LIFE ON THE LAGOON

A Neighborhood Update

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PUBLIC WORKS
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Our Marina Lagoon (Lagoon) is the City of San Mateo's aquatic gem and we work around the clock to ensure it is an amenity available for everyone. In this update, we share some of the efforts we're making to keep our Marina Lagoon healthy. Find out more information and frequently asked questions at **www.cityofsanmateo.org/Lagoon**.

Have questions? Email us at MarinaLagoon@cityofsanmateo.org.

WATER QUALITY IN MARINA LAGOON

Water quality is an important factor contributing to life on the Lagoon. The Lagoon receives stormwater runoff from most of the City, and pollutants are carried through streets and storm drains directly to it. These pollutants include pesticides applied to residential and commercial landscapes; oil and grease from cars; litter; legacy pollutants such as mercury; and bacteria from animals, sanitary sewer overflows, and leaks.

The City is subject to several regulatory requirements that direct us to perform certain activities and develop plans to limit and address these pollutants.

It is important to maintain healthy conditions for people who use the Lagoon area for recreational purposes, and for wildlife and fauna who make it their home.

San Mateo storm drains flow directly to the Lagoon without water treatment. We take every opportunity to remind our residents to report stormwater pollution.

Help us spread the word about the importance of keeping our stormwater clean.

OPERATION AND MAINTENANCE PERMITS FOR MARINA LAGOON

Historically, the City has been subject to five-year permits from the Army Corp of Engineers, California Department of Fish and Wildlife, and the Regional Water Quality Control Board for routine maintenance projects conducted within the Lagoon. Activities covered include oversight of the private dock construction program, sand replenishment at the beaches, fence building, bank stabilization, vegetation harvesting, and limited sediment removal. The current permits expire at the end of 2021; City staff is currently in the process of re-applying for these permits. The City's plan is to continue to operate and maintain the Lagoon in a similar manner as we have in the past. However, there is a chance that the regulatory agencies could change the requirements or make them more restrictive.

Bookmark our webpage **www.cityofsanmateo.org/lagoon** for updates.

Our Public Works Department hired a professional consultant to assist with negotiating reasonable permit conditions. To date, several meetings with the regulatory agencies have occurred. Ideally, all final permits will be issued to the City by the end of the year, however working with multiple regulatory agencies is often slow and it may take longer. Staff is hopeful that the conditions will be manageable, and that we can continue to provide the same level of service and management of this valuable resource. Dock permitting procedures may need to be modified to incorporate new requirements. Staff will work expeditiously to revise procedures, fees, and guidance so that dock permits can be issued as soon as possible, subject to new permit conditions.

DREDGING ANALYSIS

Our Lagoon is a remnant of a tidal slough which was diked and dredged in 1952 to form an enclosed estuary. The lagoon serves the City as a flood control basin, recreation area, aesthetic amenity, and ecological resource. Lagoon operation and management is centered around optimizing this area so that it can serve these many uses.

Our Lagoon has experienced a shallowing and sedimentation of some areas, which has resulted in hazards and barriers to navigation, reduced stormwater retention, and reduced water quality and circulation. In addition, the shallowing of the Lagoon leads to reduced water flow and increased temperatures which creates an environment for increased nuisance vegetation growth and impacts to water quality.

Continued ...

DREDGING ANALYSIS - CONTINUED

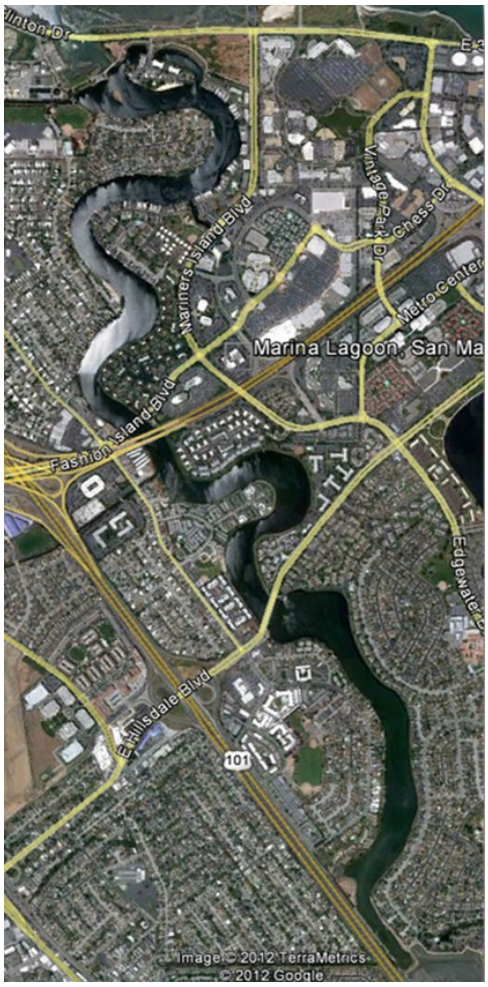
Moffatt & Nichol, a professional services consultant, provided a preliminary Maintenance Dredging Assessment of the Lagoon in 2018. The assessment included a regulatory review to identify permits needed for future dredging, identification of disposal options, preliminary sediment testing, conceptual level costs for dredging and disposal options, and an updated hydrographic survey to determine current sedimentation levels throughout the Lagoon.

The study estimated that up to 270,000 cubic yards of sediment would need to be removed to restore the Lagoon to its original operating capacity; a cost of up to $80 million.

Smaller dredge projects at critical areas could be conducted, but none for less than $8 million. Limited disposal options result in a more expensive project. The stormwater capacity for the 100-year flood control criteria is not yet threatened and the Lagoon is still operating as an effective flood control structure. If no dredging takes place, water quality, recreation, and other beneficial uses will continue to be compromised.

FUNDING ANALYSIS

Unlike our sewer collection and treatment system, we currently do not have a dedicated funding source for dredging or any other stormwater operations, maintenance, or infrastructure renewal activities. All funding is from our general fund.



At the May 17, 2021 City Council study session, staff presented an overview of the stormwater activities, including the Lagoon, and a recent Stormwater Funding Analysis performed by SCS Consulting Group.

The analysis is broken into three sections:

1. Evaluation of projected financial needs;
2. Evaluation of potential funding sources; and
3. Preliminary rate structure and recommendations.

The projected operating costs for fiscal year 2022 totaled $3.6 million. Capital costs were estimated at $139 million (including dredging). After amortization of capital costs into a 30-year model, the total annual costs for the hypothetical stormwater utility are $8.4 million.

Continued ...

FUNDING ANALYSIS - CONTINUED

The analysis identifies various funding sources for a stormwater utility with the most common being a user fee similar to water, sewer, and garbage services. The analysis concludes that a user fee of approximately $16 per month for the average residential property could be required to fund the full annual cost.

Council provided staff direction to proceed with conducting community outreach and polling to obtain community input regarding the potential storm system fee and to better inform potential future ballot measures. That additional scope of work was approved by Council at its Aug. 16, 2021 meeting. Expect to hear more soon.

VEGETATION MANAGEMENT

One of City staff's challenges with the lagoon is controlling the aquatic weed and algae growth. With the shallower water, the sunlight now reaches the bottom easily and with warmer temperatures, conditions are ideal for plant growth. Because much of the stormwater runoff from the City ends up in the lagoon, the water is rich in nutrients adding more fuel for more growth.

In the past, staff used a combination of different herbicides targeting different stages of the growth cycle. Fluoridone is typically applied early in the spring before signs of growth emerge to knock back growth of widgeon grass, which supports the growth of algae. Copper and diquat have been used in the past to treat growth that emerges on the surface.

Continued ...

Did You Know?

Due to a product label regulatory change, City staff can no longer use fluoridone for widgeon grass treatments.

Copper containing herbicide is severely restricted due to water quality criteria that limit the ability to apply effective concentrations.

VEGETATION MANAGEMENT

BEFORE

AFTER

VEGETATION MANAGEMENT- CONTINUED

Herbicide use is strictly monitored and regulated by the state. Due to a product label regulatory change, we can no longer use fluoridone for widgeon grass treatments.

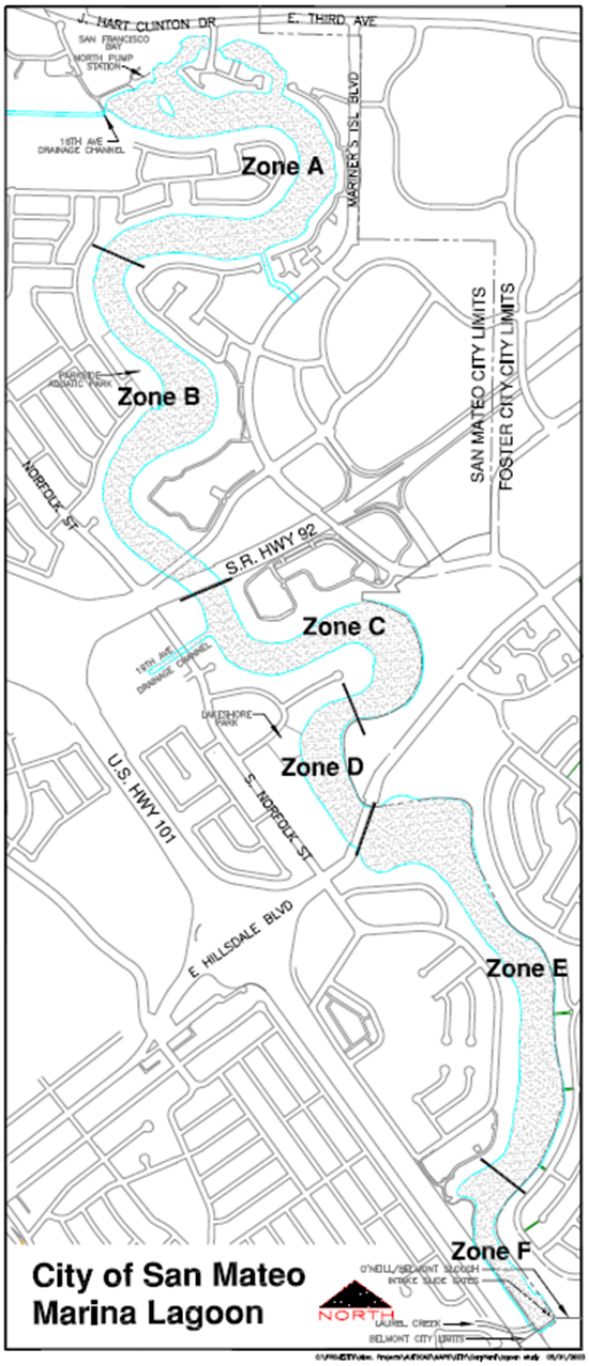
Widgeon grass from the Lagoon, June 2020

Copper containing herbicide had been used successfully in the past. However, copper use is severely restricted due to water quality criteria that limit the ability to apply effective concentrations. The availability of alternative herbicides is limited, costs more, and are not as effective.

Due to limited herbicide options, staff turned to a mechanical solution to address the growth by using harvesters. On June 28, 2021, one harvester was deployed to start removing the widgeon grass from areas D, E, and F. On July 8, 2021, a second harvester began operating to assist with the removal. The harvesters are not able to operate in the shallow water at the far south end of the lagoon. For these areas we are employing an airboat to apply herbicide to growth in these shallow waters. Herbicides have been used for four separate treatment events so far in 2021, treating for both algae and widgeon grass.

Staff has been meeting with the Regional Water Board, the County Agricultural Commissioner, and the herbicide distributor to conduct efficacy trials at the Lagoon for a Special Local Needs registration from the State Department of Pesticide Regulation. This will enable the City to apply fluoridone early on as we have done in the past.

If approved, it will be too late for treating growth in 2021, but would provide a level of certainty for our options next season, and minimize surprises.



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