

Central Valley Regional Water Quality Control Board
21/22 June 2007 Board Meeting

Response to Comments for the California Department of Fish and Game
Moccasin Creek Fish Hatchery
Tentative Waste Discharge Requirements

The following are Regional Water Quality Control Board, Central Valley Region (Regional Water Board) staff responses to comments submitted by interested parties regarding the tentative Waste Discharge Requirements (NPDES Permit renewal) for the California Department of Fish and Game, Moccasin Creek Fish Hatchery. Public comments regarding the proposed Order were required to be submitted to the Regional Water Board by 22 May 2007 in order to receive full consideration.

The Regional Water Board received comments regarding the tentative Order by the deadline from California Sportfishing Protection Alliance. The comments are summarized below, followed by staff responses.

CALIFORNIA SPORTFISHING PROTECTION ALLIANCE (CSPA) COMMENTS

CSPA – COMMENT #1. Incomplete Report of Waste Discharge. CSPA states that the proposed Permit is based on an incomplete Report of Waste Discharge (RWD) and in accordance with Federal Regulations 40 CFR 122.21(e) and (h) and 124.3(a)(2), the State's *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (SIP), and California Water Code Section 13377, the permit should not be issued until the discharge is fully characterized and a protective permit can be written.

RESPONSE: The Discharger adequately characterized the discharge and submitted a complete Report of Waste Discharge, dated 30 May 2006, to the Regional Water Board. As stated in 40 CFR § 122.21(e)(1), "The Director shall not issue a permit before receiving a complete application for a permit except for NPDES general permits. An application for a permit is complete when the Director receives an application form and any supplemental information that are completed to his or her satisfaction. The completeness of any application for a permit shall be judged independently of the status of any other permit application or permit for the same facility or activity." 40 CFR § 124.3(a)(2) states, "The Director shall not begin the processing of a permit until the applicant has fully complied with the application requirements for that permit. See §§270.10, 270.13 (RCRA), 144.31 (UIC), 40 CFR 52.21 (PSD), and 122.21 (NPDES)." Accordingly, staff has concluded a complete NPDES permit application was submitted by the Discharger and the wastewater has been adequately characterized in compliance with the regulations cited above. All of the constituents that were present in the effluent and exhibited a reasonable potential to cause or contribute to an instream excursion above applicable water quality criteria are discussed in the Fact Sheet.

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CSPA – COMMENT #2. Antidegradation Analysis. CSPA states that the proposed permit should not be adopted until the Discharger completes an antidegradation analysis.

RESPONSE: The proposed Order complies with the antidegradation policies. The proposed Order does not allow for an increase in flow or mass of pollutants to the receiving water. Therefore, a complete antidegradation analysis is not necessary. The proposed Order requires compliance with applicable federal technology-based standards and with water quality-based effluent limits (WQBELs) where the discharge could have the reasonable potential to cause or contribute to an exceedance of water quality standards.

The commentor states that since the proposed Order allows the use of therapeutants, including oxytetracycline, penicillin G, florfenicol, amoxicillin, trihydrate, erythromycin, Romet-30, MS-222, carbon dioxide, sodium bicarbonate, Aquí-S, PVP, iodine, hydrogen peroxide, potassium permanganate, acetic acid, and chloramines-T, an antidegradation analysis must be performed for these chemicals. While research is currently being conducted on the possible aquatic and human health impacts of these types of chemicals, no criteria exist to establish defensible numerical water quality-based effluent limitations. Therefore, the proposed Order requires the Discharger to perform best management practices for the use of these chemicals and to monitor the effluent during use at the facility. The use of non-numerical control mechanisms is expressly allowed in the Title 40 of the Code of Federal Regulations. The requirements in the proposed Order for the control and monitoring of these chemicals comply with the regulations and are fully supportive of the Clean Water Act.

CSPA – COMMENT #3. Acute and Chronic Toxicity. CSPA states that the proposed permit fails to contain an effluent limitation for acute and chronic toxicity, and therefore does not comply with applicable state and federal regulations.

RESPONSE: The Basin Plan specifies a narrative objective for toxicity, requiring that *“All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life.”*

USEPA’s *Technical Support Document Water Quality-based Toxics Control (TSD)* specifies two toxicity measurement techniques that can be employed in effluent characterization; the first is Whole Effluent Toxicity (WET) testing, and the second is chemical-specific toxicity analyses. WET requirements protect the receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. WET

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tests measure the degree of response of exposed aquatic test organisms to an effluent. The WET approach allows for protection of the narrative “*no toxics in toxic amounts*” criterion while implementing numeric criteria for toxicity. For fish hatcheries, WET testing is used most appropriately when the toxic constituents in an effluent are not completely known; whereas chemical-specific analysis is more appropriately used when an effluent contains only one, or very few, well-known constituents. Due to the nature of operations at the Facility, its effluent is very consistent. Inputs into the system are limited to source water from Moccasin Reservoir, feed, and, occasionally, therapeutents. Therefore, the Regional Water Board used a chemical-specific approach to determine “reasonable potential” for discharges of aquaculture drugs and chemicals. As such it is not necessary to include an acute or chronic toxicity effluent limitation.

CSPA – COMMENT #4. Receiving Water Monitoring. CSPA objects to the lack of receiving water monitoring for temperature in the Monitoring and Reporting Program.

RESPONSE: Staff agrees with the commenter. Temperature monitoring of the receiving water is needed to ensure compliance with the Basin Plan water quality objective that the effluent shall not increase the natural temperature in the receiving water by more than 5°F. Therefore, temperature monitoring of the receiving water and effluent has been added to the Agenda version of the permit.

CSPA – COMMENT #5. Aquaculture Drug and Chemical Effluent Limitations. CSPA objects to the lack of effluent limitations for aquaculture drugs and chemicals including the following: oxytetracycline, penicillin G, florfenicol, amoxicillin trihydrate, erythromycin, Romet-30, MS-222, carbon dioxide gas, sodium bicarbonate, Aqwi-S, PVP, iodine, hydrogen peroxide, potassium permanganate, acetic acid and Chloramine-T.

RESPONSE: There has been a great deal of interest in the use of disease control chemicals at aquaculture facilities. Staff has reviewed NPDES permits for aquaculture facilities in the states of Oregon, Idaho, and Washington, in addition to California and other states. None of these states have promulgated water quality standards for these types of chemicals. In the cases of previously adopted permits in California, Oregon, Idaho, and Washington, the control and monitoring of these disease control chemicals is maintained through Best Management Plans and stringent monitoring requirements. The Best Management Practices (BMPs) found in this permit for the use and reporting of disease control drugs are contained in 40 CFR Part 451, Effluent Limitations Guidelines and New Source Performance Standards (ELG) for the Concentrated Aquatic Animal Production Point Source

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Category. In development of the above mentioned regulation, the U.S. EPA did not develop numerical limitations for these chemicals but instead developed management practices to ensure the proper storage, handling, and disposal of drugs and chemicals. The requirements contained in 40 CFR Part 451 are applicable to this Discharger and must be incorporated in their entirety into the NPDES permit. In the case where EPA, as part of the ELG development process, considered the pollutants and decided a standard was not necessary, the permit cannot include technology-based limits for those pollutants (40 CFR §125.3).

While research is currently being conducted on the possible aquatic and human health impacts of these types of chemicals, no criteria exist to establish defensible numerical WQBELs. The use of non-numerical control mechanisms is expressly allowed in the Title 40 of the Code of Federal Regulations. The requirements in this permit for the control and monitoring of disease control drugs such as oxytetracycline, penicillin G, florfenicol, amoxicillin, trihydrate, erythromycin, Romet-30, MS-222, carbon dioxide, sodium bicarbonate, Aqui-S, PVP, iodine, hydrogen peroxide, potassium permanganate, acetic acid, and chloramines-T comply with the regulations and are fully supportive of the Clean Water Act.

CSPA – COMMENT #5. Mass Limitations. CSPA states that the proposed Permit fails to include mass based effluent limitations contrary to Federal Regulations and contrary to technical advise.

RESPONSE: 40 CFR § 122.25(f) states:

Mass limitations. (1) All pollutants limited in permits shall have limitations, standards or prohibitions expressed in terms of mass except:

(i) For pH, temperature, radiation, or other pollutants which cannot appropriately be expressed by mass;

(ii) When applicable standards and limitations are expressed in terms of other units of measurement; or

(iii) If in establishing permit limitations on a case-by-case basis under §125.3, limitations expressed in terms of mass are infeasible because the mass of the pollutant discharged cannot be related to a measure of operation (for example, discharges of TSS from certain mining operations), and permit conditions ensure that dilution will not be used as a substitute for treatment.

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(2) Pollutants limited in terms of mass additionally may be limited in terms of other units of measurement, and the permit shall require the permittee to comply with both limitations.

40 CFR § 122.25(f)(1)(ii) states that mass limitations are not required when applicable standards are expressed in terms of other units of measurement. All the pollutants with numerical effluent limitations in this tentative permit are based on water quality standards and objectives. These are expressed in terms of concentration. Pursuant to 40 CFR § 122.25(f)(1)(ii), expressing the effluent limitations in terms of concentration is expressly allowed and is in no way contrary to Federal Regulations.