

Annual Progress Summary

Annual Progress Summary # 3

Reporting Period: 2015-10-01 to 2016-09-30

Submittal Date: 2016-12-21

Grant Agreement: 12-420-550

Project Index: FA-24090-PHASE1

Project Name: Tracking California's Trash

Grantee Name: Bay Area Stormwater Management Agencies Association

Summary of the conditions the Project is meant to alleviate, the Project's objective, the scope of the Project, and a description of the approach used to achieve the Project's objective

Information on the costs and benefits of best management practices for control of trash in stormwater is limited and monitoring methodologies needed to accurately measure progress towards trash TMDL and NPDES permit reduction goals have not been developed.

The purpose of the project is developing, evaluating, and recommending monitoring methods to accurately measure trash loads in receiving waters or from stormwater conveyances; filling critical data gaps on the effectiveness and costs/benefits of implementing enhanced street sweeping as an alternative to trash full capture devices; compiling and publishing recommendations along with other available knowledge of trash monitoring and reduction.

The work is being conducted in five major work items:

B.1 – Project Management

B.2 – Technical Advisory Committee

B.3 – Trash Trends and Flux Monitoring Methods Development

B.4 – Stormwater BMP Effectiveness and Cost Evaluations

B.5 – Public Interface for Bay Area Trash Tracker and New Web Portal for Trash Reduction Projects

Summary of the progress made to date, significant milestones achieved, and the current schedule of completing the Project

The project is more than three-quarters through its three plus year term. Below are summaries of progress to-date of the technical work items.

B.2 – Technical Advisory Committee: BASMAA created and convened a TAC of trash and monitoring methods experts, including a representative from the State Water Board. The TAC met at the beginning of the project to review and provide advice on the project's design and on specific work products, including the Comprehensive Literature Review and the Sampling and Analysis Plans. Planning is underway for a second TAC meeting in November at which the TAC will be briefed on and asked for review and feedback on work items B.3 and B.4.

B.3 – Trash Trends and Flux Monitoring Methods Development: BASMAA worked in four creeks (three in the Bay Area: Colma Creek, Coyote Creek, and San Mateo Creek and one in Los Angeles: Arroyo Seco, a channelized river in Pasadena) for the receiving water portion of this monitoring methods development work item. Progress on the water quality-related monitoring was slower than planned because of the drought and the need to secure permits for work in these creeks. Despite these challenges, some pilot testing of monitoring equipment and methods was conducted at Colma Creek in spring 2015 and additional testing was conducted there and for the first time at San Mateo Creek, Arroyo Seco River, and Coyote Creek in the winter and spring of 2016. Ultimately, 57 samples were taken over eight events, four of which were classified as wet weather events.

Although the drought severely limited the sampling events, the team was able to gather significant experience and understanding of the viability of a variety of sampling devices, which was one of the main objectives of the project. The team also received valuable insight regarding monitoring site

selection and permitting, traffic control, and sample processing (sorting, characterization, and storage).

Additionally, BASMAA worked with three partner municipalities for the on-land assessments portion of the work item. During stormwater BMP effectiveness evaluations (work item B.4 below), the team conducted 266 on-land assessments before, directly after, and in between BMP evaluations. The goal was to refine the assessment protocol and its application to increase confidence in assessment results and ensure stakeholders have a clearer understanding of its benefits and limitations. An initial assessment indicates much of this goal was met. The final report will provide a detailed summary of the findings.

B.4 – Stormwater BMP Effectiveness and Cost Evaluations: BASMAA worked with the same three partner municipalities on this BMP effectiveness and cost evaluations work item. The overall goal was to quantify the ability of street sweeping programs to reduce trash in MS4s, possibly to levels equivalent to full capture systems. BASMAA conducted 32 planned sampling events to test the performance of street sweeping at variable sweeping frequencies, and with and without partial trash capture devices that impede trash from entering storm drain inlets (i.e., auto-retractable curb inlet screens). Preliminary findings were made regarding types of trash on streets, sidewalks and inlets, trash generation, and the performance of several trash best management practices.

B.5 – Public Interface for Bay Area Trash Tracker and New Web Portal for Trash Reduction Projects: Work on the Trash Tracker work item is scheduled to start soon.

Significant milestones achieved in the third year of the Project include:

- Completion of the fieldwork for work items B.3 – Trash Trends and Flux Monitoring Methods Development and B.4 – Stormwater BMP Effectiveness and Cost Evaluations
- Initiation of analyses and reporting on work items B.3 – Trash Trends and Flux Monitoring Methods Development and B.4 – Stormwater BMP Effectiveness and Cost Evaluations.

The drought during the project period has resulted in fewer and smaller storms on which to conduct work items B.3 and B.4, resulting in delays (the last of the sampling events was not until late April and late May, 2016). As a result, analyses and reporting on work items B.3 and B.4 is slightly behind schedule. Work item B.5 has also been delayed over concerns regarding the viability and need for the current version of the trash tracker and the sustainability of the “my water quality” site. Accordingly, BASMAA is planning to submit a request for a time extension.

Evaluation of the effectiveness of the Project to date in preventing or reducing pollution and alleviating the Project's original conditions

The work conducted and the milestones reached to-date are precursors to addressing the Project's original condition. An initial review of the results of the methods development and BMP effectiveness monitoring work items appears to indicate that methods will be available for both measuring trash and BMP effectiveness that help answer management questions and promote trash reduction and adaptive management.