

EXECUTIVE OFFICER SUMMARY REPORT
March 10, 2010

- ITEM: 7
- SUBJECT: NPDES Permit Reissuance: Waste Discharge Requirements for the Sweetwater Authority, Richard A. Reynolds Desalination Facility, discharge to the Lower Sweetwater Basin, San Diego County. (Tentative Order No. R9-2010-0012, NPDES Permit No. CA0108952) (Michelle Mata)
- PURPOSE: To adopt Waste Discharge Requirements and NPDES Permit for the discharge of up to 2.5 million gallons per day (MGD) of demineralization brine and miscellaneous wastewater from the Richard A. Reynolds Desalination Facility (Facility).
- PUBLIC NOTICE: A public notice of the tentative Order was published in the San Diego Union Tribune on January 25, 2010. Copies of the tentative Order were mailed on February 2, 2010 to Sweetwater Authority. Copies were made available for public review at the San Diego Water Board office and posted on the San Diego Water Board's website on February 2, 2010.
- DISCUSSION: Sweetwater Authority is currently regulated under Order No. R9-2004-0111, which establishes requirements for the discharge of up to 0.8 MGD of combined discharges from demineralization brine, well purge water, and miscellaneous wastewater from the Richard A. Reynolds Desalination Facility. The combined waste discharges regulated under this NPDES permit are routed to the Lower Sweetwater River via the upper Paradise Creek Flood Control Channel. The area of discharge at the lower Sweetwater River is within the tidal prism of San Diego Bay.
- The Facility is a groundwater desalination plant that draws brackish groundwater for desalination and use as a potable water supply to approximately 180,000 customers through about 35,000 service connections in the communities of Chula Vista and National City. Since the adoption of Order No. R9-2004-0111 the Facility has increased potable water production from 4 MGD to 5 MGD and plans an additional expansion to 10 MGD in the near future. Six groundwater wells draw from the San Diego Formation Aquifer to provide plant feed-water. An additional five

groundwater wells are planned to be added as part of the proposed expansion for a total of eleven groundwater wells. The discharge of brine would increase from a maximum of 0.8 MGD to no more than 2.5 MGD.

The discharge at its current location and flow rate of 0.8 MGD has been shown to have adverse impacts on the beneficial uses of portions of the Lower Sweetwater River caused by significant differences between the salinity of the discharge and the receiving water. An increase in flow, at the existing location, would cause additional adverse impacts to the receiving water by further reducing the salinity below background concentrations and thus the Discharger is proposing to relocate the discharge location approximately 3,000 ft downstream of the confluence of the Upper Paradise Creek Flood Control Channel and the Lower Sweetwater River.

Site studies conducted by the Discharger indicate the area downstream would provide sufficient dilution to minimize the salinity impacts to the tidally influenced portion of the Lower Sweetwater River as a result of the increased flow. The San Diego Water Board is currently working with the Discharger to develop a schedule for relocation of the discharge and hope to finalize the schedule prior to the Board Meeting.

The San Diego Water Board received comments from Sweetwater Authority on February 23, 2010. A written Responses to Comments document and an Errata Sheet (if needed) will be prepared and included in the Supplemental Agenda Packet.

**SIGNIFICANT
CHANGES:**

The following areas in Tentative Order No. R9-2010-0012 differs from the current Order No. R9-2004-0111:

1. The tentative Order has a new look based on the statewide template for NPDES permits. While each region is unique, there are many aspects of NPDES permits that can be standardized. Since 2004, staffs of the State and Regional Boards, along with USEPA's contractor, have embarked in standardizing NPDES permits in the state.
2. A Reasonable Potential Analysis (RPA) was conducted using data supplied by Sweetwater Authority. Effluent limitations

were included for constituents with reasonable potential to exceed water quality objectives. Constituents that do not have reasonable potential or had inconclusive RPA results are assigned performance goals in the tentative Order. These constituents are also assigned monitoring requirements, but the results will be used for informational purposes only, not compliance determination.

3. The tentative Order contains Effluent Limitations for the existing discharge location (001a) and the proposed discharge location (001b).
4. The tentative Order will include a time schedule for relocation of the discharge to a point further downstream to mitigate salinity impacts.

COMPLIANCE:

Sweetwater Authority's discharges to San Diego Bay via the Lower Sweetwater River has demonstrated compliance with the Effluent Limitations in current Order No. R9-2004-0111. New information obtained from recent site studies conducted by the Discharger indicate salinity impacts, associated with the brine discharge, have had an adverse effect on the beneficial use of the Lower Sweetwater River and is not in full compliance with the Discharge Prohibitions contained in Order No. R9-2004-0111. This non-compliance will be addressed with a Compliance Schedule to move the discharge location further downstream.

LEGAL ISSUES:

None

SUPPORTING DOCS:

1. Site Map
2. Transmittal Letter for Order No. R9-2010-0012 (February 2, 2010)
3. Tentative Order No. R9-2010-0012
4. Comment Letter from Sweetwater Authority (February 23, 2010)

RECOMMENDATION:

Adoption of Tentative Order No. R9-2010-0012 is recommended.