

**STATE WATER RESOURCES CONTROL BOARD
BOARD MEETING SESSION - DIVISION OF WATER QUALITY
DECEMBER 6, 2011**

ITEM 10

SUBJECT

CONSIDERATION OF A RESOLUTION APPROVING AN AMENDMENT TO THE WATER QUALITY CONTROL PLAN FOR THE COLORADO RIVER BASIN REGION ESTABLISHING A TOTAL MAXIMUM DAILY LOAD AND IMPLEMENTATION PLAN FOR DISSOLVED OXYGEN IN THE NEW RIVER AT THE INTERNATIONAL BOUNDARY, IMPERIAL COUNTY, CALIFORNIA

DISCUSSION

On May 20, 2010, the Colorado River Basin Regional Water Quality Control Board (Colorado River Basin Water Board) adopted [Resolution No. R7-2010-0011](#) amending the Water Quality Control Plan for the Colorado River Basin Region (Basin Plan) to establish a Total Maximum Daily Load (TMDL) and implementation plan for dissolved oxygen in the New River at the International Boundary, Imperial County, California (Basin Plan amendment). The New River originates in Mexicali Valley, Mexico. It flows approximately 20 miles through the city of Mexicali, Mexico, crosses the International Boundary, continues through the city of Calexico, California, and travels northward about 60 miles until it empties into the Salton Sea. The Basin Plan [amendment](#) addresses the first 12-mile reach of the New River downstream of the International Boundary, which has been prioritized over other New River reaches because of the proximity to the major waste sources that originate in the Mexicali Valley in Mexico.

Impairment

The New River is listed on the 2010 Clean Water Act section 303(d) List of Water Quality Limited Segments because it did not meet water quality standards for dissolved oxygen. The Basin Plan amendment is to address the listing of the New River for organic enrichment/low dissolved oxygen. The TMDL specifies load allocations for nonpoint sources and wasteload allocations for point sources that, when implemented, are expected to result in attainment of applicable water quality standards. Since the TMDL is being established as a Basin Plan amendment, state law requires an implementation plan and schedule to ensure that the TMDL is achieved.

The TMDL addresses the dissolved oxygen impairment and is designed to ensure that water quality standards will be achieved, and that beneficial uses in the watershed will be protected. The most sensitive beneficial use to the dissolved oxygen impairment for the New River is Warm Freshwater Habitat. The water quality objectives in the Basin Plan for dissolved oxygen are set at minimum concentration levels of 5.0 milligrams per liter (mg/l) that must be met at all times. Current dissolved oxygen concentrations in the New River do not meet the existing Basin Plan numeric water quality objectives for protecting the Warm Freshwater Habitat beneficial use. Biochemical oxygen demand (BOD) and ammonia (NH₃) discharged from

Mexicali, Mexico, to the New River and tributaries are the main cause of low dissolved oxygen in the first 12-mile reach of the New River downstream of the International Boundary.

Targets and TMDL Allocations

The TMDL establishes a numeric target equal to the Basin Plan water quality objective for the protection of the Warm Freshwater Habitat beneficial use, a minimum concentration of 5.0 mg/l of dissolved oxygen at any time. Because the Warm Freshwater Habitat beneficial use is the most sensitive to low concentrations of dissolved oxygen in the New River, it has the most stringent water quality objectives.

Dissolved oxygen is not considered a pollutant, but **is** an indicator parameter for water quality. Because dissolved oxygen is not a pollutant, the TMDL focuses on the parameters causing low dissolved oxygen concentrations. Modeling analysis shows that BOD and ammonia are the most influential parameters affecting dissolved oxygen levels in the New River. Variations in other parameters were shown to have only a minor influence.

The TMDL proposes to address the low dissolved oxygen impairment in the first 12-mile reach of the New River downstream of the International Boundary. To achieve the numeric target and water quality objective, the TMDL specifies allowable loads of BOD and NH₃ to the sources causing dissolved oxygen impairments. The allowable loads are based on steady-state New River dissolved oxygen model projections, scientific literature, monitoring data, and best professional judgment.

As noted, the impairment of the New River in the first 12-mile reach downstream of the International Boundary can be attributed to sources originating in Mexico. However, the Colorado River Basin Water Board has no jurisdiction over waste discharges originating in Mexico and, thus, has no authority to require Mexico or the United States to reduce materials in Mexico that cause low dissolved oxygen which cross the International Boundary in the New River. Consequently, the full allowable load can only be designated to the first 12-mile reach of the New River to raise awareness ~~enof~~ International Boundary **water quality** issues. Accordingly, the Basin Plan amendment requests, but does not require, in addition to water quality monitoring and reporting, that the U.S. government propose measures to ensure that the discharges from Mexico do not violate or contribute to a violation of the TMDL.

All publicly owned treatment works in the United States that discharge pollutants from point sources in the impaired New River watershed have been issued National Pollutant Discharge Elimination System permits, which prescribe, among other requirements, effluent limitations for BOD concentrations, which are sufficient to maintain the DO levels and protect the beneficial uses. Therefore, waste load allocations for these facilities are the BOD limitations prescribed in their existing permits.

The TMDL has an implicit margin of safety incorporated by the conservative assumptions used to develop the TMDL and, thus, are not quantified, including the use of conservative model inputs for temperature, dissolved oxygen concentrations, and flow.

Implementation

The implementation plan for the TMDL is divided into two, three-year phases. Phase II commences after the conclusion of Phase I.

As the modeling scenarios demonstrated, the dissolved oxygen water quality objectives cannot be attained solely through implementation measures taken on the United States side of the **International Boundary New River**. The assistance and cooperation of Mexico is essential to attain the dissolved oxygen standards. The United States Government, through the United States Environmental Protection Agency (U.S. EPA) and the United States section of the International Boundary and Water Commission (U.S. IBWC), is responsible for ensuring that waste discharges to the New River and its tributaries in Mexico do not violate bi-national water treaties. Because the Colorado River Basin Water Board does not have jurisdictional authority to require Mexico, a sovereign nation, or the United States Government to reduce waste that crosses the International Boundary and impairs the New River, the Colorado River Basin Water Board can only request cooperation from Mexico and the United States Government to help it attain the dissolved oxygen water quality objectives.

Therefore, as part of Phase 1 implementation, the Colorado River Basin Water Board requests Mexico to implement those actions necessary to prevent wastewater discharges into the New River in Mexicali that produce conditions that violate this TMDL. The Colorado River Basin Water Board also requests the United States Government through the U.S. EPA and the U.S. IBWC to assist Mexico in helping the Colorado River Basin Water Board achieve the dissolved oxygen water quality objectives for the New River. Specifically, the Colorado River Basin Water Board requests that the U.S. IBWC and U.S. EPA take the following three actions:

1. Develop and submit to the Colorado River Basin Water Board a New River dissolved oxygen TMDL Implementation Report that describes measures taken or proposed by the agencies to ensure Mexico does not cause or contribute to violations of this TMDL. This report is due one year after U.S. EPA approval of the TMDL.
2. Continue to conduct water quality and dissolved oxygen monitoring in the New River at the International Boundary, and continue to submit monitoring data and reports to the Colorado River Basin Water Board. This is an on-going task.
3. Develop and submit to the Colorado River Basin Water Board a New River dissolved oxygen TMDL Final Implementation Report that describes progress in completing the implementation measures identified in Actions 1 and 2, above. This report is due three years after U.S. EPA approval of the TMDL.

Additionally, Phase 1 of TMDL implementation also requests that third-party cooperating agencies and organizations (the U.S. members of the New River/Mexicali Sanitation Program Bi-national Technical Advisory Committee, North American Development Bank, Border Environment Cooperation Commission, California Border Environment Cooperation Commission, City of Calexico New River Committee, and the Citizens Congressional Task Force on the New River) take the following two actions:

1. Develop, sign, and submit to the Colorado River Basin Water Board a memorandum of understanding to ensure coordination of New River International Boundary projects. The memorandum of understanding is due six months after U.S. EPA approval of the TMDL.
2. Develop and submit to the Colorado River Basin Water Board New River dissolved oxygen TMDL implementation progress reports. These reports are due semiannually, with the first report due 12 months after U.S. EPA approval of the TMDL.

Phase 2 of TMDL implementation will be necessary if Phase 1 does not result in attaining the dissolved oxygen water quality objectives. Several actions may be considered for the second phase including a wastewater treatment plant in the United States. That action and other more stringent regulatory mechanisms may be discussed for the second implementation phase at the triennial review that the Colorado River Basin Water Board has committed to have following the conclusion of Phase 1. The Colorado River Basin Water Board has also committed to a second review at a hearing at the conclusion of the Phase 2, which will be approximately six years after U.S. EPA approval.

Monitoring and Evaluation

The Colorado River Basin Water **Board** has committed to two types of monitoring, contingent on funding: water quality monitoring, and implementation tracking. The water quality monitoring will be conducted in accordance with a Quality Assurance Project Plan that is modeled after and consistent with existing Quality Assurance Project Plans for monitoring the New River at the International Boundary as well as consistent with the Surface Water Ambient Monitoring Program. Monthly sampling will occur on the United States side of the **New River International Boundary** in at least five locations. Data from other agencies will also be used.

The Basin Plan amendment requires implementation tracking to be developed to evaluate data to determine when numeric targets are attained; assess and track actions already in place; and to evaluate the progress in achieving the TMDL.

The Basin Plan amendment requires monitoring and tracking programs to be developed and begin one month after U.S. EPA approval.

As described above, the Colorado River Basin Water **Board** has committed to conduct a review of the TMDL at least triennially at a public hearing.

POLICY ISSUE

Should the State Water Board approve the amendment to the Basin Plan to establish a TMDL and implementation plan for dissolved oxygen in the first 12-mile reach in the New River downstream of the International Boundary?

FISCAL IMPACT

Colorado River Basin 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

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

STAFF RECOMMENDATION

That the State Water Board:

1. Approves the Basin Plan amendment adopted under Colorado River Basin Water Board Resolution No. R7-2010-0011.
2. Authorizes the Executive Director or designee to submit the Basin Plan amendment adopted under Colorado River Basin Water Board Resolution No. R7-2010-0011, as approved, and the administrative record for this action to the California Office of Administrative Law and the TMDL to the U.S. EPA 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.

**STATE WATER RESOURCES CONTROL BOARD
RESOLUTION NO. 2011-****APPROVING AN AMENDMENT TO THE WATER QUALITY CONTROL PLAN FOR THE
COLORADO RIVER BASIN REGION ESTABLISHING A TOTAL MAXIMUM DAILY LOAD AND
IMPLEMENTATION PLAN FOR DISSOLVED OXYGEN IN THE NEW RIVER AT THE
INTERNATIONAL BOUNDARY, IMPERIAL COUNTY, CALIFORNIA****WHEREAS:**

1. On May 20, 2010, the Colorado River Basin Regional Water Quality Control Board (Colorado River Basin Water Board) adopted [Resolution No. R7-2010-0011](#) amending the Basin Plan to establish a Total Maximum Daily Load (TMDL) and implementation plan for dissolved oxygen in the 12-mile reach of the New River downstream of the International Boundary ([Basin Plan amendment](#)).
2. The Colorado River Basin Water Board found that the Basin Plan amendment was consistent with the provisions of [State Water Board Resolution No. 68-16](#), "Statement of Policy with Respect to Maintaining High Quality of Waters in California" and Code of Federal Regulations, title 40, section 131.12.
3. The Colorado River Basin Water Board approved the amendment pursuant to the State Water Board's certified California Environmental Quality Act's (CEQA) regulatory program, as set forth in the California Code of Regulations, title 23, section 3720 et seq. The Colorado River Basin Water Board found that the analysis contained in its Substitute Environmental Document for the proposed Basin Plan amendment, including the CEQA Checklist, the Final TMDL Staff Report, and supporting documents (collectively, "Substitute Environmental Documentation") complies with the requirements of the State Water Board's certified regulatory CEQA process. The State Water Board has reviewed the Substitute Environmental Documentation and concurs with the Colorado River Basin Water Board's findings.
4. The State Water Board finds that the Basin Plan amendment is in conformance with Water Code section 13240, which specifies that regional boards may revise basin plans; and Water Code section 13242, which requires a program of implementation to achieve water quality objectives.
5. The regulatory action meets the "Necessity" standard of the Administrative Procedures Act, Government Code, section 11353, subdivision (b)(2). The necessity of developing a TMDL is established in the TMDL Staff Report, the federal Clean Water Act section 303(d) List of Water Quality Limited Segments, and the data contained in the administrative record for the proceeding documenting the impairments of the New River.
6. The Basin Plan amendment does not become effective until it is reviewed and approved by the State Water Board and its regulatory provisions approved by the California Office of Administrative Law (OAL). Finally, ~~OAL.~~ ~~T~~the TMDL must also receive approval from the U.S. Environmental Protection Agency (U.S. EPA).

7. **The Colorado River Basin Water Board's staff determined that a minor, nonsubstantive correction to the text of the Basin Plan amendment was necessary. The Colorado River Basin Water Board's Executive Officer made that minor correction in a memorandum dated November 21, 2011.**

THEREFORE BE IT RESOLVED THAT:

The State Water Board:

1. Approves the Basin Plan amendment adopted by the Colorado River Basin Water Board under Resolution No. R7-2010-0011.
2. Authorizes the Executive Director or designee to submit the Basin Plan amendment adopted under Colorado River Basin Water Board Resolution No. R7-2010-0011, as approved, and the administrative record for the proceedings to the OAL, and further authorizes the Executive Director or designee to submit the TMDL to the U.S. EPA for approval.

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 December 6, 2011.

Jeanine Townsend
Clerk to the Board