

**California Regional Water Quality Control Board  
San Francisco Bay Region**

**RESPONSE TO WRITTEN COMMENTS**

On the Tentative Order for  
Lind Tug and Barge, Inc – Oyster Shell Mining in South San Francisco Bay  
San Mateo County and Alameda County

The Regional Water Board received sixteen comment letters during the public comment period which began on February 3, 2022, and closed on March 7, 2022. The comments from the letters are summarized in **bold** (paraphrased for brevity) below and are followed by staff response. We have also made a small number of staff-initiated revisions in addition to those arising from the response to comments.

Comment letters received are listed below:

1. WESTAqua Commodity Group
2. Sparetime Supply
3. Redi-Gro Corporation
4. Hillson Commodities, Inc
5. Liz Rasmussen
6. June Bugg
7. Leah Ancheta
8. Maribeth Stetts
9. Hunt & Behrens, Inc
10. Oakdale Fee & Seed Co
11. A.L. Gilbert Company
12. CA Grain Feed Association
13. Bar ALE, Inc
14. Lind Tug & Barge
15. Pacific Egg & Poultry Assn
16. San Francisco Baykeeper (Baykeeper) and Citizens Committee to Complete the Refuge (CCCR)

**Comment Letters 1 – 15**

These letters support adoption of the Tentative Order and require no response.

**Comment Letter 16 – Baykeeper and CCCR**

1. **Provision 16, Special Study is undeveloped and raises the following questions:**
  - 1.1. **Who will determine if the methodology and decision criteria proposed are adequate?**

The Revised Tentative Order now clarifies that the management goal of the special study is to assess if oyster shell harvesting affects shell transport and thus contributes to erosion of shell beaches. Under Provision 6, the Executive Officer will determine whether the methodology and decision criteria are adequate when approving the workplan after considering public comments. In addition, the Provision 6 has been revised to include a requirement for a three-member technical advisory committee (TAC) as follows:

“Lind shall organize and convene a three-person TAC that includes qualified experts in San Francisco Bay nearshore sediment transport dynamics. This TAC may include experts from the San Francisco Bay Regional Monitoring Program Sediment Workgroup, local universities, research agencies such as the U.S. Geological Survey, or other similarly qualified entities. The membership of the TAC is subject to approval by the Executive Officer.”

**1.2. Further, Provision 6 requires the workplan to be developed with assistance from the TAC. Will there be any consultation with experts who have been studying sediment transport within the Bay?**

See Response to Comment 1.1.

**1.3. What are the consequences of a finding that a “significant portion of shell hash was derived from shell deposits being mined by Lind?”**

We revised the Tentative Order to clarify that the study will focus on assessing possible relationships between oyster shell mining, shell transport, and erosion of current shell beaches and shoals. We also revised the Tentative Order to clarify that characterization of oyster shells within the mining area and at shell hash beaches and shoals will include but not limited to the identification and relative quantities of shell types, relative distribution of shell shapes, and the bulk density of shells. Characterizing the composition of shells will provide data that can be used to evaluate the mobility and transport of shells in the mining area and in the beaches and shoals, and may be used to develop a shell transport model, if needed. Further, if the composition of shells is similar and the TAC supported studies conclude there is a strong scientific linkage between oyster shell mining and erosion of current shell beaches and shoals, we will work with other permitting agencies on identifying the appropriate minimization or mitigation measures during subsequent permitting processes.

**1.4. Will the conclusions of the Special Study have any impact on the current permit cycle?**

The Water Board anticipates that the special study will inform the next permit cycle. See response in 1.3 above.

**1.5. Does the Regional Board foresee that the results of the Special Study may lead to the need for additional studies?**

The Water Board will evaluate the results from the special study to determine if further studies are needed to further clarify whether oyster shell mining is causing or contributing to erosion

of shell hash beaches and shoals. The results may or may not lead to additional studies. See also Response to 1.3 above.

**1.6. Require the three bathymetric surveys (2018, 2022, and 2026) listed as Applicant Proposed Measure 3 (APM-3) in the Mitigated Negative Declaration and if the 2018 bathymetric survey was not conducted, require one in 2024.**

CEQA Mitigation Measure APM-3 is overseen by the State Lands Commission. As such, the first bathymetric survey was completed in 2019, after the Mitigated Negative Declaration was adopted by the State Lands Commission in December 2018. The Revised Tentative Order incorporates the following language as Provision 4.I:

“In the 2022 and 2026 annual reports, include a copy of the new bathymetric survey. In the 2026 annual report, compare the bathymetric surveys completed in 2019, 2022, and 2026 to show changes over time.”

**1.7. Require a TAC to review results of the Special Study and to recommend future studies before future permit reissuance.**

The special study in Provision 6 has been revised to include a requirement for a three-person TAC in order to translate the management question into scientific studies. See Response to Comment 1.1.

The Water Board will evaluate the results of the special study and the recommendations of the TAC. If the results of the special study conclusively show that oyster shell mining reduces the amount of oyster shells available to shoreline hash beaches, the Water Board will evaluate the need to require additional studies. See Response to Comment 1.3 for more information.

**1.8. Water Board cannot continue to issue authorizations for extraction of nonrenewable oyster sources without assessing if the activity is adversely impacting the services provided by the hash beaches and shoals, such as a reduction of the erosive forces, protection of tidal wetlands, wildlife habit.**

We disagree. The Water Board, as a responsible agency under the California Environmental Quality Act (CEQA), is required to consider the Mitigated Negative Declaration adopted by the State Lands Commission. (Cal. Code Regs., tit. 14, section 15096.) The Mitigated Negative Declaration was not challenged and is presumed to comply with CEQA. (*Id.* at section 15231.) The Mitigated Negative Declaration did not find that the dredging activity will cause significant adverse impacts to shell hash beaches and shoals and the environmental services they provide. Moreover, assuming for argument’s sake that the Mitigated Negative Declaration is inadequate, the Water Board cannot assume the lead agency’s role as none of the circumstances for preparing a subsequent environmental impact report exist. (See Cal. Code. Regs., tit. 14, sections 15096, subd. (e), 15162, and 15052.) Specifically, there have been no substantial changes to the project and there is no new information implicating significant impacts since the Mitigated Negative Declaration was adopted. There is currently insufficient evidence that the Project would have adverse impacts to shell beaches and

shoals and the environmental services they provide. The Water Board does not believe this to be a significant concern. There are shell deposits throughout the South Bay and the mining area is relatively small in comparison to the entire South Bay. In addition, mining activities have been ongoing for about a century and shell hash beaches persist in the vicinity of the mining activities. Nevertheless, the Revised Tentative Order requires the special study to address the uncertainty around this issue.

The Water Board has fulfilled its CEQA obligations as a responsible agency by considering the Mitigated Negative Declaration and imposing feasible mitigation measures within its authority to require to reduce significant impacts. Accordingly, the Water Board may proceed with adoption of the Tentative Order under Water Code section 13263 and Clean Water Act section 401.

### **1.9. Methods for dating oyster shells inaccurate**

The Revised Tentative Order requires Lind to convene a TAC of qualified experts. The TAC will provide recommendations on the types of data that need to be collected to assess whether oyster shell mining causes or contributes to erosion of shell hash beaches and shoals. If the TAC recommends dating of oyster shells, they will also be asked to recommend feasible and accurate methods for dating oyster shells.

### **1.10. Tracer studies would be needed to assess the direction and rate of shell sediment movement onshore, and estimate sediment budgets.**

The special study has been modified to allow the TAC to consider a tracer study as a suggested project for the TAC to consider and propose, if scientifically supported. The following language has been incorporated as Provision 6.c:

“An analysis of the relationship between Lind’s mining activities and erosion of shell hash beaches and shoals in the vicinity of the mining activity. The analysis shall use empirical data collected as part of the study. In addition, the analysis may include assessing mobility and transport of shells within the mining area using a tracer study and/or by measuring wave energy, sheer stress, storm surge, and other important factors that can affect mobilization and transport of shells shoreward. Lastly, the information collected for the analysis may be used to determine the steps and feasibility of developing a mathematical shell transport model.”

Because the Revised Tentative Order requires convening a TAC and utilizing the TAC to develop the workplan, and expanding the scope of the tasks, the Revised Tentative Order extends the due date of the workplan to one year from the adoption of the Revised Tentative Order and extends the due date of the final report to within four years from the adoption of the Revised Tentative Order.

## **2. Decrease Lind’s Proposed Maximum Harvest**

### **2.1. Researchers are exploring numerous ways eggshell waste can be utilized ranging from use as “a fertilizer and calcium supplement in nutrition for human, animals, plants,**

**etc.” to use of heat treated “eggshell waste into mortar as an effective antibacterial composite.” The commenters also included results of studies in their comment letter.**

We are not decreasing Lind’s proposed maximum harvest. Currently, there is no infrastructure to support the widespread use of eggshell waste as a calcium supplement for chickens in California. We base this conclusion off the information Lind provided in the revised Alternative Analysis and our own investigation.

In addition, the 80,000 cy annual cap is consistent with the Mitigated Negative Declaration and other agencies’ approvals. State Lands in its lease, California Department of Fish and Wildlife (CDFW) in its Incidental Take Permit (ITP), and National Oceanic and Atmospheric Administration (NOAA Fisheries) in its Concurrence Letter have all limited the mining of oyster shells at 80,000 cy each year.

Lind dredges according to demand. Records from 2006 to 2019 show that Lind has never dredged 80,000 cy. The volume peaked at 72,034 cy in 2013 and has been generally decreasing annually. For example, in 2019, Lind dredged 44,970 cy and has not dredged since 2019. Therefore, we agree it is likely Lind will not mine the full 80,000 cy each year.

Further, Provision 4 requires Lind to report the total volume of oyster shells mined annually. To further confirm the volume of shells mined, the Revised Tentative Order in Provision 4.k adds the following annual reporting requirements:

“Capacity of barge, in cubic yards, used in each episode;”

## **2.2. Thanked Water Board for rejecting dollar cap for the donation of shell hash compensatory mitigation measure because it was not adjusted for inflation.**

NOAA Fisheries negotiated this compensatory mitigation measure in its Concurrence Letter. The Water Board accepted the measure.

## **3. Limit Water Quality Certification to a five-year term.**

The Tentative Order’s expiration coincides with the expiration date of Lind’s State Lands Lease, so it was not adjusted from the current duration of about 6.5 years to 5 years as suggested.

## **4. Compensatory mitigation measures are inadequate**

### **4.1. Prohibit mining activities between January and March to protect Longfin Smelt. Stopping mining for two months is insufficient to protect the Longfin Smelt during its spawning period.**

Longfin Smelt is protected by CDFW. In its ITP for the Project, CDFW determined that a 2-month halt of mining between February 1 and June 30 each year is appropriate to protect Longfin Smelt spawning. The Tentative Order is consistent with this CDFW minimization measure.

The Revised Tentative Order adds Provision 5:

“Each year, by January 31, Lind shall notify the Water Board of the months in which mining will cease to minimize impacts to spawning and rearing habitat.”

**4.2. Require protection of resident and migratory waterbirds and special-status species living along the South Bay’s shoreline.**

Resident and migratory water birds and special status species living along the South Bay’s shoreline are protected by CDFW and U.S. Fish and Wildlife Service. Neither has identified adverse effects on resident and migratory waterbirds or special status species living along the South Bay’s shoreline. Further, the Mitigated Negative Declaration for the Project evaluated effects of the Project on migratory birds and special status bird species and found these effects to be less than significant.

**4.3. Compensatory mitigation measures are inadequate. Unclear how 0.2 acres of covered species credits for Longfin Smelt was calculated.**

The compensatory mitigation measure was calculated by CDFW, the lead agency for protecting the Longfin Smelt. The Tentative Order is consistent with CDFW’s compensatory mitigation requirement.

A copy of “Petition To List The San Francisco Bay-Delta Population of Longfin Smelt (*Spirinchus thaleichtys*) As Endangered Under The Endangered Species Act” was included with the comments. The Tentative Order’s mitigation for Longfin Smelt is consistent with the mitigation required by CDFW’s ITP, which covers take of Longfin Smelt along with other species listed as threatened or endangered under the California Endangered Species Act.

**4.4. Survey regarding the presence, absence, or distribution and abundance of oyster populations that may colonize shell lag deposits.**

NOAA Fisheries is the lead agency for determining impacts to essential fish habitat, which includes the benthic communities serving as a food resource for fish. It evaluated the project’s impact to the benthic communities and required compensatory mitigation through the donation of 3 percent of the oyster shells mined, up to 1,800 cy annually for shoreline restoration projects. The Tentative Order is consistent with NOAA Fisheries’ compensatory mitigation requirement and has mitigated for impacts to benthic communities, which includes living oyster populations.