

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

**TENTATIVE ORDER NO. R9-2006-0088  
SAN DIEGO STATE UNIVERSITY RESEARCH FOUNDATION COASTAL WATERS LABORATORY**

**RESPONSES TO COMMENTS FROM INTERESTED PARTIES**

*In this document, "the original tentative Order" refers to tentative Order No. R9-2006-0088, and "the revised tentative Order" refers to tentative Order No. R9-2007-0006.*

Comment #	Comment	Staff Response
<i>Comments from San Diego State University Research Foundation (SDSURF) received October 31, 2006</i>		
1	<p>Perhaps the biggest concern the marine ecology researchers have is the fact 0.18 million gallons per day (MGD) is stated as the limit for an average discharge flow rate, which is noted in various areas throughout the Tentative Order (such as pages 3.9. F-3, F-4, F-5, F-6 and F-1 I). Although the application of waste discharge submitted in February of this year indicated an average daily, variable flow rate estimating 125 gallons per minute (GPM). or 0.18 MGD, neither the SDSU Research Foundation (SDSURF) nor its researchers can afford to limit intake/discharge flow rates and ultimately research to stay under this threshold. Under the provisions of this order, "a combined discharge to San Diego Bay from the CWL in excess of 0.18 MGD, as a calendar monthly average, is prohibited unless the SDSURF obtains revised waste discharge requirements authorizing an increased flow rate."</p>	<p>SDSURF submitted a Report of Waste Discharge in February 2006 and an application for an NPDES permit in July 2006 which identified 0.18 MGD as the average daily flowrate with a maximum daily flowrate of 0.288 MGD from the proposed Coastal Waters Lab (CWL). In drafting the requirements of Tentative Order No. R9-2006-0088, the Regional Board utilized the information provided by SDSURF.</p> <p>The Regional Board did not intend to limit the activities at CWL by setting the flowrate limitation at 0.18 MGD as a monthly average in the original tentative Order. Since SDSURF reported its expected average flowrate as 0.18 MGD and did not provide any other information in its application as to why this would not actually be the average flowrate, the Regional Board understood that an average flowrate of 0.18 MGD would accommodate the anticipated activities at CWL.</p>

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2	<p>With this threshold, an issue arises if the researchers as a result of their research are required to run the facility at design capacity of 200 GPM for most of the calendar-month and end up exceeding the 0.18 MGD limit. The flow rate of this facility is designed to provide maximum flexibility of systems and an increased chance of grant awards yet still maintain a relatively low flow of seawater back into the channel. Limiting the SDSURF researchers to the stated flow rate could be potentially detrimental to planned research grants and cooperative research with the MWWD and USGS located on the same campus. The SDSURF therefore requests changes to the Tentative Order to state a maximum 200 GPM or 0.288 MGD flow rate rather than a 0.18 MGD calendar-monthly average with a maximum one-day flow of 0.288 MGD.</p>	<p>The flowrate limitation of 0.18 MGD as a calendar monthly average in tentative Order No. R9-2006-0088 has been revised in tentative Order No. R9-2007-0006 to 0.288 MGD maximum flowrate within a calendar day or 24-hour period representing a calendar day. The revised limitation would allow the CWL to discharge at 0.288 MGD for an unrestricted number of days.</p>
3	<p>It is understood the computer modeling for dilution rates within the channel may need to be analyzed relative to the 0.288 MGD flow rate, given "pollutants can tend to accumulate within the NTC Boat Channel with low dilution rates under certain tidal conditions." However, as stated on page F-5 and confirmed by the marine ecology researchers, "waste seawater quality will be essentially the same as the intake water quality, as the discharge is simply from a flow-through seawater aquarium system." Given this, it would seem that increasing the discharge flow rate of seawater with essentially identical characteristics to those of the receiving water, an additional 0.108 MGD would have very little effect on the quality of the channel and ultimately the bay.</p>	<p>As used on page F-5 of the Fact Sheet of the original tentative Order, the use of the phrase "essentially the same as" was within the context of seasonal variations in intake water quality that would also be reflected in the waste seawater discharged. For this reason, it has been replaced with "similar to" in the revised tentative Order.</p> <p>The Regional Board maintains that the discharge may be significantly different from the intake water depending on the amount of uneaten food and fecal material released in the aquaria. For this reason, increasing the permitted flowrate from 0.18 MGD calendar monthly average to 0.288 MGD daily maximum was not a simple exercise and required re-analyzing dilution models and recalculating effluent limitations.</p>

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4	<p>Regarding the proposed Monitoring and Reporting Program (MRP), the Tentative Order mandates some quarterly monitoring for conventional pollutants (e.g. BOD and nutrients), semiannual monitoring for fecal indicator bacteria (total coliforms, fecal coliforms and enterococci), and annual monitoring for organic and inorganic (other than copper) priority pollutants and chronic toxicity. It is understood that the Regional Board may impose quarterly monitoring requirements for the conventional pollutants; however, the SDSURF questions the mandates for toxicity, priority pollutant and fecal indicator analyses, which can be quite costly and a burden on grant-funded projects.</p> <p>Regarding requirements for fecal bacterial indicators, in the near to long term there is little chance that the CWL will house marine mammals, which are the source of fecal bacteria. Given that research by the SDSU marine ecologists will be performed on fish, invertebrates and other coldblooded animals (which do not excrete fecal coliforms). then I see no reason that this should be included in the monitoring requirements. If indeed marine mammals ever become a part of the CWL research then the SDSURF will apply for a revision to the permit as required, and the Regional Board will be notified as a result of project report submittals.</p> <p>The proposed priority pollutant monitoring for organic priority pollutants and metals (except copper) are known to be rather expensive tests, even if only required annually. Since the SDSURF and marine ecology researchers have guaranteed that no chemicals or additives (besides fish food) will be added to the seawater for the enclosed animals then it would seem these tests would not need to be required. This statement is also confirmed and included in the Tentative Order on page F-17.</p> <p>Whole Effluent Toxicity testing mandated on an annual</p>	<p>The Regional Board understands that the CWL will house several independent researchers working on various projects that will vary over time. Because of this potentially variable nature of operations and resulting discharge at the CWL, the Regional Board deems it appropriate to maintain monitoring requirements for priority pollutants and chronic toxicity. The requested changes to monitoring requirements have been addressed in the Tentative Order No. R9-2007-0006 as follows:</p> <ol style="list-style-type: none"> <li>a. Influent and effluent monitoring requirements for fecal bacterial indicators have been removed. A prohibition prohibiting the discharge of waste seawater from aquaria housing warm-blooded species has been added. Compliance with the prohibition will be determined from semiannual reports describing research projects and activities at the CWL and from periodic inspections.</li> <li>b. Effluent monitoring for inorganic and organic priority pollutants, except copper, have been reduced from annually to once during Year 3 of the permit.</li> <li>c. Effluent monitoring for chronic toxicity has been reduced from annually to once each during Years 2 and 4 of the permit.</li> </ol> <p>Currently, because the actual nature of research activities that will be conducted at the CWL is not entirely known and because the discharge from the CWL has not commenced and no monitoring data is available, the Regional Board is taking a cautious approach on relaxing monitoring requirements. Based on monitoring results, semiannual reports describing research projects and activities at the CWL, and periodic inspections, the Regional Board may determine</p>

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	<p>basis is even more expensive than the analytical chemistry above and can cost several thousand dollars per sample. The same statement can be made for this requirement as above, in that nothing is to be added to the seawater with the exception of monitored food, and indeed we need to scrupulously avoid any toxicity to the animals in the system for our own research purposes.</p> <p>Given the above statements regarding the MRP, the SDSURF proposes to delete the requirements for the fecal bacterial indicator monitoring, organic priority pollutant and metal (aside from copper) monitoring, as well as the WET testing as long as the discharge remains below the 200 GPM (0.288 MGD) threshold. The SDSURF/CWL is simply not an industrial discharger, it is a research facility supported by state and federal grant awards. The above mentioned monitoring requirements will put undo harm on already limited grant resources. Additionally, the Tentative Order states that descriptions of research projects and activities are required to be submitted on a semiannual basis. These reports will provide documentation on activities and a list of materials involved in the research project, as well as sufficient evidence that the quality of the seawater within the aquaria will not be modified from the quality of its source.</p>	<p>in the future that increased or decreased monitoring is necessary, and the permit may be amended accordingly.</p> <p>The Regional Board acknowledges that monitoring costs would be part of potentially limited grant funds for research projects. While the Regional Board may consider costs when establishing monitoring requirements, other factors are also considered. The Regional Board strives to prescribe the minimum monitoring requirements necessary to determine compliance with permit requirements and assess protection of water quality and beneficial uses.</p>
5	Please remove the reference to "Aqua Hedionda" on page 12.	The requested correction has been made in the revised Tentative Order.
6	On page F-15, fourth paragraph, please change "NTV" to NTC. Also on same page. Paragraph 4.b1, should "percentile" be shown after "90th"	The requested corrections have been made in the revised Tentative Order.

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7	<p>In addition, please note that neither the SDSURF nor its researchers should be held responsible for adverse affects /non-compliance issues relative to water quality in the NTC Boat Channel or the San Diego Bay, caused outside of our discharge point. In other words, SDSURF cannot control potential pollutants from sources other than the discharge, such as the adjacent City storm drain outfall.</p>	<p>When taking enforcement actions in response to adverse impacts to water quality from waste discharges, the Regional Board will attempt to identify the cause(s) and the responsible party(ies).</p> <p>Because SDSURF also contributes to stormwater runoff that is discharged from the City storm drain adjacent to the CWL outfall, the Regional Board cannot make a determination at this time that SDSURF will not be held responsible if impacted water quality is observed in the NTC Channel resulting from stormwater discharges to the NTC Channel.</p>
<p><i>Comments from the Sierra Club San Diego Chapter received October 31, 2006</i></p>		
8	<p>We have reviewed the Tentative Order R9-2006-0088, which establishes the waste discharge requirements for the waste aquaria seawater discharge up to 1.8 million gallons per day into the Navy Training Center Boat Channel. In general, we concur with the requirements. However, there are two issues that we believe should be addressed.</p>	<p>The Regional Board appreciates the comments submitted by the Sierra Club.</p> <p>The discharge flowrate limitation under tentative Order No. R9-2006-0088 is 0.18 MGD.</p>

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9	<p>The aquaria will be drawing in seawater means that over time marine life will accumulate in and foul the intake screens, piping, pumps, storage tank and other mechanical hardware exposed to the seawater. The Tentative Order does not but should describe the maintenance procedures used to periodically remove this marine growth (bio-fouling) with sufficient detail to demonstrate compliance with the waste discharge requirements.</p>	<p>SDSURF has informed the Regional Board that the inside of the intake pipes will be cleaned by “pigging”, which will scrape off biofouling and other material accumulated within the pipe. These scrapings, as well as materials cleaned from the intake screen and other equipment, if pushed out to the NTC Boat Channel and depending on the amount, could result in nuisance and localized water quality impacts (e.g., increased turbidity, decreased dissolve oxygen). Provision VI.C.3.a(2) has been revised to require procedures for cleaning of facilities and equipment which minimize potential discharges of wastes to waters of the US. The written procedures must be submitted to the Regional Board within 180 days of the adoption of the Order.</p>
10	<p>The Tentative Order indicates that the discharge is not treated. This raises the concern that should contagious diseases occur in any of the plant or animal life in the facility the discharge of the contagion could infect the marine life in the receiving waters. The Tentative Order should include measures and monitoring for contagious diseases in the effluent to protect the marine life in the receiving waters.</p>	<p>SDSURF provided the following response which the Regional Board concurs with:</p> <p><i>The CWL researchers will not be using exotic species, so we do not expect any exotic diseases. Furthermore, there is no information that we are aware of, that points to the holding of natural marine organisms in marine tanks and aquaria in marine laboratories, as causing or spreading marine diseases of infectious origin. Moreover, there is no way that our (or any other marine lab) can "monitor for contagious diseases in the effluent," since so little is known about the broad range and diversity of agents of disease which infect the natural SB Bay biota. Methods for monitoring these are exceedingly difficult if not impossible.</i></p> <p>The revised tentative Order has also been amended to include a provision in Section VII.A requiring SDSURF to report and document aquaria failures or significant plant or animal mortalities due to contagious disease as part of the semiannual report describing research projects and activities.</p>