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CITY OF OAKLAND

MEMORANDUM

TO: HONORABLE MAYOR & CITY COUNCIL

FROM: Jason Mitchell, Director, OPW

SUBJECT: Stormwater Trash Load Reduction Compliance

DATE: March 17, 2020

City Administrator Approval

Date March 18, 2020

INFORMATION

EXECUTIVE SUMMARY

This report provides a compliance status update and summary of the City of Oakland's (City) previous and current actions to meet trash capture requirements in its Municipal Regional National Pollutant Discharge Elimination System (NPDES) Stormwater Discharge Permit (MRP) issued by the San Francisco Bay Regional Water Quality Control Board. Under these regulations, the City is required to achieve 100% compliance with stormwater trash load capture targets that are based on a 2009 calculation of trash generation rates.

The City needs an additional 4.2 percent trash reduction credit by June 30, 2022 to reach the 100 percent trash reduction compliance requirement for FY 2021/22. Meeting the requirements set forth in the MRP has always required a significant financial investment, however achieving the final reduction requirements will be even more difficult and costly as many of the easier projects and programs have already been implemented. The existing MRP expires in December 2020.

BACKGROUND / LEGISLATIVE HISTORY

On February 19, 2019, Oakland Public Works (OPW) provided the Public Works Committee (PWC) with an informational report regarding the status of compliance the trash load reduction requirement in the City's MRP. This report was subsequent to previous informational reports presented on April 25 and October 24, 2017. The current report responds to the PWC's request to provide an annual update on the City's comprehensive trash reduction strategy including programs and activities, compliance status, and next steps to meet future requirements.

ANALYSIS AND POLICY ALTERNATIVES

Under Provision C.10 "Trash Load Reduction" of the MRP, the City is mandated to reduce trash and litter in its storm drain system and receiving water bodies. Compliance targets for this mandate are based on several formulas related to a baseline trash generation rate developed in 2009 that includes actual volumes removed as well as other actions that provide credits and

offsets. Trash generation is a term used to describe the level of trash deposited onto land areas that could potentially be transported to the storm drain system and receiving water bodies, and the rate was calculated using a formula that includes land use classifications, median household income, and observed trash load. The City has identified very-high, high, moderate, and low trash generating areas (see ***Attachment A*** - Baseline Trash Generation and Full Trash Capture Systems Map). By 2022, the City must achieve 100% compliance with capturing the volumes of trash predicted in the trash generation rate through the performance of approved management actions that provide credit toward meeting that compliance target. The City has already achieved its 2019, 80% compliance target. The City is currently receiving trash reduction credit through:

- The extent of full trash capture systems installed in the City's storm drain system that capture trash;
- The volume of trash removed during volunteer cleanup events at creeks and shorelines;
- The implementation of source control bans on plastic bags and polystyrene foam food service ware;
- The volume of trash removed through illegal dumping and homeless encampment abatement as part of a direct trash discharge control program; and
- The reduction in trash on the City's streets and sidewalks from various management actions as measured by on-land visual assessments.

More information concerning the City's trash load reduction program, including purpose, permit requirements, and compliance status, is available in the City of Oakland Annual Report to the Water Board: https://www.oaklandca.gov/documents/mrp-fy-18-19-annual-report

Compliance Status

In its 2018-2019 Annual MRP Compliance Report, the City exceeded the 80% trash reduction compliance requirement and reported to the Water Board that the amount of litter and trash entering the City's municipal storm drain system has been reduced from 2009 baseline levels by 95.8% as of June 30, 2019. The City met compliance targets through numerous efforts including the installation of underground full trash capture systems in the City storm drain system, above ground efforts to remove litter in the streets before it enters inlets and waterways including volunteer programs and events, the Excess Litter Fee Program, the Business Improvement Districts, street sweeping programs, and clean-up of illegal dumping sites and homeless encampments as described below.

Trash Reduction Programs

Trash reduction credits are taken in five established Trash Load Reduction Action categories:

1. Full Trash Capture Systems
2. Creek & Shoreline Cleanups
3. Source Control Actions
4. Direct Trash Discharge Control Program
5. Other Control Measures

The following **Table 1** shows a summary of Trash Load Reduction Action categories and corresponding reduction credits for Fiscal Years 2015-2016 (FY15/16), Fiscal Year 2016-2017 (FY16/17), Fiscal Year 2017-2018 (FY 17/18), and Fiscal Year 2018-2019 (FY 18/19).

Table 1: Trash Reduction Credit Summary

Trash Load Reduction Action	FY 15/16	FY 16/17	FY 17/18	FY 18/19
1) Full Trash Capture Systems	10.0%	12.4%	12.4%	12.4%
2) Creek & Shoreline Cleanups	3.3%	10.0%	10.0%	10.0%
3) Source Control Actions*	8.0%	10.0%	10.0%	10.0%
4) Direct Trash Discharge Program	0%	0%	0%	15%
5) Other Control Measures**	23.3%	42.3%	46.2%	48.4%
TOTAL	**44.6%**	**74.7%**	**78.6%**	**95.8%**

** This category includes plastic bag and polystyrene product bans.*
*** This category includes Business Improvement Districts, Excess Litter Fee Businesses, street sweeping, illegal dumping and homeless encampment clean-up, Adopt-a-Spot and other on-land clean-up efforts.*

1. Full Trash Capture Systems

Full trash capture (FTC) systems are devices installed in storm drain infrastructure that collect trash prior to entering nearby waterways. The two main types of full trash capture devices are hydrodynamic separators, which are large underground units with a basket that capture trash as stormwater flows through the storm drain system, and connector pipe screens, which are screens installed in a storm drain inlet that trap trash and prevent it from transporting through the storm drain system.

FTC devices are a very effective method for preventing trash from entering waterways and they ensure full trash reduction credit for the area treated; however, they can be expensive and because they are underground solutions, they do not address cleaner streets and neighborhoods, and quality of life issues.

Since FY 2015/16, over 110 new full trash capture storm drain inlet screens have been installed or are currently under construction to treat over 1,300 acres of high and very-high trash generating areas resulting in a total of 12.4 percent reduction credit. The screens are being installed in conjunction with capital improvement and transportation projects (see ***Attachment A*** - Baseline Trash Generation and Full Trash Capture Systems Map).

2. Creek and Shoreline Cleanups & Shoreline Cleanups

The City receives the maximum total trash load reduction credit of 10 percent in this category through implementation of numerous trash removal/cleanup events in Lake Merritt and local creeks and on the Bay shorelines including the annual Earth Day and Creek to Bay Day events. Per the MRP, FY 2018/19 triggered a change to the formula for calculating trash load reduction in this category from a 3:1 offset to a 10:1 offset, thereby significantly increasing the volume of trash needed to qualify for a 10% reduction. Nearly 507,000 gallons of trash were removed from

local waterways during FY 2018/19 which exceeded the volume needed for the City to receive the 10% trash load reduction. In FY 2015/16 the City only received a 3.3 percent reduction credit in this category. The increase in credit is due to improved data collection and tracking of volume of trash and litter removed from creeks and shorelines at the events.

3. Source Control Actions

For the past three years, the City has received an additional 2 percent for a total of 10 percent source reduction credit for the Alameda countywide plastic bag ban and the City of Oakland polystyrene food service ware ban. The additional 2 percent is for the expansion of the countywide single use plastic bag ban to include all retail facilities. The plastic bag ban is implemented through the Alameda County Waste Management Authority.

4. Direct Trash Discharge Control Program

In FY 2018/19, the City received the maximum total trash load reduction credit of 15 percent for the implementation of a direct trash discharge control program. This program, approved by the Water Board in April 2019, allows the City to receive trash reduction credit for its programs that reduce the impacts of trash from homeless encampments and illegal dumping into local creeks and the storm drain system. Through these programs, the City removed more than 15 million gallons of trash from streets, parks, and public rights-of-way last fiscal year, over 1.9 million gallons of which was within 500 ft. of a waterway. To receive 15 percent trash reduction credit in this category, the City must remove a minimum of 735,000 gallons within 500 ft. of a waterway. The direct trash discharge control program allows the City to leverage the enormous efforts already devoted to illegal dumping and homeless encampment abatement to receive valuable trash reduction credit.

5. Other Control Measures

In FY 2018/19 the City received an additional 2.2 percent in trash reduction credit in this category for a total of 48.4 percent. This category measures the effectiveness of the majority of the City's above ground trash reduction efforts that include:

- Continuing the City's street sweeping program, the most widespread trash control measure, that targets much of its efforts in very-high trash producing areas including downtown, business districts, and major arterials with 3 or more sweeping events per week. The City has posted signs on all routes, has a rigorous enforcement program, and spends more than $6.5 million dollars on implementation annually.
- Implementing Oakland's award-winning Adopt-a-Spot program to support individuals, neighborhood groups, civic organizations, and businesses in ongoing cleaning and greening of parks, creeks, shorelines, streets, trails, and other public spaces. In FY 2018/19, citywide, volunteers contributed over 146,000 on-land clean-up volunteer hours at adopted spots and parks.
- Facilitating the Adopt-a-Drain program that enhances the cleaning of storm drains throughout the city. More than 1,400 of the City's estimated 13,600 storm drains have been adopted since the program began.

- Conducting the City's Excess Litter Fee (ELF) Program at fast food businesses, convenience markets, gasoline station markets, and liquor stores. Fees collected provide funds for a contracted crew to clean up the trash around businesses that sell/provide large amounts of disposable materials to customers. The contracted crew services more than 850 ELF businesses sites throughout the City and focuses on known locations of high street litter and illegal dumping.
- Continuation of the City's 10 Business Improvement Districts (BIDs) in neighborhood commercial areas. The City's 10 BIDs and 1 Business Improvement Association cover over 900 acres. These organizations hire full-time staff to remove litter and dedicate funding to maintain trash containers and manage the number and capacity of trash containers needed, install and maintain cigarette butt receptacles, and install public anti-litter signage.
- Conducting an enhanced facility inspection program of more than 800 facilities that includes the identification of overflowing trash cans, trash conditions in the right-of-way, and compliance with the City's Polystyrene Foam Food Service Ware Ordinance.

To justify trash reduction credit in this category the City is required to conduct visual assessments of street segments using a protocol developed in 2015. The protocol provides qualitative estimates of the amount of trash on the streets that may be transported into the storm drain system as observed through field assessments along randomly selected stretches of street. A category of trash condition, from low to very-high, is assigned to the area based on trash count and visual condition as recorded through photographs. The assigned trash condition determines trash reduction credit using the standardized formula in the protocol.
The past three years of visual assessments have demonstrated that in some areas of the City, trash reduction activities such as enhanced trash removal by the BIDs, Adopt-a-Spot volunteer efforts, and the three times or more a week of street sweeping in commercial areas and downtown have reduced the amount of trash found from very-high trash to moderate levels.

Future Actions

The City needs an additional 4.2 percent trash reduction credit by June 30, 2022 to reach the 100 percent trash reduction compliance requirement for FY 2021/22. Meeting the requirements set forth in the MRP has always required a significant financial investment, however achieving the final reduction requirements will be even more difficult and costly as many of the easier projects and programs have already been implemented. The existing MRP expires in December 2020. As the Water Board prepares to renew the MRP the City anticipates new requirements and trash reduction targets. The new MRP will likely require the City to further expand its trash reduction efforts and realign trash reduction program goals and priorities. Permittees are currently in negotiations with the Water Board regarding proposed changes to the next MRP. It is the position of the Permittees that should any permit trash reduction changes be adopted, the deadline for compliance be extended. Currently the City plans to achieve the 2022 mandate in two ways:

1. Installation of full trash capture systems
2. Implementation and expansion of other control measures

I. Installation of Full Trash Capture Systems

The City will leverage existing bond funding, transportation funding, existing capital projects, grants, and private development projects to install full trash capture (FTC) systems. The City Council has provided direction to staff on several occasions to look for opportunities for FTC implementation.

- On June 12, 2017, City Council approved Resolution No. 86773 C.M.S. for the identification of Capital Improvement Projects funded by the General Obligation Bond (Measure KK) including the adoption of a Trash Capture Transportation Map that showed transportation project locations in high trash generation areas to ensure that those projects incorporate FTC as appropriate. The City has since completed a prioritization study to identify locations for FTC that will be the most cost-effective and will maximize trash reduction credits.
- On June 12, 2018, City Council approved Resolution No. 87238 C.M.S. authorizing the City to enter a cooperative implementation agreement with Caltrans for an FTC project in the Ettie Street watershed. Caltrans will provide up to $1.9 million for the project. City and Caltrans staff are still identifying the optimal location to maximize trash reduction credit and meet engineering constraints.
- On June 24, 2019 the City Council approved Resolution No. 87759 C.M.S. authorizing the balanced, two-year $3.29 billion "Oakland Together" budget covering FYs 2019-20 and 2020-21.The two-year budget includes: 1) $250,000 of Transportation Impact Fee funds (2420) for the installation of FTC; and 2) $225,000 of City Department of Transportation funds for the design of FTC.
- On November 14, 2019 City Council approved Resolution No. 87919 C.M.S. authorizing the submission of an Ordinance on the March 3, 2020 Statewide Primary Election ballot for a 20-year parcel tax to raise revenues necessary to maintain, protect and improve parks and recreational facilities and services, to provide homeless support services, and to improve water quality. The measure would provide $21 million annually with approximately $1 million for stormwater system improvement and trash reduction efforts including the installation of FTC.

To support Council's direction on FTC, staff has developed an internal Standard Operating Procedure (SOP) (***Attachment B***) requiring the inclusion of FTC in capital improvement and transportation projects in high and very-high trash generating areas. The SOP also includes FTC standard specifications and standard details to facilitate installation of FTC with City contractors.

The following FTC projects will be initiated or completed in FY 2019/20:

- 68 connector pipe screen (CPS) units as part of the East Bay Rapid Transit Project (i.e., BRT Project);
- Approximately 30 CPS units as part of the Active Transportation Program 20th Street Project, Highway Safety Improvement Program Cycle 7 Telegraph Avenue Improvement Project, Fruitvale Alive Gap Closure Project, and 7th Street Streetscape Phase 2 Project; and

- Approximately 1,200 CPS units on very-high, high, and moderate trash generating areas receiving paving rehabilitation as part of the 3-Year Paving Program.

II. Implementation and Expansion of Other Control Measures

The City will continue to implement the numerous trash control actions already underway to remove litter in streets and parks before it enters inlets and waterways including volunteer programs and events, the Excess Litter Fee Program, BIDs, street sweeping programs, and clean-up of illegal dumping sites and homeless encampments. Moving forward, actions the City will explore and/or undertake include, but are not limited to:

- Implement the education and outreach campaign—Oaktown PROUD: Prevent and Report Oakland's Unlawful Dumping.
- Further discuss strategies to effectively implement: 1) eradication; 2) education; and 3) enforcement around illegal dumping through the City's Illegal Dumping Task Force. OPW declared illegal dumping as the number one priority and has empowered the Task Force to explore creative and effective solutions.
- Continue to grow and support the extensive volunteer cleanup and Adopt-a-Spot programs and improve the data collection on the volume of trash removed.
- Examine the fee structure, fee amount, and definition of ELF eligible businesses.
- Work with stakeholders to encourage the formation of BIDs in other areas (e.g., Piedmont Avenue, Chinatown, Embarcadero Cove Area, Coliseum Area, Oakland Airport Area).
- Analyze implementation of the existing polystyrene, plastic bag, and plastic straw ban ordinances and, as necessary, make improvements to inspection and enforcement including tracking of violations and referrals to the City Administrator's staff for enforcement/citation.
- Conduct a citywide street sweeping evaluation study with recommended improvements to improve trash levels on streets, reduce redundancies in trash control measures, and improve the cost-efficiency of the City's Street Sweeping Program.
- Complete collaborative trash reduction study with the Santa Clara Valley Urban Runoff Pollution Prevention Program on the performance of curb-inlet screen partial trash capture systems.

FISCAL IMPACT

No fiscal impacts are associated with this informational report.

PUBLIC OUTREACH/INTEREST

While this item did not require any additional public outreach other than the required posting on the City's website, the City is taking steps to educate citizens on litter and illegal dumping with the goal of encouraging and fostering personal responsibility for proper disposal of unwanted items through enhancement of civic pride; re-emphasizing the laws and consequences for illegally dumping; and, reminding residents and businesses of proper disposal options available to them. This includes the recently launched education and outreach campaign Oaktown PROUD

and the Adopt-a-Spot program which fosters community engagement to clean, green, and beatify public spaces.

COORDINATION

The Office of the City Attorney, Budget Bureau, and the City Administrator's Office were consulted for the preparation of this report.

SUSTAINABLE OPPORTUNITIES

Economic: The continued efforts to reduce trash and litter will assist in improving the physical appearance of the City of Oakland, which helps to attract and retain businesses and promotes civic pride.

Environmental*:* The continued efforts to reduce trash and litter entering the storm drain systems improves the health of our creeks and waterways.

Race & Equity*:* Many of the activities the City is undertaking to meet the stormwater trash reduction compliance mandates occur in neighborhoods most affected by the impacts of trash and illegal dumping. Implementation of compliance requirements helps to alleviate some of the disproportionate impact experienced by frontline communities

Respectfully submitted,

Jason Mitchell
Director, Oakland Public Works

For questions, please contact Kristin Hathaway, Watershed Manager, at (510) 238-7571.

Attachments:
A: Baseline Trash Generation and Full Trash Capture Systems Map
B: Standard Operating Procedure for Full Trash Capture