

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION**

**TENTATIVE WASTE DISCHARGE REQUIREMENT ORDER NO. R9-2007-0026 (NPDES NO. CA0109355)
FOR**

**HUBBS-SEAWORLD RESEARCH INSTITUTE
LEON RAYMOND HUBBARD, JR.
MARINE FISH HATCHERY
DISCHARGE TO AGUA HEDIONDA LAGOON**

RESPONSES TO SIGNIFICANT WATER QULITY RELATED COMMENTS RECEIVED BEFORE NOVEMBER 6, 2007

Com ment No.	Summary of Comment	Regional Board Staff Response	Suggested Revision	Permit Section
WRITTEN COMMENTS				
<i>Comments received from Hubbs-Seaworld Research-Institute Dated November 5, 2007</i>				
1	The purpose of this letter is to provide additional written comments regarding the Tentative Waste Discharge Requirements (WDR Order #R9-2007-0026). These comments are specific to the proposed requirements of zero net discharge of nitrogen (N), phosphorus (P), and Zinc (Z) from our hatchery facility on outer Agua Hedionda Lagoon (AHL) in Carlsbad, CA. We believe the proposed requirements of zero net discharge of N, P, and Z to be untenable and unnecessary, and our rationale this position is described below.	Comment noted. The Discharger's surface water monitoring data indicates zinc, nitrogen, and phosphorus levels in receiving water of Agua Hedionda Lagoon already exceed water quality objectives. The effluent limits in the tentative order are set at background concentrations based on the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP). Since the receiving water already exceeds water quality objectives, Tentative Order No. R9-2007-0026 does not allow the additional of zinc, nitrogen, and phosphorus contributions from the hatchery operations.	None	
2	Our hatchery in Carlsbad is operated under contract from the California Department of Fish & Game using public funds collected from commercial and recreational fishermen. The purpose of the facility is to raise white seabass from eggs to juvenile size for release back into the ocean as an experimental program to evaluate the feasibility of replenishing depleted stocks using cultured	The water quality based effluent limitations in Tentative Order R9-2007-0026 were developed using water quality criteria in the SIP, Basin Plan, and the California Toxic Rule (CTR) and not by a cost-benefit analysis. Although the mass loading of additional nitrogen and phosphorus from the hatchery is low (approximately 1/2 bag of fertilizer) per day, the Basin Plan water quality objectives for these constituents are numeric	None	

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	<p>fish. The white seabass program is the nation's largest, most comprehensive replenishment program and it is widely recognized as yielding positive benefits to the environment –benefits that in our opinion far outweigh the “impacts” of the minute concentrations of N, P, and Z in our discharge. To express this opinion quantitatively, during the last five year monitoring period we discharged an average of 2.5 lbs of N, 1.1 lbs of P, and -0.27 lbs of Z per day during the process of annually releasing 27-50 tons of juvenile fish into the ocean (see attachment of quantitative assessment)1</p>	<p>concentrations. For a standing waterbody like Agua Hedionda Lagoon, the water quality objectives are 0.25 mg/l for nitrogen and 0.025 mg/l for phosphorus. The water quality objectives are established to prevent algae blooms and emergent plant growth. The applicable water quality objectives have already been exceeded, therefore no dilution credit could be given for the hatchery discharge.</p>		
3	<p>From a procedural standpoint the new requirements of our NPDES permit have come as a complete surprise to us. Our facility was opened in 1995 on land designated for aquaculture use by the Carlsbad land Use Plan (1982) and adjacent to a lagoon where aquaculture is recognized as a beneficial use. During our initial, lengthy 3-year NPDES application process, we openly stated that nitrogenous waste products would be discharged because they are natural waste product of fish, including those swimming in the lagoon. We were not issued an NPDES permit at that time because we did not meet the threshold production limit for a Concentrated Aquatic Animal Production (CAAP) facility. Our operation remains well below that 100,000 lb per year threshold (approximately 20%) but we were issued a NPDES permit in 2001 because of a change in our processes related to meeting new municipal wastewater requirements. Since our initial authorization to discharge into the AHL was issued, we have a 10-year monitoring history during which time there has been no notice of violation (NOV) nor notification of any kind that discharge of N, P, and Z were problematic at the levels we were reporting. In this regard we have not been given the opportunity to fully explore the sources of these compounds in our discharge or implement additional BMPs to further reduce the discharge of these specific compounds. This remains something we can</p>	<p>It is correct that the hatchery has been in compliance with the previous NPDES permit. Effluent limitations for nitrogen, phosphorus, and zinc were not included in the previous Order No. 2001-237, but these constituents were required to be monitored in the discharge. During the permit renewal process, this monitoring data was evaluated to determine the need for changes to effluent limitations. Based this monitoring data, Tentative Order No. R9-2007-0026 now includes effluent limitations for nitrogen, phosphorus, and zinc that are protective of water quality.</p> <p>We have no information to disagree with the cost estimates provided by Hubbs Seaworld Research Institute to implement the additional filtration and hereby meet the proposed effluent limitations. Zinc was not included in the Interim Effluent Limitations as it appears that the hatchery process reduces the zinc in the effluent. However, based on the comment and a reevaluation of the monitoring data, an interim effluent limitation for zinc, based on CTR levels, has been added to the Tentative Order.</p>	See Errata Item 2	Section IV Effluent Limitation s

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	<p>do but as it stands now, this point is irrelevant because the threshold limits for net discharge are set at zero. While the new WDR gives us four years to explore filtration options to remove N & P, this is not an economically viable solution for our program operated on public funds(i.e. we do not have rate payers to pass these costs on to). We estimate an increase of approximately 30% of our operating costs plus the associated capital costs. These technologies also have environmental costs that would clearly outweigh their benefits in this particular case (i.e. removing < 3lbs per day N and P). We are in a similar dilemma for Z removal, which unlike N and P, requires immediate removal without a four year phase-out period.</p>			
4	<p>While we certainly respect the intent of the Clean Water Act, this tentative ruling is clearly an unanticipated consequence that we feel is both difficult to rationalize and inequitable. The watershed that feeds AHL is 29 square miles of primarily urban and agricultural land. Twenty three storm drains discharge into AHL, as well as urban runoff to the north and agricultural runoff from the south. Our discharge is one of the only point source discharges into AHL so it is an easily identifiable and quantifiable target for regulatory review and action but as already noted the input of N and P from our facility is insignificant. It is also important to note that our discharge is the most westerly discharge that is several hundred yards from the ocean where water quality standards from San Diego Basin Plan merge with the California Ocean Plan, ironically not concerned with N & P discharge.</p>	<p>Other discharges into the lagoon are currently covered by other NPDES storm water and the Non Point Source Program. These discharges are based on Best Management Practices (BMPs) and do not have effluent limitations like those proposed in the Tentative Order. The TMDL process provides for waste allocation for all sources within an area, however a TMDL for nutrients is not currently proposed for Agua Hedionda Lagoon.</p> <p>Monitoring data indicate the hatchery discharge is to a part of the lagoon comprised essentially of ocean water. The comment is correct in that the California Ocean Plan does not have water quality objectives for nitrogen and phosphorus. However, the Agua Hedionda Lagoon is considered a lagoon and estuary, which are not covered by the California Ocean Plan. Discharges to the lagoon are covered by SIP requirements implemented by which Tentative Order R9-2007-0026 implements.</p>	None	
5	<p>In summary, we feel that the Tentative WDR is unreasonable and unnecessary as written, and has the likely result of putting our California state-mandated conservation research program out of business within</p>	<p>Comment noted.</p>		

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	<p>the specified four year time span. The levels of N, P, and Z that we are discharging are insignificant in relation to other sources within the watershed and other local discharges into the ocean This is especially true when our discharge characteristics are put in perspective with the public benefit that is being derived from the fish that are generating these wastes.</p>			