STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

REPORT DATE: August 4, 2023

Executive Officer's Report

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Update on Long-Term Flood Protection Planning at Bayfront Land Disposal Sites (Keith Roberson and Alyx Karpowicz)

During the October 11, 2022 Board meeting, the Board adopted a general amendment to waste discharge requirements for 16 closed and operating municipal solid waste Bayfront landfills requiring them to address the potential effects of sea level rise and other site-specific vulnerabilities, such as groundwater rise due to their Bayfront locations. The amendment required the landfills to prepare and submit Long-Term Flood Protection Plans to perform an initial assessment for flood protection and subsequently update the assessment every five years. It also required a climate change vulnerability assessment and adaptation plan to identify strategies for the long-term protection of the landfill from flooding and inundation due to sea level rise, groundwater rise, and extreme climate/weather events.

There was a lot of interest during the public comment period and Board meeting about whether the Regional Water Board planned to issue similar long-term flood protection planning requirements to unregulated fill sites around the Bay margin. In response, San Francisco Bay Regional Water Board staff compiled a list of unauthorized land disposal sites for follow up. We started with CalRecycle's list of about 2,500 closed, illegal, and abandoned (CIA) disposal sites across California, which is maintained by its Closed, Illegal, and Abandoned Disposal Sites Program. We narrowed the list down to 45 sites by focusing on sites in our Region that are potentially vulnerable to sea level rise and groundwater rise (i.e., located within one mile of the Bay or ocean) (see Figure 1).

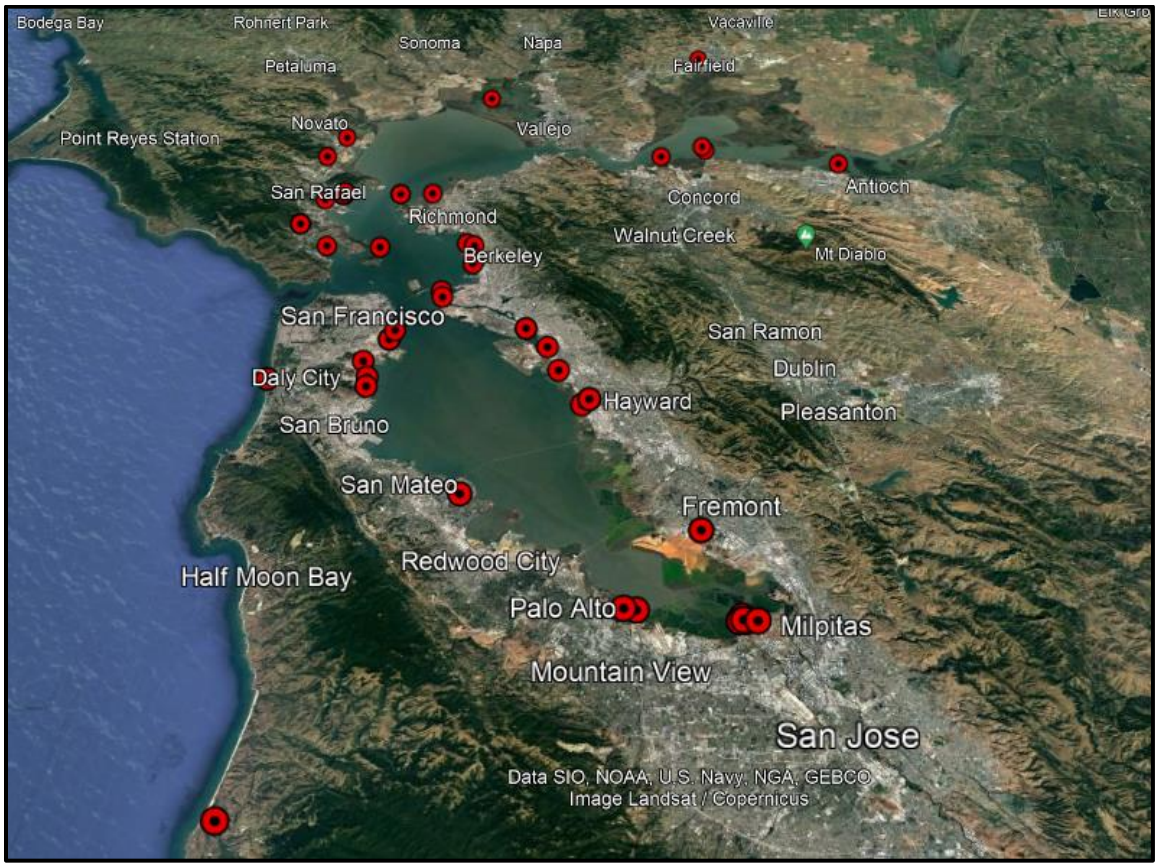

Figure 1. CIA Sites Vulnerable to SLR/GWR (Credit: Kenneth Gen-kuong, 2023)

Of those 45 sites, we already regulate 28 under existing Waste Discharge Requirments (WDRs) or through voluntary cleanup/oversight. The remaining 17 unauthorized land disposal sites are overseen by local enforcement agencies, which are mostly the county departments of environmental health. Our next step will be to coordinate with the local enforcement agencies about their requirements for sea level rise vulnerability assessments at vulnerable sites under local enforcement agency oversight.

We also created a publicly-accessible webpage for the Land Disposal Program, which is now accessible at www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/LandDisposal.html. This work aligns with our Strategic Workplan commitment to serve the public by building trust and long-term relationships through proactive communication, education, and collaboration. We strive to consistently provide professional, high-quality, timely service to the public.

Caltrans Trash Cease and Desist Order Update (Derek Beauduy)

This item provides an update on the progress Caltrans has made since the April 12, 2023, Board item on Caltrans' compliance with the Cease and Desist Order, as amended (CDO), first issued to Caltrans in February 2019 to control trash discharges. Caltrans continues to implement substantial actions to control trash discharges from its Bay Area right-of-way. However, Caltrans has significant work to do to meet both the upcoming June 30, 2024, CDO benchmark requirement to control trash from 6,000 acres of their Bay Area right-of-way, and future benchmarks. This includes:

- Establishing and implementing an effective visual assessment methodology to characterize the trash generation rates of Caltrans' Bay Area right-of-way;
- Demonstrating the efficacy of enhanced maintenance measures and vegetation in controlling trash to a full trash capture equivalency level;
- Implementing on Bay Area right-of-way structural trash capture devices; and
- Working with local municipalities to implement cooperative projects to control trash from both Caltrans and municipality right-of-way.

Since April, San Francisco Bay Water Board and Caltrans staff have met monthly to discuss Caltrans' ongoing work to control trash and meet CDO benchmarks. In addition to the regular monthly meetings, we sent a letter on April 25, 2023, with detailed comments on Caltrans' 2023 CDO Compliance Action Plan, Level of Service Visual Trash Assessment Methodology Justification Report, and Trash Discharge Design Study (Trash Discharge Study), setting expectations for future submittals, and identifying additional information required for Caltrans to demonstrate compliance with CDO benchmarks. In June of this year, San Francisco Bay Water Board staff conducted joint field inspections with Caltrans staff to evaluate a small number of areas Caltrans plans to claim as full trash capture equivalency due to a combination of roadside vegetation that traps trash and maintenance to collect the trapped trash before it discharges to Caltrans' storm drain. San Francisco Bay Water Board staff have also recently worked with State Water Board and Caltrans staff on Caltrans' proposed statewide trash assessment methodology and refinements to the Trash Discharge Study. We plan to meet jointly with Caltrans and Save the Bay to discuss Caltrans' studies and progress toward meeting CDO benchmarks.

Background

Consistent with the requirements of the Caltrans Statewide NPDES Municipal Stormwater Permit (Order No. 2012-0011-DWQ, as amended) and the Statewide Trash Amendments to the Water Quality Control Plans for Ocean Waters and for Inland Surface Waters, Enclosed Bays, and Estuaries, Caltrans must control discharges of trash from significant trash generating areas of its right-of-way by no later than 2030. The Board adopted the CDO because Caltrans had not appropriately characterized significant trash generating areas within its right-of-way or proposed an acceptable plan and schedule to timely control trash discharges via full trash capture devices or full trash capture equivalency controls. The CDO established the following enforceable right-of-way acreage of trash control benchmarks and a schedule for their achievement, as well as planning and reporting requirements sufficient to demonstrate that Caltrans will

substantially control trash discharges from the significant trash generating areas on its right-of-way by 2026, and fully control those discharges by 2030.

- 2,000 acres or more by June 30, 2020;
- 4,000 acres or more by June 30, 2022;
- 6,000 acres or more by June 30, 2024;
- 8,800 acres or more by June 30, 2026; and
- All additional significant trash generating areas of right-of-way identified by visual assessments conducted in 2021, 2025, and 2029 by December 2, 2030.

Trash control is typically accomplished via the implementation of full trash capture devices or via a combination of alternative measures equivalent to full trash capture, such as source controls to prevent the discharge of trash in the first place, and trash removal from streets and highways before it can discharge to the storm drain, such as by street sweeping or maintenance crews.

Below is a summary of developments since the April 2023 Board meeting:

Enhanced Maintenance Measures, Trash Discharge Study, and visual assessment methodology: The December 2022 and April 2023 Staff Summary Reports describe staff's concerns with Caltrans' claims of compliance with the June 30, 2022, benchmark of 4,000 acres of significant trash generating areas controlled for trash. Almost half of Caltrans claimed compliance acreage was via enhanced maintenance measures. San Francisco Bay Water Board staff's field inspections where enhanced maintenance measures were claimed as compliant found that trash controls were not implemented to a level to achieve full trash capture equivalency in some areas because substantial amounts of trash remained in the right-of-way. At the December 2022 and April 2023 Board meetings, staff also described shortcomings in Caltrans' visual assessment method used to verify the effectiveness of enhanced maintenance measures to keep an area at a low trash generating level. We are working with Caltrans to resolve these issues. We expect Caltrans' planned Trash Discharge Study will provide further information on maintenance effectiveness and the actual amount of trash getting into storm drain inlets, which will help determine benchmark compliance.

Caltrans must ensure that enhanced maintenance measures are consistently implemented and verified by visual assessment at a level and frequency sufficient to achieve full trash capture equivalency. Caltrans has not yet documented or implemented an acceptable visual assessment methodology to verify enhanced maintenance measures effectiveness. An acceptable visual assessment methodology must assess the entirety of the right-of-way and must capture small pieces of trash that can substantially impact receiving waters if allowed to discharge.

Caltrans has submitted a draft Trash Discharge Study and will be submitting a final study by August 15, 2023. The Trash Discharge Study is also scheduled to begin this upcoming rainy season and will measure the amount of trash entering storm drain inlets at 40 sites in the San Francisco Bay and Los Angeles regions and 20 sites in northern California counties. Our April 2023 letter outlined our expectations for the Trash Discharge Study design. The study must specify the planned types and frequencies of

maintenance activities, document the timing and type(s) of maintenance actions that are implemented during the study, categorize the types of trash that are effectively controlled by enhanced maintenance measures, correlate the observed trash volume with visual assessment ratings (ratings must use an acceptable visual assessment methodology), incorporate appropriate performance standards, and utilize an adaptive management approach to identify and maintain a level and frequency of maintenance that converts moderate, high, or very high trash generating area to low trash generation rate, including appropriately controlling trash particles to the 5 mm level and controlling trash across the full right-of-way, such as landscaped areas that have the potential to discharge trash to the storm drain. The current Trash Discharge Study is planned to take place over one year and, while we will consider data gathered in the first year as we determine compliance with CDO benchmarks, Caltrans must conduct a multi-year study to allow for additional data to be collected sufficient to support the study's findings. We will continue to work with Caltrans to refine the Trash Discharge Study to ensure that maintenance measures implemented and visual assessments conducted to confirm trash conditions will generate data to appropriately support the study's findings. If, at the study's conclusion, Caltrans demonstrates that a consistent type and frequency of maintenance actions result in full trash capture equivalency, Caltrans must then implement and report on the level and frequency of implementation over areas claimed as compliant to ensure actions achieve full trash capture equivalency.

Hydrodynamic Separator (HDS) Implementation Plan (HDS Plan): Caltrans has submitted a HDS Plan that identifies three sites, one each in San Mateo County, Santa Clara County, and Contra Costa County where HDS units are planned for installation in May 2024. These HDS units will capture trash from over 150 acres of Caltrans right-of-way. HDS units are widely used by municipalities and private property owners to capture trash in storm drain systems prior to discharge to receiving waters. Caltrans has funded numerous cooperative projects with municipalities to install HDS units on municipal property. HDS units can be sized to capture trash from large drainage areas, which can eliminate the need to install multiple smaller inlet-based devices higher in the watershed.

HDS devices are not currently Caltrans approved due to potential siting, accessibility, and maintenance constraints, but implementation of this pilot project will allow for further evaluation of these devices within Caltrans' Bay Area right-of-way. Caltrans must expand its trash control toolbox to meet future CDO benchmarks. Successful installation and operation of these first three devices and timely Caltrans approval of HDS units for wider use within the right-of-way are crucial steps needed to allow for a significant increase in the deployment of HDS units to treat large areas of the right-of-way and meet trash control benchmarks. Caltrans also cannot miss opportunities to install additional HDS units where appropriate. We will provide an update at a future Board meeting on Caltrans' inclusion of HDS units into current and future road construction projects as well as expansion of the current pilot.

Cooperative projects: Caltrans staff has continued efforts to identify municipal partners for cooperative projects to install trash capture devices that control trash from both Caltrans and the municipality. The City of Hayward has two project sites and recently installed large HDS units that will control trash from hundreds of acres in

Hayward and over 100 acres of Caltrans right-of-way. Caltrans has recently entered or is developing agreements for projects with municipal partners including Pacifica, San Mateo County, the Port of Oakland, and Emeryville. Caltrans must continue its coordination and outreach efforts to keep current projects on schedule and significantly increase the number of new projects in the pipeline to meet its projection of approximately 2,600 acres of Caltrans right-of-way treated via cooperative projects by June 30, 2024, and 3,400 acres treated by 2026. Water Board staff will update existing cooperative project status and new projects identified at a future Board meeting.

On-Right-Of-Way structural control implementation: Caltrans has expedited implementation of on-right-of-way trash control devices to control trash from 561 acres of right-of-way, which is about 225 acres over their previously projected acreage for June 2023. Caltrans has also identified seven sites to install its new trash capture housing device, which is an inlet-based device that captures trash from relatively small areas (generally about an acre or less) of right-of-way. Approval of the trash capture housing device was a promising development last year because Caltrans claimed it could be deployed in areas previously deemed infeasible for structural controls. The limited deployment of the device at just seven sites for this initial construction contract is disappointing. Caltrans must significantly increase installation of the housing device by incorporating it where practicable on all current and future road construction projects in significant trash generating areas.

Vegetation controls: San Francisco Bay Water Board and Caltrans staff conducted a joint field visit to evaluate locations where Caltrans plans to claim compliance toward the 2024 benchmark based on the combination of roadside vegetation and trash pickup that they claim is sufficient to control trash prior to entering the storm drain system. In evaluating these field locations we observed stark differences in the amounts and types of vegetation that Caltrans has determined prevents trash from migrating to drainage inlets and discharging to receiving waters. Many areas did not have consistent vegetation cover that would have prevented trash from reaching storm drain inlets. We discussed with Caltrans staff the need for some locations to implement additional measures, such as placing permeable barriers or screens around drainage inlets that would let water through, but keep trash from getting into the storm drain system. Caltrans will also need to field verify areas claimed as compliant using vegetation controls to ensure drainage areas are properly delineated and vegetation conditions or a combination of vegetation conditions and other controls meet full trash capture equivalency. We will provide an update at a future Board meeting on Caltrans' progress on identifying and field verifying compliant areas.

Next Steps: While Caltrans has made some progress since April in identifying additional cooperative projects, expediting on-right-of-way device installation, and refining its Trash Discharge Study, Caltrans has significant work ahead to meet 2024 and 2026 benchmarks. Caltrans must robustly increase installation of on-and off-right-of-way structural trash control devices and demonstrate that enhanced maintenance measures and vegetation controls achieve full trash capture equivalency. As Caltrans projections rely on enhanced maintenance measures and vegetation to control trash from over 2,500 acres toward the June 30, 2024, 6,000-acre benchmark, Caltrans must work to identify appropriate locations and the level of effort needed to ensure enhanced

maintenance measures and vegetation controls in combination with other measures achieve full trash capture equivalency. We will continue to meet monthly to monitor Caltrans' trash control implementation progress and clearly communicate expectations, as outlined in our April 25, 2023, letter to ensure effective and compliant controls are implemented that achieve full trash capture equivalency and can be counted toward CDO benchmark compliance.

We plan to bring an information item to the December 13, 2023, Board meeting to update the Board on the status of Caltrans' trash control implementation and progress toward meeting CDO benchmarks.

Review of Inactive Cleanup Cases (Ron Goloubow)

The San Francisco Bay Water Board's Site Cleanup and Underground Storage Tank Programs include 1050 cases. A case is a site or property where a toxic chemical spill or leak occurred and needs further evaluation, investigation, and/or remediation. Common examples include dry cleaners, gas stations, manufacturing facilities, and fuel terminals. In the June 2023 Executive Officer's Report, we reported on our progress and priorities for the those 850 cases in both programs that are considerd "active." That means the responsible party is engaged in making progress investigating or cleaning up the site.

We did not discuss the other 200 backlogged (i.e., "inactive") cases. These inactive cases are mostly in the Site Cleanup Program and are defined as cases where no progress has been made in two or more years. The main reasons for this are that the responsible party is unknown or lacks ability to pay for the necessary environmental work and/or our cost recovery for staff time. The Site Cleanup Program is solely funded by cost recovery from responsible parties. By contrast, there are very few inactive underground storage tank cases because the State's underground storage tank cleanup fund, which is supported by a gasoline tax, reimburses most responsible parties for their expenditures. In 2015, the State Water Board encouraged Regional Boards to consider inactivating cases if there was no way to move them forward under cost recovery.

In 2021, the San Francisco Bay Water Board received five new positions earmarked, in part, to address the inactive case backlog. While the positions are still funded by cost recovery, we have some limited funds from the Site Cleanup Subaccount Program (SCAP) created in 2015 by Senate Bill 445 to cover staff's time. Since mid-2022, in alignment with this purpose, we have been systematically reviewing our inactive cases to assess the risks and threats and if further investigation or cleanup is needed. We started our reviews focusing on 27 inactive cases known to be in disadvantaged communities. Our findings to date include:

- We have evaluated 45 cases total (27 in disadvantaged communities plus 18 others) – see table below for the disposition of these cases after review.
- 17 cases lack any evidence of a significant risk or threat and have been administratively closed.
- 16 cases have been adequately investigated and cleaned up and have been issued "No Further Action" letters.
- 12 cases require some degree of additional investigation, monitoring, cleanup, or long-term management.
- We have not yet found any high-risk/threat sites that went unattended.

We are prioritizing our continued case review selection considering these factors:

- if there is community interest and/or if the site is in a disadvantaged community
- if the site was a former drycleaning facility
- if the site is subject to significant risk do to sea-level or groundwater rise
- if the site is located near sensitive land use, such as a school or home

We have three staff that dedicate a portion of their time to conducting these reviews and have set ourselves a goal of reviewing 100 inactive cases (50%) by the end of FY 23-24 and the remainder by the end of FY 24-25. All cases that need further work are re-activated and assigned to staff.

We know that progress on some cases will be impacted from the lack of a responsible party's ability to fund the necessary investigation or cleanup work. For such cases we encourage the responsible party to apply for funds under the State Water Board's SCAP program, and work with them to identify incremental priority actions to address the most immediate concerns. We are aware that some high risk/threat cases will require coordination with our enforcement team. We plan to report back on our cleanup program progress later in the year.

Staff Introductions (Eileen White)

This month we welcome Angus Chan to the Toxics Cleanup Division as a Water Resource Control Engineer. He is a licensed Civil Engineer in California and received his Bachelor of Science in Chemical Engineering and Master of Science in Civil and Environmental Engineering, both from UC Berkeley. Angus previously worked in environmental consulting for 9 years, where he managed the investigation and cleanup of chlorinated solvents, petroleum, metals, and other contaminants for sites throughout California. Angus enjoys tennis, running, sharing a pint with good people, and being the best pet uncle for his friends.

Please welcome Madeleine Gaw to the Toxics Cleanup Division as a Water Resource Engineer case manager. Madeleine has a bachelor's degree in mechanical engineering from Brown University and recently received a dual master's degree in environmental engineering and public policy from UC Berkeley. Her capstone project investigated the extent of PFAS pollution in California Drinking Water Systems and the progress of current remediation efforts across the nation. During her free time, Madeleine enjoys reading, knitting, playing board games with friends, and playing with her dog Margot.

Welcome to Jared Wilson of the Toxics Cleanup Division as an Environmental Scientist case manager. Jared has spent over four years in private environmental consulting working on groundwater and soil remediation projects throughout California. Jared received his Bachelor of Science in Earth Science from Cal Poly San Luis Obispo with a concentration in geology. Following his undergraduate studies, Jared continued his education with a Master of Science in Earth Science from UC Santa Barbara. For his Master's program, Jared studied the potential use of radon-222 as a tracer for groundwater in the Santa Ynez mountains. Jared enjoys weightlifting, playing tabletop games, practicing cello, reading, and spending time with his dogs Ouija and Buster.

401 Water Quality Certification Applications Received (Abigail Smith)

The table below lists those applications received for Clean Water Act section 401 water quality certification from June 15 through July 14, 2023. A check mark in the right-hand column indicates a project with work that may be in BCDC jurisdiction.

Project Name	City/Location	County	May have BCDC Jurisdiction
Retaining Wall Repair at 2169 Acton Street	Berkeley	Alameda	
1279 Trestle Glen Rd	Oakland	Alameda	
Bank Slide Repair at 53 & 49 Laurelwood Dr	Novato	Marin	
Western Meadows Subdivision	Napa	Napa	
Chiles Pope Valley Road MPM 3.63 Bank Stabilization	St. Helena	Napa	
Bradford Pump Station Improvements	Redwood City	San Mateo	✓
City of San Mateo Wastewater Treatment Plant Outfall Cleaning and Slide Gate Repair	San Mateo	San Mateo	✓
Cutoff Slough Bridge Repair at Joice Island Unit, Grizzly Island Wildlife Area	Unincorporated	Solano	✓
Petaluma River Turning Basin Float and Pile and Gangway Replacement	Petaluma	Sonoma	
Fowler Creek Bridge Repair	Unincorporated	Sonoma	
106 Reed St. Bank Repair	Mill Valley	Marin	
Garnett Creek Streambank Restoration	Calistoga	Napa	
Alex Johnson Private Floating Dock Installation	Mill Valley	Marin	✓
Geotechnical Investigation for Port of SF Ferry Building Early Project	San Francisco	San Francisco	✓
Emergency culvert clearing SFDB MP 27.23	Inverness	Marin	
95 West Shore Road Pile Repair Project	Belvedere	Marin	✓