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STATE WATER RESOURCES CONTROL BOARD BOARD MEETING SESSION – DIVISION OF WATER QUALITY DATE OF MEETING - TBD

ITEM

SUBJECT

CONSIDERATION OF PROPOSED RESOLUTION APPROVING AN AMENDMENT TO THE WATER QUALITY CONTROL PLAN FOR THE LOS ANGELES REGION TO INCORPORATE A TOTAL MAXIMUM DAILY LOAD FOR INDICATOR BACTERIA IN THE SANTA CLARA RIVER ESTUARY AND REACHES 3, 5, 6 AND 7

DISCUSSION

On July 8, 2010, the Los Angeles Water Quality Control Board (Los Angeles Water Board) adopted Resolution No. R10-006 ([Attachment](#)) amending the Water Quality Control Plan for the Los Angeles Region (Basin Plan) to incorporate a Total Maximum Daily Load for Indicator Bacteria in the Santa Clara River Estuary and Reaches 3, 5, 6 and 7.

IMPAIRMENT

During the 1996 Water Quality Assessment, the Santa Clara River Estuary and Reach 6 of the Santa Clara River were included on the Clean Water Act 303(d) list (303(d) List) because fecal coliform levels exceeded applicable water quality objectives. In the 1998 Water Quality Assessment, Reaches 5 and 7 of the Santa Clara River were added to the 303(d) List as a result of high coliform counts. Additional data analysis conducted by Los Angeles Water Board Staff as a part of the TMDL development demonstrates impairment for indicator bacteria in Santa Clara River Reach 3. Therefore, this TMDL addresses indicator bacteria impairments in the Santa Clara River Estuary and Reaches 3, 5, 6 and 7. The target bacteria indicators addressed are fecal coliform, total coliform, enterococcus, and E. coli.

A schedule for development of TMDLs in the Los Angeles Region was established in a consent decree (Heal the Bay Inc., et al. v. Browner C 98-4825 SBA) approved on March 22, 1999. The consent decree combined water body pollutant combinations in the Los Angeles Region into 92 TMDL analytical units. This TMDL satisfies analytical unit 34.

The Basin Plan contains bacteria water quality objectives to protect the water contact recreation (REC-1) and non-contact water recreation REC-2 beneficial uses. Local and national epidemiological studies demonstrate that there is a causal relationship between adverse health effects and recreational water quality, as measured by bacterial indicator densities.

Bacterial concentrations in the Santa Clara River Estuary and Reaches 3, 5, 6 and 7 exceed water quality standards during both dry and wet weather.

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SOURCES

Bacteria sources in the Santa Clara River Watershed include anthropogenic, non-anthropogenic, point and non-point sources. Each contributes to the elevated levels during both dry and wet weather. Point source discharges are generally regulated through a National Pollutant Discharge Elimination System (NPDES) permit issued by the Los Angeles Water Board. Urban runoff to the Santa Clara River is regulated as a point source discharge under the three municipal separate storm sewer system (MS4) NPDES permits. Runoff from construction and industrial activities is also subject to statewide general NPDES permits for storm water. There are five major individual NPDES permits in the watershed. They are issued to the Saugus Water Reclamation Plant, Valencia Water Reclamation Plant, Fillmore Wastewater Treatment Plant, Santa Paula Water Reclamation Facility, and Ventura Water Reclamation Facility. Other NPDES permits issued in the Santa Clara River watershed are for minor or general discharges.

Data from natural landscapes in the region indicate that open space loading is not a significant source of bacteria. Discharge data from storm drains and channels draining urban areas show elevated levels of bacteria, indicating that urban areas are a major source of bacteria. Data from throughout the Los Angeles Region further demonstrate that bacteria concentrations are significantly greater in developed areas. A calculation of bacteria loadings in the Santa Clara River shows that most of the annual bacteria loading to the Santa Clara River is associated with wet weather. Based on this information, Los Angeles Water Board concluded that runoff from urban areas served by the storm drain system is a significant source of bacteria. Storm drain system discharges may have elevated levels of bacteria indicators due to sanitary sewer leaks and spills, illicit connections of sanitary lines to the storm drain system, runoff from homeless encampments, pet waste, and illegal discharges from recreational vehicle holding tanks, among others. Other point and nonpoint sources were analyzed and found to be less significant, or there were not enough data to quantify their contribution. Nonetheless, all potential sources of bacteria are assigned wasteload allocations and load allocations in the TMDL.

TARGETS AND TMDL ALLOCATIONS

The TMDL has a multi-part numeric target based on the bacteriological water quality objectives for marine and fresh waters to protect the REC-1 beneficial use.

The numeric targets for this TMDL are:

Marine Waters (Santa Clara River Estuary)

1. Geometric Mean Targets
 - a. Fecal Coliform shall not exceed 200/100 mL.
 - b. Enterococcus shall not exceed 35/100 mL.
 - c. Total Coliform shall not exceed 1,000/100 mL.
2. Single Sample Targets
 - a. Fecal Coliform shall not exceed 400/100 mL.
 - b. Enterococcus shall not exceed 104/100 mL.
 - c. Total Coliform shall not exceed 10,000/100 mL.

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Freshwaters (Santa Clara River Reaches 3, 5, 6, and 7)

1. Geometric Mean Target
 - a. E. coli density shall not exceed 126/100 mL.
2. Single Sample Target
 - a. E. coli density shall not exceed 235/100 mL.

The Basin Plan objectives and these targets are based on a health risk for recreational waters of eight to nineteen illnesses per 1,000 exposed individuals, as recommended by the U.S. EPA.

To implement the single sample bacteria objectives for waters designated REC-1 and to set allocations based on the single sample targets, an allowable number of exceedance days were established. The numeric targets in the TMDL are expressed as 'allowable exceedance days' since bacterial density and the frequency of exceedances are most relevant to public health.

The allowable number of exceedance days is based on the more stringent of two criteria: (1) exceedance days in the designated reference system, and (2) exceedance days based on historical bacteriological data collected within the subject reach. This ensures that bacteriological water quality is at least as good as that of a largely undeveloped system and that there is no degradation of existing water quality. This approach recognizes that there are natural sources of bacteria that may cause or contribute to exceedances of the single sample objectives and that it is not the intent of the Los Angeles Water Board to require treatment or diversion of natural creeks or to require treatment of natural sources of bacteria from undeveloped areas.

For the single sample targets, the Estuary and Reaches 3, 5, 6, and 7 are assigned interim and final wasteload allocations and load allocations expressed as an allowable number of exceedance days for wet weather (defined as days with 0.1 inch of rain or greater and the three days following the rain event) and for dry weather as set forth in Tables 7-36.2 and 7-36.3 of the Basin Plan amendment language.

The TMDL requires that geometric mean targets not be exceeded at any time.

IMPLEMENTATION

The regulatory mechanisms used to implement the TMDL will include general NPDES permits, individual NPDES permits, MS4 Permits covering jurisdictions within the Santa Clara River watershed, the Statewide Industrial Storm Water General Permit, the Statewide Construction Activity Storm Water General Permit, the Statewide Stormwater MS4 Permit for Caltrans Activities, the Conditional Waiver for Irrigated Lands, WDRs, waivers of WDRs, the authority contained in Sections 13263, 13267, and 13269 of the California Water Code, and other appropriate mechanisms.

Wasteload allocations for point sources will be implemented through NPDES permits. Each NPDES permittee assigned a wasteload allocation shall have its NPDES permit reopened or amended at re-issuance, in accordance with applicable laws, to incorporate the assumptions and requirements of applicable wasteload allocation as permit requirements.

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MS4 Permittees

The cities of Santa Clarita, Fillmore, Santa Paula, and Ventura, and the Counties of Los Angeles and Ventura are responsible for MS4 wasteload allocations. Cities and counties that have co-mingled storm water are jointly and severally responsible for meeting the wasteload allocations assigned to MS4 discharges, unless the dischargers demonstrate that their discharges did not cause or contribute to the exceedances. Responsible parties must provide an Implementation Plan to the Los Angeles Water Board outlining how each intends to individually or cooperatively achieve compliance with the wasteload allocations. The report must include implementation methods, an implementation schedule, proposed milestones, and proposed outfall monitoring to determine compliance. Proposed milestones will be considered by the Los Angeles Water Board as potential permit conditions when the MS4 permit is reopened or reissued. For responsible jurisdictions and agencies who will be proposing wet-weather load-based compliance at MS4 outfalls, the plan must include an estimate of existing load and the allowable load from MS4 outfalls to attain the allowable number of exceedance days in-stream. The plan must include a technically-defensible quantitative linkage to the wasteload allocations. The plan must include quantitative estimates of the water quality benefits provided by the proposed implementation approach.

Non-MS4 Permittees

Other NPDES dischargers are individually responsible for their wasteload allocations.

Nonpoint Sources

Load allocations for irrigated agricultural lands will be implemented through requirements in the Conditional Waiver for Irrigated Lands ([Order No. R4-2005-0080](#)) or other orders that are consistent with the load allocations. Load allocations for onsite wastewater treatment systems will be implemented through WDRs or waivers of WDRs. Load allocations for other nonpoint sources, such as horses/livestock, aquaculture, and golf courses, will be implemented through the Nonpoint Source Implementation and Enforcement Policy.

The load allocations for irrigated agricultural lands can be achieved by the implementation of on-farm best management practices, which may include buffer crops, filter strips and sedimentation basins. The estimated costs for buffer crops, filter strips, and sedimentation basins are \$373/acre, \$1002/acre, and \$10,000/acre, respectively. There may be funding available through the Natural Resources Conservation Service for the BMPs listed and others developed for the region, as well as technical advice for implementation. There is also funding available through Clean Water Act Section 319(h) grants which is detailed in Chapters 4 and 7 of the Basin Plan in accordance with California Water Code section 13141. For the load allocations issued to horses/livestock, land managers can use various incentives and regulatory approaches to encourage equestrians to use and abide by local restrictions and regulations.

Four years after its effective date, the TMDL requires interim wasteload allocations and load allocations to apply. Eleven years after its effective date, the TMDL requires the Santa Clara River Estuary to achieve compliance with the applicable load allocations and MS4 wasteload allocations for summer dry weather and winter wet weather. In addition, the TMDL requires Reaches 3, 5, 6 and 7 to achieve compliance with all applicable load allocations and MS4 wasteload allocations for dry weather eleven years after the effective date. The TMDL requires all load allocations and wasteload allocations to be achieved seventeen years after the effective date.

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MONITORING

MS4 Permittees

Jurisdictions and agencies responsible for the MS4 wasteload allocations are jointly responsible for developing and implementing a comprehensive in-stream monitoring plan. The monitoring plan will include all applicable bacteria water quality objectives and a sampling frequency adequate to assess compliance with the 30-day geometric mean objectives. Responsible jurisdictions and agencies may build upon existing monitoring programs in the Santa Clara River watershed when developing the bacteria water quality monitoring plan. At a minimum, at least one sampling station should be located in each impaired reach.

Jurisdictions and agencies responsible for the MS4 wasteload allocations will submit an outfall monitoring plan as part of their implementation plans. The outfall monitoring plan must propose an adequate number of representative outfalls to be sampled, a sampling frequency, and protocol for enhanced outfall monitoring resulting from an in-stream exceedance. Responsible jurisdictions and agencies can use existing outfall monitoring stations in the Ventura MS4 permit, where appropriate, for both the permit and TMDL objectives.

Non-MS4 Permittees

NPDES Permittees other than MS4 dischargers must conduct monitoring for all applicable bacteria water quality objectives to ensure that they are attaining wasteload allocations, and that water quality objectives are being met. NPDES permits for the Saugus and Valencia Water Reclamation Plants will include effluent monitoring for *E. coli*, and the NPDES permit for the Ventura Water Reclamation Facility must include effluent monitoring for total coliform, fecal coliform, and enterococcus.

Nonpoint Sources

The Conditional Waiver for Irrigated Lands must require bacteria monitoring for discharges from irrigated agricultural lands. Monitoring will be implemented as part of WDR and waiver requirements, and through implementation of the Nonpoint Source Implementation and Enforcement Policy, for other nonpoint sources.

EVALUATION

Los Angeles Water Board has committed to revisiting the TMDL within four years of the effective date to incorporate new information from TMDL special studies, or address revisions to water quality standards, such as adoption of revised water quality objectives based on recommendations of the U. S. Environmental Protection Agency.

POLICY ISSUE

Should the State Water Board approve the amendment to the Basin Plan to incorporate a Total Maximum Daily Load for Indicator Bacteria in the Santa Clara River Estuary and Reaches 3, 5, 6 and 7?

FISCAL IMPACT

Los Angeles Water Board and State Water Board staff work associated with or resulting from this action will be addressed with existing and future budgeted resources.

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REGIONAL BOARD IMPACT

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

STAFF RECOMMENDATION

That the State Water Board:

1. Approves the amendment to the Basin Plan adopted under Los Angeles Water Board Resolution No. R10-006.
2. Authorizes the Executive Director or designee to submit the amendment adopted under Los Angeles Water Board Resolution No. R10-006, as approved, and the administrative record for this action to the OAL and the TMDLs to the U.S. Environmental Protection Agency for approval.

State Water Board action on this item will assist the Water Boards in reaching Goal 1 of the Strategic Plan Update: 2008-2012 to implement strategies to fully support the beneficial uses for all 2006-listed water bodies by 2030. In particular, approval of this item will assist in fulfilling Action 1 to prepare, adopt, and take steps to carry out Total Maximum Daily Loads (TMDLs), designed to meet water quality standards, for all impaired water bodies on the 2006 list.

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STATE WATER RESOURCES CONTROL BOARD RESOLUTION NO. 2011-

APPROVING AN AMENDMENT TO THE WATER QUALITY CONTROL PLAN FOR THE LOS ANGELES REGION TO INCORPORATE A TOTAL MAXIMUM DAILY LOAD FOR INDICATOR BACTERIA IN THE SANTA CLARA RIVER ESTUARY AND REACHES 3, 5, 6 AND 7

WHEREAS:

1. On July 8, 2010, the Los Angeles Water Quality Control Board (Los Angeles Water Board) adopted Resolution No. R10-006 ([Attachment](#)) amending the Water Quality Control Plan for the Los Angeles Region (Basin Plan) to incorporate a Total Maximum Daily Load (TMDL) for Indicator Bacteria in the Santa Clara River Estuary and Santa Clara River reaches 3, 5, 6 and 7.
2. The Los Angeles Water Board found that the analysis contained in the California Environmental Quality Act (CEQA) "substitute documentation" for the proposed Basin Plan amendment, including the CEQA Checklist, the staff report, and the response to comments, complies 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.
3. The Los Angeles Water Board found the Basin Plan amendment is consistent with the Statement of Policy with Respect to Maintaining High Quality of Waters in California ([State Water Board Resolution No. 68-16](#)) and the federal Antidegradation Policy (40 CFR section 131.12).
4. The State Water Board finds that the Basin Plan amendment is in conformance with California Water Code sections 13141, 13240, and 13242. The State Water Board also finds that the TMDL as reflected in the Basin Plan amendment is consistent with the requirements of Federal Clean Water Act section 303(d).
5. A Basin Plan amendment does not become effective until approved by the State Water Board and until the regulatory provisions are approved by the Office of Administrative Law (OAL). The TMDL must also receive approval from the U.S. Environmental Protection Agency (U.S. EPA).

THEREFORE BE IT RESOLVED THAT:

The State Water Board:

1. Approves the amendment to the Basin Plan adopted under Los Angeles Water Board Resolution No. R10-006.

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2. Authorizes the Executive Director or designee to submit the amendment adopted under Los Angeles Water Board Resolution No. R10-006 to OAL for approval of the regulatory provisions and to U.S. EPA for approval of the TMDL.

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 Resources Control Board held on TBD.

Jeanine Townsend
Clerk to the Board