



CITY OF ALAMEDA

UPDATED TRASH LOAD REDUCTION PLAN

Submitted in Compliance with Provisions C.10.a, C.10.d, and C.10.g of NPDES
Permit No. CAS612008

Submitted by:

City of Alameda

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June 30, 2023; Updated November 30, 2023

1. INTRODUCTION

1.1 2014 Long-Term Trash Load Reduction Plan

The City of Alameda (City) submitted a Long-Term Trash Load Reduction Plan (Long-Term Plan) on January 31, 2014 to the San Francisco Bay Regional Water Quality Control Board (Regional Water Board) in compliance with Provision C.10.c of the Municipal Regional Stormwater National Pollutant Discharge Elimination System (NPDES) Permit (No. CAS612008, MRP 1.0). Consistent with MRP 1.0 and MRP 2.0 (No. CAS612008), which was adopted by the Regional Water Board on November 19, 2015, the City has maintained its Long-Term Plan and summarized revisions in annual compliance reports submitted to the Regional Water Board consistent with MRP requirements. The Long-Term Plan describes trash load reduction control actions being implemented or planned within the City and the trash generation or management areas where the actions are or will be implemented. The goal of the Long-Term Plan is to achieve trash load reductions from the City municipal separate storm sewer system (MS4) as required by the MRP.

1.2 MRP 3.0 Trash Load Reduction Requirements

On May 11, 2022, the MRP was reissued by the Regional Water Board (Order R2-2022-0018; No. CAS612008) and is referred to as MRP 3.0. MRP 3.0 became effective on July 1, 2022 and Provision C.10 requires applicable Permittees, including the City of Alameda, to continue to make progress on reducing trash discharges from their MS4s to receiving waters from 2009 levels. Trash load reductions from MS4s are required in accordance with the following schedules described in MRP 3.0:

1. 90 percent by June 30, 2023; and
2. 100 percent by June 30, 2025.

MRP 3.0 trash load reduction benchmarks are a continuation of the trash load reduction benchmarks (e.g., 40%, 70% and 80%) included in MRP 1.0 and 2.0. Methods that the City uses to demonstrate the achievement of the benchmarks are described in MRP 3.0 Provision C.10.

1.3 Purpose of Updated Trash Load Reduction Plan

Provisions C.10.a.i and C.10.d.ii of MRP 3.0 state that if the City of Alameda does not attain the 90 percent benchmark by June 30, 2023, it shall submit a Updated Trash Load Reduction Plan (Updated Long-Term Plan) as described in Provision C.10.d of MRP 3.0 and a schedule of implementation of additional trash load reduction control actions sufficient to achieve compliance with the 90 percent compliance benchmark within a reasonable timeframe, and the 100 percent compliance benchmark by June 30, 2025. MRP 3.0 Provision C.10.g describes the schedule in which the City is required to submit its Updated Long-Term Plan to the Regional Water Board.

This Updated Long-Term Plan describes trash load reduction control actions being implemented and planned for implementation to achieve the trash load reduction benchmarks required in MRP 3.0. Anticipated implementation schedules for planned control actions that are sufficient to achieve compliance with the 90 percent and 100 percent compliance benchmarks within a reasonable timeframe, and by June 30, 2025, are included in this Updated Long-Term Plan. The City of Alameda reserves the right to revise or amend this Updated Long-Term Plan and modify control measures and schedules.

2. Existing and Planned Trash Control Measures

2.1. Summary Descriptions of Existing Control Measures

Since the trash load reduction requirements were adopted by the Regional Water Board in MRP 1.0, the City of Alameda has implemented trash control actions to address trash load reduction benchmarks. These control actions have assisted the City in reducing the generation of trash and/or the levels of trash discharged from its MS4 and maintain compliance with the MRP. Trash control actions are summarized in annual compliance reports submitted to the Regional Water Board by the City of Alameda and are also summarized in this section.

Full Trash Capture (FTC) Systems/Devices

The installation and effective on-going maintenance of FTCs has been and continues to be the primary trash reduction strategy for the City. As previously reported for in the City's Fiscal Year (FY) 2021-2022 Annual Report (of MRP implementation), the City stood at a total of 74% total trash load reduction via FTC implementation. As of the end of FY 2021-2022, 580 FTC devices have been installed in the City of Alameda, of which 469 FTC devices were installed in public right-of-ways (ROWs) and 111 FTC devices were installed on private property, treating a total of 1,238 acres. The types of devices that have been installed include Drop Inlet Trash Guards, Connector Pipe Screen Trash Guards and CDS units. Public FTCs continue to be subject to routine and regular service intervals and private devices are subject to the on-going maintenance oversight program implemented by City staff.

The City continues with its planning, overseeing and contracting efforts for additional FTC device installations in FY 2022-23 as the primary method for trash load reduction control within the City's jurisdiction. In the public right-of-way (ROW), approximately an additional 35 public FTCs are being installed during the tail end of FY 2022-2023 municipal implementation efforts. Figure 1, "Trash Generating Areas with FY 2022-23 Public FTC Device Installation Locations, City of Alameda, CA", indicates the locations of all 63 public FTC installations, inclusive of 34 public FTCs installed by the City and 29 public FTCs installed by private development projects completed in FY 2022-2023. In parallel with the preparations of this Updated Long-Term Plan, the City is also in the midst of summarizing and quantifying, for routine annual reporting purposes, the additional trash load reduction values of FTCs installed during FY 2022-2023 as the result of both municipal, public ROW FTC installations and new, private FTC installations under the City implementation oversight of on-going new and redevelopment activity here in Alameda, CA.

Other Types of Trash Controls

The City also continues to implement control measures other than trash full capture systems as the City continues to detail in its MRP annual report submittals. These Other Trash Control Measures include:

- Municipal Street Sweeping Program
- Partial Trash Capture through Storm Drainage Pump Station Trash Racks
- On-land, Lagoon System, and Shoreline Trash Cleanup Programs
- Code Enforcement Anti-Littering and Illegal Dumping Outreach, Inspection and Enforcement

These Other Trash Control Measures efforts are not currently resulting in any formal, quantified trash load reduction credit due to on-going limitations on methods to quantify the trash load reduction effects of some of these actions and/or staffing and programmatic resources that constrain our ability to maintain an active

OVTA verification program for formal Provision C.10.b.iii. reduction. Highlights of these Other Trash Control Measures are briefly discussed below.

Street Sweeping and Parking Sign Policy Program

As a snapshot of municipal maintenance activities, in the FY 2021/22 reporting year, City Maintenance staff swept approximately 21,764 miles of roadway and removed approximately 9,639 cubic yards of debris from city streets. The City implements a Parking Sign policy to support the management of curblane access for the routine street sweeping program to be implemented effectively to reduce trash and litter. Currently the City is not claiming or receiving trash reduction credit for this effort.

Storm Drainage System Pump Station Trash Racks

Partial trash capture implementation is occurring at multiple automated trash racks at downgradient and near-shoreline stormwater pump stations. Storm drain pump station automated trash racks are subject to routine monthly inspection and maintenance during all active operational months. Though these systems are effectively contributing to MS4 trash load discharge reductions, no specific trash reduction value is presently being attributed to this management action, subject to further review.

Trash Clean-Up Programs

The City manages several active trash, litter and debris clean-up programs. The long-standing Lagoon system maintenance program includes routine trash, litter and debris removal throughout the Southshore Lagoon system. Under this program, just in the months of March and April 2023, for example, 111.5, 55-gallon cans of material were removed from the lagoons. The City has also partnered with the non-profit East Bay Conservation Corps (Civicorps) to conduct a limited annual shoreline litter pick up program at targeted, trash hot spots. And as part of a broader effort to address and manage the rise of unhoused individuals, the City performs routine trash and debris pick up services at key locations to minimize the accumulation of material that can make its way to surrounding waterways. In addition, the City quickly responds to vacated areas to conduct cleanups of the sites. The City has yet to seek or receive trash reduction credit for any of these efforts.

Code Enforcement

The City inspects facilities and, as needed, issues warnings and citations to businesses, operations and premises that have been observed to be out of compliance with Chapter 18 of the Municipal Code Storm Water and Discharge Control, specifically to address inadequate trash management, littering and inadequate Best Management Practices to minimize and control litter.

2.2. Anticipated Additional Planned Control Measures

In addition to the ongoing implementation of existing trash control actions summarized in section 2.1 that contribute to calculated trash load reduction values, the City anticipates implementing needed further control actions and expanded control actions, as summarized in this section, to achieve the 90 percent and 100 percent trash load reduction benchmarks. The results of an already completed City analysis of all areas that may contribute to additional trash load reduction value are summarized below and inform this Updated Long-Term Plan. Anticipated schedules for implementing these actions are also discussed.

As of early 2023, the City has mapped and inventoried all distinct, contributing, trash load generating (and potentially generating) parcels/areas (Contributing Areas) within the City that are not subject to current FTC treatment. See Figure 1 which presents the City's updated Trash Management Area map information highlighting these remaining Contributing Areas as of FY 2022-23 as Uncontrolled Trash Generating Areas,

after the installation of 63 new public FTCs. In addition, the Citywide trash load generation percentage value for each and every one of these distinct Contributing Areas has been calculated, consistent with the required methods for trash load reduction reporting. We have thus identified the potential trash load reduction value that is associated with each and every one of those Contributing Areas that would cumulatively get the City to the 100% trash reduction implementation benchmark. This trash load generation value assessment provides the City with both an inventory of all potential, outstanding, necessary, trash load generating areas to focus both control action implementation and thorough trash load/reduction characterization efforts upon, and a percentage-based priority ranking system for all of these parcels/areas. There are a total of 119 distinct Contributing Areas ranging in specific Citywide trash load generation percentage value from (less than) 0.01% to 3.14%. This inventory of Contributing Areas and subsequent staff analysis also:

- Distinguishes whether these are public or private (or perhaps a combination thereof) areas,
- Identifies areas that have never received parcel-specific trash load generation characterization,
- Identifies the private land drainage areas (PLDAs) and potential PLDAs, and,
- Highlights whether there are existing, infeasibility constraints for public FTC installations.

The Contributing Areas inventory and subsequent staff analysis thus establishes the scope of the current task list (as of the early 2023 assessment) of the parcels and areas for the City to focus on in order to reach the 100% benchmark threshold.

Based on the City's FY 2021-22 Total Trash Load Reduction value, reported as 74% (from Trash Full Capture Device (or FTC) Systems), the City has an Implementation Gap of 26% for further trash load reduction to meet the 100% Trash Load Reduction benchmark requirement. The results of the Citywide Contributing Areas inventory and assessment of these 119 areas, which as noted above will be used to address the Implementation Gap (acknowledging rounding error, in particular given that 0.01% is the smallest percentage value used for any given area), can be summarized as follows:

- 1) About 70 private parcels/areas that account for 21.9 (of 26) points of the Implementation Gap (that is, 21.9/26 or approximately 84% OF the Implementation Gap). This total includes about 20 larger private properties and approximately 50 smaller private parcels, ranging from commercial shopping centers and larger, residential complexes to small, individual, commercial/retail store frontages.
- 2) Approximately 50 areas, primarily ROW/public areas and/or private areas draining by surface flows to the public ROW, that account for 4.5 (of 26) points of the Implementation Gap (that is, 4.5/26 or approximately 17% OF the Implementation Gap). A subset of these are small, public ROW areas that remain as candidates for public FTC installations (as of the end of FY 2021-22).

As above, the Contributing Areas inventory and subsequent staff analysis thus establishes the scope of the current task list (as of the early 2023 assessment) of the parcels and areas for the City to focus on in order to reach the 100% benchmark threshold.

Full Trash Capture Systems/Devices

The installation of FTCs continues to be a priority implementation strategy for additional trash load reduction implementation in the City. The State Water Resources Control Board's (current) posted list of certified full trash capture devices continues to be referenced for device installation specifications and/or project oversight requirements.

Anticipated, potential additional public FTC installations:

As noted above in Section 2.1, approximately 35 additional FTCs will be installed in public catch basins within the public ROW by the close of FY 2022-23. These installations are pending as of the preparation of this Updated Long-Term Plan and their net trash load reduction value will be calculated for and summarized in the City's FY 2022-23 MRP Annual Report. See Figure 1 depicting the locations of the actual FY 2022-23 public FTC installations.

In addition, the City's Contributing Areas assessment identifies a maximum of approximately 55 additional public ROW areas that may be candidates for yet further public catch basin FTC device installations to contribute effective trash load reduction value. All of these areas not yet assessed will be assessed for routine device installation practicability for FY 2023-24 device installation implementation efforts. Figure 2 depicts the FY 2023-24 Preliminary Public FTC Installation Vetting Locations and the remaining Uncontrolled Trash Generating Areas, or Contributing Areas. All planned and anticipated FTC installation locations are subject to evaluation of the feasibility and practicality for the actual installation and on-going routine maintenance. A subset of these areas with public catch basins were previously determined to be infeasible to install a routine public FTC device. Public FTCs would already be installed in these catch basin locations (and there would thus be active trash load reduction control here) if it had been feasible and practicable to do so. Nonetheless, some of these locations may be candidates for further evaluation for the feasibility of installation of customized (certified) FTC devices. Custom FTC installation assessment for FTC installations or the necessity of Other Trash Control Measures can be implemented by FY 2024-25.

Based on the City's Contributing Areas assessment, routine, public FTCs installations efforts may contribute upwards of approximately 1.6 points (of 26) towards the closing of the City's Implementation Gap by the end of FY 2023-24. If every one of those infeasible-to-date areas could get a public FTC installed in the local catch basin, that would contribute an additional total of up to 2.9 points (of 26) towards the closing of the City's Implementation Gap by the end of FY 2024-25.

Private FTC installations from the completion of new or redevelopment activity:

The City also continues with development plan oversight to ensure private FTCs are required to be installed, as relevant, during development activity. Development activity installations of new FTCs, along with any associated changes in the City's trash load reduction baseline map as a result of the completed development activity (and actual land-use conditions), are typically accounted for in MRP annual reporting FTC inventory and trash load reduction summary updates.

Comprehensive On-Land Visual Trash Assessments Effort of Contributing Areas

Many of the approximately 70 specific private parcels/properties identified presently as potential Contributing Areas have never received a parcel-specific determination (via the On-Land Visual Trash Assessment (OVTA) protocol) of the actual trash load generation rate at that site. In order to prioritize effective trash load reduction efforts, the City intends to confirm parcel-area specific trash generation rates at all of the private, parcels/areas on this finite list of Contributing Areas identified in the City's assessment. At locations where the trash generation rate is observed to be inconsistent with the mapped trash generation rate, the City will complete OVTAs as necessary to determine the actual parcel-specific trash generation load rates for Contributing Areas in FY 2023-24. Private Land Drainage Area (PLDA) determinations will be updated for all of these parcels/areas based on these findings. These results would allow for an update to the inventory of actual Contributing Areas and will inform and support the City's Provision C10 MRP Annual Reporting in FY 2023-24, including an update to the City's trash load reduction baseline map, and further inform substantive, additional trash load reduction implementation efforts in FY 2024-25.

Based on the City's Contributing Areas assessment, the FY 2023-24 Comprehensive OVTA effort will scrutinize for further refinement of parcel/area-specific trash load generation calculations and potential correction strategies on 21.9 points (of 26) of the City's Implementation Gap by the end of FY 2023-24.

Private Land Drainage Areas (PLDA) Oversight Program: Inspections, Trash Control Measures and Escalating Enforcement

As described in MRP 3.0 Provision C.10.a.ii(b), private properties that 1) generate moderate, high, or very high level of trash, 2) are plumbed to the City's MS4, and 3) are not already addressed by a FTC system/device are required to be equipped with a FTC system/device or be managed by trash discharge control actions equivalent to or better than a FTC system/device by July 1, 2025.

As noted above in the section "Comprehensive On-Land Visual Trash Assessment Effort of Contributing Areas", the City intends to confirm the inventory of actual PLDAs in FY 2023-24, and then continue to conduct OVTAs on PLDAs as necessary thereafter.

If the level of trash observed on the property via OVTAs is greater than low trash generation, the City will mandate property owners and/or managers to implement additional trash control measures and achieve low trash generation through a phased approach, including active business outreach, code enforcement, ordinance revision as required, and require property owners to achieve a low trash generation status. The City anticipates active engagement with private property owners on their trash load reduction requirements and to offer options and steps to reach compliance. Allowing a period for private property owners to implement trash control measures, the City will escalate enforcement actions by Q4 2024 as needed. Trash control measures may include FTC systems/devices or other types of control actions. The goal of implementing PLDA inspections is to achieve effective trash load reduction from all PLDAs by June 30, 2025.

Based on the City's current Contributing Areas assessment, the FY 2023-24 through FY 2024-25 PLDA Oversight Program effort will scrutinize and address trash load reduction implementation to upwards of 21.9 points (of 26) of the City's Implementation Gap by the end of FY 2024-25.

Other Types of Control Measures

In areas where FTC installation or routine maintenance may be infeasible, the City may continue to consider other types of control measures, some combined with OVTAs, to reach the final 90% and 100% trash reduction targets. These measures may continue to include:

- Expanded requirements for litter pick up or additional trash pick up
- Further Code enforcement or parking enforcement
- Increased Street sweeping/curb inlet cleaning
- Characterization of the trash capture function and effective contributions to reductions to MS4 trash discharges to San Francisco Bay from City's Lagoon Maintenance and Stormwater Pump Station maintenance programs
- Evaluation of options for long-term downgradient, large scale certified FTC devices

These control measures can be considered for implementation as required at locations where FTC installation is not a viable option.

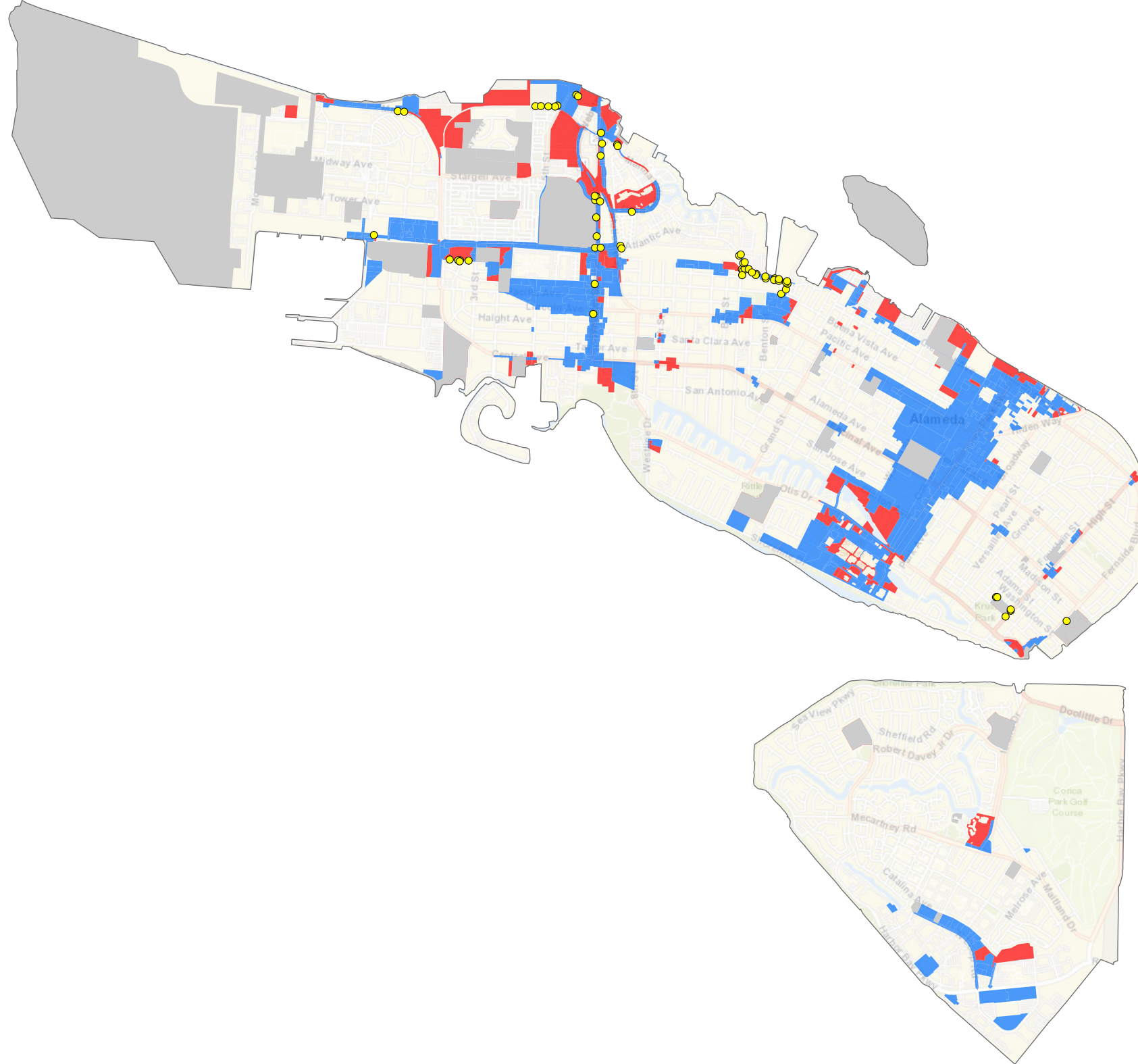
The incremental and resultant trash load reduction improvements and implementation timeline discussed above can be summarized as below.

FY and Control Actions	Yearly Implementation Efforts Jurisdiction-wide % Reduction Increment (Estimated)	Cumulative Total % Trash Load Reduction
(Through) FY 2021-22: FTC Installations	74% (most recent Annual Report submittal)	74%
FY2022-23: Public and Private FTC Installations	1%-6% (TBD)	75%-80%
FY2023-24: Public FTC Installations; OVTA scrutiny of potential PLDAs; PLDA engagement; Ordinance review	5%-10%	80%-90%
FY 2024-25: Public FTC installations; PLDA engagement and oversight; Other Control Measures and OVTAs implementation	10%-20%	100%

3. ANTICIPATED IMPLEMENTATION SCHEDULE & TRASH LOAD REDUCTIONS

The implementation of trash control actions described in section 2.1 has resulted in the reduction of trash generated and/or discharged from the City of Alameda’s MS4 as reported by the City via annual compliance reports submitted to the Regional Water Board. Methods used to calculate trash load reductions are described in MRP Provision C.10. As of June 30, 2022 the City of Alameda has calculated a trash load reduction of 74% based solely on the implementation of trash full capture (or FTC) device systems, with an updated trash load reduction percentage to be provided by September 30, 2023, including quantification of the Citywide trash load reduction value associated with the installation of additional FTC devices that is taking place concurrently with the preparation of this Trash Plan Update. Trash load reductions for existing control actions are based on the most readily available information at the time this Updated Long-Term Plan was developed and are subject to change based on new or improved information.

Based on the City of Alameda’s current understanding of the steps that will need to be completed to implement planned trash control actions described in section 2.2, the City of Alameda anticipates achieving the 90% and 100% percent trash load reduction benchmarks both in a reasonable time and by June 30, 2025. The anticipated schedules for the implementation of planned trash control actions are described in section 2.2. This is a preliminary planning level estimate and subject to change and actual progress will be reflected in the subsequent MRP Annual Report submittals to the Regional Water Board.



Legend

- FY 2022-23 Newly Installed Public FTC Device (63 total)

 ■ Controlled Trash Generating Areas

 ■ Non-Jurisdictional

 ■ Uncontrolled Trash Generating Areas



Trash Generating Areas with FY 2022-23 Public FTC Device Installation Locations


City of Alameda, California

SOURCE	World Street Map, City of Alameda, NCE
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JOB NUMBER
773.16.55

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DATE
11/15/2023

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1 in. = 3,500 ft.

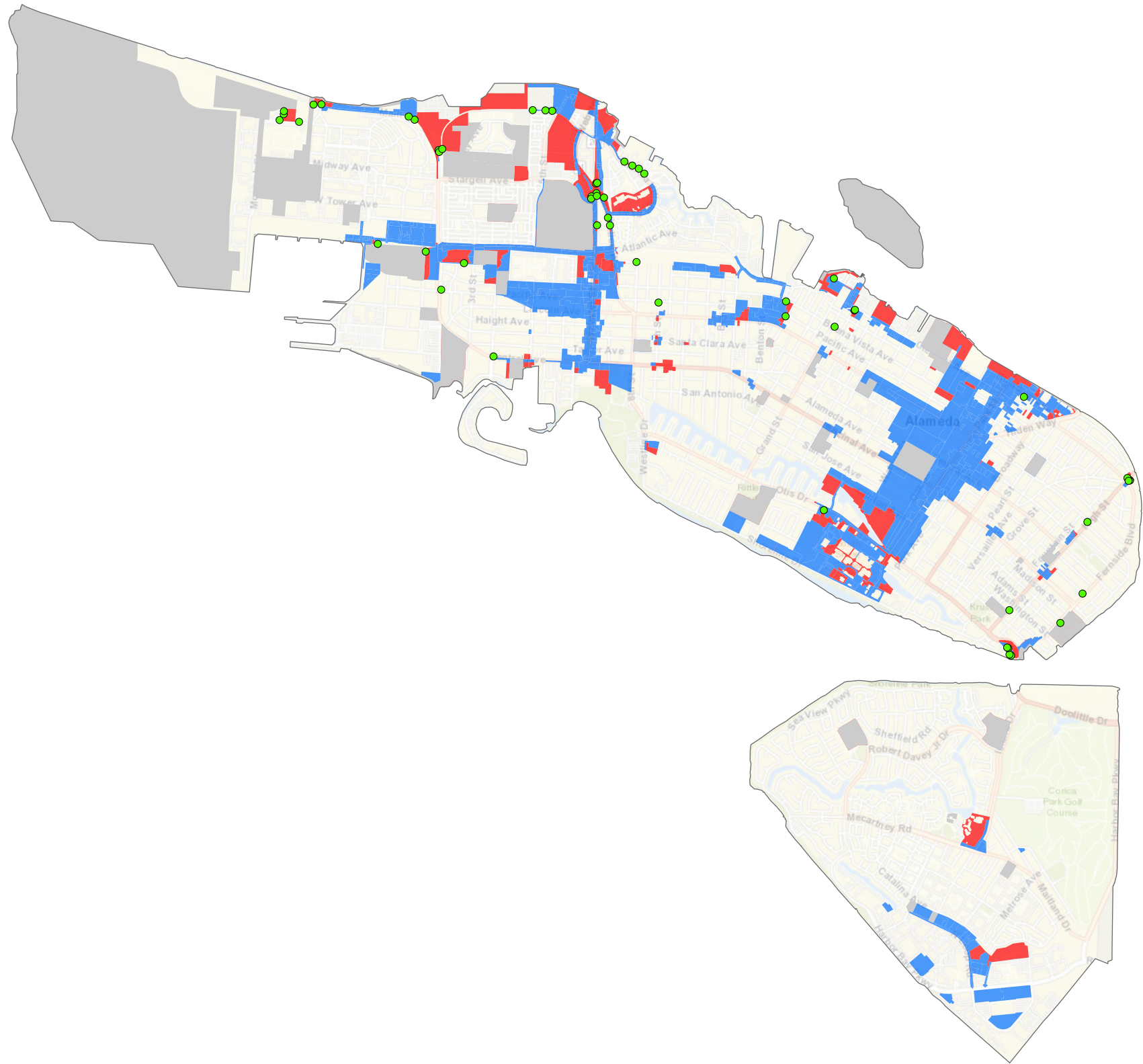
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FIGURE

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Legend

- FY 2023-24 Preliminary Public FTC Installation Vetting Location (55 total)
- Non-Jurisdictional
- Controlled Trash Generating Areas
- Uncontrolled Trash Generating Areas



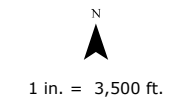
SOURCE
World Street Map, City of Alameda, NCE

Trash Generating Areas with FY 2023-24 Preliminary Public FTC Installation Vetting Locations
City of Alameda, California

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FIGURE
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