BOARD REPORT

DATE: January 27, 2026

CATEGORY: Consent

DEPT.: Public Works

TITLE: **Shoreline Park Water Control Structures Improvements, Project 23-44—Various Actions**

RECOMMENDATION

Acting in its capacity as the Board of Directors for the Shoreline Regional Park Community:

1. Approve plans and specifications for Shoreline Park Water Control Structures Improvements, Project 23-44, Package 1, and authorize staff to advertise the project for bids.

2. Authorize the Community Manager or designee to award a construction contract for Shoreline Park Water Control Structures Improvements, Project 23-44, Package 1, to the lowest responsible responsive bidder if the low bid is within the available project budget.

3. Find that, in accordance with California Environmental Quality Act requirements, Shoreline Park Water Control Structures Improvements, Project 23-44, Package 1, is categorically exempt. Within Package 1, the replacement of the Coast-Casey Pump Station sump pump pipe is categorically exempt as Class 1, Existing Facilities, and on a separate and independent basis, Class 2, Replacement or Reconstruction, under California Public Resources Code, Section 15301 and Section 15302. The demolition and removal of the boardwalk, repair of the spillway outlet structure slide gate, and Sailing Lake outlet structure are categorically exempt as Class 1, Existing Facilities, under California Public Resources Code Section 15301.

4. Direct staff to complete environmental clearance, permitting, and plans and specifications to restore Sailing Lake Habitat Island as part of Shoreline Park Water Control Structures Improvements, Project 23-44, Package 3, with Restoration Alternative 2, Repair Eroded Slopes and Expand Island Size, and Barrier Improvement Alternative C, Drilled Wooden Piles.

BACKGROUND

Shoreline Park Water Control Structures Improvements, Project 23-44, is located in the Shoreline at Mountain View Regional Park (Shoreline Park). Figures 1a and 1b show the locations of the project components at Charleston Slough, Sailing Lake, and Coast-Casey Forebay.

Figure 1a: Project Location Map at Shoreline Park and Charleston Slough

Figure 1b: Project Components at Sailing Lake in Shoreline Park

Shoreline Park Water Control Structures Improvements, Project 23-44, was created to address ongoing operation and maintenance issues at Charleston Slough, Sailing Lake, and Coast-Casey Pump Station via the following three project implementation packages.

Package 1: Shoreline Park Water Control Structures

This package includes the following components:

- Sailing Lake Access Road Boardwalk: The existing wooden boardwalk provides access to an underwater gate which is no longer needed for the interconnection pipe between Sailing Lake and Coast-Casey Forebay. This project will remove the boardwalk and gate from the lake so they will not be potential safety hazards to lake users.

- Sailing Lake Outlet Gates: Sailing Lake has two outlet gates to drain water from Sailing Lake to Permanente Creek and Charleston Slough. Neither gate is properly functioning, and both require repairs to the gates and seals.

- Coast-Casey Pump Station Discharge Pipe: The pump station discharges stormwater via a 6" pipe and outfall to the Palo Alto Flood Basin. The pipeline currently has reduced capacity due to a misalignment possibly caused by differential ground settlement. This project component will replace the pipeline to restore its conveyance capacity.

Package 2: Charleston Slough Tide Gate

The existing tide gates were installed in 1997. The tide gates deteriorated over time due to corrosion. The tide gates need to be replaced for the City to manage tidal flow and the water level in Charleston Slough. These tide gates are a key infrastructure element that mitigates flood risk by managing tidal flow and providing flood control. The gates work in tandem with surrounding levees to protect Shoreline Park as well as business and residential areas south of Charleston Slough from coastal flooding. In addition, the tide gates optimize the tidal flow range to support suspended sediment delivery for tidal marsh restoration at Charleston Slough and to provide water supply to Sailing Lake via the Sailing Lake Pump Station.

Package 3: Sailing Lake Habitat Island

Sailing Lake supports multiple recreational uses, including kayaking, sailing, and windsurfing. Within Sailing Lake is an island landform (habitat island) located near its southwestern shore, which provides significant habitat for a range of bird species. The habitat island has been eroding over the years due to wind and wave actions and impacts from recreational lake users. A 1991

aerial photograph shows the island surface area was approximately 0.18 acre. A 2023 field survey shows the current island surface area has decreased to approximately 0.11 acre. The erosion has reduced the overall size of the island and its habitat value. This project package evaluated and developed alternatives and includes the design and construction to restore the habitat island.

On May 31, 2023, the City executed a professional services agreement with AECOM to provide design engineering, environmental clearance, and permitting services for all three packages of Shoreline Park Water Control Structures Improvements, Project 23-44. The consultant has completed the engineering design for Package 1, prepared a Draft 100% design for Package 2, and prepared an alternative analysis to improve and restore the habitat island for Package 3.

ANALYSIS

Package 1: Shoreline Park Water Control Structures

The design plans and specifications for Package 1, Shoreline Park Water Control Structures, improvements are completed. The City is ready to advertise the project for public bidding. If the recommended actions are approved and a responsive bid from a responsible contractor within the project budget is received, construction is anticipated to begin in September 2026 and be completed in early 2027 to avoid bird nesting season. The Engineer's Opinion of Probable Construction Cost is $332,000.

Package 2: Charleston Slough Tide Gate

The design plans and specifications for the Package 2, Charleston Slough Tide Gate, improvements are at the Draft 100% design. There are a number of environmental and regulatory permitting requirements for the project. The City received the following certifications and permits related to the project: the San Francisco Bay Regional Water Quality Control Board Clean Water Act Section 401 Water Quality Certification and Order on October 23, 2025; the United States Army Corps of Engineers Clean Water Act Section 404 Permit on November 18, 2025; and the San Francisco Bay Conservation and Development Commission Regionwide Permit on November 25, 2025. The Charleston Slough Tide Gate Project is slated to receive Federal funding through the Fiscal Year 2026 Community Project Funding (CPF) program to support a portion of the project costs. Once the CPF is awarded to the City, staff will return to Council for approval of plans and specifications and authorization to bid the project for construction.

Package 3: Sailing Lake Habitat Island

There are two components to this package: restoration of the habitat island and barrier installation.

There are three alternatives for the habitat island restoration: maintain existing conditions, repair eroded slopes, and repair eroded slopes and expand island size. A detailed review of each analysis is presented below.

In September 2025, the consultant completed an Alternatives Analysis Report (Attachment 1) that evaluated alternatives to address the erosion and associated habitat degradation at the habitat island. The Alternative Analysis Report summarizes proposed alternatives to restore the habitat island from its current size of 0.11 acre to its historic island size of 0.18 acre or greater, enhance benefits for nesting bird species, prevent future erosion, and provide a more robust protection barrier around the island to prevent island access by recreational users. A multi-criteria evaluation was conducted to assess how well each alternative would meet the project objectives and to inform the recommendation of an alternative to advance into detailed design.

The habitat island is identified in the Shoreline Wildlife Management Plan (SWMP) as a nontidal saltwater lake/island habitat within Shoreline Park. The habitat island serves as an annual nesting site for a variety of species including: black skimmers (an umbrella species studied in the SWMP), Forster's terns, American avocets, black-necked stilts, and some resident waterfowl such as mallards and Canada geese. The habitat island is also used as a roosting site during the nonbreeding season by a variety of resident and migratory waterbirds and gull species. Decreasing the rate of bank erosion and restoring the habitat island is one of the habitat enhancement and restoration opportunities identified in SWMP.

The term "restoration" encompasses multiple goals for the habitat island. The overarching goal of this project is to restore the island to its historic acreage or greater in a manner that will minimize future erosion. In addition, there is a more specific restoration goal to enhance bird nesting habitat within both the existing island area and any proposed expansion areas to maximize benefits for the target bird species, including black skimmers, Forster's terns, American avocets, and black-necked stilts.

The Alternative Analysis Report considered three alternatives to restore the habitat island and three alternatives to improve the existing barrier around the habitat island. As the barrier options could be used for any of the island restoration alternatives, they are discussed separately at the end of this report with individual option costs.

Habitat Island Restoration Alternatives

Habitat Island Restoration Alternative 0: Maintain Existing Condition

Alternative 0 includes no improvements to the existing island, leaving the existing near-vertical eroded banks and associated risk to wildlife unaddressed. In addition, no improvements would be made to the island's existing surface features. However, a new barrier system would be constructed to reduce human interaction (recreational users) with the habitat island and its wildlife. The objective of this alternative is to maintain the current level of City operation and maintenance while limiting near-term capital costs.

This alternative does not meet the primary goals of the project to restore the island to its historical size and minimize future erosion. In addition, it is anticipated that this alternative will result in continued erosion and further reduction in island size over time, which would increasingly limit bird nesting areas. For these reasons, Alternative 0 is not further evaluated in this alternative analysis.

Habitat Island Restoration Alternative 1: Repair Eroded Slopes

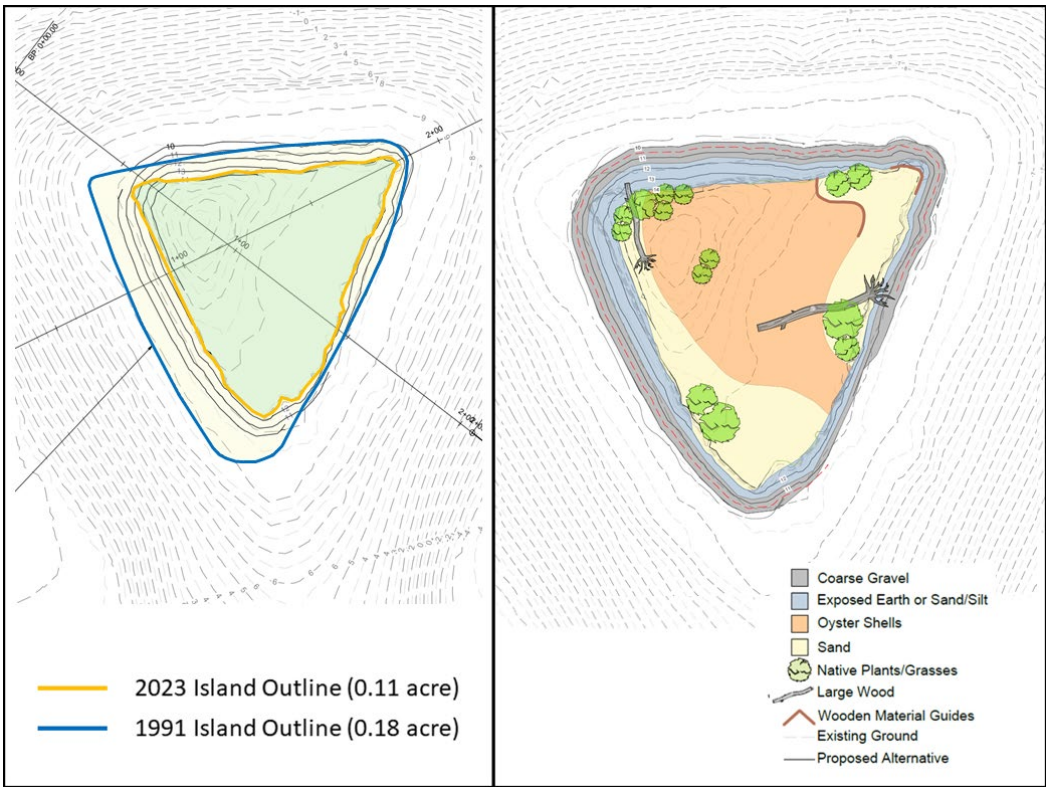

Figure 2: Habitat Island Restoration Alternative 1

Alternative 1 preserves the existing habitat island shape and surface size of 0.11 acre and will repair the eroded slopes around its perimeter (Figure 2). While the existing surface topography on the island would largely remain intact, the proposed design includes flattening the island's side slopes. Gravel erosion protection would also be provided around the island slopes.

A construction duration of two months would likely be required for this alternative with mobilization starting in early October after the end of the bird nesting season. The contractor would need to lower the lake level and potentially install cofferdams to create a dry work area that would accommodate the earthwork at the island.

The planning-level Engineer's Opinion of Probable Construction Cost for Alternative 1 is approximately $1.2 million.

Habitat Island Restoration Alternative 2: Repair Eroded Slopes and Expand Island Size

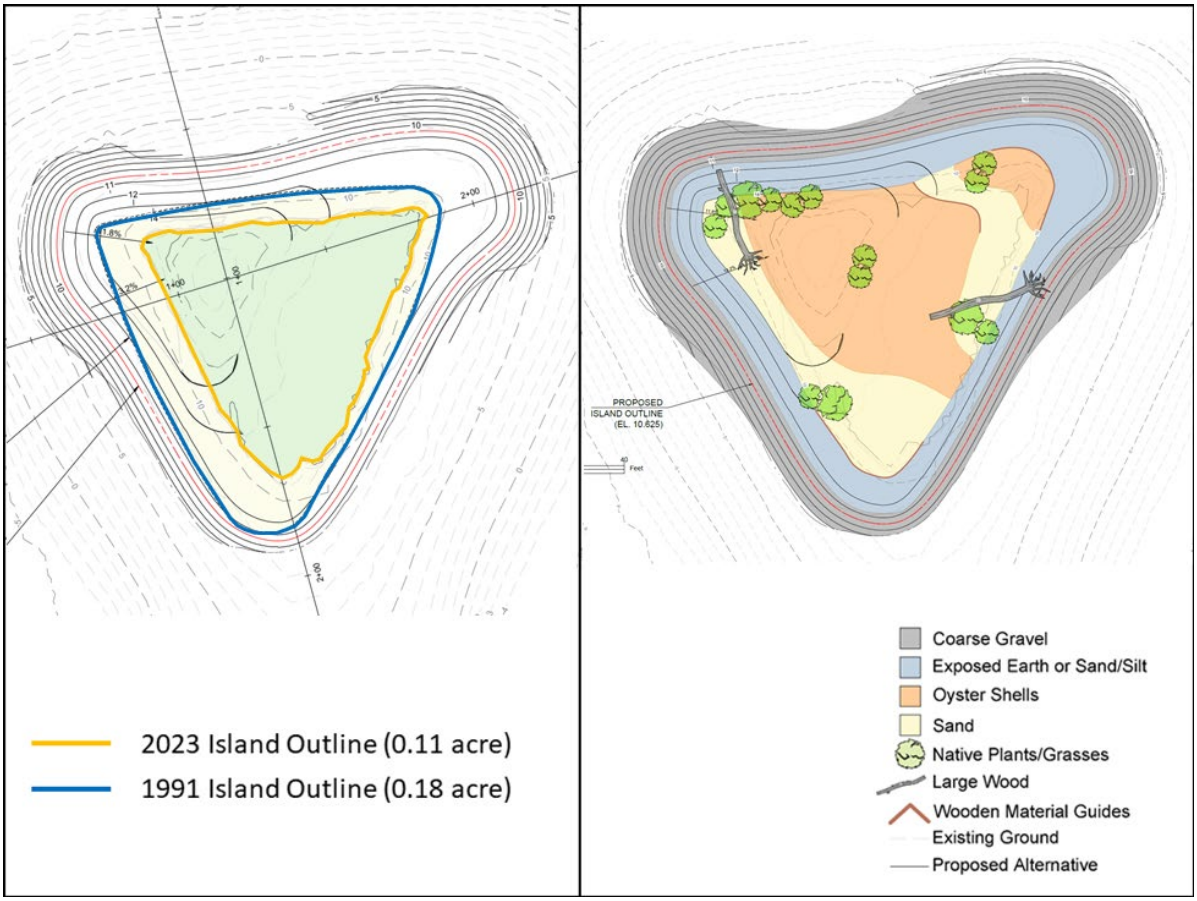

Figure 3: Habitat Island Restoration Alternative 2

Alternative 2 preserves the existing habitat island shape, repairs the eroded slopes around the perimeter, and increases the island size (Figure 3). Alternative 2 meets the goal of restoring the habitat island to its historic size. Because of the additional areas needed to grade a set of gradually sloped banks around the restored island, the island surface area above the lake water level would increase from the existing size of 0.11 acre to the expanded size of up to 0.28 acre, of which 0.18 acre would be flat surface area. While the existing topography on the island surface would largely remain intact, the proposed island side slopes would be flattened. Gravel erosion protection would also be provided around the island slopes.

A construction duration of three to four months would likely be required for this alternative, with mobilization starting in early October after the end of the bird nesting season. Similar to Alternative 1, the contractor would need to lower the lake level and install cofferdams to create a dry work area that would accommodate the earthwork at the island.

The planning-level Engineer's Opinion of Probable Construction Cost for Alternative 2 is approximately $3.1 million.

For both Alternatives 1 and 2, the island would also be improved to maximize the habitat quality by removing invasive vegetation and providing a mixture of new substrate and pockets of native vegetation preferred by the target bird species. The existing wooden frames and guiderails would be removed and repurposed on-site, and all existing nonnative vegetation would be cleared and removed from the site.

In addition, the restoration is proposed to add oyster shells in higher-ground areas of the island, sand in mid-elevation areas, and exposed earth or a sand/silt mixture in areas near the water surface and just above the gravel-erosion protection along the island slopes. Existing native vegetation would be preserved to the extent feasible, and additional pockets of pickleweed and alkali heath would be planted.

Wooden frames and guiderails would be used in select areas to prevent movement of the soil, and large wood would be added to provide additional habitat complexity. The anticipated future maintenance needs for Alternative 2 are likely to be slightly greater than Alternative 1 due to the increased shoreline length.

Alternatives 1 and 2 may also temporarily affect the recreational use of the lake as the lake will be lowered during construction. The total impacts are not known at this time; City staff will coordinate with the contractor and the Sailing Lake operator to prepare for construction and its impact.

Barrier Improvement Alternatives

Barriers will prevent recreational users from accessing the habitat island, preserving its use as a bird habitat. There are three different barrier types that can be installed around the island.

Barrier Improvement Alternative A: Walsh Marine Buoy System

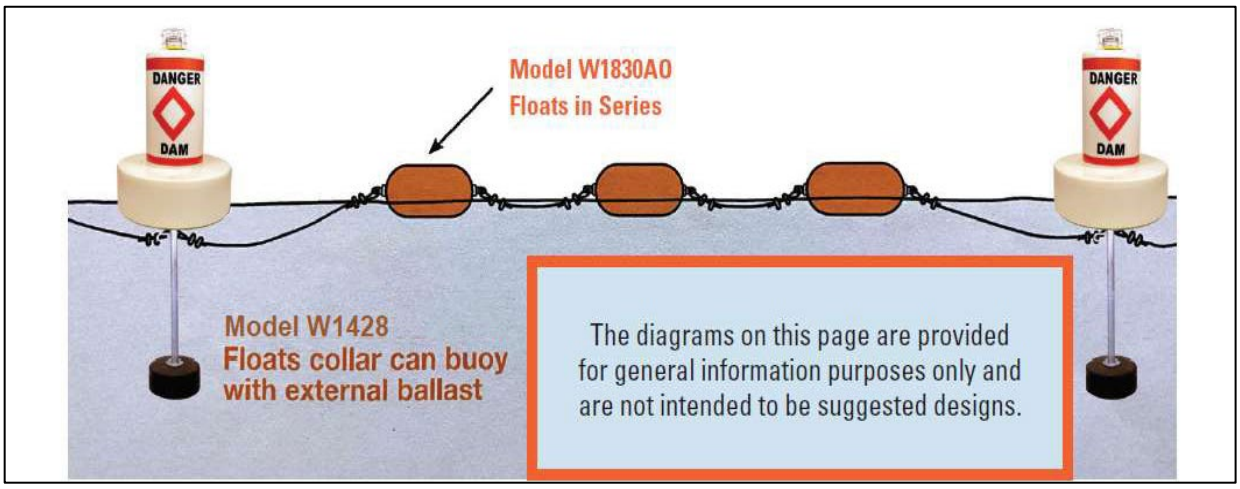

Figure 4: Barrier Improvement Alternative A

This alternative includes a Walsh marine buoy system with barrier floats, float collar buoys, and chain connectors (Figure 4). The barrier floats are linked together to prevent boaters from entering the vicinity of the island. The international orange color increases visibility and signals caution. The float collar buoys provide additional visibility and instruction to recreational lake users.

Anchors to the lake bottom will be installed at key locations to prevent significant movement of the buoy system. Preliminary data from the supplier suggest that the system is robust enough to resist sinking due to mussel and algae accumulation. However, additional evaluation of its maintenance requirements will be needed during detailed design.

The planning-level Engineer's Opinion of Probable Construction Cost of Alternative A is approximately $110,000.

Barrier Improvement Alternative B: Musthane Floating Security Barrier

Figure 5: Barrier Improvement Alternative B

This alternative includes a Musthane floating security barrier system with large floats and chain connectors. The floating security barriers are larger in size than the Walsh marine system in Alternative 1, offering better protection against boater entry, as well as easier installation and maintenance. Anchors to the lake bottom will be installed at key locations to prevent significant movement of the buoy system. Preliminary data from the supplier suggest that this product is robust enough to resist sinking due to mussel and algae accumulation. However, additional evaluation of its maintenance requirements will be needed during detailed design.

The planning-level Engineer's Opinion of Probable Construction Cost of Alternative B is approximately $590,000.

Barrier Improvement Alternative C – Drilled Wooden Piles

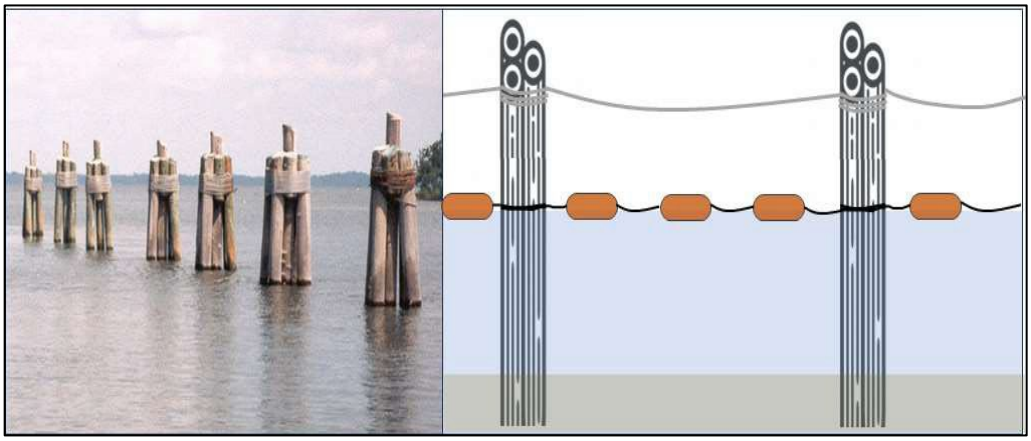

Figure 6: Barrier Improvement Alternative C

This alternative includes drilled wooden piles with a rope/buoy system. It could include either single wooden piles, or groups of piles, connected with heavy duty marine rope and a buoy system at the water surface. The wooden piles would be spaced at an appropriate distance to anchor the rope and buoy system in place to restrict boater access.

The planning-level Engineer's Opinion of Probable Construction Cost of Alternative C is approximately $250,000.

Habitat Island Restoration Alternative Analysis

The project team conducted a multi-criteria evaluation to compare the habitat island alternatives based on the following criteria:

- Engineering: Engineering and technical considerations, including maintenance, construction duration, and construction cost.
- Environmental: Environmental considerations, including benefits for target species.
- Regulatory: Regulatory constraints or challenges.
- Recreation: Benefits and impacts associated with public use and recreation activities in the lake.

A simple evaluation framework was developed to score the alternatives based on the evaluation criteria, using a range of scores between 1 and 10. Scores were assigned using qualitative or quantitative methods, depending on the information and data available. Total scores were calculated to support the selection of a staff-recommended habitat island alternative.

Table 1 summarizes the full evaluation scoring for the habitat island alternatives. Habitat island Alternative 2, Repair Eroded Slopes and Expand Island Size, meets one of the primary objectives of the project by restoring and exceeding the historic size of the habitat island. In addition, Alternative 2 provides a high level of benefits for wildlife, minimizing regulatory risks and potential impacts to recreation, and limits construction costs and duration.

Based on this multi-criteria evaluation, staff recommends Alternative 2, Repair Eroded Slopes and Expand Island Size, to restore the habitat island.

Table 1: Habitat Island Evaluation Results (Alternative Evaluation Report Table 6-6)

Category/Criteria	Alternative 1	Alternative 2
	Score 0-10	Score 0-10
Engineering		
Equal to or greater than historic size	0	10
Long-term maintenance	7	6
Construction duration	8	7
Construction cost	8	6
Environmental		
Acreage for habitat	2	8
Shoreline length	2	5
Slope variability	2	4
Benefits to multiple species	3	6
Regulatory		
Fill volume into the lake water body	10	8
Temporary impacts	8	8
Recreation		
Aesthetic value	4	5
Impact to view corridor	8	8
Impact to navigation/recreation	6	6
Ability to restrict public access	8	8
Total Score (Overall)	**76**	**95**
Total Score (Rank)	**2**	**1**

Barrier Improvement Alternative Analysis

The evaluation and recommendation for the barrier improvement alternatives are independent of the habitat island alternatives. The barrier improvement alternatives evaluation considered cost, aesthetics, maintenance, and effectiveness as selection criteria. Each alternative was scored for each criterion with scores ranging from 0 to 5, with 5 being the most positive or beneficial.

The lowest-cost alternative was Alternative A, and the highest-cost alternative was Alternative B. In terms of aesthetics, Alternative C, featuring the traditional drilled wooden pile design, was considered the most aesthetically pleasing. In contrast, the large black buoys used in Alternative B were viewed as the least visually appealing.

Alternative B is expected to require the least maintenance due to its robust buoy design, which limits biofouling and reduces the risk of sinking. Alternative A would likely require the most maintenance effort due to potential biofouling and the risk of damage from boats. Alternative C is expected to have the lowest risk of buoy sinking due to the piles support.

Regarding effectiveness, Alternative B would be the most effective at deterring boaters from approaching the habitat island, while Alternative A would be the least effective as smaller boats could potentially float over the lower-profile buoys.

Table 2 summarizes the scores for each barrier alternative across all evaluation criteria, along with the total scores and rankings. The highest-ranking barrier improvement alternative is Alternative C, which includes drilled wooden piles connected by a rope and buoy system.

Table 2: Barrier Improvement Evaluation Results (Alternative Evaluation Report Table 6-5)

	Alternative A	**Alternative B**	**Alternative C**
Alternative Name	Walsh Marine Buoy System	Musthane Floating Securing Barrier System	Drilled Wooden Piles with Buoy System
Cost	5	1	4
Aesthetics	3	1	4
Maintenance	2	4	3
Effectiveness	2	5	4
Total	12	11	15
Rank	**2**	**3**	**1**

Alternative Analysis Recommendation

Staff presented the Sailing Lake Habitat Island Alternative Analysis at the November 12, 2025 Parks and Recreation Commission (PRC) meeting, at which the PRC unanimously supported the recommended alternatives, including Restoration Alternative 2, Repair Eroded Slopes and Expand Island Size, and Barrier Improvement Alternative C, Drilled Wooden Piles, to restore the habitat island. The total planning level Engineer's Opinion of Probable Construction Cost for both components is approximately $3.35 million. If the recommended actions are approved, staff will begin work on environmental clearance, regulatory permitting applications, and project design.

ENVIRONMENTAL CLEARANCE FOR PACKAGE 1 PROJECT

In accordance with the California Environmental Quality Act (CEQA), staff has reviewed the scope of the Package 1 project and determined that the replacement of the Coast-Casey Pump Station sump pump pipe is categorically exempt as Class 1, Existing Facilities, and Class 2, Replacement or Reconstruction, under California Public Resources Code Section 15301 and Section 15302. The demolition and removal of the boardwalk, repair of the spillway outlet structure slide gate, and Sailing Lake outlet structure are categorically exempt as Class 1, Existing Facilities, under California Public Resources Code Section 15301. The environmental review did not identify any significant effects that would occur from the projects, and the exceptions listed in Section 15300.2 of the CEQA Guidelines were found not to apply to the projects. Staff recommends that Council make findings that, in accordance with the CEQA requirements:

1. The replacement of the Coast-Casey Pump Station sump pump pipe is categorically exempt as a Class 1, Existing Facilities, and Class 2, Replacement or Reconstruction, under CEQA Guidelines (Title 14, Division 6, Chapter 3 of the California Code of Regulations) Sections 15301 and 15302, respectively; and

2. The demolition and removal of the boardwalk, repair of the spillway outlet structure slide gate, and Sailing Lake outlet structure are categorically exempt as a Class 1, Existing Facilities, under CEQA Guidelines (Title 14, Division 6, Chapter 3 of the California Code of Regulations) Section 15301.

FISCAL IMPACTS

Sailing Lake habitat island restoration, under Shoreline Park Water Control Structures Improvements, Project 23-44, is funded with $5,050,000 from the Shoreline Regional Park Community Fund. There is sufficient budget to support the engineering design, environmental regulatory permitting, and the construction of Packages 1 and 2. The existing budget also supports engineering design and environmental regulatory permitting for Package 3. However,

it does not include the construction costs for Package 3, and additional funding will be requested when the Package 3 design is completed and ready for bidding.

LEVINE ACT

California Government Code Section 84308 (also known as the Levine Act) prohibits city officials from participating in any proceeding involving a "license, permit, or other entitlement for use" if the official has received a campaign contribution exceeding $500 from a party, participant, or agent of a party or participant within the last 12 months. The Levine Act is intended to prevent financial influence on decisions that affect specific, identifiable persons or participants. For more information see the Fair Political Practices Commission website: www.fppc.ca.gov/learn/pay-to-play-limits-and-prohibitions.html

Please see below for information about whether the recommended action for this agenda item is subject to or exempt from the Levine Act.

EXEMPT FROM THE LEVINE ACT
☒ Competitively bid contract

CONCLUSION

The design documents for Package 1, Shoreline Park Water Control Structure Improvements, have been completed. Approval of Package 2, Charleston Slough Tide Gate Improvements, is on hold pending the City's receipt of the CPF grant award. Staff has completed the habitat island alternative analysis for Package 3 to restore the Sailing Lake habitat island and recommends Habitat Island Restoration Alternative 2, Repair Eroded Slopes and Expand Island Size, and Barrier Improvement Alternative C, Drilled Wooden Piles. If the recommended actions are approved and a responsive bid from a responsible contractor within the project budget is received, construction of the Package 1 project is expected to begin in September 2026 and be completed by early 2027. In addition, staff will begin work on environmental clearance, regulatory permitting applications, and habitat island restoration design for the Package 3 project.

ALTERNATIVES

1. Defer construction of Package 1, Shoreline Park Water Control Structure, improvements.

2. Approve another habitat island restoration and barrier improvement alternative.

3. Provide other direction.

PUBLIC NOTICING—Agenda posting.

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PWK/LL/RW-01-27-26CR

Attachment: 1. Shoreline at Mountain View Lake Habitat Island, Alternative Analysis Report, from AECOM, dated October 2025