



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: September 03, 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, 2023, September 6, 2023, November 6, 2023, and February 20, 2024. The following sections update Council on recent preparatory actions and storm response activities, as well as additional actions staff have been implementing that have not been covered in previous presentations. 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 received from Schaaf & Wheeler a draft alternatives analysis on January 26, 2024. Alternatives evaluated include the following: 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 reviewed draft alternative analysis and met with Schaaf and Wheeler to discuss and determine most feasible solution for the Marina Lagoon. Staff is scheduling a meeting with Ad-hoc Lagoon Committee to further discuss alternatives for pumping below 95' for a dock maintenance period and potential additional flood storage capacity.
- 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 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 Storm Drain Master Plan Update.
- G. Inspect and clean all City-owned trash capture devices
 - a. This is an annual action item scheduled to be completed as routine maintenance throughout the year.
- H. Inspect and clean all City-owned trash racks
 - a. This is an annual action item. Trash racks are scheduled to be cleaned by October 1st in advance of anticipated storms and also monitored/cleaned before and after all significant storm events.
- I. Inspect and clean all storm pump station wet wells
 - a. This is an annual action item. Wet wells are scheduled to be cleaned in advance of the wet season by October 1st and after all significant storm events.
- J. Prepare traffic control/closures and stage materials for roads with known flooding concerns
 - a. This is an annual action item. Materials, including water walls and signs, will be staged in key locations. A mobile trailer containing closure materials will be ready for deployment, 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 complete.
- M. Establish a Marina Lagoon Resident Flood Watch communication program
 - a. This action is ongoing. Staff works 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 (5) diesel engines, upgrade wiring, programming, and alarms, and purchase a spare pump lubricator system at Marina Lagoon Pump Station
 - a. Engine maintenance is ongoing. Four of the five engines have been fully rehabilitated with the last remaining engine, Engine #3, is scheduled to be completed before the onset of the wet season (October 1st). An oil leak discovered on one of the recently rehabilitated engines is currently scheduled to be assessed by Peterson Power System mid-November.
 - b. The Marina Lagoon Pump Station (MPSP) Upgrade Project, which included upgrades to the wiring, programming, and alarms, completed in April 2024. New alarms specific to each of the five (5) diesel engines have been installed. Additionally, two (2) ultrasonic level transducers have been added to monitor the lagoon water level inside the wet well and on the lagoon. The scope also included back up alarm, low and high alarm floats, and fuels sensor alarms. Lastly, the Human Machine Interface (HMI) was also upgraded to enhance pump programming capabilities.
 - c. A spare pump lubricator system has been delivered and wired to allow staff to quickly swap with any lubricator that might fail.

- d. Upgrades to the cathodic protection system is partially complete, with the system online, functioning and an automated monitoring system soon to be installed. Cathodic protection systems for two (2) pumps were installed last year, and installation for the three (3) other pumps is scheduled for Nov. 1 by Corrosion Integrity LLC.
2. Deploy up to four (4) 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 the following four (4) sandbag stations during last wet season: 1) the Anchor Road parking lot near the Bay Trail; 2) the parking lot of Parkside Aquatic Park; 3) the parking lot at the City's Corporation Yard; and 4) the parking lot of Beresford Park. The Parkside Aquatic Park site saw very little usage - staff is evaluating again opportunities to add a station in the North Central neighborhood and will potentially replace the Parkside Aquatic Park location if a suitable site can be identified.
3. Inspect and clean all catch basins before rainy season and recurring cleaning at hot spots throughout rainy season
 - a. This is now an annual maintenance action and ongoing. Staff is planning to resume normal catch basin maintenance beginning on September 1st, starting first in the Shoreview area. Budget for two additional crew members was approved (thanks to the new Community Flood and Storm Protection Fee) to provide ongoing, dedicated storm related field maintenance. Interviews to fill these positions have been scheduled for September 2024.
 - b. 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 selected a consultant, Moffatt & Nichol, to prepare final design packages for anticipated construction in Summer 2025. Review of lagoon bathymetric data and preparation of a Sampling and Analysis Plan (SAP) are underway.
5. Localized, small-scale drainage improvements
 - a. This action is ongoing. Engineering and operations staff identified critical flooding and storm related maintenance items throughout the City. One location was repaired in-house, two locations will be bundled into nearby Capital Improvement Projects for repair, and a construction contract to address four additional locations will be brought before the City Council at the September 16, 2024 meeting.
6. Camera monitoring of priority creeks/trash racks
 - a. This action is ongoing. Continued dialog between engineering and operations staff resulted in revisions to anticipated camera locations. Procurement of cameras is expected to be complete by the end of 2024.
7. LiDAR aerial survey (Ground surface, creeks, and lagoon bathymetric)
 - a. This action is complete. Additional manual sounding of key locations is being performed by the City's consultant to supplement areas where the LiDAR data was insufficient.

Mid-Term Actions

8. Storm Drain Master Plan update
 - a. This action is ongoing. Staff released an RFP in February 2024, received proposals, and selected Schaaf and Wheeler to develop the Storm Drain Master Plan update. Staff and consultant team members have initiated kickoff meetings. Current tasks include evaluation of existing data, acquisition of new data, initial field work, and condition assessments of critical infrastructure components.
9. Marina Lagoon dredging: Design, environmental, and permitting
 - b. This action is ongoing. The City recently received bathymetric data for the Marina Lagoon and will use existing Marina Lagoon conditions to plan long-term and larger dredging improvements.

Additional Activities

- Operation and maintenance staff will begin hydraulic jetting and cleaning on storm drain pipelines diameters between 4" and 8" to remove debris out of the system.

- Staff submitted Water Resources Development Act (WRDA) proposals to US Representative Mullin for key storm drain/flood control infrastructure improvements and Marina Lagoon dredging. Those efforts resulted in a new project for “flood risk management, including stormwater runoff reduction” in San Mateo being incorporated in the WRDA updates, authorizing the Army Corps of Engineers (ACOE) to conduct a feasibility study. While this is a positive first step, it doesn’t appropriate funding, so staff will continue working with the City’s legislative advocate and federal contacts to secure funding for an ACOE study and/or potential earmarks 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. Additionally, staff removed debris from the trash rack at Laurelwood Dam and forty-two (42) other trash rack locations. To ensure ongoing maintenance, staff also met with a consultant to discuss pursuing a multi-year jurisdictional permit, which would facilitate continued creek and channel upkeep for sections owned and 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. Staff continues collaborating with OneShoreline and San Francisco Public Utilities Commission staff on efforts to better monitor and manage San Mateo Creek.
- Property owners approved the Community Flood and Storm Protection Initiative and Council authorized levying of the fees at the January 16, 2024, City Council Meeting, which will provide \$4 million annually for work on storm drainage issues. Staff, in coordination with the Finance Department, set up the new enterprise fund for revenue and expenditures and completed the operating and capital budget allocations for the 2024-26 budget. Staff has also provided necessary documentation to the County of San Mateo to start levying the fee on property tax bills for fiscal year 2024-2025.
- 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.

BUDGET IMPACT:

There is no budget impact associated with this informational update.

ENVIRONMENTAL DETERMINATION:

This informational update to City Council relating to the City’s wet weather preparations and storm response activities 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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