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STATE WATER RESOURCES CONTROL BOARD BOARD MEETING SESSION - DIVISION OF WATER QUALITY [DATE - TBD], 2009

ITEM

SUBJECT

CONSIDERATION OF A RESOLUTION APPROVING AN AMENDMENT TO THE WATER QUALITY CONTROL PLAN FOR THE LAHONTAN REGION (BASIN PLAN) TO REVISE STANDARDS FOR SURFACE WATERS OF THE ANTELOPE HYDROLOGIC UNIT

DISCUSSION

On November 29, 2007, the Lahontan Regional Water Quality Control Board (Lahontan Water Board) adopted Resolution R6T-2007-0036 ([Attachment 1](#)) amending its Basin Plan to revise water quality standards for certain surface waters located in the Antelope Valley watershed (or Antelope Hydrologic Unit). Water quality monitoring data show that the Los Angeles County Sanitation District No. 14's Lancaster Wastewater Reclamation Facility, which discharges wastewater to lower Amargosa Creek, is having difficulty complying with the existing Basin-wide water quality objectives for ammonia. The amendments are needed to facilitate ongoing Lahontan Water Board permitting of Lancaster Wastewater Reclamation Facility's discharge to surface waters. In addition, editorial changes are needed to clarify the applicability of current beneficial use designations to the eight hydrologic areas within the Antelope Hydrologic Unit. The proposed site-specific beneficial use designations would reflect the existing uses of the waters in question more accurately than some of the current categorically designated uses. And the proposed site-specific objectives for ammonia toxicity would be more easily attainable in these effluent dominated waters, while still protecting aquatic life and wildlife uses. Specifically, the amendment would: (1) revise designated beneficial uses for lower Amargosa Creek, Piute Ponds and wetlands, and Rosamond Dry Lake; (2) add site-specific water quality objectives for ammonia, applicable to lower Amargosa Creek and Piute Ponds and associated wetlands; and (3) make a variety of editorial and informational changes to the Basin Plan.

Antelope Hydrologic Unit

The Antelope Hydrologic Unit includes portions of Los Angeles, Kern, and San Bernardino Counties, and corresponds to the Antelope Valley basin, which is a closed topographic basin with an area of about 2,400 square miles. It is bounded by the Tehachapi Mountains and Garlock Fault Zone to the north and west, and the San Gabriel Mountains and San Andreas Rift Zone to the south and west. The eastern watershed boundary consists of buttes and hills that roughly parallel the San Bernardino County line. Under the California Department of Water Resources mapping system used in the Lahontan Basin Plan, the Antelope Hydrologic Unit includes eight Hydrologic Areas: Chafee, Gloster, Willow Springs, Neenach, Lancaster, North Muroc, Buttes, and Rock Creek. However, most of the specific water bodies affected by the proposed Basin Plan amendment are located within the Lancaster Hydrologic Area.

Lancaster Wastewater Reclamation Facility serves a large part of the City of Lancaster as well as portions of the City of Palmdale and adjacent unincorporated areas. The treatment plant is located in a relatively undeveloped area about five miles north of Lancaster. Most of Lancaster Wastewater Reclamation Facility's effluent has historically received secondary treatment, and about two-thirds of it has been discharged to Piute Ponds. Some of the secondary effluent is discharged to the Nebeker Ranch for irrigation of alfalfa, but a small amount of effluent currently

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receives tertiary treatment and is used to maintain recreational lakes in Lancaster. Los Angeles County Sanitation District's adopted 2020 Facilities Plan calls for replacement of the existing Lancaster Wastewater Reclamation facilities with new tertiary treatment facilities, by November 2010. Most of the tertiary effluent will be used for agriculture, urban landscape watering, and industrial purposes. Upon completion of Lancaster Wastewater Reclamation Facility's new treatment facilities, Piute Ponds and the associated wetlands will be maintained with tertiary effluent at the historical wetted area (about 400 acres). However, the volume of effluent discharged to the ponds will be reduced in order to prevent overflow from the ponds to Rosamond Dry Lake.

Amargosa Creek originates in the San Gabriel Mountains and is ephemeral for much of its length. It terminates in Rosamond Dry Lake, which is used by Edwards Air Force Base for emergency aircraft landings. Lancaster Wastewater Reclamation Facility began discharging effluent to Amargosa Creek in 1959. In 1961, the perennial Piute Ponds and wetlands were created when Amargosa Creek was dammed to prevent Lancaster Wastewater Reclamation Facility effluent from overflowing onto Rosamond Dry Lake and impacting military operations. By 1981, the California Department of Fish and Game recognized the ecological importance of the ponds and designated them as a regionally significant wildlife habitat. Subsequently, in 1981, Los Angeles County Sanitation District, Edwards Air Force Base, and Department of Fish and Game entered into an agreement under which the Los Angeles County Sanitation District agreed to discharge effluent at a rate sufficient to maintain 200 wetted acres of ponds. By 1991, Ducks Unlimited had constructed additional impoundments expanding the area of the ponds to accommodate higher effluent flows and to support wildlife and recreational uses.

The Lahontan Water Board permits the Lancaster Wastewater Reclamation Facility discharge to Amargosa Creek and Piute Ponds and associated wetlands through state Waste Discharge Requirements (WDRs) (Board Order R6V-2002-053, as amended), issued under the California Water Code. The discharge is not under a federal National Pollutant Discharge Elimination System (NPDES) permit because the U.S. Army Corps of Engineers (USACE) determined in 2002 that the waters of the Amargosa Creek watershed, and other surface waters within the boundaries of Edwards Air Force Base, are not "waters of the United States," and therefore, are not federally protected under Section 404 of the Clean Water Act. As a result, the federally-promulgated standards for "priority pollutants" that apply to most surface waters of California under the National Toxics Rule (NTR, 40 CFR 131.36) and California Toxics Rule (CTR, 40 CFR 131.38) do not apply to waters within Edwards Air Force Base and the Amargosa Creek watershed. However, the CTR and NTR standards apply to all other surface waters of the Antelope Hydrologic Unit for which no federal jurisdictional determination has been made. Lahontan Water Board staff will continue to use federal criteria documents for priority pollutants and the State Water Resources Control Board's (State Water Board's) Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (Resolution Nos. [2000-015](#) and [2005-0019](#)) as technical references, and to interpret narrative objectives in the development of permit conditions for the protection of beneficial uses in the waters affected by the amendments.

Since the waters affected by the proposed amendments are no longer considered waters of the United States, the federal guidance regarding designation or removal of beneficial uses is not mandatory. Additionally, California does not have comprehensive state guidance regarding beneficial uses of "isolated, non-navigable" surface waters of the state. Until state guidance is developed, Lahontan Water Board staff will use the federal regulations as guidance for recommending changes to beneficial uses of such waters. And in the absence of state guidance, the 1968 Antidegradation Policy ([State Water Board Resolution No. 68-16](#)) will serve as a threshold by which beneficial uses of waters of the state will be measured.

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WATER QUALITY OBJECTIVES

Water quality standards in California include designated beneficial uses, narrative and numeric objectives for protection of those designated uses, and an antidegradation policy. The Lahontan Water Board's Basin Plan does not currently include site-specific beneficial use designations for Amargosa Creek, the Piute Ponds and associated wetlands, and Rosamond Dry Lake. Instead, these waters have categorically designated beneficial uses as "Minor Surface Waters" or "Minor Wetlands" of the Lancaster Hydrologic Area (Hydrologic Area No. 626.50) within the Antelope Hydrologic Unit (Hydrologic Unit No. 626.00). The proposed changes to beneficial use designations would reflect the existing uses of the affected waters more accurately than the current categorically designated uses.

Amendments for the Antelope Hydrologic Unit

Lahontan Water Board staff proposed that site-specific beneficial uses be designated, and site-specific water quality objectives for ammonia toxicity be adopted for the effluent-dominated surface waters downstream of its wastewater discharge point. The proposed amendments would add "Xs" in the "COLD" and "COMM" beneficial use columns of Basin Plan Table 2-1 for the "Minor Surface Waters" category in each of the eight Hydrologic Areas within the Antelope Hydrologic Unit. These changes would clarify that the Cold Freshwater Habitat (COLD) and Commercial and Sportfishing (COMM) beneficial uses are already designated uses for minor surface water bodies in each of these hydrologic areas. The proposed changes are editorial corrections rather than new regulations. Their purpose is to resolve an apparent internal inconsistency in the plan due to an oversight during final formatting of the 1995 Basin Plan.

Site-Specific Beneficial Use Designations for the Lancaster Hydrologic Area

The proposed Basin Plan amendments would establish site-specific beneficial uses for the affected surface waters by adding new rows to Table 2-1. Site-specific beneficial uses would include the current designated uses for waters within the categories "Minor Surface Waters" and "Minor Wetlands" in the Lancaster Hydrologic Area, with the following changes:

- Removal of the Municipal and Domestic Supply (MUN), Water Contact Recreation (REC-1), Cold Freshwater Habitat (COLD), and Commercial and Sportfishing (COMM) beneficial use designations, where they now apply, from all surface waters downstream of the Lancaster Wastewater Reclamation Facility discharge point.
- Make an editorial correction to the spelling of "Roger's Lake Wetlands" (first entry under the Antelope Hydrologic Unit heading) by removing the apostrophe in "Roger's."
- Addition of new beneficial use designations for Piute Ponds and the associated wetlands, including Rare, Threatened, or Endangered Species (RARE) and Preservation of Biological Habitats of Special Significance (BIOL). And add the Freshwater Replenishment (FRSH) use for two segments of Amargosa Creek and for Piute Ponds.
- Removal of the Agricultural Supply (AGR) use and addition of the Inland Saline Water Habitat (SAL) beneficial use designation for the ephemeral surface waters of Rosamond Dry Lake.

Site-Specific Water Quality Objectives for Ammonia Toxicity

The Basin Plan currently contains a narrative water quality objective for ammonia based on the U.S. Environmental Protection Agency's (U.S. EPA) 1986 freshwater ammonia criteria document, as revised in 1992. It includes equations for determining allowable acute (1-hour) and chronic (4-day) concentrations of un-ionized and total ammonia, based on ambient water

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temperature and pH conditions. Limited historic monitoring data show violations of some drinking water standards, and that the discharged effluent does not meet the ammonia limits in its 2002 WDRs.

The proposed amendments to Basin Plan Chapter 3 would add site-specific water quality objectives for total ammonia concentrations to prevent acute (1-hour) and chronic (30-day average) toxicity in Piute Ponds, the associated wetlands, and the reach of Amargosa Creek that is downstream of the Lancaster Wastewater Reclamation Facility discharge point. The proposed site-specific objectives are based on U.S. EPA's 1999 freshwater ammonia criteria, and include a narrative objective with equations for calculating ammonia limits, and new tables of ammonia limits under specific temperature and pH conditions. The proposed site-specific objectives for ammonia would be attainable, while still protecting aquatic life and wildlife uses.

The existing regionwide ammonia toxicity objectives will continue to apply to other surface waters in the Antelope Hydrologic Unit, including the segment of Amargosa Creek upstream of the Lancaster Wastewater Reclamation Facility discharge point. In addition, site-specific objectives for ammonia toxicity are not proposed for the ephemeral surface waters of Rosamond Dry Lake. The existing regionwide ammonia toxicity objectives, based on freshwater criteria, are not really appropriate for Rosamond Dry Lake because of the saline nature of the lake and the corresponding high levels of total dissolved solids (TDS). However, U.S. EPA's 1989 saltwater ammonia criteria document states that its criteria do not apply to salt lakes, and recommends the development of site-specific objectives. Further study, including toxicity tests on inland saline water organisms would be necessary to develop meaningful site-specific objectives for Rosamond Dry Lake.

IMPLEMENTATION

The California Water Code requires Basin Plans to include measures for the implementation of water quality standards. The revised beneficial use designations and site-specific objectives for ammonia toxicity will be implemented through the Lahontan Water Board's existing permitting and enforcement authority for point and nonpoint sources and, in particular, through WDRs for Los Angeles County Sanitation District No. 14's Lancaster Wastewater Reclamation Facility. The revised standards will also be used, as appropriate, in permits and monitoring programs for other discharges to surface waters of the Antelope Hydrologic Unit.

MONITORING

Most of the historical ambient water quality data were collected under the discharger self-monitoring program associated with Los Angeles County Sanitation District No. 14's Lancaster Wastewater Reclamation Facility WDRs, and these data meet the Lahontan Water Board's quality assurance and quality control requirements. Appropriate revisions will be made in the applicable WDRs and discharger self-monitoring program for Lancaster Wastewater Reclamation Facility. In addition, the revised standards will be used, as appropriate, in permits and monitoring programs for other discharges to surface waters of the Antelope Hydrologic Unit.

ECONOMIC CONSIDERATIONS

Los Angeles County Sanitation District No. 14 will implement its facilities plan, including construction of a new tertiary treatment plant and maintenance of Piute Ponds with tertiary effluent, whether or not the proposed Basin Plan amendments are adopted. With tertiary effluent, Lancaster Wastewater Reclamation Facility should be able to comply with the proposed

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ammonia site-specific objectives without additional costs beyond those in the facilities plan. However, there may be changes in the costs of ambient water quality monitoring and laboratory analyses associated with revisions to Lancaster Wastewater Reclamation Facility's self-monitoring program.

Executive Officer Corrections to the Basin Plan Amendment Language

Resolution R6T-2007-0036 authorizes the Lahontan Water Board's Executive Officer to make minor, non-substantive corrections to the language of the amendment, if needed, for clarity or consistency. State Water Board staff's review of the proposed amendment identified items in the amendment language that needed clarification to maintain consistency with the Basin Plan. The Lahontan Water Board's Executive Officer has made the requested non-substantive clarifications to the amendment in a memorandum dated January 26, 2009 ([Attachment 2](#)).

POLICY ISSUE

Should the State Water Board approve the proposed amendment to the Basin Plan to revise water quality standards for surface waters located in the Antelope Hydrologic Unit as adopted under Lahontan Water Board Resolution R6T-2007-0036?

FISCAL IMPACT

Lahontan Water Board and State Water Board staff work associated with or resulting from this action can be accomplished within budgeted resources.

REGIONAL WATER BOARD IMPACT

Yes, approval of this resolution will amend the Lahontan Water Board's Basin Plan.

STAFF RECOMMENDATION

That the State Water Board:

1. Approve the amendment to the Basin Plan adopted under Lahontan Water Board Resolution R6T-2007-0036, as corrected by the Lahontan Water Board's Executive Officer.
2. Authorize the Executive Director or designee to submit the Basin Plan amendment adopted under Lahontan Water Board Resolution R6T-2007-0036, as approved, and the administrative record for this action to the Office of Administrative Law for approval of the regulatory provisions and to U.S. EPA for information.

State Water Board action on this item will assist the Water Boards in reaching Goal 4 of the Strategic Plan Update: 2008-2012 to comprehensively address water quality protection and restoration, and the relationship between water supply and water quality, and describe the connections between water quality, water quantity, and climate change, throughout California's water planning processes. In particular, approval of this item will assist in fulfilling Objective 3 to achieve near-term priority Basin Plan amendment needs by collaborating in third-party initiated processes that incorporate Water Board requirements and stakeholder interests.

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STATE WATER RESOURCES CONTROL BOARD RESOLUTION NO. 2009-

APPROVING AN AMENDMENT TO THE WATER QUALITY CONTROL PLAN FOR THE LAHONTAN REGION (BASIN PLAN) TO REVISE STANDARDS FOR SURFACE WATERS OF THE ANTELOPE HYDROLOGIC UNIT

WHEREAS:

1. The Lahontan Regional Water Quality Control Board (Lahontan Water Board) adopted the revised Basin Plan under Resolution No. 6-93-98 on September 9, 1993. The revised Basin Plan was approved by the State Water Resources Control Board (State Water Board) on January 19, 1995, by the Office of Administrative Law (OAL) on March 31, 1995, and by the U.S. Environmental Protection Agency (U.S. EPA) on May 29, 2000.
2. On November 29, 2007, the Lahontan Water Board adopted Resolution R6T-2007-0036 ([Attachment 1](#)) amending the Basin Plan to revise standards for surface waters of the Antelope Hydrologic Unit.
3. Resolution R6T-2007-0036 authorizes the Lahontan Water Board's Executive Officer to make minor, non-substantive corrections to the language of the amendment, if needed, for clarity or consistency. State Water Board staff's review of the proposed amendment identified items in the amendment that needed clarification. The Lahontan Water Board's Executive Officer has made the non-substantive clarifications to the amendment in a memorandum dated January 26, 2009 ([Attachment 2](#)).
4. The Lahontan Water Board found that the scientific portions of the Basin Plan amendment are based on sound scientific knowledge, methods, and practices in accordance with Health and Safety Code section 57004.
5. The Lahontan Water Board found that the analysis contained in the staff report, the California Environmental Quality Act (CEQA) checklist, notice of public hearing, and notice of filing prepared by Lahontan Water Board staff comply with the requirements of the State Water Board's certified regulatory CEQA process, as set forth in the California Code of Regulations, Title 23, section 3775 et seq.
6. The U.S. Army Corps of Engineers has determined that the waters of the Amargosa Creek watershed, and other surface waters within the boundaries of Edwards Air Force Base, are not "waters of the United States".
7. The Lahontan Water Board found that the proposed amendment is consistent with [State Water Board Resolution No. 68-16](#), in that the changes to water quality objectives (i) consider maximum benefit to the people of the state, (ii) will not unreasonably affect present and anticipated beneficial use of waters, and (iii) will not result in water quality less than that prescribed in policies.
8. The State Water Board finds that the Basin Plan amendment is in conformance with Water Code section 13240, which specifies that Regional Water Quality Control Boards may revise Basin Plans, section 13241, which authorizes Regional Water Quality Control Boards to

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establish water quality objectives, section 13242, which requires a program of implementation of water quality objectives, and section 13244 which requires Regional Water Quality Control Boards to provide a published, public notice to all interested persons of any public hearing.

9. Based on the record as a whole, including draft Basin Plan amendments, the environmental document, accompanying written documentation, public comments received, and the scientific peer reviewer's comments, the Lahontan Water Board found that the amendments will not result in adverse effects on fish, wildlife, or the environment.
10. A Basin Plan amendment does not become effective until approved by the State Water Board and until the regulatory provisions are approved by OAL.

THEREFORE BE IT RESOLVED THAT:

The State Water Board:

1. Approves the amendment to the Basin Plan adopted under Lahontan Water Board Resolution R6T-2007-0036, as corrected by the Lahontan Water Board's Executive Officer.
2. Authorizes the Executive Director or designee to submit the amendment adopted under Lahontan Water Board Resolution R6T-2007-0036, as approved, and the administrative record for this action to OAL for approval of the regulatory provisions and to U.S. EPA for information.

CERTIFICATION

The undersigned, Clerk to the Board, does hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted at a meeting of the State Water Board held on [date TBD].

Jeanine Townsend
Clerk to the Board