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

ITEM

SUBJECT

CONSIDERATION OF A RESOLUTION APPROVING AN AMENDMENT TO THE WATER QUALITY CONTROL PLAN FOR THE LOS ANGELES REGION (BASIN PLAN) TO INCORPORATE A TOTAL MAXIMUM DAILY LOAD FOR EUTROPHIC, ALGAE, AMMONIA, AND ODORS (NUTRIENTS) IN MACHADO LAKE

DISCUSSION

The Los Angeles Regional Water Quality Control Board (Los Angeles Water Board) adopted [Resolution No. R08-006](#) on May 1, 2008 establishing a Total Maximum Daily Load (TMDL) for Eutrophic, Algae, Ammonia, and Odors (constituents commonly referred to as “Nutrients”) in Machado Lake. 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 for eutrophic, algae, ammonia, and odors (nutrients) and related effects for Machado Lake addresses listings in analytical unit 76 of the consent decree.

Machado Lake is located in the Ken Malloy Harbor Regional Park (Park), which is a 231 acre Los Angeles City Park serving the Wilmington and Harbor City areas. The Park is located west of the Harbor Freeway (110) and east of Vermont Avenue between the Tosco Refinery on the south and the Pacific Coast Highway on the North. Machado Lake is one of the last lake and wetland systems in Los Angeles; the area is approximately 103.5 acres in total size. The upper portion, which includes the open water area, is approximately 40 acres and the lower wetland portion is about 63.5 acres. This TMDL will address the 40-acre open water lake.

The most distinct water quality problem affecting Machado Lake is eutrophication. The eutrophic condition arises due to the enrichment of the lake with nutrients (nitrogen and phosphorus). The nutrient enrichment results in high algal productivity. Algal blooms have been observed in the lake during summer months. In addition, high nutrient concentrations contribute to excessive and nuisance macrophyte growth. Algae respiration and decay depletes oxygen from the water column, creating an adverse aquatic environment. Likewise, the decay of algal blooms and other eutrophic related impairments can create offensive odors leading to a condition of nuisance. This alteration of the ecosystem degrades warm water habitat leading to the following impaired beneficial uses of Machado Lake: Warm Freshwater Habitat (WARM); Wildlife Habitat (WILD); Rare, Threatened, or Endangered Species (RARE); Wetland Habitat (WET); Water Contact Recreation (REC 1); Non-contact Water Recreation (REC 2); and Municipal and Domestic Supply (MUN). As a result of high nutrient concentrations, algal blooms, odors, and eutrophic conditions, Machado Lake was placed on the Clean Water Act 303(d) list of impaired water bodies in 1998, and maintained on the list in 2002 and 2006.

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TMDL

The Basin Plan amendment establishes numeric targets for total phosphorus, total nitrogen (TKN+NO₃-N+NO₂-N), ammonia – N (chronic and acute), dissolved oxygen, and chlorophyll a. These numeric targets are set to achieve the applicable Water Quality Objectives, which are the narrative objectives for Biostimulatory Substances, Taste and Odor, Dissolved Oxygen, and Ammonia. The TMDL waste load allocations for point source discharges and load allocations for nonpoint source discharges are established to attain the TMDL numeric targets. The TMDL establishes both interim and final waste load allocations and load allocations. Waste load allocations are assigned to urban stormwater dischargers in both wet and dry weather. Interim waste load allocations are based on current in-lake concentrations. The final waste load allocations are assigned as concentration-based allocations of 0.1 milligrams per liter (mg/L) and 1.0 mg/L as monthly averages for total phosphorus and total nitrogen, respectively. Load allocations are assigned for nonpoint source discharges to the lake, primarily discharges resulting from internal nutrient loading from the lake sediments. Interim load allocations are based on current in-lake concentrations. The final load allocations for internal loading are concentration-based allocations for 0.1 mg/L and 1.0 mg/L as monthly averages for total phosphorus and total nitrogen, respectively.

The regulatory mechanisms used to implement the TMDL include the Los Angeles County municipal separate storm sewer system (MS4) permit, the Caltrans stormwater permit, the general industrial stormwater national pollutant discharge elimination system (NPDES) permit, and the general construction stormwater NPDES permit. Nonpoint sources will be regulated through a Memorandum of Agreement (MOA) between the responsible parties and the Los Angeles Water Board Executive Officer. The MOA shall comply with the Water Quality Control Policy for Addressing Impaired Waters: Regulatory Structure and Options ("Policy"). The implementation of the MOA must result in attainment of the TMDL load allocations. If the MOA does not result in the attainment of the TMDL load allocations, the MOA will be rescinded and the load allocations will be implemented through a cleanup and abatement order.

The TMDL requires stormwater permittees to achieve interim waste load allocations upon the effective date of the TMDL and final waste load allocations 9.5 years from the effective date of the TMDL. In addition, the TMDL also requires responsible parties who are assigned load allocations to achieve interim load allocations upon the effective date of the TMDL and final load allocations 9.5 years from the effective date of the TMDL. The TMDL allows for special studies, which must be completed within six years of the TMDL's effective date. The Los Angeles Water Board has committed to reconsidering the TMDL 7.5 years from the effective date, based on the results of special studies and water quality monitoring.

POLICY ISSUE

Should the State Water Board approve the amendment to the basin plan to incorporate a total maximum daily load for eutrophic, algae, ammonia, and odors (nutrients) as adopted by Los Angeles Water Board Resolution No. R08-006?

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 WATER 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 as adopted under Los Angeles Water Board Resolution No. R08-006.
2. Authorizes the Executive Director or designee to submit the amendment adopted under Los Angeles Water Board Resolution No. R08-006 to the Office of Administrative Law for approval of the regulatory provisions and to the U.S. Environmental Protection Agency for approval of the TMDL.

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STATE WATER RESOURCES CONTROL BOARD RESOLUTION NO. 2008-

APPROVING AN AMENDMENT TO THE WATER QUALITY CONTROL PLAN FOR THE LOS ANGELES REGION (BASIN PLAN) TO INCORPORATE A TOTAL MAXIMUM DAILY LOAD FOR EUTROPHIC, ALGAE, AMMONIA, AND ODORS (NUTRIENTS) IN MACHADO LAKE

WHEREAS:

1. On May 1, 2008, the Los Angeles Regional Water Quality Control Board (Los Angeles Water Board) adopted [Resolution No. R08-006](#) amending the Basin Plan to incorporate a total maximum daily load (TMDL) for eutrophic, algae, ammonia, and odors (collectively referred to as “nutrients”) in Machado Lake.
2. The TMDL for nutrients in Machado Lake is designed to protect the municipal water supply, aquatic life habitat, water contact recreation, and non-contact water recreation beneficial uses of Machado Lake and to achieve the numeric and narrative water quality objectives set to protect those uses.
3. The Los Angeles Water Board found that the analysis contained in the Final Project Report, the California Environmental Quality Act (CEQA) “Substitute Document” for the proposed Basin Plan amendment, including the CEQA Checklist, the staff report, and the responses to comments prepared by Los Angeles Water Board staff and Resolution R08-006 adopted by the Los Angeles Water Board complies with the requirements of the State Water Resources Control Board’s (State Water Board’s) certified regulatory CEQA process, as set forth in the California Code of Regulations, Title 23, section 3775 et seq.
4. The State Water Board finds that in amending the Basin Plan to establish this TMDL, the Los Angeles Water Board complied with the requirements set forth in sections 13240 and 13242 of the California Water Code. The State Water Board also finds that the TMDL is consistent with the requirements of federal Clean Water Act section 303(d).
5. The Los Angeles Water Board found that adoption of this amendment would result in no adverse effect on wildlife, and the amendment would be consistent with the State Antidegradation Policy ([State Water Board Resolution No. 68-16](#)) and federal antidegradation requirements.
6. The Los Angeles Water Board established a loading capacity, based on the numeric and narrative water quality objectives provided in the Basin Plan. Compliance with this load will be based on a 9.5 year implementation schedule.
7. 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 be approved by the U.S. Environmental Protection Agency (U.S. EPA).

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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. R08-006.
2. Authorizes the Executive Director or designee to submit the amendment adopted under Los Angeles Water Board Resolution No. R08-006 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