

# Staff Report 39

## APPLICANT:

San Francisco State University Estuary and Ocean Science Center

## PROPOSED ACTION:

Issuance of a General Lease – Public Agency Use.

## AREA, LAND TYPE, AND LOCATION:

Sovereign land located in San Francisco Bay, adjacent to 3150 Paradise Drive, Tiburon, Marin County (as shown in Figure 1).

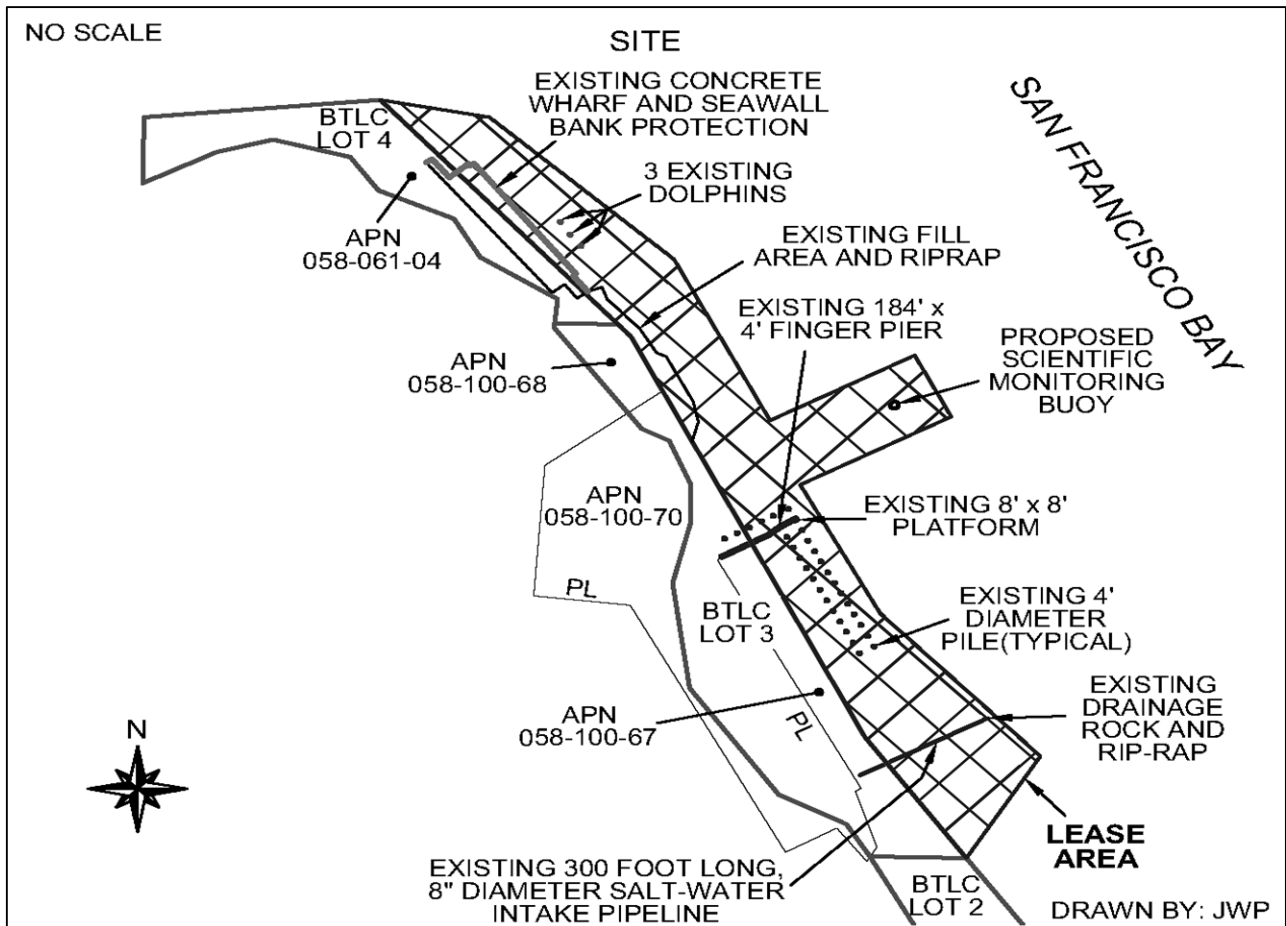
Figure 1. Location



**AUTHORIZED USE:**

Use of an existing finger pier, weather station, water quality testing instruments, 30 unattached concrete pilings, 300-foot-long by 8-inch-diameter seawater intake pipeline, concrete wharf, seawall, riprap, three dolphins, and fill area; and installation of a scientific data collection buoy (as shown in Figure 2).

**Figure 2. Site Map**



NOTE: This depiction of the lease premises is based on unverified information provided by the Applicant or other parties and is not a waiver or limitation of any State interest in the subject or any other property.

**TERM:**

10 years, beginning October 17, 2024.

**CONSIDERATION:**

The public use and benefit, with the State reserving the right to set a monetary rent if the Commission finds such an action to be in the State's best interests.

**SPECIFIC LEASE PROVISIONS:**

- The authorized seawater intake pipeline shall be inspected at least twice per year, and when warranted by extraordinary circumstances including, but not limited to, accidents, major floods or storms, or significant seismic events.
- The intake structure appurtenant to the seawater intake pipelines shall be inspected at least twice per year, and when warranted by extraordinary circumstances including, but not limited to, accidents, major floods or storms, or significant seismic events. Additionally, the intake structure shall be replaced as needed to address fouling.
- Within 60 days of installing the authorized scientific data collection buoy, Lessee shall provide Lessor with Latitude and Longitude coordinates for the location of the installed buoy, accurate to at least five decimal places.
- Should Lessee require approval for Major Repairs or Alterations of the authorized seawall or riprap, then Lessee must assess the feasibility of implementing alternative adaptation strategies such as nature-based solutions or hybrid protective structure designs and provide written documentation of that analysis to Lessor.

**STAFF ANALYSIS AND RECOMMENDATION:**

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**AUTHORITY:**

Public Resources Code sections 6005, 6216, 6301, 6321, 6321.2, 6501.1, and 6503; California Code of Regulations, title 2, sections 2000 and 2003.

**PUBLIC TRUST AND STATE’S BEST INTERESTS:**

On September 20, 2013, the Commission authorized issuance of a General Lease – Public Agency Use to the San Francisco State University Romberg Tiburon Center for Environmental Studies for use of an existing finger pier previously authorized by the Commission, and the use of an existing weather station, water quality instruments, and 32 concrete pilings not previously authorized by the Commission, located in San Francisco Bay, adjacent to 3150 Paradise Drive, Tiburon, Marin County ([Item 59, September 20, 2013](#)).

On April 20, 2017, the Commission authorized an amendment of this lease to include the use of an existing 300-foot-long, 8-inch-diameter seawater intake pipeline and riprap previously authorized by the Commission under Lease 8268; the

use of three dolphins, fill area, riprap, a concrete wharf, and seawall not previously authorized by the Commission; and the installation and use of a scientific data collection buoy ([Item 32, April 20, 2017](#)). This lease expired on August 22, 2023.

Now, the Applicant is applying for a General Lease – Public Agency Use for use of the existing finger pier, weather station, 300-foot-long by 8-inch-diameter seawater intake pipeline, water quality testing instruments, 30 unattached concrete pilings, concrete wharf, seawall, riprap, three dolphins, and fill area; and installation of a scientific data collection buoy. Staff recommends issuance of a General Lease – Public Agency Use to the Applicant, effective October 17, 2024.

Many improvements on the lease premises, as well as on the upland property, were originally constructed by the U.S. Navy as the property was used as a Navy coaling station starting in 1905, and later as a Naval Net Depot that constructed anti-submarine netting during World War II. The property was also used in the 1930s for activities involved in construction of the Golden Gate Bridge. Now, the property and the lease premises are utilized for research and educational activities focused on studying San Francisco Bay.

The finger pier on the lease premises is used to facilitate research through various wildlife surveying activities such as plankton tows and hydrophone listening. The pier also hosts an existing weather station, which is a scientific hydrological station that is used to monitor meteorological data such as air temperature, wind speed, wind direction, precipitation, barometric pressure, relative humidity, and solar radiation. The data collected by the weather station is utilized in research activities and is publicly available for anyone interested in weather information from the subject location. The finger pier is also home to various water quality testing instruments on the lease premises. These are used to measure water temperature, salinity, chlorophyll content, water conductivity, concentration of dissolved oxygen, pH, turbidity, and pressure of the seawater near the finger pier. The information collected by the water quality instruments provides vital data that is used in the Applicant's research activities. This data is also available to the public upon request and will soon be published online for improved ease of access.

The seawater intake pipeline on the lease premises supports the Applicant's educational and research interests, and also supports numerous activities that provide a significant public benefit. This pipeline facilitates the Applicant's research activities by providing a constant source of seawater from San Francisco Bay to the Applicant's laboratories and research facilities. This seawater is used in research focused on the effects of climate change and other human induced impacts on

coastal species within the Bay Area and California in general. This research provides a wide-reaching public benefit by facilitating an improved understanding of how the environment and wildlife of the State may be affected by current and future anthropogenic conditions, and helps provide insights into management methods that benefit conservation and restoration efforts. The seawater brought in by the intake pipeline also supports the Applicant's interests as an educational institution and is used for classes in fields such as marine ecology, wetlands ecology, and biology. The intake pipeline further provides seawater used to cultivate eelgrass that is transplanted into San Francisco Bay as part of the Applicant's habitat restoration activities. This restoration work provides a regional public benefit by improving the health of the local marine habitat and is critical in supporting the eelgrass restoration goals of the Ocean Protection Council, the State Coastal Conservancy, and federal agencies such as the National Oceanic and Atmospheric Administration and the U.S. Environmental Protection Agency. Finally, the seawater intake pipeline is used to support the Applicant's annual Marine Lab Open House, which provides a regional public benefit through the academic enrichment of Bay Area youth and gives participants the opportunity to learn about local wildlife and environmental concerns, and to gain hands-on experience with local marine species.

To ensure the intake pipeline remains functional and can continue to support both the Applicant's and the public's interests, the proposed lease will include a provision requiring that both the pipeline itself and the intake structure at its seaward terminus are inspected at least twice annually in keeping with the Applicant's current inspection schedule. Additionally, the proposed lease will require the Applicant to replace the intake structure as needed to address fouling.

The 30 unattached concrete pilings on the lease premises are not currently in use. These pilings have existed for many years and predate the Applicant's acquisition of the upland property. Though unused, the concrete pilings are in good condition and, due to their age, are home to their own local marine ecosystem. Removal of these pilings would not provide a significant increase in publicly available waterway on the lease premises, however the disturbance to local marine life would likely be substantial. Therefore, staff recommends authorizing the unattached pilings without requiring a removal plan at this time, although changing conditions or circumstances may require future removal. Pursuant to the terms of the proposed lease, the Lessee will be responsible for maintenance or removal of the authorized pilings should they become dislodged, degraded, or in any way become a hazard or impediment to navigation or other Public Trust uses.

Additionally, though the previous lease authorized 32 pilings, there are only 30 unattached pilings on the lease premises. All other pilings are included as part of the authorized finger pier. Therefore, the proposed lease will authorize 30 unattached pilings, with all other pilings included within the authorization of the finger pier.

The three dolphins on the lease premises have existed for approximately 80 years and are no longer in use. Though these improvements are not used by the Applicant, and provide no benefit to the public, due to their age they are effectively part of the marine habitat in the area and their removal would cause damage to the local habitat in return for a negligible increase in the publicly available waterway. As such, staff recommends authorizing these dolphins without requiring a removal plan at this time, although changing conditions or circumstances may require future removal. Nevertheless, as with the unattached pilings discussed above, should these improvements become damaged or dislodged to the extent that they become an impediment to navigation or other Public Trust uses, then the Applicant will be required to have them removed. Pursuant to the proposed lease, any removal project would require review and approval from staff, and authorization of a lease amendment.

The concrete wharf on the lease premises is a large expanse of concrete that was originally constructed by the U.S. Navy during World War II and only a small portion of the overall wharf is situated within the lease premises. The wharf serves as an access road for various buildings on the campus, provides space for facilities such as the Greenhouse and Bay Water Research Area, and is used for parking and exhibit space during the Marine Lab Open House. Much of the wharf is unused except during special events for which the Applicant requires additional space; however, as it has been in place for many years and extends well below the surface of San Francisco Bay, the full length of the wharf within the lease premises is effectively part of the local marine habitat. Therefore, despite the fact that much of the wharf within the lease premises is unused, removal of the wharf from this area would cause substantial impacts to local marine life in return for an insignificant increase in the publicly available waterway. Additionally, removal of the wharf would reduce the area available for the Marine Lab Open House and other public events that provide a regional public benefit. Therefore, staff recommends authorizing the wharf without requiring plans for its removal or reduction.

The seawall and riprap on the lease premises are protective structures designed to attenuate the effects of shoreline erosion that result from wave and tidal action. The seawall was built by the U.S. Navy and protects much of the waterfront

property on the lease premises. The riprap on the lease premises has existed for many years and protects the southern edge of the property and portions of the shoreline north of the finger pier; some of this riprap is situated on fill areas directly adjacent to the shoreline. Loss or degradation of these improvements could lead to significant property damage resulting from erosion of the coastline on which the Applicant's upland facilities are located. Due to the public benefit provided by many of these facilities, the seawall and riprap provide a benefit to both the Applicant and the public through protection of these facilities. Nevertheless, this benefit is not attained without compromise. As with other hard armoring structures that provide a solid barrier to minimize energy from tides and waves, seawalls and riprap often lead to increased erosion along the adjacent coastline due to wave reflection and refraction. Therefore, though these improvements protect the upland facilities and the public benefits these facilities provide, they also cause accelerated erosion to the adjacent coastline. To help address these impacts, the proposed lease includes a provision requiring the Applicant to assess the feasibility of implementing alternative adaptation strategies such as nature-based solutions or hybrid protective structure designs if the seawall or riprap require significant alterations, repair, or replacement during the term of the lease. Any such alternative adaptation strategies should be consistent with the Commission's report [\*Shoreline Adaptation and The Public Trust\*](#), and as it may be revised.

The scientific data collection buoy proposed to be installed on the lease premises was previously authorized by the Commission and installed by the Applicant; however, this buoy was removed from the water following a malfunction in its instrumentation. The Applicant now proposes to reinstall the buoy after the malfunctioning instrumentation is repaired. Installation of the scientific collection buoy will be accomplished by San Francisco State University's research vessel, the *R/V Questuary*. Installation of the buoy will begin with deployment of the buoy's anchor and anchor chain along with a temporary marker buoy to ensure accurate placement. After it is confirmed that the anchor has been installed in the desired location, the monitoring buoy itself will be placed in the water and attached to the anchor chain. Following deployment, a notice to mariners will be submitted to the Coast Guard and widely broadcast to ensure mariners are aware of the buoy's location. When deployed, the buoy is used to conduct research on the water properties of San Francisco Bay, with an emphasis on carbon chemistry, ocean acidification, and dissolved oxygen. The buoy is also used to monitor water temperature, salinity, chlorophyll levels, and pH. The data provided by this buoy is particularly valuable in assessing climate change associated vulnerability to ocean



acidification in the San Francisco Bay ecosystem due to its high-precision carbon dioxide monitoring capabilities. The buoy's vital role in advancing climate change research provides a significant public benefit, and its installation on the lease premises does not have any substantial negative impact on Public Trust uses in this location.

Overall, the improvements on the lease premises primarily facilitate scientific research, education, ecological preservation, academic enrichment, and other activities that are generally of regional and statewide public benefit, and that are consistent with the Public Trust. Although some of the subject improvements are no longer used by the Applicant or the public, removal of these improvements would not provide any significant increase in the lease premises' availability for Public Trust uses, and their continued existence does not have a significant impact on Public Trust uses at this time. Additionally, though the protective structures on the lease premises may have impacts on the adjacent coastline, they currently protect facilities that promote the Applicant's research and educational activities and, given the public benefit derived from these facilities, are not inconsistent with the Public Trust. Nevertheless, to ensure the impacts these improvements have on the adjacent coastline are addressed and remedied in the future, the proposed lease will require the Applicant to assess alternative adaptation strategies if these improvements require alterations, repair, or replacement during the term of the lease.

The Applicant has occupied State land without authorization since the previous lease expired. However, both the previous lease and the proposed lease do not require monetary rent because the public benefit derived from the improvements on the lease premises is sufficient compensation for the State. Therefore, staff does not recommend that the proposed lease require monetary compensation for the Applicant's occupation of State land following expiration of the prior lease. Nevertheless, the proposed lease will require that the Applicant indemnify the State for the entire period of unauthorized occupation prior to October 17, 2024, to ensure that the State is protected from potential liability.

The proposed Lease does not alienate the State's fee simple interest or permanently impair public rights. The lease is limited to a 10-year term, does not grant the lessee exclusive rights to the lease premises, and will have no significant impact on Public Trust-consistent uses or resources in the area. Upon termination of the lease, the lessee may be required to remove any improvements from State land and restore the lease premises to their original condition. The proposed lease



requires the lessee to indemnify the State for any liability incurred as a result of the lessee’s activities thereon.

**CLIMATE CHANGE:**

Climate change impacts, including sea level rise, increased wave activity, storm events, and flooding may impact an existing saltwater intake pipeline with riprap, three dolphins, riprap bank protection, a concrete wharf with seawall bank protection and a new scientific monitoring buoy subject to the proposed lease, located on the San Francisco Bay.

The California Ocean Protection Council updated the *State of California Sea-Level Rise Guidance* in 2018 to provide a synthesis of the best available science on sea level rise projections and rates. Commission staff evaluated the “high emissions,” “medium-high risk aversion” scenario to apply a conservative approach based on both current emission trajectories and the lease location and structures. The San Francisco tide gauge was used for the projected sea level rise scenario for the lease area as listed in Table 1.

**Table 1. Projected Sea Level Rise for San Francisco**

Year	Projection (feet)
2030	0.8
2040	1.3
2050	1.9
2100	6.9

Source: Table 13, [State of California Sea-Level Rise Guidance: 2018 Update](#)

Note: Projections are with respect to a 1991 to 2009 baseline.

As stated in the [Safeguarding California Plan: 2018 Update](#) (California Natural Resources Agency 2018), climate change is projected to increase the frequency and severity of natural disasters related to flooding, drought, and storms (especially when coupled with sea level rise). The combination of these conditions will likely result in increased wave run up, storm surge, and flooding in coastal and near coastal areas. In tidally influenced waterways, more frequent and powerful storms can result in increased flooding conditions and damage from storm-created debris. Climate change and sea level rise will further influence coastal and riverine areas by changing erosion and sedimentation rates. Beaches, coastal landscapes, and near-coastal riverine areas will be exposed to increased wave force and run up, potentially resulting in greater beach or bank erosion than previously experienced.

This increase in sea level combined with more frequent and stronger storm events will likely expose the lease area to higher flood risks, comprised of greater total water levels for longer periods of time. The lease area contains a floating scientific monitoring buoy that is likely adaptable to rising water levels. However, the finger pier, weather station, water quality testing instruments, 30 unattached concrete pilings, seawater intake pipeline, riprap, three dolphins, and concrete wharf with seawall bank protection are fixed structures that may need additional maintenance due to increased flood exposure and more frequent storm events, which will increase the structures' exposure to inundation, erosion, and wave action. These fixed structures may need to be elevated or relocated in the event of major storm and flood damage. The Applicant should implement alternative adaptation strategies such as nature-based solutions or hybrid protective structure designs if the seawall or riprap require significant alterations, repair, or replacement during the term of the lease. Any such alternative adaptation strategies should be consistent with the Commission's report [Shoreline Adaptation and The Public Trust](#). Any future construction or activities on state land would require a separate authorization from the Commission.

Regular maintenance, as referenced in the lease, may reduce the likelihood of severe structural degradation or dislodgement. Pursuant to the proposed lease, the Applicant acknowledges that the lease premises and adjacent upland are located in an area that may be subject to the effects of climate change, including sea level rise.

**CONCLUSION:**

For all the reasons above, staff believes approval of this lease will not substantially interfere with Public Trust needs at this location, at this time, and for the term of the lease; and is in the best interests of the State.

**OTHER PERTINENT INFORMATION:**

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1. Approval or denial of the application is a discretionary action by the Commission. Each time the Commission approves or rejects a use of sovereign land, it exercises legislatively delegated authority and responsibility as trustee of the State's Public Trust lands as authorized by law. If the Commission denies the application, the Applicant must remove the improvements and restore the property to its original condition. The lessee has no right to a new lease or to renewal of any previous lease.

2. This action is consistent with the “Leading Climate Activism” and “Meeting Evolving Public Trust Needs” Strategic Focus Areas of the Commission’s 2021-2025 Strategic Plan.
3. **Buoy Installation:** Staff recommends that the Commission find that this activity is exempt from the requirements of the California Environmental Quality Act (CEQA) as a categorically exempt project. The project is exempt under Class 6, Information Collection; California Code of Regulations, title 2, section 2905, subdivision (e)(5).

**Existing Facilities:** Staff recommends that the Commission find that this activity is exempt from the requirements of CEQA as a categorically exempt project. The project is exempt under Class 1, Existing Facilities; California Code of Regulations, title 2, section 2905, subdivision (a)(2).

Authority: Public Resources Code section 21084 and California Code of Regulations, title 14, section 15061 and California Code of Regulations, title 2, section 2905.

## **RECOMMENDED ACTION:**

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It is recommended that the Commission:

### **CEQA FINDING:**

Find that the activity is exempt from the requirements of CEQA pursuant to California Code of Regulations, title 14, section 15061 as a categorically exempt project through the combination of the following exemptions: Class 1, Existing Facilities; California Code of Regulations, title 2, section 2905, subdivision (a)(2), and Class 6, Information Collection; California Code of Regulations, title 2, section 2905, subdivision (e)(5).

### **PUBLIC TRUST AND STATE’S BEST INTERESTS:**

Find that the proposed lease will not substantially interfere with Public Trust needs and values at this location, at this time, and for the term of the lease; and is in the best interests of the State.

### **AUTHORIZATION:**

1. Authorize issuance of a General Lease – Public Agency Use to the Applicant beginning October 17, 2024, for a term of 10 years, for the use of an existing

finger pier, weather station, water quality testing instruments, 30 unattached concrete pilings, 300-foot-long by 8-inch-diameter seawater intake pipeline, concrete wharf, seawall, riprap, three dolphins, and fill area; and installation of a scientific data collection buoy; consideration being the public use and benefit, with the State reserving the right to set a monetary rent if the Commission finds such an action to be in the State's best interests.

2. Authorize the Executive Officer or designee to replace Exhibits in the lease upon submission, review, and approval of the latitude and longitude coordinates for the final location of the proposed scientific monitoring buoy after it is installed.