Meeting Date: 10/21/26
Application Number: 5113
Staff: D. Romero

Staff Report 41

APPLICANT:

San Francisco Estuary Institute

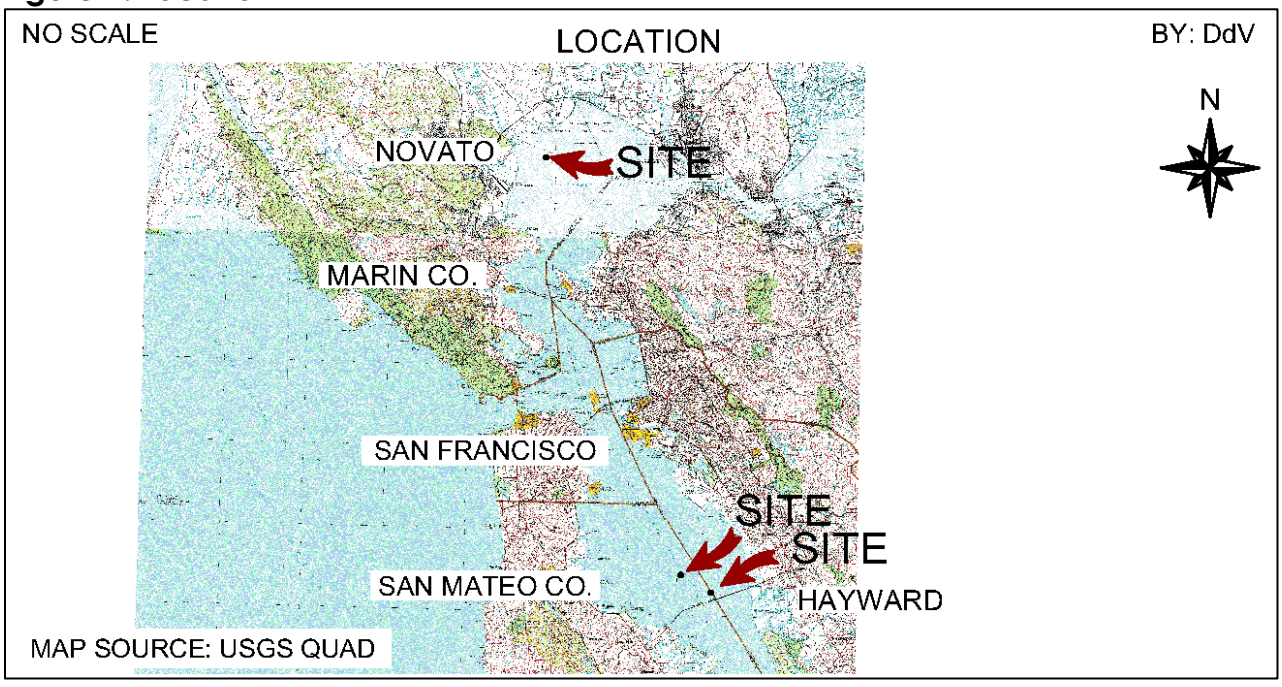
PROPOSED ACTION:

Issuance of a General Lease – Other.

AREA, LAND TYPE, AND LOCATION:

Sovereign land in San Francisco Bay, San Mateo County and San Pablo Bay, Marin County (as shown in Figure 1).

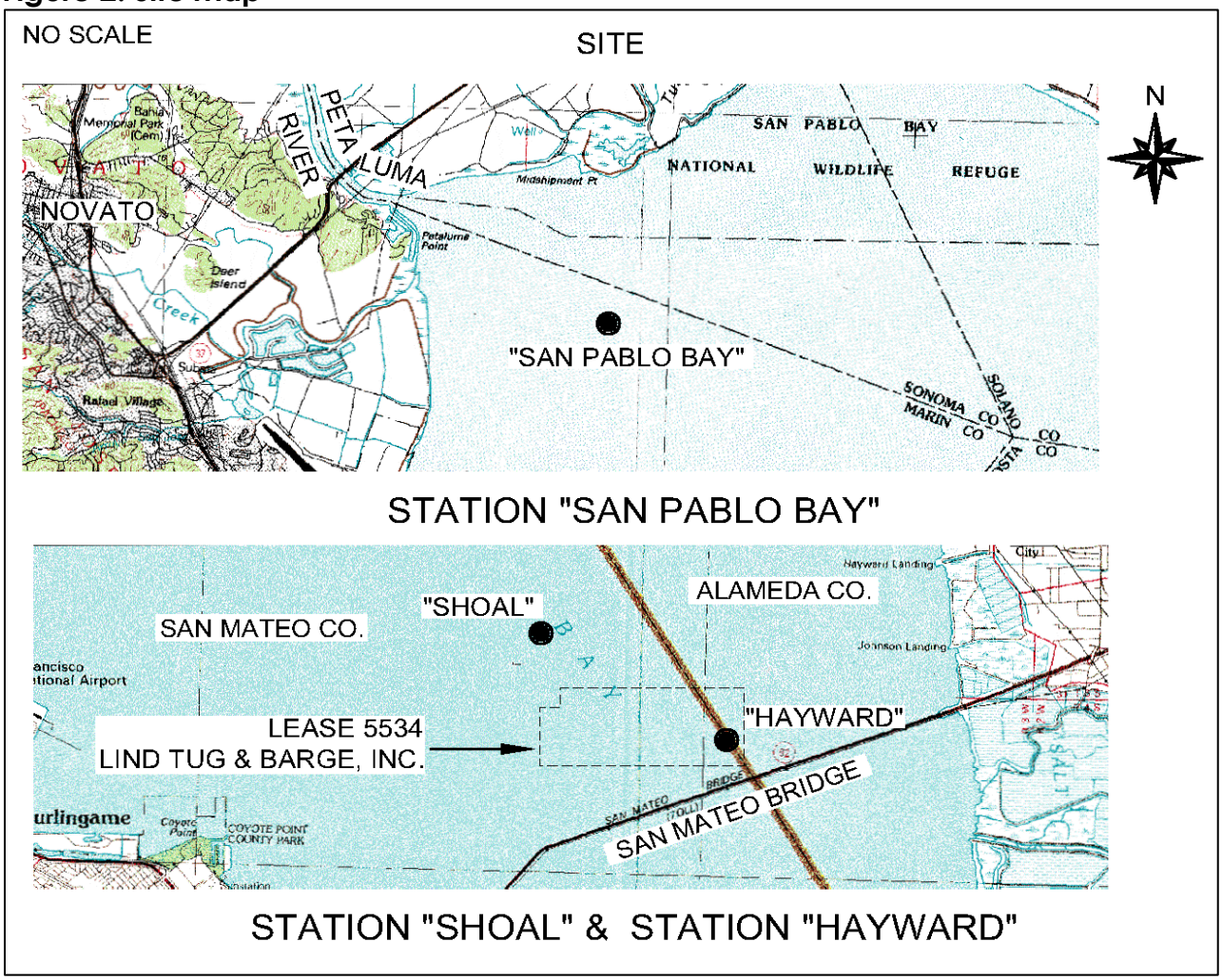
Figure 1. Location



AUTHORIZED USE:

Use of two buoys with monitoring sensors in San Francisco Bay and one monitoring sensor attached to a channel marker in San Pablo Bay (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 21, 2026.

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:

- Liability insurance in an amount no less than $1,000,000.
- Surety bond in the amount of $70,000.

STAFF ANALYSIS AND RECOMMENDATION:

AUTHORITY:

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

PUBLIC TRUST AND STATE'S BEST INTERESTS:

The Applicant is applying for a General Lease – Other for two existing buoys with monitoring sensors and one existing monitoring sensor attached to a channel marker, not previously authorized by the Commission. The two monitoring sensors attached to buoys are in the San Francisco Bay, and the monitoring sensor attached to a channel marker is in the San Pablo Bay. The buoy monitoring sensors are referred to as Shoal Station and Hayward Station, while the channel marker sensor is referred to as San Pablo Bay Station.

The sensors are a part of the Nutrient Management Strategy which plays a critical role in monitoring San Francisco Bay and the Sacramento-San Joaquin Delta's complex response to nutrient inputs. The subject monitoring sensors are used to conduct research on the water quality and nutrient trends of San Francisco Bay and San Pablo Bay. There are two different types of sensors used, the EXO-2 and a submersible underwater nutrients analyzer (SUNA). The EXO-2 is equipped to measure temperature, salinity, dissolved oxygen, Chlorophyll A, phycocyanin, pH, and turbidity. The SUNA sensor measures the concentration of nitrate in the water column. Each sensor has self-contained batteries, and the data collected are downloaded during servicing trips, which occur every 3 to 5 weeks depending on the season and rate of biofouling.

The Shoal Station buoy has the sensors affixed to the underside of the buoy. It holds the EXO-2 and SUNA sensors. The buoy is anchored by a 300-pound pyramid anchor. The Hayward Station buoy has an EXO-2 sensor suspended above the bottom of the bay with a steel cage. The buoy has a 135-pound weight in the middle to ensure the cage does not move during strong wind and wave events. Lastly, the San Pablo Bay Station sensors are attached to either side of a channel

marker with an EXO-2 sensor and a SUNA sensor. The materials are inspected annually, and all parts are replaced as they corrode or wear out.

The sensors and appurtenant facilities provide both local and statewide public benefit, as they play a vital role in developing a comprehensive understanding of nutrient dynamics within the San Francisco Bay area. The data collected can also provide more information to give us a fuller picture of the impacts of climate change and how to better adapt going forward.

The Applicant has occupied State land without authorization since the first buoy was installed at Shoal Station on August 11, 2020. However, because the subject improvements are a critical component in monitoring water quality in San Fransico Bay and San Pablo Bay and provide a significant public benefit, which is considered sufficient compensation for the state, the proposed lease does not require monetary rent. Additionally, staff does not recommend that the proposed lease require monetary compensation for the Applicant's prior occupation of State land. Nevertheless, the proposed lease will require that the Applicant indemnify the State for the entire period of unauthorized occupation prior to October 21, 2026, to ensure that the State is protected from potential liability. The proposed lease does require a $70,000 bond to ensure the improvements are removed at the end of the lease term.

The proposed lease does not alienate the State's fee simple interest or permanently impair public rights. In addition, the lease has a limited 10-year term and does not grant the lessee's exclusive rights to the lease premises. Furthermore, the lessee will be subject to lease terms and conditions which promote public use and safety. 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:

INTRODUCTION:

The climate crisis and rising sea levels are impacting coastal California now. As underscored in the State of California Sea Level Rise Guidance (Ocean Protection Council, 2024), the combination of extreme weather events and the persistent and accelerating rise in sea levels will lead to increased coastal hazards, such as wave runup, storm surges, flooding, and erosion. These impacts may affect the buoys at the sensor monitoring sites subject to the proposed lease in San Francisco Bay.

DATA & PROJECTIONS:

Sea levels along most of the California coast rose four to eight inches during the 20th century, and this trend will accelerate throughout the 21st century. The current rate of sea level rise is triple the 20th century rate. There is growing confidence that by 2050 sea levels will be approximately ten inches higher than they were in 2000. The severity of sea level rise beyond 2050 is contingent on future levels of greenhouse gas emissions. The California Ocean Protection Council updated the State of California Sea Level Rise Guidance in 2024 to provide a synthesis of the best available science on sea level rise projections and rates for multiple emissions scenarios. Commission staff evaluated the "intermediate" scenario due to the lower vulnerability and exposure of the lease location and the adaptability of the buoys. The San Francisco Bay 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	Intermediate (feet)
2040	0.6
2050	0.8
2070	1.4
2100	3.1

Source: Table 6, State of California Sea Level Rise Guidance: 2024 Update
Note: Projections are with respect to a 2000 baseline.

ANALYSIS:

Improvements to the lease premises include an existing water quality monitoring sensor on an existing channel marker piling in San Pablo Bay (channel marker piling not part of lease) and on two existing buoys at the Shoal and Hayward monitoring sites. The effects of more frequent and intense storms and wave action, very high or King tides, and El Niño events, alone or in combination with sea level rise, increase the vulnerability of the buoys and attached sensors. As a result, the buoys may sustain substantial damage and degradation over the lease term, requiring more frequent repairs and maintenance of all components (i.e., block, chain, float, etc.) to retain their function. While the buoys are designed to float on the water's surface and move with the ebb and flow of currents and tides, a longer or stronger chain connecting the buoy to the anchor and a stronger anchor on the seabed may be necessary in the future. These modifications will allow the buoys and attached sensors to accommodate rising sea levels, more intense storm events, and

destructive waves and currents. Any future construction or activities on State land would require a separate authorization from the Commission.

RECOMMENDATION:

Regular maintenance, as referenced in the terms of the lease, may reduce the likelihood of severe structural degradation or dislodgement. Pursuant to the proposed lease, the Lessee acknowledges that the lease premises 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 believe 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; is consistent with the common law Public Trust doctrine; and is in the best interests of the State.

OTHER PERTINENT INFORMATION:

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. 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. 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 14, section 15306.

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

RECOMMENDED ACTION:

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, Class 6, Information Collection; California Code of Regulations, title 14, section 15306.

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; is consistent with the common law Public Trust doctrine; and is in the best interests of the State.

AUTHORIZATION:

Authorize issuance of a General Lease – Other to the Applicant beginning October 21, 2026, for a term of 10 years, for the use of two buoys with monitoring sensors and one monitoring sensor attached to a channel marker; 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; liability insurance in an amount no less than $1,000,000 per occurrence; and a bond or other security instrument in the amount of $70,000.