

**STAFF REPORT
C41**

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12/03/18
PRC 5534.1
A. Franzoia
C. Huitt

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**CONSIDER ADOPTION OF A MITIGATED NEGATIVE DECLARATION
AND ADOPTION OF A MITIGATION MONITORING PROGRAM AND
ISSUANCE OF A GENERAL LEASE – MINERAL EXTRACTION**

APPLICANT:

Lind Tug and Barge, Inc.

PROPOSED LEASE:

AREA, LAND TYPE, AND LOCATION:

1,560 acres, more or less, of sovereign land in south San Francisco Bay, near the San Mateo Bridge, San Mateo and Alameda Counties.

AUTHORIZED USE:

Hydraulically dredge a maximum of 80,000 cubic yards of historic oyster shell deposits annually using a tug and barge.

LEASE TERM:

10 years, beginning January 1, 2019.

CONSIDERATION:

Rent is comprised of two components: land rent and royalty.

Annual Land Rent: \$6,240 per year, with an annual California Consumer Price Index adjustment, as specified in the lease; AND

Minimum Annual Royalty: \$62,400, payable in equal semiannual installments whether or not oyster shells are extracted from the Lease Premises.

Quarterly Royalty: The Quarterly Royalty due is based on the amount of oyster shells extracted, at a rate of \$3.12 per ton, that exceeds the Minimum Annual Royalty.

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SPECIFIC LEASE PROVISIONS:

- Liability Insurance: \$1,000,000 per occurrence.
- Water Quality Insurance: \$5,000,000.
- Bond: \$70,000 to assure payment of the land rent and minimum annual royalty.
- Applicant shall execute a Lease Maintenance Agreement in the initial amount of \$25,000.

STAFF ANALYSIS AND RECOMMENDATION:

Authority:

Public Resources Code sections 6005, 6216, 6301, 6401, 6407, 6501.1, 6801, 6890, 6897, and 6899; California Code of Regulations, title 2, sections 2000 and 2003.

Background:

On November 27, 1978, the Commission authorized an extraction lease to Morris Tug and Barge, Inc., for 10 years with two 5-year options ([Item C42, November 27, 1978](#)). On August 30, 1989, the Commission authorized a 5-year lease extension ([Item C32, August 30, 1989](#)) and on August 21, 1996, the Commission authorized the second 5-year extension ([Item C40, August 21, 1996](#)). The lease was in holdover status until 2006 when the Commission authorized a new lease, which included a right to renew for an additional period of 10 years, subject to terms and conditions that will reasonably protect the State's interests ([Item C34, December 14, 2006](#)). On October 13, 2015, Morris Tug and Barge, Inc., and the Applicant merged. The Applicant is the surviving corporation and, on July 5, 2016, Lind Tug and Barge, Inc., applied for a new lease, invoking its right to renew its lease for an additional 10 years. The lease has been in holdover status.

The Applicant has mined oyster shell from the South Bay for about 40 years, and its parent company has operated for more than 90 years. The type of mining methods and mining location have remained relatively unchanged for decades and are proposed to remain the same for future operations. The lease and regulatory permits limit the Applicant to annual mined volumes of 80,000 cubic yards. There is seasonal curtailment of mining to avoid sensitive fish windows. Product demand and limited land-based storage for the oyster shell dictate the frequency of mining events that occur and the quantity mined per event.

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California Environmental Quality Act:

The Commission is the lead agency for the project pursuant to the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.) and conducted an Initial Study to determine if the Project may have a significant effect on the environment (State CEQA Guidelines, § 15063). Although the Initial Study identified several potentially significant impacts to the environment (e.g., biological resources, cultural resources and tribal cultural resources, hazards and hazardous materials), the Applicant identified several applicant proposed measures (APMs) it will implement to reduce potential impacts and also agreed to additional mitigation measures (MMs) prior to public review that would avoid or mitigate the identified potentially significant impacts “to a point where clearly no significant effects would occur” (State CEQA Guidelines, § 15070, subd. (b)(1)). See Exhibit C, Mitigation Monitoring Program, for identified APMs and MMs. Consequently, the Initial Study concluded that “there is no substantial evidence, in light of the whole record before the agency, that the Project as revised may have a significant effect on the environment” (State CEQA Guidelines, § 15070, subd. (b)(2)).

Pursuant to the Commission’s delegation of authority and the State CEQA Guidelines (Cal. Code Regs., tit. 14, § 15025), staff prepared a Mitigated Negative Declaration (MND) identified as CSLC MND No. 795, State Clearinghouse No. 2018062075. The Initial Study and MND were circulated for a 30-day public review period from June 29, 2018, to July 30, 2018. Staff received five comment letters: four from state agencies and one from the Applicant. The primary areas of concern raised during the public comment period and a summary of the response to these concerns are identified in Exhibit D. The responses also include where modifications were made in the MND to address the comment, as appropriate.

The Applicant has submitted an administrative draft application with the California Department of Fish and Wildlife (CDFW) for an Incidental Take Permit (ITP) for its mining activities. The Applicant must submit a final Draft ITP application upon adoption of the MND by the Commission. Commission staff consulted with CDFW, a CEQA responsible agency, which will act on the ITP after completion of the CEQA review process. Specific APMs and MMs incorporated into the Project to protect steelhead, Chinook salmon, longfin smelt, and other special-status fish species include:

- Seasonal curtailment of mining (APM-4) to avoid sensitive fish windows as determined by CDFW

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- Turbidity reduction during mining (MM BIO-1) and limiting the annual volume of oysters mined (MM BIO-2) to reduce exposure of fish and macroinvertebrates to suspended solids
- Installation and maintenance of positive barrier fish screens (MM BIO-3) and limited water pumping depths (MM BIO-4) to minimize potential entrainment of fish during mining operations

To reduce air emissions, the Applicant has committed to electrifying pumps that were formerly diesel powered (APM-1) and will use a Tier 4 diesel generator to power all other barge mining equipment (APM-2). Use of Tier 4 engines on marine vessels and workboats is an emission milestone set by the California Air Resources Board and supported by the Bay Area Air Quality Management District.

To reduce potential impacts to marine transportation and waterborne navigation, the Applicant will contact and notify U.S. Coast Guard District 11, San Francisco Bay Vessel Traffic Control of all transit activities inbound and outbound to and from the lease mining area in San Francisco South Bay and transiting to Mare Island or the offloading facilities prior to operations (APM-6).

Tribal Cultural Resources

In keeping with its Tribal coordination practices and pursuant to the Commission's Tribal Consultation Policy, staff also separately notified the five California Native American Tribes identified by the Native American Heritage Commission (NAHC) of the availability of the MND for public comment. The NAHC also provided a Native American contact list which Commission staff used for outreach and coordination. While no Tribes with geographical or cultural affiliation in Alameda and San Mateo Counties have submitted written requests to the Commission for notification of CEQA projects pursuant to AB 52, Commission staff contacted the Tribal Chairpersons identified by the NAHC to ensure the Tribes had an opportunity to provide meaningful input on the proposed Project. Commission staff did not receive responses from any Tribal representatives.

Conclusion

Staff believes that the changes described in Exhibit D do not constitute a "substantial revision," as defined in State CEQA Guidelines section 15073.5, subdivision (b), and that recirculation of the MND prior to Commission consideration is not required pursuant to State CEQA Guidelines section 15073.5, subdivision (c).

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Based upon the Initial Study, the MND, and the comments received during the public review process, staff believes there is no substantial evidence that the project will have a significant effect on the environment (California Code of Regulations, title 14, section 15074, subdivision (b)).

A Mitigation Monitoring Program has been prepared in conformance with the provisions of CEQA (Pub. Resources Code, § 21081.6), and is contained in Exhibit C, attached.

Public Trust and State's Best Interests Analysis:

The State of California acquired sovereign ownership of all tidelands and submerged lands and beds of navigable lakes and waterways upon its admission to the United States in 1850. Pursuant to statute and the common law Public Trust Doctrine, the State holds these lands for the benefit of all people of the State for statewide Public Trust purposes that include, but are not limited to, waterborne commerce, navigation, fisheries, water-related recreation, habitat preservation, and open space.

The MND analyzed the impacts on many resources that are also pertinent for the Public Trust analysis. Therefore, the MND and entire CEQA record of proceedings for the Lind Tug and Barge Inc. Oyster Shell Mining Project are hereby incorporated by reference into this staff report.

Oyster shell mining itself is not a Public Trust use under the common law Public Trust Doctrine. However, the Commission may authorize the mining if it finds that it does not substantially interfere with Public Trust needs and values at this location, at this time, and for the foreseeable term of the proposed lease; or substantially impair the trusts upon which such lands are held including navigation, fisheries, water-dependent recreation, public access, habitat, and open space. Specific Public Trust uses or values that could be affected by this Project are discussed below, including fisheries, navigation, water-dependent recreation and public access, mineral resource availability, sediment transport and bay morphology, and open space.

Fisheries

The MND evaluated impacts on fish species inhabiting the South Bay, including the northern anchovy, Pacific herring, flatfish, surfperch, gobies, six sharks and rays, smelt, Chinook salmon, and steelhead. These species rely on the South Bay for foraging, spawning, egg incubation, larval development, juvenile nursery areas, and migration. Although there is very little scientific information specifically on the effects of oyster shell mining on fish and aquatic habitats, a substantial body of information is

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available on sand mining and maintenance dredging that is directly relevant to assessing potential impact mechanisms for oyster shell mining on aquatic resources. Based on information available from the scientific literature, in combination with information on the methods and processes involved in oyster shell mining, factors associated with oyster shell mining that could adversely affect habitat conditions and fish within the South Bay were identified. These include:

- Benthic disturbance
- Changes in habitat
- Exposure to increased suspended sediment concentrations, and turbidity, and contaminants
- Changes in fish movement or migration patterns
- Entrainment
- Spread of invasive species

Oyster shell mining events remove benthic organisms, which serve as a food source for fish species, from the mined area and disturb the South Bay bottom. These benthic organisms have short lifespans, high reproductive potential, and rapid dispersal; and they are able to successfully colonize disturbed habitat. Results of studies conducted at other locations have shown that recolonization of subtidal areas, similar in their characteristics to South Bay, typically would begin immediately after completion of the oyster shell mining event with community recovering to pre-disturbance levels within less than 1 to 3 years. Additionally, the lease premises include a small portion, 1,560 acres, of the South Bay. Given the relatively small area where mining occurs and the rapid recolonization of benthic habitat following disturbance, oyster shell mining has not been identified as a significant factor affecting the benthic community in the estuary.

The removal of oyster shell from the mining area results in a localized habitat change in sediment grain size distribution as large material is mined and silt, mud, and other fine-grained sediment are returned to the area. Since much of the shell deposit is overlaid and interspersed with young bay mud, the effects of localized changes in sediment grain size distribution on benthic habitat is expected to be small. Limiting oyster shell mining to the lease premises substantially reduces the potential risk that oyster shell mining would result in regional changes in benthic habitat conditions that would affect the South Bay benthic community. Accordingly, the incremental impact of a localized change in substrate grain size distribution resulting from mining has not been identified as a significant impact to the benthic community.

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During oyster shell mining, a discharge plume occurs that raises turbidity and suspended sediment levels temporarily within the localized area of the mining operation, exposing present organisms to suspended sediment and turbidity. Results of water quality monitoring and analyses provide no evidence that contaminant concentrations would result in significant adverse effects to aquatic resources. To minimize the existing risk, the MND includes MM-1 and MM-2. MM-1 requires the mining barge to use a subsurface discharge to increase dispersal, avoiding higher concentrations of suspended sediment and turbidity. MM-2 limits the amount of mining allowed, and thus, the maximum amount of exposure to discharge plumes.

During oyster shell mining, the discharge plume could cause undesirable conditions that encourage migratory species to avoid the lease premises, thereby interfering with the species' migration. Since the potential area of the South Bay affected by the localized temporary discharge plume is small in comparison to the water body, migratory fish such as Chinook salmon or longfin smelt would have the opportunity to behaviorally avoid potentially stressful or unsuitable suspended sediment conditions resulting from the discharge plume. Therefore, no significant barrier or impediment to migration of either adults or juveniles is expected to occur in the South Bay as a result of oyster shell mining.

The oyster shell mining would use a trailing suction method in which the suction head is located immediately below (within 2 to 3 feet of) the substrate surface. This suction method creates the potential for entrainment of fish and larvae, including longfin smelt, juvenile steelhead, and Chinook salmon, during oyster shell mining. To avoid significant impacts, the MND includes APM-4, MM BIO-3, MM BIO-4, and MM BIO-5. APM-4 will help ensure that the mining occurs when the most sensitive species are not present; MM BIO-3 requires the use of fish screens to avoid entrainment; MM BIO-4 requires clearing the suction pipe at depths within 3 feet of Bay bottom, avoiding vulnerable species. MM BIO-5 requires monitoring of mining operations to ensure that operations comply with all other requirements.

Vessels can serve as vectors to transport invasive species from ecosystem to ecosystem. These invasive species can directly harm native species or compete with them for resources. However, oyster shell mining equipment used would be moored and operated exclusively within the South Bay, with shell offloading at sites in the Delta tributaries. Therefore, there is no potential for oyster shell mining to contribute to the transport or

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movement of invasive species or introduce new invasive species to the area.

For the reasons discussed above and as a result of the mitigation measures imposed as conditions in the proposed lease, oyster shell mining under the proposed lease would not cause a substantial interference with fisheries.

Because of the short duration of mining events and the relatively small area occupied by mining equipment, oyster shell mining under the proposed lease will not substantially impair the South Bay fisheries.

Navigation, Water-dependent Recreation, and Public Access

The mining activity would create the potential for increased vessel traffic, creating impediments to navigation, recreation, and public access in the South Bay. The South Bay is a wide, relatively shallow subtidal area where mining occurs in open water approximately 3 miles or more from bay shorelines. There is ample room for commercial and recreational navigation to occur simultaneously with oyster shell mining. The Applicant recently upgraded its oyster shell mining barge to a larger capacity that will result in a substantial reduction in the frequency and duration (about 58 percent and 39 percent, respectively) of South Bay mining events and thereby reduce barge and tug traffic on the South Bay and further reduce the potential for impacts to recreational and commercial boaters. Additionally, oyster shell mining is conducted in compliance with standard Operating Procedures for the Vessel Traffic Safety System of San Francisco Bay. Electronic navigational aids such as radar and crew training are used to detect and avoid boaters and aid in avoiding impacts to recreational and commercial boating.

Lastly, the Applicant will contact the U.S. Coast Guard (USCG) San Francisco Vessel Traffic 6 Control prior to all mining events, as required by APM-6.

Thus, oyster shell mining operations will not substantially impair the public rights to navigation, water-related recreation, or public access because of the limited duration of the mining events on a relatively small area of the lease premises and the ample space surrounding the lease premises.

Mineral Resource Availability

The estimated annual mined relic oyster shell deposits from the South Bay (which have ranged from approximately 26,000 to 36,000 tons per year in recent years) represents an annual mining rate of 0.06 percent per year of

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the estimated deposit of 60,000,000 tons of oyster shell in the South Bay and 0.17 to 0.33 percent per year of the estimated shell reserves in the lease premises. Thus, the resource is expected to be and remain widely available throughout the term of the proposed lease.

Additionally, the proposed lease would require the Applicant to conduct a volumetric study to determine the quantity and extent of the historic oyster shells within the lease premises within 2 years of the execution of the lease. This lease term will provide the Commission with updated information on the supply of oyster shell remaining in the lease premises.

For these reasons, the proposed lease would not result in substantial depletion of the oyster shell resource.

Sediment Transport and Bay Morphology

Oyster shell mining results in the localized removal of relic shell material from the subtidal area as well as a redistribution of silt and mud that is washed from the shell and returned to the area. These effects of oyster shell mining contribute to localized changes in bathymetry (water depth) and sediment grain size distribution within the area where mining occurs. The cumulative effect of oyster shell mining results in localized, and temporary--depending on sediment deposition rates--increases in water depth.

As part of the Project, the Applicant has agreed to work collaboratively with the Commission and other interested agencies to design and conduct periodic bathymetric surveys of the South Bay lease premises to assess changes in benthic topography associated with oyster shell mining (APM-3: Periodic Bathymetric Surveys). The Applicant will conduct bathymetric surveys to assess current and future bathymetric conditions within the lease premises. The Applicant proposes to conduct further periodic bathymetric surveys beginning in 2018, then in 2022 and 2026, to evaluate potential trends and impacts with regard to South Bay bathymetry. Results of these bathymetric surveys will be helpful in assessing local changes in subtidal habitat in the South Bay area and how oyster shell mining affects subtidal bathymetry.

The Project site is located within an area susceptible to liquefaction with the occurrence of a large earthquake; however, the nature of the on-going mining of the Project, and lack of structures at the Project site, make potential risks negligible.

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Open Space

Open space is also considered an appropriate Public Trust purpose. Because of the limited duration of the oyster shell mining operations on a relatively small area of the South Bay, no substantial interference with open space, scenic vistas, or aesthetics is expected or has been reported in the past.

Continuing Supervisory Role of Commission

The California Supreme Court in *National Audubon Society v. Superior Court* emphasized the duty of the state as sovereign to retain continuing supervisory control over its navigable waters and the lands beneath those waters. (*National Audubon Society v. Superior Court* (1983) Cal.3d 419, 445.) The proposed leases contain numerous provisions that provide for the Commission's exercise of continuing supervisory control over the Public Trust lands leased for oyster shell mining.

First, the proposed lease would not alienate the State's fee simple interest or permanently impair public rights. There are several prohibitions on the sale of tide and submerged lands. (Cal. Const., art. X, § 3; Pub. Resources Code, § 7991; Cal. Code Regs., tit. 2, § 2030 subd. (a).) Removal of oyster shell does not affect the State's fee title. Mineral deposits are reserved to the State and are reserved from sale except upon a rental and royalty basis. (Pub. Resources Code, §§ 6401, 6890 et seq.) The lease would be limited to a 10-year term beginning January 1, 2019.

Second, the lease would include as enforceable conditions the mitigation measures from the Mitigation Monitoring Program designed to mitigate impacts to the environment, including Public Trust resources, to the maximum extent feasible.

Third, the Applicant is required to report quarterly on the amount and quality of oyster mined, report the number and location of all mining episodes, and provide detailed mining episode track lines to defined tolerances.

Finally, the Commission may temporarily suspend mining or any other operation by the Applicant under the lease whenever staff "makes a good faith determination that the operation or operations, unless suspended, may pose an immediate and serious threat to life, health, property, or natural resources." (Section 2, paragraph 13.)

In sum, the limited duration of the lease, coupled with implementation of mitigation measures, reporting requirements, and the ability to temporarily

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suspend operations, provide the Commission with the necessary supervisory control to protect these Public Trust lands and resources. The State obtains rent for the mining lease area and royalties for the State-owned resource mined. Oyster shell is currently processed and used as a high-grade mineral and nutrient supplement in poultry diets, as a soil amendment, for pharmaceuticals, and as an amendment to neutralize livestock waste. Regional economic and agricultural development and commercial activity is dependent on having adequate supplies of oyster shell. The quantity and quality of oyster shells available from alternative sources are not adequate to meet the existing or projected future market demand in California and throughout the United States, nor can they meet the unique physical and chemical characteristics of the relic oyster shell deposits from the South San Francisco Bay.

The proposed lease is for a limited time period and requires the lessee to insure the lease premises and indemnify the state for any liability incurred as a result of the lessee's activities thereon. The lease also requires the payment of annual rent and a royalty to compensate the people of the State for the extraction of oyster shells and the use of State land.

Climate Change:

Due to the Project's short duration, and with no permanent infrastructure proposed on the lease premises, sea-level rise as a result of climate change is not expected to have any effect on the Project. Additional background information on climate change and sea-level rise is provided in Section 5.2 of the MND.

Conclusion:

For all the reasons above, staff believes the lease will not result in significant changes in the use of, or impacts to, Public Trust resources; does not substantially interfere with Public Trust needs and values at this location, at this time, and for the foreseeable term of the proposed lease; and is in the best interests of the State.

OTHER PERTINENT INFORMATION:

1. This action is consistent with Strategy 1.1 of the Commission's Strategic Plan to deliver the highest levels of public health and safety in the protection, preservation, and responsible economic use of the lands and resources under the Commission's jurisdiction and with Strategy 2.1 to optimize returns for the responsible development and use of State lands and resources, both onshore and offshore.

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2. The Project involves lands identified as possessing significant environmental values in the Commission's Significant Lands Inventory, pursuant to Public Resources Code section 6370 et seq. The Project area is listed in the Significant Lands Inventory as parcel number 41-063-000, which includes the tidelands of the South San Francisco Bay lying below the ordinary high-water mark from Foster City in the south extending to the San Francisco City and County line to the north by Brisbane. The subject lands are classified in use category Class C, which authorizes multiple use. Environmental values identified for these lands are mostly biological, including endangered species, fishery and wildlife support, and marine life, but also having recreational values. Based on staff's review of the Significant Lands Inventory, consultation with CDFW, and through the CEQA analysis provided in the MND, staff believes the Project, as proposed, will not significantly affect those lands and is consistent with the use classification.

FURTHER APPROVALS REQUIRED:

U.S. Army Corps of Engineers
San Francisco Bay Regional Water Quality Control Board
California Department of Fish and Wildlife
Bay Conservation and Development Commission

EXHIBITS:

- A. Land Description
- B. Site and Location Map
- C. Mitigation Monitoring Program
- D. Comments and Responses on the Mitigated Negative Declaration

RECOMMENDED ACTION:

It is recommended that the Commission:

CEQA FINDING:

Find that an MND, CSLC MND No. 795 (November 2018), State Clearinghouse No. 2018062075, was prepared for this project pursuant to the provisions of CEQA, that the Commission has reviewed and considered the information contained therein and in the comments received in response thereto and that the MND reflects the Commission's independent judgment and analysis.

Adopt the MND and determine that the project, as approved, will not have a significant effect on the environment.

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Adopt the Mitigation Monitoring Program, as contained in Exhibit C, attached.

SIGNIFICANT LANDS INVENTORY FINDING:

Find that this activity is consistent with the use classification designated by the Commission for the land pursuant to Public Resources Code section 6370 et seq.

PUBLIC TRUST AND STATE'S BEST INTERESTS:

1. Find that oyster shell mining is not a Public Trust use, but that the proposed lease will not substantially interfere with the common law Public Trust Doctrine needs and values at this location, at this time, and for the foreseeable term of the lease; or substantially impair the trusts upon which such lands are held including navigation, fisheries, water-dependent recreation, public access, habitat, and open space; and
2. Find that issuance of the lease is in the best interests of the State.

AUTHORIZATION:

Authorize issuance of a General Lease – Mineral Extraction to Lind Tug and Barge, Inc., beginning January 1, 2019, for a term of 10 years, for extracting a maximum of 80,000 cubic yards of oyster shell deposits annually from sovereign land in south San Francisco Bay, as described in Exhibit A and shown on Exhibit B (for reference purposes only) attached and by this reference made a part hereof; and subject to the terms and conditions summarized below and more particularly set forth in the lease on file in the office of the Commission:

- Annual Land Rent of \$6,240, with an annual Consumer Price Index adjustment;
- Minimum Annual Royalty of \$62,400, payable in equal semiannual installments;
- Quarterly Royalty based on the amount of oyster shells extracted that exceeds the Minimum Annual Royalty, at a rate of \$3.12 per ton;
- Performance bond in the amount of \$70,000; and
- Liability insurance in an amount no less than \$1,000,000 per occurrence and water quality insurance in the amount of \$5,000,000.

EXHIBIT A

PRC 5534.1

LAND DESCRIPTION

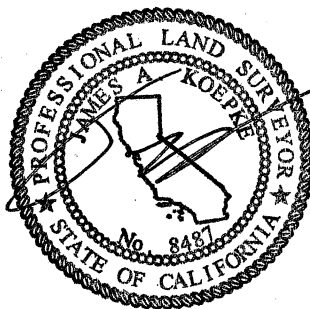
A parcel of submerged land lying in San Francisco Bay, situated northerly of San Mateo Bridge, in the Counties of Alameda and San Mateo, State of California, more particularly described as follows:

COMMENCING at a NGS monument "Guano Island Reset" (Epoch 2010.00) having CCS83 Zone 3 coordinates of Northing (y) = 2035870.58 feet, Easting (x) = 6050817.60 feet from which a NGS monument "Tidal 1" (Epoch 2010.00) having CCS83 Zone 3 coordinates of Northing (y) = 2042282.16 feet, Easting (x) = 6034838.53 feet bears North 68° 08' 13" West, 17217.41 feet; thence North 26° 38' 13" East 13466.63 feet to the POINT OF BEGINNING; thence the following six (6) courses:

1. North 3960.00 feet;
2. East 1320.00 feet;
3. North 1320.00 feet;
4. South 89° 59' 44" East 11877.90 feet;
5. South 5279.10 feet;
6. West 13197.90 feet to the POINT OF BEGINNING.

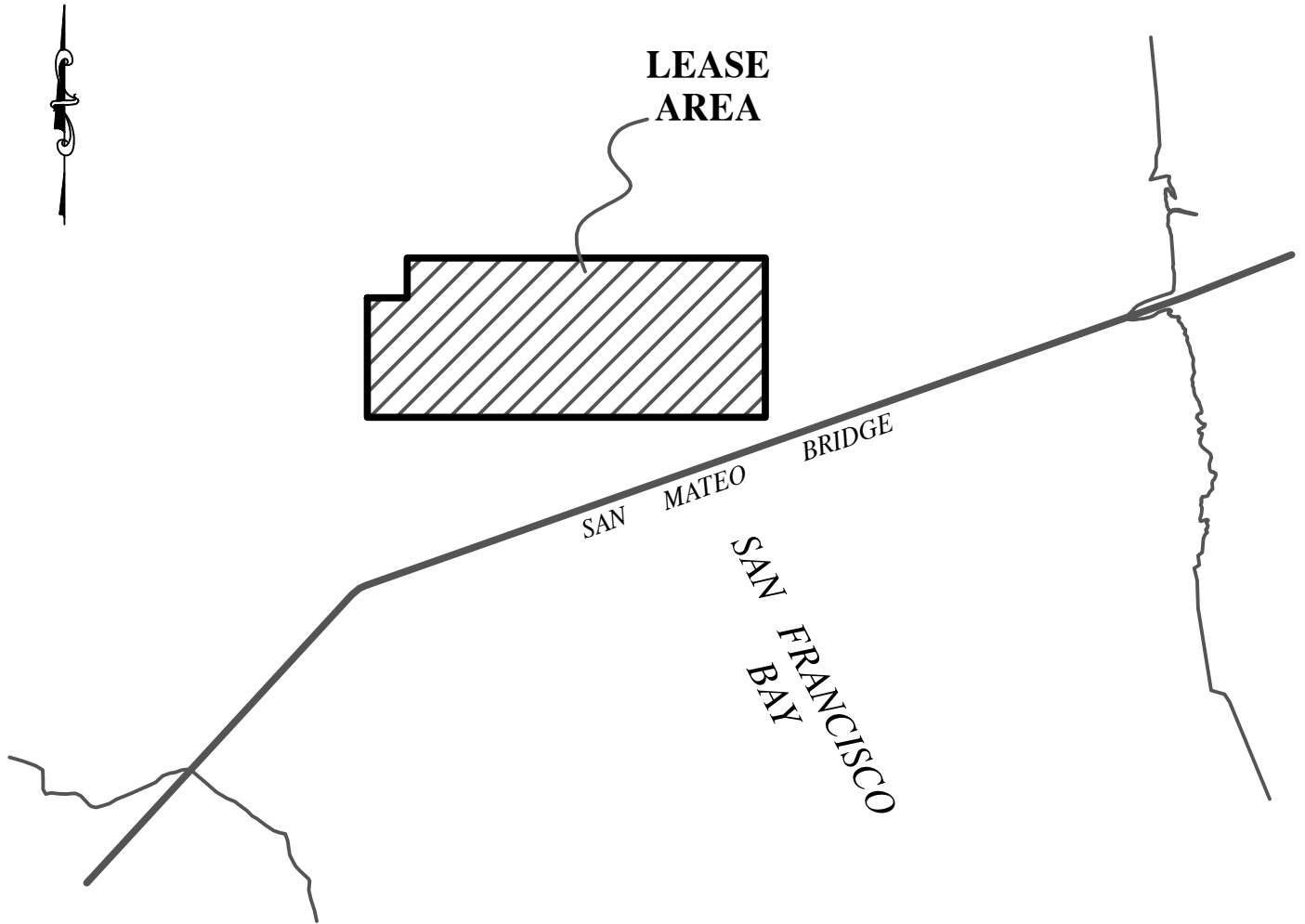
END OF DESCRIPTION

Prepared 10/01/2018 by the California State Lands Commission Boundary Unit



NO SCALE

SITE



SAN FRANCISCO BAY, NEAR SAN MATEO BRIDGE

NO SCALE

LOCATION



MAP SOURCE: USGS QUAD

Exhibit B

PRC 5534.1
 LIND TUG AND BARGE
 GENERAL LEASE -
 MINERAL EXTRACTION
 SAN MATEO & ALAMEDA
 COUNTIES



This Exhibit is solely for purposes of generally defining the lease premises, is based on unverified information provided by the Lessee or other parties and is not intended to be, nor shall it be construed as, a waiver or limitation of any State interest in the subject or any other property.

EXHIBIT C
CALIFORNIA STATE LANDS COMMISSION
MITIGATION MONITORING PROGRAM

LIND TUG AND BARGE, INC. OYSTERSHELL MINING PROJECT
(State Clearinghouse No. 2018062075)

The California State Lands Commission (Commission or CSLC) is the lead agency under the California Environmental Quality Act (CEQA) for the Lind Tug and Barge, Inc. Oystershell Mining Project (Project). In conjunction with approval of this Project, the CSLC adopts this Mitigation Monitoring Program (MMP) for implementation of mitigation measures (MMs) for the Project to comply with Public Resources Code section 21081.6, subdivision (a) and State CEQA Guidelines sections 15091, subdivision (d) and 15097.

The Project authorizes Lind Tug and Barge, Inc. (LTB or Applicant) to continue to operate and mine relic oyster shell deposits in the South Bay. Use of the State sovereign land for the mining of these oyster shell deposits is currently authorized under the existing CSLC Lease PRC 5534.1, hereinafter referred to as the "State Lease."

PURPOSE

The purpose of an MMP is to ensure compliance and implementation of MMs so that all identified significant impacts from the Project are mitigated to the maximum extent feasible. This MMP shall be used as a working guide for implementation, monitoring, and reporting for the Project's MMs.

ENFORCEMENT AND COMPLIANCE

The Commission is responsible for enforcing this MMP. The Project Applicant is responsible for the successful implementation of and compliance with the MMs identified in this MMP. This includes all field personnel and contractors working for the Applicant.

MONITORING

The Commission staff may delegate duties and responsibilities for monitoring to other environmental monitors or consultants as necessary. Some monitoring responsibilities may be assumed by other agencies, such as affected jurisdictions, Bay Area Air Quality Management District, San Mateo County, the city of San Mateo, or the San Francisco Bay Conservation and Development Commission (BCDC). The CSLC or its designee shall ensure that qualified environmental monitors are assigned to the Project.

Environmental Monitors. To ensure implementation and success of the MMs, an environmental monitor must be on site during all Project activities that have the potential to create significant environmental impacts or impacts for which mitigation is required. Along with the CSLC staff, the environmental monitor(s) are responsible for:

- Ensuring that the Applicant has obtained all applicable agency reviews and approvals
- Coordinating with the Applicant to integrate the mitigation monitoring procedures during Project implementation (for this Project, many of the monitoring procedures shall be conducted during the deconstruction phase)
- Ensuring that the MMP is followed

The environmental monitor shall immediately report any deviation from the procedures identified in this MMP to the Commission staff or its designee. The Commission staff or its designee shall approve any deviation and its correction.

Workforce Personnel. Implementation of the MMP requires the full cooperation of Project personnel and supervisors. Many of the MMs require action from site supervisors and their crews. The following actions shall be taken to ensure successful implementation.

- Relevant mitigation procedures shall be written into contracts between the Applicant and any contractors.

General Reporting Procedures. A monitoring record form shall be submitted to the Applicant, and once the Project is complete, a compilation of all the logs shall be submitted to the Commission staff. The Commission staff or its designated environmental monitor shall develop a checklist to track all procedures required for each MM and shall ensure that the timing specified for the procedures is followed. The environmental monitor shall note any issues that may occur and take appropriate action to resolve them.

Public Access to Records. Records and reports are open to the public and would be provided upon request.

MITIGATION MONITORING TABLE

This section presents the mitigation monitoring table for the following environmental disciplines: Biological Resources, Cultural and Paleontological Resources, Cultural Resources – Tribal, and Hazards and Hazardous Materials. All other environmental disciplines were found to have less than significant or no impacts and are therefore not included below. The table lists the following information, by column:

- Impact (impact number, title, and impact class)
- Mitigation and Applicant-proposed measure (full text of the measure)
- Location (where impact occurs and mitigation measure should be applied)
- Monitoring/reporting action (action to be taken by monitor or Lead Agency)
- Timing (before, during, or after construction; during operation, etc.)
- Responsible party
- Effectiveness criteria (how the agency can know if the measure is effective)

Table C-1. Mitigation Monitoring Program

Potential Impact	Mitigation Measure (MM)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Party	Timing
BIOLOGICAL RESOURCES						
Potential Impacts to Special-Status Species and Habitat	MM BIO-1: Turbidity Reduction During Mining. The oyster mining barge shall incorporate a subsurface discharge to increase dispersal (located approximately 4.5 feet below the surface) of the “overflow plume.”	Lease area (PRC 5534)	Initial verification and annual onsite-turbidity reduction equipment configuration verification by CSLC.	Verification by CSLC that subsurface discharge installed.	Applicant and CSLC	Verification within first 2 months after lease approval
	MM BIO-2: Limited Volume per Year. The Applicant shall not mine oyster shells over the permitted volume of 80,000 cubic yards per year.	Lease area (PRC 5534)	Onsite and remote monitor to verify	Logs, documentation, inspections, and summaries.	Applicant and CSLC	Annual volume reporting
	MM BIO-3: Installation of Positive Barrier Fish Screens. The Applicant shall not conduct any oyster shell extraction within the lease area without the installation of Positive Barrier Fish Screens as approved by the California Department of Fish and Wildlife, National Marine Fisheries Service, and U.S. Fish and Wildlife Service. The screens shall be installed on the drag head arm and the wash water intake.	Lease area (PRC 5534)	Onsite monitor to verify	Installation and full-time operation of Positive Barrier Screens	Applicant and CSLC	Verification within first 2 months after lease approval
	MM BIO-4: Limited Water Pumping Depths. When clearing the suction pipe, the Applicant shall ensure that the end of the drag head arm pipe is within 3 feet of the Bay bottom.	Lease area (PRC 5534)	Onsite monitor to verify	Logs, documentation, inspections, and summaries.	Applicant and CSLC	Verification within first 2 months after lease approval
	MM BIO-5: Mitigation Effectiveness Monitoring. The Applicant shall conduct compliance monitoring for the oyster shell mining operations to include and report the following: <ul style="list-style-type: none"> Operational logs documenting date, mining event log number, volume, lease site. 	Lease area (PRC 5534)	Onsite monitor to verify	Logs, documentation, inspections, and summaries.	Applicant and CSLC	Verification within first 3 months after lease approval and

Potential Impact	Mitigation Measure (MM)	Location	Monitoring/Reporting Action	Effectiveness Criteria	Responsible Party	Timing
	<ul style="list-style-type: none"> Documentation on the beginning and end location coordinates for each mining event to be provided to the California Department of Fish and Wildlife, U.S. Army Corps of Engineers, and San Francisco Bay Conservation and Development Commission so that each agency can review reporting forms. Documentation on the duration (minutes) of pump priming and clearing for each mining event when the suction head is not in contact with the bottom substrate and pump engaged. Visual inspection of the fish screens following each mining event to verify screen integrity, remove any impinged debris, and record any fish or macroinvertebrates impinged on the screen. Preparation of an annual summary of mining activity and quantification of the area of suitable shallow water required to fully mitigate incidental take based on the approach and assumptions (volumetric basis for full mitigation calculations) and an accounting of the mitigation habitat area (acres) that have been purchased by the Applicant for fishery mitigation in compliance with Section 8 of the Incidental Take Permit. 					quarterly reporting
	<p>MM BIO-6: Limited Mining Area. Oyster shell mining shall be restricted to the specific lease area designated by the California State Lands Commission in the South Bay and is not permitted outside of the lease area (PRC 5534). Oyster shell mining activities shall be monitored for location and duration activity within the lease area with a global positioning system (GPS) tracking and reporting system.</p>	Lease area (PRC 5534)	Onsite monitor to verify	Logs, documentation, inspections, and summaries.	Applicant and CSLC	Verification of GPS system installation within 6 months of lease approval. Quarterly GPS data reporting

Potential Impact	Mitigation Measure (MM)	Location	Monitoring/Reporting Action	Effectiveness Criteria	Responsible Party	Timing
CULTURAL AND PALEONTOLOGICAL RESOURCES						
Potential Discovery of Unidentified Cultural Resources, Paleontological or Human Remains	<p>MM CUL-1: Mining Personnel Cultural Resource Sensitivity Training. The Applicant shall retain a certified archaeologist, defined as an archaeologist meeting the Secretary of the Interior’s Standards for professional archaeology (U.S. Department of the Interior, 2011), to carry out this measure related to archaeological, tribal, historical, and paleontological resources.</p> <ul style="list-style-type: none"> • After lease approval and prior to the first mining episode, the archaeologist, in coordination with the CSLC and a California Native American tribe(s) that is culturally-affiliated to the Project site, shall prepare a Cultural Resources Sensitivity Training Guide for all personnel working on the barge. A copy of the Cultural Resources Sensitivity Training Guide shall be submitted to the California State Lands Commission (CSLC) for approval. The Training Guide shall include an overview of potential cultural resources that could be encountered during mining activities to facilitate worker recognition, avoidance, and subsequent immediate notification to the archaeologist and culturally-affiliated Native American tribe(s) for further evaluation and action, as appropriate. • Lind Tug and Barge (LTB) shall ensure all new personnel obtain Cultural Resources Sensitivity Training prior to mining activities. • The Cultural Resources Sensitivity Training Guide shall be kept available on the barge for all personnel to review and be familiar with as necessary. • In the event that cultural resources are discovered during mining activities, all mining shall be suspended until a certified archaeologist 	Lease area (PRC 5534)	Onsite monitor to verify	Implementing MM will reduce the potential for impacts to any Culturally Significant Resource or discovering human remains	Applicant and CSLC	Annual records to verify staff training completion

Potential Impact	Mitigation Measure (MM)	Location	Monitoring/Reporting Action	Effectiveness Criteria	Responsible Party	Timing
	<p>has evaluated the nature and significance of the discovery. LTB shall notify CSLC staff of all potential archaeological, paleontological, historic or cultural resources that may be discovered and evaluated by the archeologist. A treatment plan on handling potentially significant resources shall be developed by the archaeologist and submitted to CSLC staff for review and approval. Title to all abandoned shipwrecks, archaeological, paleontological, historic or cultural resources on or in the tide and submerged lands of California is vested in the State and under the jurisdiction of the CSLC.</p> <ul style="list-style-type: none"> In the event that a discovery relates to a tribal cultural resource, the certified archaeologist shall immediately coordinate with the CSLC and culturally-affiliated Native American tribe(s) to evaluate the nature and extent of the discovery as well as its potential significance. The location of any such discoveries must be kept confidential and measures should be taken to ensure that the area is secured to minimize site disturbance and potential vandalism. Impacts to previously unknown significant Tribal cultural resources shall be avoided through preservation in place if feasible. 					
	<p>MM CUL-2: Unanticipated Discovery of Human Remains. If human remains are encountered, all provisions provided in California Health and Safety Code section 7050.5 and California Public Resources Code section 5097.98 shall be followed.</p>	Lease area (PRC 5534)	Onsite monitor to verify	Compliance with state laws for discovering human remains	Applicant and CSLC	Annual records to verify staff training completion

Potential Impact	Mitigation Measure (MM)	Location	Monitoring/Reporting Action	Effectiveness Criteria	Responsible Party	Timing
CULTURAL RESOURCES – TRIBAL						
Potential Discovery of Unidentified Tribal Cultural Resources	Implement MM CUL-1: Mining Personnel Cultural Resource Sensitivity Training and MM CUL-2: Unanticipated Discovery of Human Remains (see above).					
HAZARDS AND HAZARDOUS MATERIALS						
Potential Release of Hazardous Materials into the Environment	MM HAZ-1: Hazardous Material Control and Spill Prevention and Response Plan. The Spill Response Field Guide Emergency Procedures Response Action Checklist shall be implemented to ensure any accidental discharge is contained by the crew at the site. The dredge and tug crews shall be trained in accidental spill prevention, containment and response (including Agency notification) in the unlikely event of an accidental spill and discharge to the South Bay during a mining event. The dredge and tug boat crews will have access to cleanup equipment at all times.	Lease Area (PRC 5534) and transit to and from Port Facilities	Onsite monitor to verify	Prevention or containment of all accidental discharges.	Applicant and CSLC	Verification within first 6 months after lease approval
APPLICANT PROPOSED MEASURES						
	APM-1: Replacement of Tier-0 and Tier-1 Pump Engines with Electric Motors. The Applicant will electrify the oyster mining and wash water pumps to eliminate the use of older less efficient diesel engines to drive the various pumps used for oyster shell mining. The change from diesel powered pumps to electrical motor driven pumps will greatly reduce impacts to air quality.	N/A	Verification of the engine change out by CSLC	Reduction in air emissions	Applicant and CSLC	Verification within first 6 months after lease approval
	APM-2: Electrification of the Mining Pumps with a Tier-4 Diesel Generator. The Applicant will use one, state-of-the-art Tier-4 diesel generator to power all barge mining equipment to further contribute to a substantial reduction in air emissions when compared to the environmental baseline. The change to the Tier 4 diesel generator has been proposed and implemented by the Applicant.	N/A	Verification of the engine change out by CSLC	Reduction in air emissions	Applicant and CSLC	Verification within first 6 months after lease approval

Potential Impact	Mitigation Measure (MM)	Location	Monitoring/Reporting Action	Effectiveness Criteria	Responsible Party	Timing
	APM-3: Periodic Bathymetric Surveys. The Applicant will conduct bathymetric surveys to assess current and future bathymetric conditions within the lease area. The Applicant proposes to conduct further periodic bathymetric surveys beginning in 2018, then 2022 and 2026 to evaluate potential trends and impacts with regard to South Bay bathymetry. The Applicant will collaborate with regulatory agencies to develop the survey parameters.	Lease area (PRC 5534)	Approval of the Benthic Studies	Submittal of bathymetric surveys	Applicant and CSLC	Verification within first 6 months after lease approval
	APM-4: Seasonal Curtailment of Mining. A 2-month seasonal curtailment of mining (no mining activities) will occur between February and June of the calendar year. Prior to January 31 of each year, the Applicant shall request California Department of Fish and Wildlife to determine the appropriate 2-month window to ensure the curtailment is consistent with seasonal avoidance windows in other regions of the San Francisco Bay to avoid take of state listed species.	N/A	N/A	Avoid significant biological resources and habitat impacts	Applicant and CSLC	Verification in January of each year for CDFW to determine the 2-month window
	APM-5: Water Quality Wash Water Plume Study within First 2 Years of New Permits. The Applicant will collaborate with the San Francisco Bay Regional Water Quality Control Board and other interested agencies to design, fund, conduct, and report results of a discharge plume water quality monitoring study as part of the Project within 2 years after execution of a new lease.	Lease area (PRC 5534)	Approval of the Water Quality Wash Water Plume Study	Discharge plume water quality monitoring study	Applicant, SFBRWQCB and CSLC	Verification within first 2 years with SFBRWQC B staff
	APM-6: Local Notice to Mariners. Before and after all transit activities with the oyster shell mining tug, dredge barge and hopper barge, LTB shall contact and notify USCG, District 11 San Francisco Bay Vessel Traffic Control of all transit activities inbound and outbound to and from the lease mining area in South Bay and transiting to Mare Island or the offloading facilities.	Lease area (PRC 5534) and Transit to and from Port Facilities	CSLC to confirm notification to USCG.	Effective coordination and response	Applicant and CSLC	Verification within first 6 months after lease approval and annually through the lease term

EXHIBIT D
CALIFORNIA STATE LANDS COMMISSION
COMMENTS ON THE MITIGATED NEGATIVE DECLARATION AND RESPONSES

Lind Tug and Barge, Inc. Oystershell Mining Project
(State Clearinghouse No. 2018062075)

Following the 30-day public review period (June 29, 2018 to July 30, 2018) of the Initial Study and Mitigated Negative Declaration (MND)(CSLC MND No. 795), Commission staff received five comment letters: four from State agencies and one from the Applicant. The following provides the primary areas of concern raised during the public comment period and a summary of the response to these concerns.

In response to the comments, Commission staff revised the MND, as detailed in staff’s responses to the comments. None of these changes require recirculation of the MND. Recirculation is not required when:

- “[n]ew project revisions are added in response to written or verbal comments on the project's effects identified in the proposed negative declaration which are not new avoidable significant effects” or
- “[n]ew information is added to the negative declaration which merely clarifies, amplifies, or makes insignificant modifications to the negative declaration.” (State CEQA Guidelines section 15073.5, subdivision (c).)

Each of the changes made to the MND is either a new project revision or new information. Staff changed APM-4 and APM-6. Because APMs are part of the proposed Project, the changes made to APM-4 and APM-6 are “new project revisions” added in response to comments that do not create new avoidable significant effects. Similarly, all the other revisions to the MND are new information that clarifies, amplifies, or makes insignificant modifications to the MND. California Department of Transportation (Caltrans): Responsible Agency

1. Concern over encroachment onto the nearby San Mateo-Hayward Bridge Right-of-Way (ROW) and Mitigation Monitoring.	The Applicant will stay within the boundaries of the lease area, which is 1,963 feet from the San Mateo-Hayward Bridge and will not encroach into the State Transportation Network and the ROW. MM BIO-6 will maintain accountability for the Applicant to mine within the lease boundary. The Mitigation Monitoring Program (MMP) in Section 4.0 fully discusses the Commission’s responsibility of implementing all mitigation measures.
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California Department of Fish and Wildlife (CDFW); Trustee/Responsible Agency

1. Biological significance of San Francisco Bay-Delta ecosystem and the importance of threatened and endangered species. These	Commission staff recognizes the biological and ecological significance of the San Francisco South Bay and Delta. Personal communication with Arn
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include: Chinook Salmon, Steelhead, Green Sturgeon, and Longfin Smelt. Other species of importance and concern include: Dungeness Crab, Pacific Herring, and California Halibut.	Aarreberg at CDFW (August 30, 2018) revealed the proposed MMs (MM BIO-1 – MM BIO-6) and APMs (APM-3 and APM-4) will address the identified impacts to Chinook Salmon, Steelhead, Green Sturgeon, and Longfin Smelt. Various life stages of Dungeness Crab, Pacific Herring and California Halibut are not expected to remain in the surrounding area adjacent or within the lease area for significant portions of their development. Impacts to these three species are not anticipated to be significant or pose any risk to the life stages.
2. Concern over the 2-month window for the seasonal curtailment of mining	Based on consultation with CDFW, the 2-month avoidance window in APM-4 was modified in the MND to ensure the curtailment is consistent with seasonal avoidance windows in other regions of the San Francisco Bay.
3. Reference to potential take of State Listed Species and Incidental Take Permit (ITP) application.	Information has been added to Section 3.4.3 <i>Impact Analysis</i> , under Biological Resources reflecting that an administrative draft ITP application was submitted by the Applicant and a final draft ITP application must be submitted after adoption of the MND by the Commission.

San Francisco Bay Conservation and Development Commission (BCDC): Responsible Agency

1. Fish, other aquatic organisms and wildlife, Water Quality, and Navigational Safety and Oil Spill Prevention Plan and policies of the Bay Plan should be considered.	The MND evaluated the environmental, biological, water quality, and hazardous materials impacts within the existing lease area. The Commission recognizes BCDC will use the document as a responsible agency. The Bay Plan is included and discussed in the regulatory section of Appendix A.
2. Current use and reference for the use of oyster shell mined from South Bay.	The current reference for oyster shell is the current and best industry reference for use. Oyster shell use by identified industries has not changed since the publication of the referenced document.
3. Include in this section the draft of each vessel, both empty and fully loaded when appropriate.	Information regarding the requested drafts of the mining vessels has been added to Section 2.3.1, <i>Mining Methods</i> , of the Project Description.
4. BCDC staff understands that the Applicant has both installed and removed the fish screens described in Section 2.3.1 <i>Mining Methods</i> as a minimization measure at different times over the past four years.	The Commission staff is not aware of the past installation and removal of fish screens in this comment. As per the requirements of the MND and proposed lease, the continued use and maintenance of screens will be verified under MM BIO-3, Installation of Positive Fish Barrier Screens.
5. It is unclear whether the proposed electric wash pump has or has not yet been installed. Please indicate when it is scheduled to be installed or when it was installed. Indicate if tug boat engines meet current CARB standards, will be upgraded, or are exempt from air quality requirements.	The final equipment configuration impacts were evaluated for the identified project in the MND. In accordance with APM-1 and APM-2, confirmation by Commission staff will occur within the allotted time as per the verification requirement. The Applicant has provided confirmation that all tug-related engines are in compliance with CARB standards.
6. Concern regarding mining volume projected increase by approximately 17,500 cubic yards (cy) per year from actual extraction	The impacts of mining 80,000 cy of oyster shell mining were evaluated in the MND. There is no proposed increase in permitted mining volumes and

<p>volume historically mined, but within the previously permitted annual volume.</p>	<p>none authorized. The Applicant will determine if the total permitted volume of 80,000 cy will be achieved through market demand not to exceed required regulatory agency permits.</p>
<p>7. Mining activity during February and March each year to avoid disruptions to longfin smelt spawning periods and avoid the presence of longfin smelt larvae.</p>	<p>Commission staff has noted the comment and revised APM-4 based on consultation with CDFW (see comment #2 under the CDFW comments above).</p>
<p>8. Entrainment avoidance measures should be included in Table 2-4.</p>	<p>Table 2-4 is a summary of the APMs. Entrainment avoidance measures are mitigation measures and are summarized in Table ES-3 and found in Section 4.0, Table 4-1 Mitigation Monitoring Program.</p>
<p>9. Consider requiring that a qualified biologist verify that longfin smelt spawn has completed and larvae are of sufficient size to avoid entrainment prior to allowing mining to commence in April.</p>	<p>As part of APM-4, CDFW staff will annually determine the 2-month curtailment window.</p>
<p>10. Please include a monitoring event to ensure that noise generated from mining is below thresholds known to impact marine mammals.</p>	<p>Caltrans standards were used for aquatic noise in which the proposed Project mining equipment would not significantly impact marine mammals in the South Bay.</p>
<p>11. Which authority has set the sound pressure level/underwater noise tolerance threshold of 130 - 140 dB.</p>	<p>Information has been added to Section 3.4.3, under <i>Effects of Underwater Noise on Marine Mammals, Fish, and Macroinvertebrates</i>, clarifying the underwater noise impacts resulting from Project activities and the references identifying the thresholds.</p>
<p>12. Concern over bathymetric change that has occurred since the 2007 survey of the site in this section or in Section 3.12. The perceived difference between the years has deepened between 4 and 9 feet. Soundings outside the lease area were not conducted or an analysis to determine a sub-regional trend or an impact of mining activity solely within the lease area or affecting adjacent subtidal areas and the nearby shoreline. Significant concerns of the Project impacting the shorelines should be included in the MND to determine if the Project is causing adjacent erosion.</p>	<p>The two bathymetric surveys analyzed impacts in two different scales. The 2007 survey was conducted in feet and the 2014 survey was conducted in meters; however, when compared at the same scale the lease area bathymetry shows minor changes as discussed in Section 2.4.1, <i>Spatial Distribution</i>. Future bathymetric studies as required under APM-3 will be consistent with the units of the survey conducted in 2014. Section 3.16.1, <i>Environmental Setting</i> under Recreation, provides the lease area is in open water and is approximately 3 miles or more from the shoreline; therefore, shoreline features are outside the project area. Section 3.4.3, <i>Impact Analysis</i>, under Biological Resources, and Section 3.7.1, <i>Environmental Setting</i> under Geology and Soils, discuss the estimated amount of oyster shell resource in the South Bay. As provided in these sections, it is estimated that mining in the lease area would be 0.06 percent annually of the total oyster deposit in the South Bay (currently estimated at 60 million tons). Given the distance and the fractional amount being mined, it is not anticipated to affect shoreline features; however, as required under APM-3: Periodic Bathymetric Surveys, will evaluate the trends and impacts with regards to South Bay bathymetry and the oyster shell deposits during the lease term.</p>

<p>13. Carbon accounts for about 12 percent of the content of oyster shells. Long-term effects of the mining operations on the non-renewable oyster shell deposit to the site, the South Bay and San Francisco Bay and the indirect carbon emissions from consumption of the shells as animal feed and the processing of the shells in carbon-intensive industrial processes such as cement making.</p>	<p>Information has been added to Section 3.8.2 <i>Regulatory Setting</i>, under the Greenhouse Gas Emissions regarding the use and emissions of oyster shell consumption.</p>
<p>14. Please include BCDC as an agency that issues land use permits for these facilities, and specifically BCDC Permit No. 1998.014.05md, issued to Levine-Fricke Recon/Montezuma Wetlands.</p>	<p>BCDC Permit No. 1998.014.05md has been added to Section 1.5 <i>Project Background, Objectives, and Scope</i> and Section 3.11.2 <i>Regulatory Setting</i> for Land Use and Planning.</p>
<p>15. Please discuss the impacts that this Project has had on fish species, particularly protected species, since January 1, 2012, during events when fish screens were not used.</p>	<p>The use and maintenance of fish screens will be verified as required under MM BIO-3: Installation of Positive Fish Barrier Screens. The previous Commission lease did not require the Applicant to use fish screens. Implementation of MM BIO-3 will greatly reduce potential impacts to fish species, including protected species.</p>

San Francisco Bay Regional Water Quality Control Board (SFBRWQCB): Responsible Agency

<p>1. The MND does not discuss oyster shell shoreline features as a component of the affected environment.</p>	<p>See comment #12 under BCDC regarding shoreline features.</p>
<p>2. Biological Resources, Section 3.4.3 Impact Analysis, Exposure of Fish and Macroinvertebrates to Suspended Solids, MM BIO-1: Turbidity Reduction During Mining: SFBRWQCB requests more detailed explanation of the rationale for MM BIO-1.</p>	<p>MM BIO-1: Turbidity Reduction During Mining (Section 3.4.3, <i>Impact Analysis</i> under Biological Resources) explains the shell wash water discharge depth of 6 feet. The 6-foot depth of the shell wash water discharge was the original depth of the pipe on the bottom of the shell dredge barge. The depth of the new shell wash water discharge is approximately 4.5 feet due to a reduction of the shell barge draft. The decrease in draft is a result of heavy diesel engine and related equipment removal. The subsurface discharge of the wash water will reduce the spatial and temporal distribution of the discharge plume and limit it to a smaller segment of the water column.</p>
<p>3. Hydrology and Water Quality, Section 3.10.3 Impact Analysis, Table 3.10-1 Water Quality Hydrology and Water Quality, Section 3.10.3 Impact Analysis, APM-5: Water Quality Wash Water Plume Study. And 4. Water Quality Wash Water Plume Study to be conducted to characterize the wash water discharge plume, and new mining equipment has more recently come into service, SFBRWQCB concurs that the proposed water quality monitoring study</p>	<p>The proposed water quality sampling event to be scheduled with SFBRWQCB staff within 2-years after the MND is approved by the Commission. The locations of the proposed sample collection points, depth and distance from the wash water discharge will be determined by the SFBRWQCB and approved by the Applicant. The analytes, analyses, and the chemical studies will be identified and coordinated with the Applicant and the SFBRWQCB staff prior to the sampling event. Results of the water quality study will be made available to the Commission staff for future documentation and management of the activity.</p>

within 2 years of execution of a new SLC lease (APM-5) will be of value.	
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Lind Tug and Barge, Inc.: Applicant

1. The Applicant has upgraded its mining equipment with more efficient pumps, larger capacity barges, cleaner diesel engines, and converting most of the mining equipment to electrical driven. As a result, further significant reductions in associated air emissions will be observed by these modifications	Commission staff recognizes these emission reductions based on the equipment upgrades and are reflected in APM-1 and APM-2.
2. The Applicant has implemented several measures to address potential biological and water quality impacts, including: installation of positive-barrier fish screens, seasonal curtailment of mining, ensuring suction pipe is within 3-feet of the Bay bottom during operation, conduct water quality monitoring study, and conduct periodic bathymetric surveys.	Commission staff recognizes these measures and are reflected APM-3, APM-4, APM-5, MM BIO-3, and MM BIO-4.

Additional Revisions by Commission Staff

Commission staff also identified additional clarification after the MND was published and revised the MND as follows:

- APM-6 in section 3.16.3, under Recreation, was clarified to reflect the current practice of the Applicant for noticing its transiting activities. “**APM-6 Local Notice to Mariners:** Before and after all transit activities with the oyster shell mining tug, dredge barge and hopper barge, the Applicant shall contact and notify U.S. Coast Guard, District 11 San Francisco Bay Vessel Traffic Control of all transit activities inbound and outbound to and from the lease mining area in South Bay and transiting to Mare Island or the offloading facilities.”