



CITY OF SAN MATEO

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Agenda Report

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TO: City Council
FROM: Alex Khojikian, City Manager
PREPARED BY: Public Works Department
MEETING DATE: February 20, 2024
SUBJECT:
Wet Weather Preparations – Update

RECOMMENDATION:

Receive an update on the City's wet weather preparations and storm response activities.

BACKGROUND:

City staff have been engaging in a variety of actions to prepare for the current and future rainy seasons, as detailed in presentations to Council on August 21, September 6, and November 6, 2023. The following sections update Council on preparatory actions and storm response activities so far this winter. Note that the categorization and lettering/numbering of the following items correlates to how they were originally presented at the August 21, 2023, meeting.

Immediate-Term Actions (No Additional Resources Required)

- A. Additional Marina Lagoon Pump Station pump vibration analysis at summer lagoon levels
 - a. This action is complete.
- B. Develop Marina Lagoon Alternatives Analysis for Pumping Below 95 feet
 - a. City staff have executed an amendment to Schaaf & Wheeler's existing agreement to evaluate alternatives including: 1) contracting for a detailed hydraulic intake analysis to determine if existing pumps can safely lower the water level beyond standard winter operating levels; 2) installing a temporary rental pump system; 3) using one existing pump/gearbox/engine as a "sacrificial" pump with increased monitoring and anticipated replacement; and 4) constructing a new low-flow pump station adjacent to the existing pump station with pumps properly sized for lowering the lagoon levels below 95 feet.
 - b. Staff received the draft alternatives analysis on January 26, 2024 and is under internal review. Staff will then engage the ad-hoc Lagoon committee to discuss findings.
- C. Install debris rack at 4000 Pacific Boulevard Pump Station
 - a. This action is complete.
- D. Provide data on City's website for Marina Lagoon levels and pumps running
 - a. This action is nearly complete. The public-facing dashboard was rolled out as planned on December 1, 2023, and can be accessed at: www.cityofsanmateo.org/LagoonDashboard
- E. Implement additional safety systems for trash rack cleaning at Marina Lagoon Pump Station
 - a. This action is complete.
- F. Develop a Request for Proposals (RFP) to update the 2004 Storm Drain Master Plan and develop a prioritized implementation strategy
 - a. This action is complete, and combined with Short-Term Item 7, below, to perform a LiDAR aerial survey, as the survey data will feed directly into updated hydrologic and hydraulic modeling for the Master Plan. The RFP is currently advertised, with proposals due February 14, 2024.

- G. Inspect and clean all City-owned trash capture devices
 - a. This action is complete.
- H. Inspect and clean all City-owned trash racks
 - a. This action is complete and ongoing – trash racks were all cleaned in advance of storms and monitored/cleaned before and after significant storm events.
- I. Inspect and clean all storm pump station wet wells
 - a. This action is complete and ongoing – wet wells were cleaned in advance of the rainy season and after all significant storm events.
- J. Prepare traffic control/closures and stage materials for roads with known flooding concerns
 - a. This action is complete, staff have staged materials for road closures at key locations, including water walls and signs, and have other materials ready to deploy at the City's Corporation Yard and storage yard on Ivy Road. Staff have a mobile trailer pre-loaded with closure materials that can be readily deployed from the Corporation Yard, as needed.
- K. Coordinate with Office of Emergency Services (OES) on wet weather planning and training
 - a. This action is ongoing. OES has developed a draft Wet Weather Emergency Action Plan that is under review by City departments, updated the City's Emergency Operations Center staffing roster to reflect staff turnover, and scheduled training for all City staff on emergency operations.
- L. Work with community on Marina Lagoon Pump Station Standard Operating Procedures
 - a. This action is nearing completion. Public Works staff and community volunteers with expertise in developing Standard Operating Procedures have developed complete SOPs for the Marina Lagoon Pump Station that are under review by department management.
- M. Establish a Marina Lagoon Resident Flood Watch communication program
 - a. This action is in progress. Staff is working with key Marina Lagoon representatives on communication and notification protocols/criteria to ensure residents can properly keep City staff informed of any lagoon issues during the rainy season.
- N. Coordinate improved public outreach and messaging on emergency preparations
 - a. This action is ongoing. A robust public information effort about stormwater issues and public safety preparedness was conducted as part of the Community Flood and Storm Protection Initiative leading up to Council's action on the ballot. The City will continue to share safety messaging and emergency preparedness actions via City digital and print communication platforms. Staff are working on planning additional print mailings and digital communications to residents about ways they can prepare and will provide updates on the City's flood preparation web page as a hub of resources for the community. Staff will work to share this information with community partners for help disseminating these important public safety messages. Staff are also working with OES on notification procedures in the event of an emergency and will encourage residents to sign up for SMC Alerts and Nixle.

Immediate-Term Actions

- 1. Perform maintenance on all five diesel engines, upgrade wiring, programming, and alarms, and purchase a spare pump lubricator system at Marina Lagoon Pump Station
 - a. Engine maintenance is ongoing. Three engines have been serviced to date. Service on the third engine revealed significant wear on the valves/cylinder blocks, requiring refurbishment at an outside shop that kept the engine out of service for over a month. The remaining two engines were put on hold until after the rainy season; however, after storms in late January, one of the two engines leaked a significant amount of oil. Service representatives believe a fuel injector potentially failed allowing coolant into the engine block and oil system. Repairs will be extensive with a full engine dismantle required, with repair service starting on February 14. The pump station will remain with only four engines in service until it can be repaired.
 - b. Upgrades to the wiring, programming, and alarms are nearly complete, with the wiring and programming work by Telstar, Thunderbird, and Enterprise Automation already complete. The only remaining work is raising the existing transducer that measures lagoon levels to ensure it does not get flooded in a significant event and installing backup high-level floats outside the pump station and inside the pump station wet well. These will help alarm staff if wet well levels get too low (which could cause pump/engine damage)

- and alert staff to high lagoon levels if the transducer fails.
- c. A spare pump lubricator system has been delivered and is being wired to allow staff to quickly swap with any lubricator that might fail.
- d. Upgrades to the cathodic protection system is nearly complete, with the system online and functioning and an automated monitoring system soon to be installed.
- 2. Deploy up to five (5) sandbag stations throughout the City for upcoming rainy season, with focus on areas with history of flooding, and coordinate with community volunteers for filling bags, monitoring stations
 - a. Staff deployed four sandbag stations as of October 14, one at the Anchor Road parking lot near the Bay Trail, one in the parking lot of Parkside Aquatic Park, one in the parking lot at the City's Corporation Yard, and one in the parking lot of Beresford Park. Staff, with the support of OES, is in discussion with the Army National Guard regarding potential for deploying a fifth station at the National Guard facility on N. Humboldt Street.
- 3. Inspect and clean all catch basins before rainy season and recurring cleaning at hot spots throughout rainy season
 - a. Public Works staff and an outside contractor have completed cleaning all catch basins within the City, which totals approximately 6,000 locations. Staff will continue to monitor and clean catch basins, as needed, throughout the remainder of the rainy season. Staff encourages the public to sign up for the City's Adopt-a-Drain program to volunteer to keep catch basins clear of debris:
<https://www.cityofsanmateo.org/3715/Adopt-A-Drain>.

Short-Term Actions

- 4. Localized lagoon maintenance dredging under existing permit
 - a. Staff issued a Request for Proposals for professional services to prepare a design package for bidding to dredge the three creek mouths at the Lagoon. Two proposals were received on January 31, 2024, and staff is reviewing and selecting a design consultant.
- 5. Localized, small-scale drainage improvements
 - a. This action is still pending, but staff anticipates developing a package of priority locations to put out to bid in the coming months.
- 6. Camera monitoring of priority creeks/trash racks
 - a. This action is still pending.
- 7. LiDAR aerial survey (Ground surface, creeks, and lagoon bathymetric)
 - a. This action, as described above, is part of the RFP to update the City's Storm Drain Master Plan described above, for which proposals are due on February 14, 2024.

Mid-Term Actions

- 8. Storm Drain Master Plan update
 - a. This action is still pending, but proposals for consultant support, as described above, are due February 14, 2024. With approval of the Community Flood and Storm Protection Fee, staff will be programming the additional funds needed to complete the Master Plan update, a key step in developing a prioritized capital improvement program to address storm drainage system deficiencies.
- 9. Marina Lagoon dredging: Design, environmental, and permitting
 - a. This action is still pending and connected to getting updated LiDAR aerial survey data to have updated bathymetry information for the Marina Lagoon.

Additional Activities

- Staff submitted Water Resources Development Act proposals to Congressmember Mullin for key storm drain/flood control infrastructure improvements and Marina Lagoon dredging. Staff continues working with the City's legislative advocate to pursue potential earmark and/or grant funding for key projects.
- After receiving approval for some creek/channel cleaning efforts by key resource agencies, staff dredged sediment from the 19th Avenue Channel adjacent to the Corporation Yard, removed debris from the trash rack at Laurelwood Dam, and 42 other trash rack locations. Staff met with a consultant regarding pursuit of a multi-year

jurisdictional permit to perform creek/channel maintenance on an ongoing basis for sections that are owned/maintained by the City.

- Staff received draft materials from OneShoreline for a proposed Flood Early Warning System for San Mateo Creek and will continue collaborating with their staff on development of a dashboard and associated criteria for decision-making.
- Property owners approved the Community Flood and Storm Protection Initiative and Council authorized levying of the fees at the January 16, 2024, meeting, which will result in \$4 million annually for work on storm drainage issues. Staff is working with the Finance Department to set up the new enterprise fund for revenue and expenditures and establishing operating and capital budget allocations for the 2024-26 budget process.
- City staff from all departments, including OES/San Mateo Consolidated Fire, continues meeting monthly to discuss wet weather preparations/storm response as well as advancing overall emergency management preparations and training. OES established an Emergency Management Committee that will help move efforts forward, including planning for more staff training and exercises. Public Works, Parks, and OES staff continue meeting twice weekly to monitor weather forecasts and plan staff responses, accordingly.

On January 29, 2024, staff met with an ad-hoc committee of Lagoon residents to discuss next steps on the Community Flood and Storm Protection Initiative fee revenue, upgrades at the Marina Lagoon Pump Station, citywide wet weather preparations, and proposed revisions to the on/off settings for pumps at the Marina Lagoon Pump Station. As discussed, a follow-up meeting with this group is planned to further discuss alternatives for pumping below 95' for a dock maintenance period and potential additional flood storage capacity.**BUDGET IMPACT:**

There is no budget impact associated with this informational update.

ENVIRONMENTAL DETERMINATION:

This is not a project subject to CEQA, because it is an organizational or administrative activity that will not result in direct or indirect physical changes in the environment. (CEQA Guidelines Section 15378(b)(5).)

NOTICE PROVIDED

All meeting noticing requirements were met.

ATTACHMENTS

None

STAFF CONTACT

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