lake, not because of wetlands buffering the passage of natural surface drainage. Accordingly, while a natural waterbody might provide the functions described by the FLD beneficial use, the Paiute Ponds and wetlands are operated in a manner that seeks to prevent the passage of surface drainage to downstream waters, not to "buffer" the passage of overflows. Furthermore, neither the C-Dike nor the wetlands which have been newly designated as such by the Regional Board provide any buffer from overflows during storm events or are constructed for the slow release of waters from Paiute Ponds. For these reasons, the FLD beneficial use is not an existing or probable future use and should be removed from Table 2-1 for Paiute Ponds wetlands.

ATTACHMENT 2

BENEFICIAL USE DESIGNATION REPORT FOR ARMAGOSA CREEK, PAIUTE PONDS, AND ROSAMOND DRY LAKE, ADDENDUM TO FINAL REPORT, AUGUST 2004

17-0214

CDM

County Sanitation Districts of Los Angeles County

Beneficial Use Designation Report for Amargosa Creek, Paiute Ponds, and Rosamond Dry Lake

August 2004

Addendum to Final Report

17-0215

Beneficial Use Designation Report for Amargosa Creek, Paiute Ponds, and Rosamond Dry Lake Addendum

1.0 Introduction

In 2003, CDM prepared the report, *Beneficial Use Designation Report for Amargosa Creek, Paiute Ponds and Rosamond Dry Lake (Beneficial Use Report)*, for the Los Angeles County Sanitation Districts. The report provided recommendations for the establishment of specific beneficial uses for three water bodies: Amargosa Creek, downstream of the Lancaster Water Reclamation Plant (WRP) discharge, Paiute Ponds and Rosamond Dry Lake ("Paiute Ponds Ecosystem"). The findings from this report were intended to support changes to the existing Lahontan Region Basin Plan, which currently includes these water bodies under the general category of "Minor Surface Waters" (see Basin Plan, Table 2-1, HU 626.50, Lancaster Hydrologic Area) with the following designated uses: Municipal and Domestic Supply (MUN), Agricultural Supply (AGR), Ground Water Recharge (GWR), Water Contact Recreation (REC-1), Non-Contact Water Recreation (REC-2), Warm Freshwater Habitat (WARM) and Wildlife Habitat (WILD). Based on the report, three beneficial uses were recommended for adoption on the above listed water bodies: WARM, REC-2, and WILD.

After Lahontan Regional Water Quality Control Board (LRWQCB or "Regional Board") review of the *Beneficial Use Report*, Regional Board staff identified several other potentially applicable beneficial uses: Preservation of Biological Habitats of Special Significance (BIOL), Flood Peak Attenuation/Flood Water Storage (FLD), Freshwater Replenishment (FRSH), Rare, Threatened, or Endangered Species (RARE), Inland Saline Water Habitat (SAL), Water Quality Enhancement (WQE). None of these beneficial uses was included in the existing Minor Surface Waters designation. In addition, the Regional Board suggested that AGR, which is included in the existing Minor Surface Waters designation, should be retained as a beneficial use.

To support discussions between the Regional Board and the District regarding the applicability of these beneficial uses, CDM prepared this addendum to the previously prepared *Beneficial Use Report*. Information provided was developed through a review of available files at the Lahontan Regional Board South Lake Tahoe Office, adopted Basin Plans from all California regions, the Regional Board preliminary draft technical staff report, *Revised Water Quality Standards for Surface Waters of the Antelope Hydrologic Unit (May 2004)* ("Technical Staff Report"), and data provided by LACSD.

2.0 Beneficial Use Evaluation

2.1 Development of Statewide Beneficial Use Definitions

Based on a review of Lahontan Regional Board files (obtained from the South Lake Tahoe Office), an effort was begun in spring 1992 (exact date uncertain) to conduct a statewide comprehensive review and revision of beneficial use definitions. The

review committee, consisting of representatives of the various Regional Boards, was coordinated by the Los Angeles Regional Board. The purpose was to establish a common set of definitions for use by all regions:

> The goal was to develop definitions that were clear, specific enough to be all inclusive, yet general enough to allow for Regional Board flexibility in interpreting them for regional-specific needs...Even though a lot of the definitions have become more detailed, they are still general enough to allow for Regional flexibility in interpretation. We understand that Regional Boards also have the option of developing subcategories of beneficial uses if they choose. This will add even more flexibility for the Regions without compromising the consistency that we require for the standard list of definitions for all State and Regional Plans (Memorandum, Executive Officer of Region 4 to the Executive Director of the State Water Resources Control Board, November 20, 1992).

The review committee conducted its work over about an 8-month period and submitted its finding to the Executive Officers of the Regional Boards. The Executive officers had several substantive concerns with the proposed definitions, which are documented in a definitions version dated January 9, 1993. One of these concerns involved the extension of definitions to habitat-related factors:

> The Executive Officers were also concerned that because the definitions are being related to habitat preservation and maintenance, the definitions could be interpreted to apply to non-water quality related actions (e.g., drainage of wetlands, riparian vegetation removal). They felt these activities should be the responsibility of other agencies, such as the California Department of Fish and Game or the U.S. Fish and Wildlife Service, and should not be included in the beneficial use definitions (January 9, 1993).

In March 1993, the Executive Officers identified another major concern involving the proposed Wetland (WET) beneficial use. This concern led to the deletion of the proposed WET use and establishment of a proposed Water Quality Enhancement (WQE) use (see additional discussion below).

The actual date of adoption of the final beneficial use definitions is unknown. Based on the file search the last dated document showing proposed definitions is dated April 9, 1993. The Lahontan Regional Board's last Basin Plan update (October 1994) includes these proposed definitions; therefore it can be assumed that final definitions were approved during 1993, likely in summer 1993. A general review of Regional Basin Plans finds that the new statewide definitions have not been uniformly applied. For example, the Lahontan Region is the only region that has incorporated the WQE

use. Moreover, the FLD use, which was included in the statewide beneficial use definitions, is an accepted beneficial use only in the Lahontan Region.

2.2 Development of Beneficial Uses in the Lahontan Regional Board Basin Plan

The Lahontan Regional Board was developing revisions to its beneficial use definitions as early as 1988, prior to a statewide effort to develop a comprehensive, consistent list of potential beneficial uses. At that time, the Lahontan Regional Board proposed to add the BIOL use and a Wetlands (WTLD) use. The planned revisions would occur at the same time that the North and South Lahontan Basin Plans would be consolidated into a single Lahontan Region Basin Plan.

The 1988 proposal to rewrite and consolidate the Basin Plans included a listing of the existing beneficial uses at that time. At that time, the beneficial uses for different hydrologic areas within Antelope Valley (Area Code 626.000) had not been broken out under separate listings. The beneficial uses for all minor streams (defined as intermittent and ephemeral streams) in Antelope Valley were AGR, GWR, REC-1, REC-2, COLD, and WILD. The 1988 planned rewrite proposed to add MUN to this list of beneficial uses.

An undated table obtained from the Regional Board files (titled, "Appendix C, Beneficial Use Table, As Adopted by the Lahontan Board") has the Antelope Valley area subdivided into Hydrologic Units. The Lancaster unit (626.50) lists the following beneficial uses for minor surface waters: MUN, AGR, GWR, FRSH, REC-1, REC-2, WARM, COLD, and WILD. This list differs from the beneficial uses established in the existing Basin Plan (October 1994), which does not list FRSH or COLD as beneficial uses for minor surface waters in the Lancaster Hydrologic Unit.

The current Basin Plan for the Lahontan Region was adopted October 1994. The California Department of Fish and Game provided comments on a draft plan on September 2, 1993. These comments included recommendations for the establishment of RARE, BIOL, and SAL uses on specific waters in other hydrologic units in the region, but no recommendations were provided for waters in the Antelope Valley area.

The current Lahontan Basin Plan provides information on how it applies most of its beneficial uses. The plan also recognizes that some uses are not intended for wide application, but only for temporary or site-specific application:

> However, there are many beneficial uses which are not intended to apply to the entire length of a stream or to a surface water during certain temporal conditions (see above). The beneficial use designations that may be considered for temporary or site specific designation are: IND, PRO, GWR, FRSH, NAV, POW, WARM, COLD, SAL, MIGR, SPWN, and WQE.

> For these situations, Regional Board staff, in order to make a recommendation to the Regional Board, will rely on site-specific documentation which may include: water quality data, field data, professional opinions (from Regional Board staff or other state and federal agencies, also universities), and other evidence collected by a discharger. The most sensitive existing or probable future use will be protected. Uses that did not exist, do not exist and will not exist in the foreseeable future, will not be required to be protected (Lahontan Basin Plan, Page 2-4).

2.3 Applicability of Proposed Beneficial Uses

The following sections provide a review of the applicability of each of the uses currently under evaluation by the Lahontan Regional Board for application to the Paiute Ponds Ecosystem in addition to WARM, REC-2 and WILD: BIOL, FLD, FRSH, RARE, SAL, WQE, and AGR. This applicability will be evaluated on a water body-specific basis. If a beneficial use is found to be applicable, then an evaluation of the potential for the use to have only seasonal applicability is evaluated. For each beneficial use, we provide the current definition adopted in the Lahontan Region Basin Plan and, where appropriate, the definition that was generally used prior to the establishment of statewide definitions in 1993.

2.3.1 Preservation of Biological Habitats of Special Significance (BIOL)

The Lahontan Regional Board defines BIOL in the following manner:

> Beneficial uses of waters that support designated areas or habitats, such as established refuges, parks, sanctuaries, ecological reserves, and Areas of Special Biological Significance (ASBS), where the preservation and enhancement of natural resources requires special protection.

This definition contrasts markedly from the previous definition:

> Includes marine life refuges, ecological reserves and designated areas of special biological significance, such as areas where kelp propagation and maintenance is a feature of the marine environment requiring special protection.

Prior to 1994, the BIOL beneficial use only applied to marine habitats and was not included in the list of potential beneficial uses for the Lahontan Region (although the Lahontan Board was considering adopting its own definition as early as 1988). The 1992-1993 statewide revisions to the beneficial uses resulted in a new definition for BIOL that broadened its application to all waters including freshwater. According to the Lahontan Basin Plan (page 2-5):

> The State Board's development of the beneficial use...enables all regions to identify areas or habitats that require special protection. The

watercourses, lakes and wetlands designated BIOL provide important habitat to unique combinations of plant and/or animal species.

Applicability to Paiute Ponds Ecosystem

BIOL has been established as a beneficial use on only a select group of water bodies in the Lahontan Region, most of which are natural springs, wet meadows, or wetlands. A preliminary list of water bodies that could be classified with a BIOL use was developed in 1989 prior to the establishment of the use; a subsequent list was submitted as recommendations by the California Fish and Game Department. These water bodies as well as others are listed with the BIOL use in the 1994 Basin Plan. It does not appear that location in a formally named refuge, park, reserve or ASBS has been used as a basis for listing.

Per its definition, the BIOL beneficial use is established on water bodies that (a) "support designated areas or habitats, such as established refuges, parks, sanctuaries, ecological reserves and Areas of Special Biological Significance," and (b) "where the preservation and enhancement of natural resources requires special protection." Neither of these elements has been fulfilled in a manner that supports the purpose of the beneficial use.

The emphasis of the definition is that this use applies to "waters that support designated areas or habitats..., where the preservation and enhancement of *natural resources* requires special protection" (emphasis added). The term "natural" is important in the context of Paiute Ponds, which are a manmade created habitat. Without the discharge the aquatic habitat would revert back to its original ephemeral state, thus BIOL would seem to be an inappropriate use for Amargosa Creek, below the discharge to Paiute Ponds and Paiute Ponds. The use would also seem to be inappropriate for Rosamond Dry Lake since the lakebed surface is used as a runway by Edwards Air Force Base. Moreover, there are numerous other dry lake beds in the region with no BIOL use designated.

In its Technical Staff Report, the Regional Board justifies establishment of the BIOL use because "portions of the Amargosa Creek watershed and Rosamond Dry Lake have been designated, or are proposed for designation, as special areas in recognition of their ecological importance." However, the designations or proposed designations do not support establishment of a BIOL beneficial use. Specifically,

- The Fish and Game Department has recognized the value of the wetlands, but this support has included agreements with Ducks Unlimited to expand the wetlands to create more habitat which may be used by local duck hunters. In fact, Edwards Air Force Base issues hunting permits, which would seem to be contrary to the purpose of a BIOL designation.

- The references to Significant Ecological Area designations are proposals only. No formal designation resulting from public input has occurred.

- The Audubon Society has certainly recognized Paiute Ponds and Rosamond Dry Lake as important bird areas. However, this designation was established by a private organization. There has been no formal designation through a public process as would be the norm for establishing refuges, parks, sanctuaries, ecological reserves and Areas of Biological Significance.

2.3.2 Flood Peak Attenuation/Flood Water Storage (FLD)

This beneficial use is unique to the Lahontan Regional Board. The beneficial use was not included in the development of the statewide list of beneficial uses. It is defined as:

> Beneficial uses of riparian wetlands in flood plain areas and other wetlands that receive natural surface drainage and buffer its passage to receiving waters.

The intent or purpose for its designation is provided in the Lahontan Region Basin Plan (page 2-5):

> The beneficial use designation of "Flood Peak Attenuation/Flood Water Storage" (FLD) has been added to those riparian wetlands in flood plain areas and other wetlands that receive natural surface drainage and buffer its passage to receiving waters. These waters slow runoff and provide temporary storage of direct precipitation and runoff, serving to reduce the heights of flood peaks in adjacent receiving waters and lengthen the periods of runoff supplied to them. This form of water storage is vital to a number of other beneficial uses, including agriculture and wildlife.

Applicability to Paiute Ponds Ecosystem

In the Lahontan Region, FLD is typically established as a beneficial use on natural wetlands, wet meadows, and lakes. The use is also applied to reservoirs, which do provide storage and lengthen periods of runoff to downstream waters. However, while this may be an intended function of constructed reservoirs, this is not an intended function of Paiute Ponds.

The Paiute Ponds wetlands are created and exist solely because of the construction of a dike in 1961. The purpose of the dike is to prevent discharge of effluent to the downstream waterbody, Rosamond Dry Lake. Effluent overflows occur when the system reaches capacity. There is no capacity for temporary storage as the system was designed to overflow when capacity is reached. However, per its Waste Discharge Requirements, Lancaster WRP is required to cease all overflows from Paiute Ponds and wetlands to Rosamond Dry Lake as a result of effluent discharge. Overflows may still occur if sufficient stormwater runoff enters the ponds and wetlands from the Amargosa Creek watershed - but the system is operated to prevent such overflows to the extent practicable. Accordingly, while a natural waterbody may provide the

functions described by the FLD beneficial use, the Paiute Ponds and wetlands are operated in a manner that seeks to prevent the passage of surface drainage to downstream waters.

2.3.3 Freshwater Replenishment (FRSH)

The Lahontan Region Basin Plan defines FRSH in the following manner:

> Beneficial uses of waters used for natural or artificial maintenance of surface water quantity or quality (e.g., salinity).

Prior to the statewide revision of beneficial use definitions, the generally accepted definition of FRSH was as follows:

> Provides a source of freshwater for replenishment of inland lakes and streams of varying salinities.

Prior to 1994 updates to the Lahontan Region Basin Plan, the FRSH designation was only applied to groundwater. However, the 1994 Basin Plan revision states that FRSH is an applicable beneficial use "for all surface waters in the Region which flow to saline lakes" (Lahontan Basin Plan, page 2-4).

A review of the Lahontan Basin Plan finds that FRSH has been designated for a variety of water bodies throughout the region. It is not possible to evaluate whether or not the Regional Board has consistently applied the use to all waters in the region that flow to saline lakes. However, in the Antelope Valley area the Regional Board has applied the use to all minor wetlands, but has not applied the use to any of the "minor surface waters."

Applicability to Paiute Ponds Ecosystem

Prior to the creation of Paiute Ponds, Amargosa Creek was an unobstructed tributary to Rosamond Dry Lake and would have provided a source of freshwater to the dry lake during stormwater runoff events. However, C Dike was constructed in 1961 to prevent flows from the Lancaster WRP discharge from reaching Rosamond Dry Lake. While effluent and stormwater overflows have occurred since that time, the Waste Discharge Requirements for the Lancaster WRP requires that overflows resulting from effluent discharge cease by August 2005. Moreover, it is important to consider that the water in Paiute ponds is treated wastewater, not freshwater as envisioned by the definition of this beneficial use. Accordingly, the establishment of a FRSH beneficial use on Paiute Ponds or Amargosa Creek, below the Lancaster WRP discharge, would be inappropriate.

2.3.4 Rare, Threatened, or Endangered Species (RARE)

The Lahontan Region Basin Plan defines RARE in the following manner:

> Beneficial uses of waters that support habitat necessary for the survival and successful maintenance of plant or animal species established under state and/or federal law as rare, threatened or endangered.

Prior to the statewide revision of beneficial use definitions in 1993, the generally accepted definition of the RARE beneficial use was:

> Provides an aquatic habitat necessary, at least in part, for the survival of certain species established as being rare and endangered species.

No discussion regarding where this beneficial use should be applied is provided in the Lahontan Basin Plan. A review of the Basin Plan shows that over the entire Lahontan Region the beneficial use is rarely applied. In contrast, in a few other local Basin Plans the use has been widely applied. Some of these designations have resulted from recommendations provided by the California Department of Fish and Game (Letter to Lahontan Regional Board, September 2, 1993). In the Antelope Valley area RARE has not been applied to waters in any of the hydrologic units.

The definition of the beneficial use indicates that this use should be applied only where habitat exists for listed state or federal species that is "necessary for the survival and successful maintenance" (emphasis added) of the species. Habitat defined as necessary for survival and successful maintenance is functionally equivalent to the definition for critical habitat found in Section 3 of the Endangered Species Act (ESA):

> (5)(A) The term "critical habitat" for a threatened or endangered species means – (i) the specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the provisions of Section 4 of this Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection; and (ii) specific areas outside the geographical area occupied by the species at the time it is listed in accordance with the provisions of section 4 of this Act, upon a determination by the Secretary that such areas are essential for the conservation of the species.

Under the implementing federal regulations for the ESA (50 CFR 424.12(b)), when designating critical habitat, the regulatory agency must consider physical and biological features that are essential to the species, including:

> (1) space for individual and population growth, and for normal behavior; (2) food, water, air, light, minerals, or other nutritional or physiological requirements; (3) cover or shelter; (4) sites for breeding, reproduction, or rearing of offspring; and, generally, (5) habitats that are protected from disturbance or are representative of the historic geographical and ecological distributions of the species.

Applicability to Paiute Ponds Ecosystem

The Paiute Ponds ecosystem is certainly used as habitat by a number of species identified as species of concern by state or federal authorities. However, the recovery plans developed to date by state or federal authorities do not include the Paiute Ponds ecosystem as critical or necessary habitat for the recovery of any of these species of concern. . Therefore, one cannot conclude that the Paiute Ponds is necessary for the survival and successful maintenance of any state or federal rare, threatened, or endangered species. Accordingly, the RARE beneficial use is not applicable to these waters.

2.3.5 Inland Saline Water Habitat (SAL)

The Lahontan Region Basin Plan defines SAL in the following manner:

> Beneficial uses of waters that support inland saline water ecosystems including, but not limited to, preservation and enhancement of aquatic saline habitats, vegetation, fish, and wildlife, including invertebrates.

Prior to the 1993 statewide revision of beneficial use definitions, the standard definition for SAL was:

> Provides an inland saline water habitat for aquatic and wildlife resources.

Applicability to Paiute Ponds Ecosystem

Waters are typically considered saline if salinity is greater than 3 parts per thousand (ppt). Based on available water quality data from Amargosa Creek, downstream of the Lancaster WRP discharge, and Paiute Ponds, salinity levels are well below 3 ppt (e.g., see Table 6-12 in Beneficial Uses Report; total dissolved solids range from 0.5 to 2.2 ppt). Accordingly, these water bodies should not be designated with a SAL beneficial use.

In contrast, Rosamond Dry Lake may be considered inland saline water habitat. When sufficient regional rainfall occurs, the normally dry lake bed fills with relatively freshwater from rainfall runoff. However, as that water evaporates salinity levels become very high. For example, as noted in Section 4 of the *Beneficial Use Report*, salinity levels varied from 0 to 14 ppt. Given the high salinity periodically observed in the lake, designation of a SAL beneficial use would be appropriate. Establishment of this use could not be made on a seasonal or temporal basis. Following inundation of the lake from rainfall runoff, salinity naturally increases as a result of evaporation. This process of change from a freshwater to saline habitat occurs over time and is linked to magnitude, duration, and frequency of rainfall runoff events. While rainfall does occur more often during certain seasons, it would be difficult to predict when water present in the lakebed typically becomes saline.

2.3.6 Water Quality Enhancement (WQE)

The Lahontan Region Basin Plan defines WQE in the following manner:

> Beneficial uses of waters that support natural enhancement or improvement of water quality in or downstream of a water body including, but not limited to, erosion control, filtration and purification of naturally occurring water pollutants, streambank stabilization, maintenance of channel integrity, and siltation control.

This beneficial use was added to the statewide list of beneficial uses during the 1992-1993 statewide revisions. As was noted in Section 2.1, this beneficial use was established as an alternative to the establishment of a Wetlands beneficial use late in the process to develop statewide beneficial use definitions. Until early 1993, Regional Board staff were proposing to add a Wetland (WET) use, which recognized the natural ability of wetlands to improve water quality. However, there was general concern with the adoption of a WET beneficial use per the proposed definition (Memorandum, Executive Officer of Region 4 to the Executive Director of the State Water Resources Control Board, January 13, 1993). The apparent concern appears to have been caused by comments at an Executive Coordinating Committee that the proposed WET definition could be construed to define a methodology for delineating wetlands. This concern led to the deletion of the proposed WET beneficial use and the creation of a proposed Water Quality Enhancement (WQE) beneficial use. The purpose of the proposed WQE use was to "preserve those physical attributes of a surface water body that naturally enhance water quality" (Memorandum, Executive Director of the State Water Resources Control Board to all Regional Board Executive Officers, March 8, 1993).

To date, the Lahontan Region is the only Region to have adopted a WQE beneficial use in a Basin Plan. The basis for the adoption by the Lahontan Board is as follows:

> The addition of the 'Water Quality Enhancement' (WQE) beneficial use designation recognizes additional characteristics of water bodies which previously received no formal designation. Beneficial uses of surface waters include their ability to enhance and protect water quality. Characteristics which enable surface waters to provide water quality enhancement include, but are not limited to, riparian vegetation and streambank configuration. The definition of this use is broad enough to allow designation of virtually all surface waters of the Lahontan Region. However, this use is only being added to named wetlands to give special recognition of the value wetlands provide in improving the water quality of other surface waters (Lahontan Basin Plan, page 2-5).

As noted by the Basin Plan, the broad meaning of the definition could result in the placement of this beneficial use on most, if not all, water bodies in the region. The

Basin Plan indicates that this use was added only to "named wetlands" to recognize their value in improving water quality of other surface waters. A review of the beneficial uses of the Lahontan Region finds that this use has not only been applied to named wetlands but has also been applied to reservoirs, wet meadows, and springs with emergent vegetation.

Applicability to Paiute Ponds Ecosystem

While the reach of Amargosa Creek, below the Lancaster WRP discharge, and Paiute Ponds include portions that function as wetlands, it is important to recognize that these wetlands are created basins that were not established for the purpose of water quality enhancement. The created wetland habitat has been primarily the result of efforts by Ducks Unlimited to enhance habitat for use by duck hunters. Any change in the water quality of the ponds because of wetland functions is not part of the system operation as the LACSD No. 14 discharge is in compliance with its waste discharge. Moreover, the Waste Discharge Requirements established for the Lancaster WRP includes a requirement that after August 2005 effluent discharged to Paiute Ponds not be allowed to overflow to downstream water. Thus, any serendipitous enhancement of water quality is not allowed to improve downstream water quality. Accordingly, it would be inappropriate to establish this use on any waters of the Paiute Ponds Ecosystem.

2.3.7 Agricultural Supply (AGR)

The Lahontan Region Basin Plan defines AGR in the following manner:

> Beneficial uses of waters used for farming, horticulture, or ranching, including, but not limited to, irrigation, stock watering, and support of vegetation for range grazing.

Prior to the establishment of the current definition, the previous definition was functionally the same:

> Includes crops, orchard and pasture irrigation, stock watering, support of vegetation for range grazing and all uses in support of farming and ranching operations.

Applicability to Paiute Ponds Ecosystem

The AGR beneficial use can be established on a water body that serves as a water supply for irrigation or livestock watering. Accordingly, if Paiute Ponds were to become a water supply source for such activities, it might be appropriate to establish an AGR use on the ponds at that time. However, currently the Lancaster WRP only delivers effluent for agricultural use directly from the treatment facility. This effluent does not come from Paiute Ponds. Moreover, because of its location on Edwards Air force Base, access to Paiute Ponds is highly regulated. Any attempt to use the ponds as an agricultural water supply without the consent of EAFB is not possible.

Accordingly, application of an AGR use to Paiute Ponds or Amargosa Creek below the Lancaster WRP is inappropriate.

3.0 Implications of Adoption of Additional Beneficial Uses

With the exception of AGR, none of the beneficial uses discussed in Section 2.0 has any established water quality objectives. There are statements in basin plans that suggest that establishment of a particular use may require alternative criteria, e.g., more stringent criteria to protect the RARE use, but none of the Regional Boards, including the Lahontan Regional Board has identified these alternative criteria. Consequently, there is no immediate concern that application of FLD, FRSH, RARE, WQE, SAL, or BIOL will result in more stringent water quality objectives being established for waters receiving discharge from the Lancaster WRP. However, if any of these beneficial uses are established, the Regional Board will always have the option of establishing requirements in the Lancaster WRP Waste Discharge Requirements that are deemed necessary to protect one of these uses. Unfortunately, the lack of precedent in any of the other Regional Boards provides no hint or guidance as to how protection for one of these uses may be addressed in a discharge permit.

The AGR use differs from the other proposed uses because it does have the potential for the establishment of water quality objectives to protect the use. The certainty regarding applicable objectives varies among planning regions. For the Lahontan Region, little certainty exists regarding what water quality objectives would be applied to Paiute Ponds if an AGR use were established. For water bodies designated with an AGR beneficial use, the Lahontan Basin Plan states the following (page 3-15):

> In determining compliance with objectives including references to the AGR designated use, the Regional Board will refer to water quality goals and recommendations from sources such as the Food and Agriculture Organization of the United Nations, University of California Cooperative Extension, Committee of Experts, and McKee and Wolf's "Water Quality Criteria" (1963).

The listed sources for water quality objectives are only provided as guidance and nothing precludes the Regional Board from using other sources to derive water quality objectives. In fact, likely sources for water quality objectives to protect the AGR use are the objectives established by other California Regional Boards. A review of these basin plans shows that Regions 2 and 3, San Francisco Bay and Central Coast, respectively, are the only regions with general AGR criteria applicable to all waters within the region designated with the AGR use (Table 3-1). Other regions tend to rely on site-specific objectives (SSO) for constituents typically regulated to protect the AGR use. However, in these regions the SSOs may or my not be explicitly linked to the protection of the AGR use (Table 3-2).

An evaluation of the 2003 water quality data from sites RS2 and RS4 in Paiute Ponds (for specific locations, see Figure 4-1 in Beneficial Use Report) provides a mixed view with regards to potential compliance concerns if Paiute Ponds was to be designated as an agricultural water supply: For example, at RS2, which generally reflects the quality of the effluent, none of the sampled constituents appear to be a concern. This finding is based on a comparison between sample results and AGR water quality objectives established in Regions 2 and 3. If a similar comparison is made using the water quality data from RS4, three constituents were observed that have elevated concentrations that could result in compliance concerns if an AGR use is established:

- Total dissolved solids (TDS) - Mean/Max/Min = 875/1,294/544 mg/L. TDS exceeded 1,000 mg/L consistently from July through November. While this value is considered relatively high, concentrations above 1,000 mg/L do not prevent the use of the water for irrigation.

- Chloride = Mean/Max/Min = 258/431/123 mg/L. Chloride exceeded 355 mg/L (upper limit established in Regions 2 and 3) from August through November.

- pH = Mean/Max/Min = 8.85/9.50/7.81. pH exceeded 9.0 (upper limit in Regions 2 and 3) during three months - September through November.

The observance of elevated salts and pH appears to be a seasonal phenomenon with elevated values occurring only during summer and early fall. While this might suggest that a compliance with a seasonal use could be achieved, it is likely that the period during which the greatest need for water to support agricultural activities would be during the same months that high levels were observed.

Table 3-1 Water Quality Objectives Established by Regional Boards 2 (San Francisco Bay) and 3 (Central Coast) in California to Protect the Agricultural Supply Beneficial Use (Units = mg/L, unless otherwise noted)

Constituent	Region 2 Irrigation Threshold/Limit [1]	Region 2 Livestock Watering	Region 3 Irrigation [2,3]	Region 3 Livestock Watering [2,3]
pH (standard units)	5.5-8.3/4.5-9.0		6.5 - 8.3	
Electrical Conductivity (mmhos/cm)	NA/0.2-3.0			
Dissolved Oxygen			2.0	
Total Dissolved Solids		10,000		
Aluminum	5.0/20.0	5.0	5.0	5.0
Arsenic	0.1/2/0	0.2	0.1	0.2
Beryllium	0.1/0.5		0.1	
Boron	0.5/2.0	5.0	0.75	5.0
Chloride	142/355			
Cadmium	0.01/0.5	0.05	0.01	0.05
Chromium	0.1/1.0	1.0	0.1	1.0
Cobalt	0.05/5.0	1.0	0.05	1.0
Copper	0.2/5.0	0.5	0.2	0.5
Fluoride	1.0/15.0	2.0	1.0	2.0
Iron	5.0/20.0		5.0	
Lead	5.0/10.0	0.1	5.0	0.1 (threshold = 0.05)
Lithium	NA/2.5 (citrus = 0.075)		2.5 (citrus = 0.075)	
Manganese	0.2/10.0		0.2	
Mercury				0.01
Molybdenum	0.01/0.05	0.5	0.01	0.5
Nickel	0.2/2.0		0.2	
Nitrate + Nitrite (as N)	5.0/30	100		100
Nitrite				10
Selenium	NA/0.02	0.05	0.02	0.05
Sodium Adsorption Ratio (SAR) adjusted	3.0/9.0			
Sulfate				
Vanadium	0.1/1.0	0.1	0.1	0.1
Zinc	2.0/10.0	25	2.0	25

1 First number represents a "threshold" number, the concentration at which potential effects may occur; the limit is the concentration at which effects do occur.

2 Concentrations represent the 90th percentile values not to be exceeded. Based on University of California Agriculture Extension Service recommended guidelines, January 7, 1974; based on NAS/NAE 1972 Water Quality Criteria ("EPA Blue Book")

3 Additional "flexible" guidelines dependent on site-specific factors established for electrical conductivity, SAR (adjusted), sodium, chloride, ammonia, and bicarbonate. Range of values for these parameters similar to threshold/limit objectives established in Region 2.

Table 3-2 Narrative or Site-Specific Water Quality Objectives (SSO) Established by Other Regional Boards in California to Protect the Agricultural Supply Beneficial Use [1]

▪ **Region 1** - Narrative only: Waters designated for use as agricultural supply (AGR) shall not contain concentrations of chemical constituents in amounts that adversely affect such beneficial use.
▪ **Region 4** - Many water bodies have SSOs for TDS, sulfate, chloride, boron, nitrogen, and SAR based on natural background; if no SSO established, then based on McKee and Wolf (1963), Ayers and Westcot (1985), EPA (1973), Ayers (1977), the following guidelines are used to establish effluent limits: – TDS = 450 - 2,000 mg/L – Chloride = 100 - 355 mg/L – Sulfate = 350 - 600 mg/L – Boron = 0.5 - 4.0 mg/L
▪ **Region 5** - SSOs for electrical conductivity established for some waters in the San Joaquin and Sacramento River basins. Note: Region 5 published "A Compilation of Water Quality Goals" in August 2003. This document includes recommended WQOs for the AGR beneficial use, which are generally consistent with the objectives adopted by Regions 2 and 3 (see Table 3-1).
▪ **Region 6** - Narrative only: In determining compliance with objectives including references to the AGR designated use, the Regional Board will refer to water quality goals and recommendations from sources such as the Food and Agricultural Organization of the United Nations, i.e., Ayers and Westcot (1985), University of California Cooperative Extension, Committee of Experts, and McKee and Wolf (1963).
▪ **Region 7** - No AGR water quality objectives; SSOs established for TDS but not for purposes of protecting AGR use.
▪ **Region 8** - SSOs established for chloride, TDS, hardness, sulfate, and total inorganic nitrogen (objectives do not appear have been explicitly established to protect AGR use). Narrative and SSOs established for sodium. If no SSOs established, Basin Plan includes general objectives for the following: – Chloride = 175 mg/L – TDS = 700 mg/L, but Basin Plan notes benefits exist at concentrations below 500 mg/L
▪ **Region 9** - Basin Plan includes narrative (same language as Region 6) as well as SSOs for the following: – Boron (all sites = 0.75) – Chlorides (range from 50 - 400 mg/L) – Percent sodium (all sites 60%) – TDS - most water bodies = 500 mg/L, but some water bodies with SSOs above 2,000 mg/L. In addition, Basin Plan includes a table with "Guidelines for Interpretation of Water Quality for Irrigation." This table provides guidelines for EC, TDS, SAR, sodium, chloride, boron, nitrogen, bicarbonate, pH, and residual chlorine. For most parameters concentrations are provided for determining whether water at specific concentrations constitutes no restriction, slight to moderate restriction or severe restriction on use for irrigation.