

CITY OF OAKLAND

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AGENDA REPORT

TO: Sabrina B. Landreth
City Administrator

FROM: Jason Mitchell
Director, OPW

SUBJECT: Follow-up Informational Report on
Stormwater Trash Load Reduction
Compliance

DATE: September 28, 2017

City Administrator Approval

Date:

10/12/17

RECOMMENDATION

Staff Recommends That The City Council Receive A Follow-up Informational Report On The Status Of The City's Compliance With The Municipal Regional Stormwater Permit's July 1, 2017 Deadline For a 70% Reduction Of Trash In The Stormwater System.

REASON FOR SUPPLEMENTAL REPORT

On April 25, 2017 Oakland Public Works (OPW) provided the Public Works Committee (PWC) an informational report discussing compliance with the 2017 trash load reduction requirement. At the PWC staff was directed to return with another follow-up report to provide additional information. On May 23, 2017, OPW provided PWC a follow-up informational report on Oakland's compliance with clean water regulations regarding trash load reductions in the City of Oakland storm drain system. OPW staff was then further directed to provide an additional follow-up report with an updated status on compliance with the 70% trash reduction requirements and to include language in the Fiscal Year 2017-2019 Capital Improvement Program that clarifies potential "trash capture devices" installation at Measure KK priority locations.

BACKGROUND / LEGISLATIVE HISTORY

The City of Oakland is subject to the Regional Water Quality Control Board's (Water Board) National Pollutant Discharge Elimination System (NPDES) Municipal Regional Permit (MRP). Under the permit, the City must reduce trash and litter entering the City's municipal storm drain system by 70% by July 1, 2017, from the 2009 baseline levels.

General information concerning the City of Oakland's trash load reduction program, including purpose, permit requirements, and compliance status, is available in the City of Oakland's Annual Report at the Water Board's webpage:

http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/stormwater/MRP/AnnualReports1.shtml

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ANALYSIS AND POLICY ALTERNATIVES

At the May 23, 2017, PWC meeting OPW staff reported that the total trash load reduction as of June 30, 2016, was 44.6% and that it was unclear if the June 30, 2017 70% target would be met. Staff stated that the 2017 trash load reduction number would not be known until full calculations were completed for the September 30, 2017, Annual MRP Report to the Water Board.

Compliance Status

Collection and analysis of last year's data has been completed and the City has met the Water Board's June 30, 2017 70% trash reduction requirement. On September 30, 2017, the City reported to the Water Board in the 2016-2017 Annual Report that the amount of litter and trash entering the City's municipal storm drain system has been reduced by 74.7% as of June 30, 2017 from the 2009 baseline levels.

The City has met the compliance target through key program efforts including the installation of new underground full trash capture systems in the City storm drain system, and 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.

Measuring Trash Reduction

The trash load reductions are measured from a 2009 baseline generation rate (baseline) and are based on volume reductions, source reduction credits and/or through conducting visual assessments of trash in streets following established Water Board protocols from 2015. In previous years, the City had to depend on limited reduction credit data and methodologies that may not have accurately accounted for a portion of the City's trash reduction activities. This may have resulted in under-reporting for trash reduction activities such as clean-up of illegal dumping and homeless encampment sites, street sweeping and Business Improvement Districts. Starting in 2016, the City significantly increased its data collection and improved visual assessments to more accurately measure trash reduction. The new data collection and methods more closely followed practices used by most cities in the Bay Area and were completed by the City's environmental engineering consultant, EOA, Inc. EOA, Inc. is a nationally recognized consulting firm known for their work in water quality, specifically for reduction of trash in waterways.

Trash Reduction Categories

Trash reduction credits are taken in five established Trash Reduction Action categories: Full Trash Capture Systems, Creek & Shoreline Cleanups, Source Control Actions, Other Control Measures and Direct Trash Discharge. The following table shows a summary of trash reduction action and corresponding reduction credits for Fiscal Years 2015-2016 (FY15/16) and Fiscal Year 2016-2017 (FY16/17).

Table 1: Trash Reduction Credit Summary

Trash Load Reduction Action	FY 15/16	FY 16/17	Change
1) Full Trash Capture Systems	10%	12.4%	+2.4%
2) Creek & Shoreline Cleanups	3.3%	10%	+6.7%
3) Source Control Actions*	8%	10%	+2%
4) Other Control Measures**	23.3%	42.3%	+19%
5) Direct Trash Discharge***	0%	0%	0%
TOTAL	44.6%	74.7%	+30.1

* 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.

*** This category requires development of a Water Board approved Direct Discharge Plan. The City is developing a Direct Discharge Plan for approval by the Water Board in 2018.

1. Full Trash Capture Systems

The City increased installation of full trash capture systems by 20% from last year resulting in a total of 12.4% reduction credit. In FY 16/17 over 180 new full trash capture storm drain inlet screens were installed or are currently under construction to treat over 1,300 acres of high and very-high trash generating areas. The screens are being installed in conjunction with capital improvement and transportation projects (see **Attachment A** - full trash capture treatment map).

2. Creek & Shoreline Cleanups

The City received the maximum total trash load reduction credit of 10% in this category. Last year the City only received a 3.3% reduction credit in this category. The increase credit is due to improved data collection and tracking of volume of trash and litter removed from shorelines at the numerous trash removal/cleanup events. In the previous years, the City used tracked volunteer hours and estimated an hourly volume of trash collected rate. This year the City used volume of litter collected data resulting in a more accurate measure of this category.

3. Source Control Actions

The City is receiving an additional 2% for a total of 10% source reduction credit for the Alameda countywide plastic bag and the City of Oakland polystyrene food service ware bans. The additional 2% is for the recent 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. *Other Control Measures*

The City is receiving an additional 19% in trash reduction credit in this category for a total of 42.3%. This category measures the effectiveness of the majority of the City's above ground trash reduction efforts including street sweeping, Business Improvement Districts, illegal dumping and homeless encampment cleanups, the Excess Litter Fee Program, the Adopt-a-Spot Program and the Citywide volunteer clean-ups. The increase in trash reduction credits is due to implementation of a more robust visual assessment program to more accurately measure the trash level reductions in this category. The City significantly increased its visual assessments to derive a more statistically-driven use of the "Visual On-Land Trash Assessment Protocol for Stormwater" developed in 2015 by the Water Board (see **Attachment B** for the protocol). The protocol provides qualitative estimates of the amount of trash on the streets that may be transported into the storm drain. The protocol requires an on-site field assessment of on-land conditions along randomly selected stretches of street of a prescribed length. The assessment includes recording the amount and type of trash observed through visual observation and photographs. The assessor then assigns a category of trash condition for the inspection area based on the trash count and photographs. The assigned trash condition determines trash reduction credit using the standardized formula in the protocol. In FY 16/17, the City of Oakland's expanded visual assessment program included over 800 inspections with over 50 miles of street curb miles citywide utilizing consultants that specialize in trash assessments (see **Attachment C** for a map of assessment locations).

The FY 16/17 visual assessments demonstrated that in some areas of the City of Oakland, trash reduction activities have brought trash levels down from very-high trash to moderate. For example, the visual trash assessments showed that the enhanced trash reduction activities of Business Improvement Districts, Adopt-a-Spot volunteer efforts and the three times or more a week of street sweeping in commercial areas and in Downtown Oakland have reduced trash found from very-high trash to moderate resulting in a trash reduction credit of 9%.

Because this was the first year that a robust, expanded visual assessment program was implemented in Oakland, the 42.3% trash load reduction in this category reported for FY 16/17 is considered preliminary pending collection of additional data in FY 17/18. The City intends to conduct additional visual trash assessment in FY17/18, and average the two years of data to confirm the data findings of FY 16/17.

5. *Direct Discharge Plan:*

Currently the City does not receive credit in this category because it does not have a Water Board approved Direct Discharge Plan. A Direct Discharge Plan includes a trash source assessment, control actions, and monitoring program to document improvements. City staff will develop and submit a Direct Discharge Plan to the Water Board that allows Bay Area cities to claim up to 15% credit for implementing control of direct discharges of trash to receiving waters. To date, only the City of San Jose has an approved Direct Discharge Plan. The City of Oakland's on-land clean-up programs will be central to the proposed Direct Discharge Plan to be submitted to the Water Board in February 2018 for implementation in FY 18/19.

Capital Improvement Program

At the May 23 PWC meeting, the committee directed staff to incorporate full trash capture into the FY17–19 Capital Improvement Program. On June 12, 2017, Resolution No. 86773 C.M.S. was approved by the City Council for the identification of Capital Improvement Projects funded by the General Obligation Bond (Measure KK), and which included the adoption of a Trash Capture Transportation Map that provided locations for transportation projects in high trash generation areas to ensure that those transportation projects will incorporate full trash capture elements, as appropriate.

Trash Action Plan

The City developed a new Trash Action Plan to achieve MRP trash load reduction mandates of 80% by 2019 and 100% by 2022. The Trash Action Plan was submitted with the September 30, 2017, MRP Annual Report and is an evolving document that will be modified in response to changing conditions and new information. The trash plan includes:

I. Additional Full Trash Capture Systems

The City will install full trash capture devices in the future by leveraging existing bond funding, transportation funding, capital projects, grants and private development projects.

II. Other Control Measures

The City will continue to implement and expand existing trash reduction programs and projects and will explore implementation of the following new actions:

- Evaluate Excess Litter Fee program
- Pursue the formation of new Business Improvement Districts (e.g., Piedmont Avenue, Chinatown, Embarcadero Cover Area, Coliseum Area, Oakland Airport Area)
- Work with OPW staff to investigate opportunities to reduce illegal dumping behavior, assess collection, enforcement methods and deployment of resources to help meet water quality goals
- Study street sweeping program to more effectively prevent trash from getting into the storm drain
- Explore to opportunities to leverage volunteer cleanup and Adopt-a-Spot efforts to reduce trash in waterways

III. Program Development

Direct Discharge Plan: The City staff will develop and submit a Direct Discharge Plan to the Water Board in February 2019 for implementation in FY 18/19.

Full Trash Capture System Standard Operating Procedures: The City is developing an internal Standard Operating Procedure (SOP) requiring the inclusion of full trash capture for capital improvement projects and transportation paving projects in high and very-high trash generating areas. The SOP includes requirements and standard specifications and details to facilitate installation of devices with City contractors.

Full Trash Capture System Standard Conditions of Approval: The City will be instituting Standard Conditions of Approval requiring new development and redevelopment projects to be “trash neutral” through the City’s Bureau of Planning. These full trash capture devices on private property will be tracked and provide trash reduction credit.

Effectiveness Studies: The City will be undertaking studies to improve efficiency of existing trash reduction efforts and to most effectively direct future resources. The outputs of these studies will help the City determine the relative value of implementation alternatives. These studies include:

- Citywide full trash capture feasibility study to identify the most cost-effective and feasible locations and types of devices for installation
- Evaluate street trash control measures with recommended improvements to improve effectiveness of existing measures, reduce redundancies, and improve the cost-efficiency of the trash reduction programs
- Complete curb-inlet screen performance study and develop new standard for trash reduction credit for screen installation in conjunction with street sweeping

Next Steps

The City submitted the MRP Annual Report on September 30, 2017, and is awaiting a compliance determination from the Water Board.

FISCAL IMPACT

No fiscal impacts are associated with this informational report.

PUBLIC OUTREACH/INTEREST

This item did not require any additional public outreach other than the required posting on the City’s website.

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 translates directly into attracting and retaining business and promoting civic pride.

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

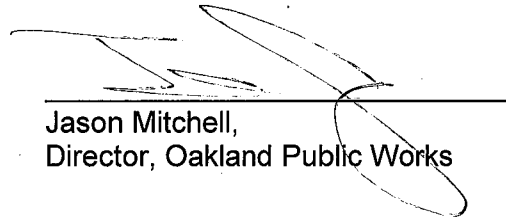
Social Equity: The enhanced efforts of collaboration and partnering between the City of Oakland, our residents and business community improves the quality of life and public safety.

ACTION REQUESTED OF THE CITY COUNCIL

Staff recommends that the City Council receive a follow-up informational report on the status of the City's compliance with the Municipal Regional Stormwater Permit's July 1, 2017, deadline for a 70% reduction of trash in the Stormwater System.

For questions regarding this report, please contact Lesley Estes, Watershed Manager, at (510) 238-7431.

Respectfully submitted,



Jason Mitchell,
Director, Oakland Public Works

Reviewed by:
Assistant Director Bureau of Design and
Construction, Danny Lau, P.E.

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Attachments (3):

- A – Full Trash Capture Systems*
- B – Visual On-Land Trash Assessment Protocol*
- C – On-land Visual Trash Assessment Results*

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