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STATE WATER RESOURCES CONTROL BOARD BOARD MEETING SESSION – DIVISION OF WATER QUALITY TBD, 2010

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 (TMDL) FOR ORGANOCHLORINE (OC) PESTICIDES, POLYCHLORINATED BIPHENYLS (PCBS), SEDIMENT TOXICITY, POLYCYCLIC AROMATIC HYDROCARBONS (PAHs), AND METALS IN COLORADO LAGOON

DISCUSSION

The Los Angeles Regional Water Quality Control Board (Los Angeles Water Board) adopted [Resolution No. R09-005](#) on October 1, 2009 incorporating a TMDL for OC pesticides, PCBs, sediment toxicity, PAHs, and metals in Colorado Lagoon. 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. In accordance with the consent decree, the Colorado Lagoon OC pesticides, PCBs, sediment toxicity, PAHs, and metals TMDL addresses the impairments in Colorado Lagoon associated with DDT, PCBs, Chlordane, Dieldrin and Sediment Toxicity under Analytical Unit 82 and the impairments associated with PAHs and metals including Lead and Zinc under Analytical Unit 83.

The Colorado Lagoon (Lagoon) is located within the City of Long Beach, Southern California. The Lagoon is a 15-acre, V-shaped tidal lagoon connected to Alamitos Bay and the Pacific Ocean via a box culvert to Marine Stadium. It serves three main functions: 1) hosting sensitive estuarine habitat; 2) providing public recreation; and 3) retaining and conveying storm flows. The lagoon is abundant in wildlife and acts as an important stop for thousands of migratory birds, including endangered species, every year. In addition, the lagoon is heavily used for recreational activities, including swimming, fishing, wildlife-viewing and picnicking. The Lagoon is used by hundreds of visitors from communities within and surrounding the City of Long Beach. The Colorado Lagoon watershed is approximately 1,172 acres, and it is divided into five sub-basins that discharge storm water and urban dry-weather runoff to the Colorado Lagoon. Each of the sub-basins are served by a major storm sewer trunkline along with supporting appurtenances that collect and transport storm water and urban dry weather runoff to the Colorado Lagoon. Surface water runoff within the watershed occurs as overland runoff into curb inlets and catch basins, and as sheet flow from near shore areas.

SOURCES

Pollutants that enter Colorado Lagoon through direct, piped, and channeled discharges such as storm drains are classified as point sources. These types of discharges are regulated through the federal National Pollutant Discharge Elimination System (NPDES) program, which the Water Boards implement through the issuance of Waste Discharge Requirements (WDRs) that are also NPDES permits). In the City of Long Beach, urban runoff to Colorado Lagoon is regulated

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under storm water NPDES permits, which is a point source discharge. Nonpoint sources, by definition, include pollutants that reach surface waters from a number of diffuse land uses and source activities that are not point sources. Nonpoint sources that are major contributors to contaminated sediment pollution in Colorado Lagoon are runoff from paved street and parking lots, construction sites, soil erosion, pesticide/herbicide application, washdown from residential and commercial sites, minor industrial operations such as atmospheric deposition. These toxic chemicals that are released into the water body bind, persist, and are transported via sediment.

TARGETS AND TMDL ALLOCATIONS

The Los Angeles Water Board's goal in establishing the TMDL is to protect the recreation (REC 1 and REC 2), aquatic life (WARM, WILD) and commercial and sport fishing (COMM, SHELL) beneficial uses of Colorado Lagoon by achieving the numeric and narrative water quality objectives set to protect those uses. Numeric targets for the TMDL are based on narrative and numeric water quality objectives (WQOs) provided in the Basin Plan and 40 CFR. 131.38 (California Toxics Rule or CTR).

The water column target for PCBs is a 30-day average objective of .00017 ug/L, selected in the Basin Plan to protect human health. Chlordane, DDT, and dieldrin are based on the CTR water quality criteria for protection of human health (for consumption of organisms only). These criteria are more stringent than those for the protection of aquatic life, and as a result these objectives will protect both aquatic life and fish consumption beneficial uses. The sediment toxicity impairment is addressed thorough sediment numeric targets derived from the "Effects Range-Low" (ER-Ls) guidelines compiled by the National Oceanographic and Atmospheric Administration (NOAA), which are protective of aquatic life in sediment. Basin Plan objectives and CTR human health criteria have not been developed for PAHs, so the California Ocean Plan objective for water was selected. The CTR aquatic life saltwater criteria for lead and zinc were selected as the numeric target for protection of both fresh water and marine life. Fish tissue targets for OC pesticides and PCBs are selected from "*Fish Contaminant Goals and Advisory Tissue Levels for Common Contaminants in California Sport Fish: Chlordane, DDTs, Dieldrin, Methylmercury, PCBs, Selenium, and Toxaphene*", which were developed by the Office of Environmental Health Hazard Assessment in June 2008 to assist other agencies in developing fish tissue-based objectives, with a goal toward pollution mitigation or elimination and protection of humans from consumption of contaminated fish or other aquatic organisms.

Mass-based waste load allocations for MS4 permittees, including the City of Long Beach, Los Angeles County Flood Control District, and Caltrans, are allocated to the five major storm drain outfalls that currently discharge to the lagoon. Concentration-based waste load allocations for sediment are assigned to MS4 permittees including the City of Long Beach, Los Angeles County Flood Control District, and Caltrans. Concentration-based waste load allocations for sediment are applied as average monthly limits. Compliance with the concentration-based waste load allocations for sediment will be determined by lagoon sediment pollutant concentrations at points in the West Arm, North Arm, and Central Arm that represent the cumulative inputs from the MS4 drainage system to the lagoon. Concentration-based waste load allocations for sediment are also assigned to all other minor storm drains discharging from the MS4 to the lagoon. Concentration-based waste load allocations are assigned to minor NPDES permits, other storm water, and non-storm water permittees. Any future minor NPDES permits or enrollees under a general non-storm water NPDES permit, general industrial storm water permit or general construction permit will also be subject to the concentration-based waste load allocations. A mass-based load allocation was developed for direct atmospheric deposition. An estimate of direct atmospheric deposition was developed based on the percent

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area of surface water within the watershed, which is approximately 15 acres or 1.3% of the total watershed area. The load allocation for atmospheric deposition is calculated by multiplying this percentage by the total loading capacity.

EVALUATION

The City of Long Beach, the Los Angeles County Flood Control District, and Caltrans are each responsible for conducting water, sediment, and fish tissue monitoring. The TMDL includes an implementation schedule which requires development of The Colorado Lagoon TMDL Monitoring Plan (CLTMP) by responsible parties. Monitoring must begin six months after the CLTMP is approved by the Los Angeles Water Board Executive Officer. Water column and sediment samples will be collected at the outlet of the storm drains discharging to the lagoon, while water column, sediment, and fish tissue samples will be collected in the West Arm, Central Arm, North Arm, at the outlet of the lagoon to Marine Stadium during an incoming tide, and at the outfall of Termino Avenue Drain to Marine Stadium. The number and location of monitoring sites must be specified in the CLTMP, which must in turn be approved by the Los Angeles Water Board Executive Officer.

Responsible agencies may employ a variety of implementation strategies such as non-structural and structural best management practices to meet the required waste load allocations. The implementation actions described in the basin plan amendment represent a range of activities that are proposed by the Los Angeles County Flood Control District and City of Long Beach in the *Los Angeles County Termino Avenue Drain Project* and *Colorado Lagoon Restoration Project*, respectively.

Compliance with the TMDL is determined based on the assigned waste load allocations. NPDES permits will be amended to be consistent with the assumptions and requirements of the waste load allocations. Responsible agencies are required to implement the proposed actions to remove contaminated sediment; control the discharges of pollutants in urban runoff, storm water and contaminated sediments to Colorado Lagoon; attain water, fish tissue, and sediment quality standards; and protect beneficial uses. The TMDL contains an implementation schedule for responsible agencies to implement BMPs and proposed implementation actions to comply with the TMDL within 7 years of the effective date of the TMDL.

COST ESTIMATES

The economic consideration for the TMDL identifies the estimated costs of the proposed implementation actions. Some specific cost estimates have been developed for planning and implementing this TMDL. Some aspects of the implementation plan have not yet reached the planning stage and/or are dependent on the impacts of earlier phases of the implementation plan. As a result, the cost estimates provided are a combination of these types of estimates. The final costs of implementation will likely vary from the estimates presented here. However, the estimates represent the best available information on the potential implementation costs of the TMDL.

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Description	Maintenance Needs	Construction Costs	Maintenance Costs
Relocate major storm drain system outfalls	Service storm drain system and remove debris	26,400,000	16,000
Clean Existing Culvert	Maintain and repair tide gates, remove debris and bio-fouling; clear track rack	170,000	15,000
Open Channel	Repair revetment; maintain bridge, fence, signs; remove trash	3,500,000	20,000
Remove Sediment – Western Arm	None	630,000	0
Remove Sediment – Central Lagoon	None	12,000,000	0
Increase/Improve City street sweeping	None	50,000	50,000
Enforce prohibition of no dry weather run-off from home owner	None	100,000	100,000
Trash Management	None	34,000	7,000
Watershed education display	None	63,000	3,000
Sediment trap at Western Arm	Periodic sediment removal	190,000	5,000
Storm drain bio-swales	Remove weeds	100,000	200
Storm drain low flow diversion	Service diversion structure and remove debris	1,300,000	12,000
Total Cost		44,537,000	228,200

Colorado Lagoon is not unique in that it possesses an active local stakeholder group, but it may be somewhat unique from other sites in that the local stakeholders are extremely active in enacting change to, and maintenance of the site. Restoration actions at the lagoon will cost a certain amount of money, with greater costs for more extensive actions and vice versa. Site maintenance will also require funds. Using volunteers to implement certain restoration actions and maintenance and monitoring may reduce costs. This study assumed no use of volunteer labor to construct and maintain alternatives so the most conservative costs are estimated. Conservative cost estimates are more reliable for purposes of budgeting and applying for grants, both of which the City may eventually have to perform. So the real costs of construction and maintenance of alternatives may actually be lower than estimated to the benefit of the City, but responsible planning dictates use of the assumption that volunteer labor is not available.

POLICY ISSUE

Should the State Water Board approve the amendment to the Basin Plan to incorporate a TMDL for OC pesticides, PCBs, sediment toxicity, PAHs, and metals in Colorado Lagoon as adopted by Los Angeles Water Board Resolution No. R09-005?

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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.

REGIONAL WATER BOARD IMPACT

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. R09-005.
2. Directs the Executive Director or designee to submit the amendment adopted under Los Angeles Water Board Resolution No. R09-005 to OAL for approval of the regulatory provisions and to U.S. EPA for approval of the TMDL and the Surface Water Quality Objectives.

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 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. 2010-

APPROVING AN AMENDMENT TO THE WATER QUALITY CONTROL PLAN FOR THE LOS ANGELES REGION (BASIN PLAN) TO INCORPORATE A TOTAL MAXIMUM DAILY LOAD (TMDL) FOR ORGANOCHLORINE (OC) PESTICIDES, POLYCHLORINATED BIPHENYLS (PCBS), SEDIMENT TOXICITY, POLYCYCLIC AROMATIC HYDROCARBONS (PAHS), AND METALS IN COLORADO LAGOON

WHEREAS:

1. On October 1, 2009, the Los Angeles Regional Water Quality Control Board (Los Angeles Water Board) adopted an amendment to the Basin Plan, [Resolution No. R09-005](#), to incorporate a TMDL for OC pesticides, PCBs, sediment toxicity, PAHs, and metals in Colorado Lagoon.
2. The TMDL for OC pesticides, PCBs, sediment toxicity, PAHs, and metals in Colorado Lagoon is designed to protect the recreation (REC 1 and REC 2), aquatic life (WARM and WILD) and commercial and sport fishing (COMM and SHELL) beneficial uses of Colorado Lagoon by achieving the numeric and narrative water quality objectives set forth 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 environmental documentation 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 R09-005 adopted by the Los Angeles Water Board 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.
4. The State Water Board finds that in amending the Basin Plan 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 regulatory action meets the "Necessity" standard of the Administrative Procedures Act, Government Code section 11353, Subdivision (b).
5. The Los Angeles Water Board found that adoption of this amendment is consistent with the Antidegradation Policy ([State Water Board Resolution No. 68-16](#)) and Federal Antidegradation Policy (40 CFR 131.12), in that it does not allow degradation of water quality, but requires restoration of water quality and attainment of water quality standards.
6. Numeric targets expressed as loading capacities for the TMDL are based on the water quality objectives provided in the Basin Plan. Compliance with the targets will be based on a fourteen-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).

THEREFORE BE IT RESOLVED THAT:

The State Water Board:

1. Approves the amendment to the Basin Plan as adopted under Los Angeles Water Board Resolution No. R09-005.

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2. Directs the Executive Director or designee to submit the amendment adopted under Los Angeles Water Board Resolution No. R09-005 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