

EXECUTIVE OFFICER SUMMARY REPORT
December 12, 2012

- ITEM: 7
- SUBJECT: NPDES Permit: General Permit for the discharge of lanthanum-modified clay to surface waters of the United States in the San Diego Region (Tentative Order No. R9-2012-0063, NPDES No. CAG999003) (*Ben Neill*)
- PURPOSE: To issue NPDES Permit No. CAG999003 with the adoption of Tentative Order R9-2012-0063.
- RECOMMENDATION: Adoption of Tentative Order No. R9-2012-0063 is recommended.
- KEY ISSUES: The states of Washington and New York have both issued NPDES permits covering discharges of lanthanum-modified clay, but Tentative Order No. R9-2012-0063 (Supporting Document No. 1) is the first time a NPDES permit has been issued in California for this discharge.
- DISCUSSION: By letter dated February 6, 2012, the County of Orange submitted a Report of Waste Discharge (ROWD) (Supporting Document No. 2) for the application of Phoslock® brand lanthanum-modified clay to Laguna Niguel Lake (Site map in Supporting Document No. 3). The project is designed to limit the available phosphorus for excess algae growth, and improve the water quality in the lake. Application is performed by mixing the Phoslock granule into slurry and spreading the slurry evenly over the lake surface. The slurry binds with free phosphorus in the water column as it sinks and caps the sediment on the lake bottom to prevent phosphorus reloading from the sediment. The application rate is determined by laboratory analysis of the free reactive phosphorus in the sediment, the water column, and the water source of the lake in order to determine the volume needed for removal of currently available phosphorus, as well as to adjust for phosphorus reloading from the water source of the lake. Phoslock will continue to uptake free reactive phosphorus until all receptor sites are full.
- Once applied, the Phoslock slurry gives the appearance of suspended sediment turbidity. The waterbody will have a cloudy or

dull appearance for approximately 4-8 hours, and a return to normal water transparency in less than 24 hours, as the modified bentonite clay carrier for the Phoslock slowly settles through the water column. Pollutants of concern are bentonite clay and lanthanum, which may impact water quality standards including but not limited to biostimulatory substances, color, floating material, pH, sediment, suspended and settleable solids, taste and odors, temperature, and turbidity if management measures are not properly implemented.

Tentative Order No. R9-2012-0063 establishes requirements for implementation of appropriate best management measures for the application of the lanthanum-modified clay. The requirements were developed with input from SePro Corporation, the company with distribution rights for the product in the United States. Because lanthanum-modified clay may be used elsewhere within the San Diego Region, the Tentative Order is a "General" NPDES Permit, allowing future project proponents to enroll under the Permit. The County of Orange will be enrolled for its Laguna Niguel Lake project immediately upon adoption of the Tentative Order.

One comment letter (Supporting Document No. 4) was received from Blankinship & Associates; an agricultural, environmental science and engineering consulting firm. The comment letter requested two non-substantial changes to permit language for clarity and to prevent misinterpretation. These changes are non-controversial and reflected in the errata sheet (Supporting Document No. 5).

LEGAL ISSUES: None.

PUBLIC NOTICE: On October 15, 2012, a public notice and copies of the Tentative Order were emailed to all known interested persons and posted on the San Diego Water Board's website.

SUPPORTING DOCUMENT:

1. Tentative Order No. R9-2012-0063
2. Report of Waste Discharge
3. Lake Laguna Niguel Site Map
4. Written Comments from Blankinship and Associates
5. Errata Sheet to Tentative Order No. R9-2012-0063