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Title: PRESENTATION AND UPDATE ON THE DISTRICT'S CLEAN WATER INITIATIVES: HEALTHY BAY EFFORTS INCLUDING POLLUTION PREVENTION, SEDIMENT CLEANUPS, AND BAY WATER QUALITY MONITORING

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DATE: May 14, 2019

SUBJECT:

PRESENTATION AND UPDATE ON THE DISTRICT'S CLEAN WATER INITIATIVES: HEALTHY BAY EFFORTS INCLUDING POLLUTION PREVENTION, SEDIMENT CLEANUPS, AND BAY WATER QUALITY MONITORING

EXECUTIVE SUMMARY:

The District's vision for clean water is supported by several environmental initiatives focused on achieving pollution prevention, healthy ecosystems and enhanced experiences. Programs in place include those which address pollution prevention and legacy contamination. The District also participates in the comprehensive Regional Harbor Monitoring Program to understand trends over time in sediment quality, water quality and marine life in San Diego Bay. The District's clean water initiatives use science-based management decisions to ensure long-term ecosystem health.

Bacteria, trash and heavy metals have been identified as priority pollutants for San Diego Bay. The District has developed unique programs and strategies to address each priority pollutant, including a novel outreach and education campaign, #ThatsMyBay. Legacy contamination also remains a District focus, specifically heavy metals and polychlorinated biphenyls (PCBs) embedded in San Diego Bay sediment as a result of historical industrial and other activities. The remediation of legacy contamination involves removing pollutants and improving sediment quality, which enhances the long-term viability of bay ecosystems. Conducting the Regional Harbor Monitoring Program every five years also allows staff to monitor water and sediment quality over time, a critical component to measuring progress towards clean water goals.

Voluntary initiatives above and beyond compliance, regulatory efforts, management actions geared

towards achieving programmatic goals, as well as outreach and community efforts all play an integral part in achieving clean water. To date, the guidance and decisions made by the Board of Port Commissioners, as well as the collaborative efforts across District departments and community involvement have been critical in making progress towards meeting the District's vision for clean water.

RECOMMENDATION:

Receive presentation from staff regarding clean water initiatives on San Diego Bay.

FISCAL IMPACT:

This item is for presentation purposes only and has no fiscal impact.

COMPASS STRATEGIC GOALS:

This agenda item supports the District's strategic goals by seeking clean water initiatives throughout San Diego Bay and working to improve water quality, sediment quality and healthy ecosystems that lives within the bay through pollution prevention.

This agenda item supports the following Strategic Goal(s).

- A Port that the public understands and trusts.
- A Port with a healthy and sustainable bay and its environment.
- A Port that is a safe place to visit, work and play.
- A Port with an innovative and motivated workforce.

DISCUSSION:

Clean water is a critical component of the District's environmental stewardship. As trustee of the Tidelands, the District has taken an important role in evaluating bay conditions and implementing programs to prevent pollution and remediate existing contamination. The District has several initiatives focused on pollution prevention and healthy ecosystems which enhance user experiences throughout the tidelands, all which support the District's vision for clean water. Programs are in place to address existing pollution. Long-term monitoring programs are also in place to evaluate progress towards the District's clean water goals.

The District employs an adaptive management approach to develop and effectively implement its environmental programs. Using adaptive management, the District seeks to identify the nature and extent of the pollution issue, followed by designing programs that set goals to eliminate and/or control the problem.

Pollution Prevention Efforts

Preventing pollution has a unique set of challenges due to the District's location within the San Diego Bay Watershed Management Area. San Diego Bay is considered "end of pipe", that is, San Diego Bay is often the last stop for pollutants that travel throughout the watershed via stormdrains or directly from creeks and rivers. Therefore, the District is challenged with not only eliminating pollution

sources within our own jurisdiction, but also working with others to properly address those sources that may be originating in other parts of the watershed, and ultimately discharge to the bay or District tidelands.

Bacteria, trash and heavy metals have been identified as stormwater-based priority pollutants and are a continuing concern for San Diego Bay. The District has developed unique programs and strategies to address each priority pollutant. Progress on notable efforts for each pollutant are discussed below.

Bacteria

While certain bacteria are naturally occurring, the types that are associated with pollution (such as those resulting from stormwater runoff, sewage and trash) can cause human health issues to swimmers and others pursuing recreational activities in contaminated water. In San Diego, storm events typically trigger the San Diego County Department of Environmental Health to issue general bacteria advisories and beach closures due to elevated bacteria concentrations resulting from stormwater runoff and sewage. During dry periods, advisories and closures are less frequent. The District's bacteria programs evaluate beaches during both dry weather and storm events and initiate actions to reduce bacteria sources when necessary.

Reducing and eliminating bacteria sources is a District-wide effort. The goals of clean beaches and protecting human health are the core drivers that have shaped the District's current bacteria initiatives. A variety of efforts have been undertaken by staff from all departments, including: voluntary cleanup events throughout the calendar year, changing operational practices to further reduce potential sources, environmental monitoring, and developing policy initiatives.

At Shelter Island Shoreline Park and Tidelands Park, beaches are monitored, and adaptive management strategies have been employed to reduce and eliminate the potential sources that include debris, trash, bird excrements and pet waste. The efforts to combat these issues by the District include programmatic changes by General Services resulting in: increased general beach cleaning and maintenance, increasing the frequency of trash pickups at the parks, implementing a bird abatement program and "No Feeding" signage, and installing and maintaining pet waste bag dispensers.

In addition, the District has filed a lawsuit against the International Boundary and Water Commission (IBWC) and Veolia Water North America demanding the cessation of the near constant discharge of sewage and other waste from their facilities in the Tijuana River Valley.

Trash

Trash has been identified as a pollutant that results in water quality impairments. Trash can harm habitats, transport chemical pollutants, threaten aquatic life and disrupt the various activities of users of San Diego Bay and the tidelands. Sources of trash in San Diego Bay include: transport during storm events from upstream locations, tidal transport from the open ocean, and both intentional and unintentional littering. While controlling trash sources that originate outside of the District's jurisdiction remains a challenge, several waste reduction and recycling measures, as well as monitoring programs, have been implemented throughout the tidelands.

The District's Integrated Waste Management Program provides a conceptual framework to document

compliance with applicable waste-related regulations, as well as identifies the goals and strategies defined in various District environmental programs, policies and planning documents. The District also employs a variety of monitoring programs to better understand trash and litter hot spots and as well as sources. This information is then used to determine the most effective approaches to reduce, eliminate and prevent trash. Using this approach, a variety of new initiatives focused on trash removal were implemented recently:

- The District added over 500 recycling containers in parks and public spaces to better manage waste and remove litter. This has resulted in nearly a 1:1 ratio of recycling to trash bins at District parks.
- The District began a cigarette butt recycling program. Cigarettes are one of the most frequently observed trash types found in parks, parking lots, and streets, despite the smoking prohibitions at District parks.
- Trash sensors have been installed at District facility dumpsters, which upload real-time data to a dashboard that informs on dumpster fullness, thus using technology to allow General Services to better understand the emptying frequency needed to avoid overflowing dumpsters. There are currently 14 sensors deployed.
- The District's Blue Economy Incubator tested a novel approach to trash remediation with the Zephyr boat, a small motorboat outfitted with a trash skimmer able to enter "hard to reach" spots around San Diego Bay. During its one-year pilot, not only did the Zephyr project collect 33,000 pounds of trash from San Diego Bay, but it collected location, volume and content data on trash. This information can be used to allow for management decisions to address sources and hotspots.

The District also hosts and supports a variety of clean up events around the Tidelands. Events including Creek to Bay, Coastal Cleanup Day and Operation Clean Sweep are held annually, and are a great way to encourage community involvement in improving the environment. On September 20, 2018, more than 300 District employees and members of the public teamed up to clean six sites along the waterfront supporting environmental stewardship and showcasing corporate volunteerism throughout the community in its signature event, *#ThatsMyBay* Service Day. Nearly 3,000 pounds of trash were picked-up and prevented from polluting San Diego Bay by participants on the ground and in the bay by the District's dive team. The event had widespread media presence and participation, as well.

Pollution Prevention Outreach - #ThatsMyBay

Public awareness is an integral element in achieving clean water. With its mission to champion and promote a healthy bay, the District launched its Environmental Champions campaign in 2018, and with that came an innovative, out of the box approach to pollution prevention messaging via *#ThatsMyBay*. The campaign offers a "fresh take" on stormwater pollution and environmental stewardship, focusing on trash, metals, and bacteria. The approach takes a serious, dry, and oftentimes regulatory-feeling topic and makes it interesting by combining memorable characters the public can connect with and catchy social media messaging. By creating brand identity and using empathic visual imagery, the District seeks to instill a sense of ownership and pride within tourists and local San Diego residents who visit the San Diego Bay.

While still relatively new, the campaign has already demonstrated a positive impact on the San Diego Bay community. Components of *#ThatsMyBay* extend beyond social media with live events to create

additional opportunities for the public to learn about and get involved in pollution prevention. The strategic framework from which the campaign was developed, enables *#ThatsMyBay* to grow with the Port's needs and adapt to various pollution prevention scenarios ensuring the campaign can be timeless. With more than one million impressions during the first six months of the campaign, *#ThatsMyBay* is well on its way to meeting and exceeding its goal of two million impressions in fiscal year 2020.

Legacy Contamination

Another environmental challenge is the remediation of legacy contamination, such as heavy metals and PCBs embedded in Bay sediment as the result of historical activities. Removing pollutants and improving sediment quality enhances the long-term viability of bay ecosystems. Cleaning up legacy contamination is a time intensive, step-wise process that requires a collaborative approach between the District, regulatory agencies, and other stakeholders. Typically, the process is broken into four general stages, each with an anticipated timeframe to move from one process step to the next. The procedural steps, as well as the general time frames associated with each step are as follows:

- Step 1: Condition Assessment (Define Problem Area) (1-5 years)
- Step 2: Source Investigation (Identify the Solution) (3-15 years)
- Step 3; Remediation (1-3 years)
- Step 4: Post-cleanup evaluation (1-20 years)

To date, the District has played a key role in remediating contaminated areas around San Diego Bay. In 2013, the South Bay Power Plant underwent demolition, which eliminated a warm water discharge and stopped fish impingement. The Port has also been involved with the shipyard cleanups at Campbell Shipyard, NASSCO, and BAE, which resulted in removing several tons of contaminated sediments from the bay. As part of the Campbell Cap, newly developed eelgrass habitats were created and now serve as a valuable nursery ground for juvenile species. The A-8 anchorage cleanup was a multi-year project which removed 350 tons of debris from the bay floor.

Currently, the District is conducting an investigation of sediment conditions surrounding the Tenth Avenue Marine Terminal with the City of San Diego. The District has also collaborated with the San Diego Regional Water Quality Control Board on special studies to better understand the overall ecological impact that legacy pollution has on San Diego Bay. Two examples of special study partnerships include the Fish Consumption Study completed in FY16, and an ongoing study to evaluate bioaccumulation of pollutants through the food web (FY18-20).

In addition, the Port District has sued Monsanto and related entities to abate the nuisance caused by PCBs in and around the Bay.

Regional Harbor Monitoring Program

Long term monitoring of San Diego Bay's water and sediment quality, as well as the evaluation of its aquatic life allows the District to understand current bay conditions, evaluate trends over time and measure progress towards programmatic goals. The District's Regional Harbor Monitoring Program evaluates water quality, sediment quality and marine life in San Diego Bay

This Program, under a directive from the San Diego Regional Water Quality Control Board, studies the health, abundance and biodiversity of marine life, as well as measures corresponding water and

sediment quality. Data is collected every five years as part of a field sampling effort to evaluate overall ecosystem health. Trends and changes over time in each metric are also evaluated. To date these core sampling efforts have occurred three times since the program's inception: 2008, 2013, and most recently 2018.

Progress towards clean water can be evaluated using RHMP data. For example, one measure of overall ecosystem health is calculated using a measurement designed by the State Water Quality Control Board called the Sediment Quality Objective (SQO). Since the RHMP's inception, the District has observed improvements in overall sediment quality using the SQO metric for trend evaluation. In 2008, 63% of RHMP sites qualified as "*unimpacted*" or "*likely unimpacted*". In 2013, that number improved by 9%, with 72% of RHMP sites considered "*unimpacted*" or "*likely unimpacted*". Data analysis for the 2018 cycle is in progress and will be compared to 2008 and 2013 data to further evaluate sediment quality and water quality progress. Continued improvements in the percentage of sites qualifying as "*unimpacted*" or "*likely unimpacted*" is a measured result that supports the fact that the District's clean water initiatives are working.

The RHMP program also assists in facilitating collaboration and partnerships. In 2018, 75 locations were sampled as part of the RHMP program, and were coordinated with the Bight Regional Monitoring Program extending from Ventura south to the border. As a result, RHMP data is being utilized by both the RHMP and Bight programs. Previous iterations of the RHMP have facilitated further special studies with partner agencies such as the San Diego Regional Water Quality Control Board, including the Bioaccumulation Study (2016) and the San Diego Bay Debris Study (2016).

Conclusion

The District's clean water initiatives and approaches discussed herein are just some of the ways that the District hopes to achieve its goal of a clean, thriving San Diego Bay. The District's approach to understand the extent of the pollution problem, followed by the implementation of programs to manage source control and facilitate reduction and/or elimination of pollutants have resulted in improvements to water quality in San Diego Bay over time. Pollution prevention requires a collaborative approach that includes District-wide internal efforts, policy and regulatory initiatives, as well as community involvement. The District's multi-faceted approach includes tracking progress via long-term monitoring, establishing and implementing effective goal-driven adaptive management programs, using innovative thinking and technologies, and harnessing the power of public engagement via outreach, collaborations and partnerships. A healthy bay belongs to all of us. The District is proudly helping lead the way by encouraging all stakeholders and bay users to become Environmental Champions for clean water.

General Counsel's Comments:

The Office of the General Counsel reviewed this agenda as to form and legality.

Environmental Review:

This informational presentation to the Board does not constitute an "approval" or a "project" under the definitions set forth in California Environmental Quality Act (CEQA) Guidelines Sections 15352 and 15378 because no direct or indirect changes to the physical environment would occur. CEQA requires that the District adequately assess the environmental impacts of projects and reasonably foreseeable activities that may result from projects prior to the approval of the same. Any project developed as a result of Board's direction that requires the District or the Board's approval, including without limitation District proposed legislation or a request for funding will be analyzed in accordance

with CEQA prior to such approval. CEQA review may result in the District, in its sole and absolute discretion, requiring implementation of mitigation measures, adopting an alternative, including without limitation, a “no project alternative” or adopting a Statement of Overriding Consideration, if required. The current Board item in no way limits the exercise of this discretion. Therefore, no further CEQA review is required.

In addition, this Board item complies with Section 87 of the Port Act, which allows for the establishment, improvement, and conduct of a harbor, and for the construction, reconstruction, repair, maintenance, and operations of wharves, docks, piers, slips, quays, and all other works, buildings, facilities, utilities, structures, and appliances incidental, necessary, or convenient, for the promotion and accommodation of commerce and navigation. The Port Act was enacted by the California Legislature and is consistent with the Public Trust Doctrine. Consequently, the proposed project is consistent with the Public Trust Doctrine.

Finally, this Board item does not allow for “development,” as defined in Section 30106 of the California Coastal Act, or “new development,” pursuant to Section 1.a. of the District’s Coastal Development Permit (CDP) Regulations because it will not result in, without limitation, a physical change, change in use or increase the intensity of uses. Therefore, issuance of a Coastal Development Permit or exclusion is not required. However, the District’s projects require processing under the District’s CDP Regulations. If a project is formulated as a result of Board’s direction, the Board will consider approval of the project and any improvements associated after the appropriate documentation under District’s CDP Regulations has been completed and authorized by the Board, if necessary. The Board’s direction in no way limits the exercise of the District’s discretion under the District’s CDP Regulations.

Equal Opportunity Program:

Not applicable.

PREPARED BY:

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