

**ITEM:**

**SUBJECT:** University of California, Center for Aquatic Biology and Aquaculture  
(CABA)  
Yolo and Solano Counties

**BOARD ACTION:** *Continuation of Hearing to Consider NPDES Permit Renewal*

*(Continued Hearing on Effluent Salinity Limitations and Effluent Monitoring Frequency)*

**BACKGROUND:** The University of California, Davis (Discharger) owns and operates the CABA facility, a fish research facility. The University's Aquaculture and Fisheries Program conducts research focused in toxicology, nutrition, stress, genetics, general and physiology ecology, engineering, endocrinology, infectious diseases, and reproduction. Public agencies and other environmental protection interests use results from this research. The CABA facility is not a commercial hatchery and does not release fish into the environment.

The facility discharges effluent to the South Fork of Putah Creek under existing Waste Discharge Requirements (WDRs) Order No. 99-177 (NPDES Permit No. CA0083348). The tentative permit includes new effluent limitations, and new monitoring, reporting and study requirements, but does not allow an increase in discharge from the 2.88 million gallons per day allowed in the existing permit. The proposed permit also allows the use of effluent for irrigation of adjacent agricultural land owned by the Discharger. The Discharger is expected to immediately comply with the newly proposed requirements. Therefore, time schedules to provide time for the Discharger to comply with the new limitations are not included in the proposed Order.

On 22 August 2006, the tentative NPDES permit for the CABA facility was issued for public comments. As a result of public comments received, changes were made to the tentative permit to be considered for adoption.

The Regional Water Board considered the renewal of the tentative permit at the 26 October 2006 meeting and continued the hearing to allow additional time for public review and comment on two changes to the tentative permit. These changes are in regards to: (1) the appropriate effluent salinity limitation and (2) the frequency of effluent monitoring. On 27 October 2006, a Notice of Continuation of Public Hearing and the tentative NPDES permit were issued for a 30-day public comment period. Public comments, limited to the newly proposed effluent salinity limitations and effluent monitoring requirements, are due to the Regional Water Board office by 29 November 2006.

**ISSUES:**

**Electrical Conductivity (Salinity) Effluent Limitations:**

To be consistent with the Regional Water Board's direction regarding salinity in surface waters that drain into the Delta, the proposed permit includes an effluent limitation for Electrical Conductivity (EC) that maintains the discharge of salinity into Putah Creek from this facility at its current level. The proposed permit also requires the Discharger to conduct a Salinity Reduction Study as part of the required Best Management Practices Plan, and implement feasible measures that may reduce the amount of salinity discharged into Putah Creek from the CABA facility.

Regional Water Board staff originally proposed a monthly average EC effluent limitation of 700 uMhos/cm for the CABA facility's two discharges into Putah Creek. In response to their concern regarding compliance with this proposed EC limitation, the Discharger submitted recent effluent EC data. This data demonstrates that the Discharger can comply with a performance-based monthly average EC limitation of 800 uMhos/cm. Staff has modified the proposed NPDES permit to include a monthly average EC limitation of 800 uMhos/cm, holding the Discharger to its current level of EC in its discharge. The proposed Order contains a reopener provision allowing the Regional Water Board to revise the EC effluent limitation if further information from the required monitoring or other salinity study efforts indicates that a revised limitation is necessary to protect the beneficial uses of the receiving waters.

**Effluent Constituents Monitoring Frequency:**

The number of parameters to be monitored, and the frequency of monitoring required in the proposed NPDES permit have increased from the existing Order No. 99-017. In response to the Discharger's concern regarding the proposed increased monitoring, staff re-evaluated the proposed effluent monitoring requirements.

Staff concludes that the facility is a research laboratory that uses chemicals and aquacultural drugs that may pose threat to the beneficial uses of the receiving water. Therefore, staff is proposing to maintain the weekly monitoring for chemical and drug constituents used in the research facility. For conventional pollutants such as Biochemical Oxygen Demand, Total Suspended Solids, Settleable Solids and EC, however, staff proposes quarterly monitoring instead of monthly monitoring. This modification is based on the consistency among monitoring results demonstrated from previous Discharger data.

Additionally, due to the continuously changing constituents in the CABA facility wastewater, staff proposes modified whole effluent toxicity testing frequencies to be required annually instead of quarterly, as originally proposed. Monthly or quarterly toxicity testing may be applicable for municipal or industrial wastewater where the characteristic of the wastewater does not significantly change and the Discharger is not aware of what is actually in the waste stream. For this Discharger, however, staff

concludes that due to the continuously varying research taking place in this facility, more frequent toxicity testing may not capture a short or long-term toxic event taking place between the required tests. The standard conclusions this facility strives for in their research is the impact their own water quality has on fish. The Discharger is continuously aware of the constituents in the wastewater and has best management practices (BMPs) in place to haul away potentially toxic wastewater for offsite disposal.

The proposed NPDES permit requires the Discharger to establish and implement a BMP plan that reduces the quantity of pollutants discharged to the receiving water. The proposed permit also requires the Discharger to report instances in which toxicity is suspected in their wastewater and offsite disposal of potentially toxic wastewater takes place. The reduced NPDES toxicity testing frequency is intended to work in conjunction with the routine testing conducted at the facility and the implementation of BMPs, minimizing any duplicative efforts while collecting the information necessary to prevent toxic discharges to the receiving waters.

Mgmt. Review\_\_\_\_\_

Legal Review\_\_\_\_\_

Central Valley Regional Water Quality Control Board  
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7/8 December 2006