



June 30, 2016

Stormwater Compliance Program
State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812-0100

RE: 2015-2016 Annual Report: Section E.14.a.iii Program Effectiveness Assessment and Improvement Plan Annual Summary

The City of Pismo Beach (City) developed its Program Effectiveness and Improvement Plan (PEAIP) in 2015. The purpose for the PEAIP is to assist the City in assessing implementation of stormwater management activities, documenting compliance with the Municipal Stormwater General Permit (General Permit) program elements, and allowing, necessary modifications to the City's municipal stormwater program, with the overall goal of reducing pollutant loading in nearby receiving waters.

In accordance with Section E.14.a.iii of the General Permit, the City is required to submit an annual summary that describes the implementation of the PEAIP, summarizes data obtained through effectiveness assessment measures, describe short and long term progress of the stormwater program, and provide an analysis of the data to improve program effectiveness in order to protect water quality.

The City is pleased to provide the following summary on the implementation of the PEAIP.

PEAIP Implementation Status - The City outlines its approach to assess the municipal stormwater program effectiveness in its PEAIP. The PEAIP was submitted to the State Water Board via the Stormwater Multiple Application and Reporting Tracking System (or SMARTS) during the last 2014-2015 Annual Report submittal. To summarize, the City is developing an assessment program that comprises three key elements: catchment delineation (section 3.1 of the PEAIP); best management practice (BMP) tracking, performance, and maintenance (section 3.2 of the PEAIP); and pollutant loading/reduction and risk assessment (section 3.3 of the PEAIP).

Catchment Delineation -The City completed the catchment delineation mapping component in 2015 and submitted a copy of the catchment delineation map to the Central Coast Water Board on August 8, 2016 (in response to the June 13, 2016, Section 13267 Letter). The map was created through the use of a GIS platform and was developed by using guidance (documents and webinar training) derived through 2nd Nature and the Central Coast Low Impact Development Initiative (LIDI). The City identified 32 different catchments within then City's

jurisdictional boundaries. Most of the catchments range in size from 13-106 acres and drain either directly to the ocean or to Pismo Creek. The map provides, at a minimum, catchment labels (1-32), receiving water locations, and the City boundaries. In addition, the City was able to obtain vital attribute information for each individual catchment that will be used to model load contribution and load reduction to the receiving water. These individual catchment attributes include, but are not limited to, total percent impervious surface, percent impervious surface related to specific land used (i.e., commercial, residential, road, etc.), and whether the catchment has a discrete or distributed discharge to the receiving water (single point vs. multiple point).

BMP Tracking, Performance and Maintenance -The City has the ability to inventory BMPs (wet basins, dry basins, bioswales, porous pavement, etc.) on a website database. The City signed a use agreement with 2nd Nature in order to utilize the BMP Rapid Assessment Methodology (RAM) database. The BMP RAM database is a cloud-based program that will allow the City to inventory all stormwater structural BMPs, establish baseline performance criteria, spatially identify the BMP locations on a mapping platform, track field observations (date, time, BMP condition), temporally track the field observations over time (line graph), and identify (based on a 1-5 scoring) which BMPs require maintenance. Although, the City has full access to the BMP RAM database, the City has not yet begun the process on inventorying BMPs. The City will receive training to better understand the best and most efficient approach to populating the database.

Pollutant Load Reduction and Risk Assessment - The City is currently using 2nd Nature to develop a model that tracks programmatic implementation and program effectiveness through the use of load reduction modeling. As noted in the City's PEAIIP, the City plans to use the Tool to Evaluate Load Reduction (TELRL) model. The model will utilize, at a minimum, information from the catchment delineation mapping, catchment attribute information, and BMP RAM information. The information from the aforementioned sources are data inputs for the model. The TELRL model will use two main pollutant indicators to assess program effectiveness and load reduction: 1) Total Suspended Solids (TSS) - as a pollutant and as a proxy for other pollutants and 2) Volume -as an indicator for assess loading rates from each catchment.

First, each catchment will be analyzed using the TELRL model to better understand the baseline loading characteristics without the considerations of BMPs. Then, information from BMP RAM database will be incorporated in to the model in order to analyze load reduction within the catchment. Lastly, the TELRL model will be used to report and identify catchments that have a higher contribution of pollutant loading. The Regulatory Compliance Coordinator will then assess focused stormwater management actions and long-term planning to address the loading contributions. The catchment delineation map will then be color coded (green, yellow, red, purple) to spatially indicate the catchments that require improvement. As mentioned previously, the City is currently working with 2nd Nature to develop the TELRL model and is estimated to be ready by the end of 2016.

Relevant Data - As mentioned above, the City has been collecting information specific to each of the 32 identified catchments. Catchment attribute information includes catchment ID (1 . . . 32), acres in square miles, whether the catchment has a discrete or distributed discharge point, name of associated receiving water, if the catchment drains to another catchment before entering

the receiving water, percent connectivity to the receiving water, percent impervious surface within the catchment, percent impervious surface associates with land uses (commercial, industrial, single family residence, multi family residence, cultivated, high traffic road, medium traffic road, low traffic road, rural roads), precipitation, soil type, catchment slope, and catchment length.

As discussed in Section 2.4.3 of the City's PEaip, the City implements and continues to track other programmatic activities such as public education outreach, street sweeping, trainings, public education surveys, and community based social marketing activities. However, it is difficult to realize the direct water quality improvements related to the implementation of these activities.

Short and Long Term Progress - The City plans to begin the BMP inventory in late 2016. However, appropriate staff training would need to occur first to accurately and consistently collect BMP information in order to populate BMP RAM database. The training should occur towards the end of the 2016 calendar year.

The City plans to begin the use of the TELR model towards the end of the year. A user agreement has been submitted to 2nd Nature, similar to the BMP RAM. The TELR model will be supplement to the BMP RAM database and could be accessed through a website log-in. The TELR is estimated to be ready for public consumption by the end of July 2016.

Program Analysis - At this point, the City has not conducted any data analysis as the information that has been gathered thus far is strictly for the development and input to the TELR model as well as BMP RAM database. The City anticipates a basic level of modeling by June 2017. We should also anticipate a final tuning period to adjust the model in order to yield accurate results. This process would not only be for the Regulatory Compliance Coordinator, but also for compliance reporting purposes.

As discussed above, the City continues to implement and track other programmatic activities. Tracking these activities such as number of public surveys, number of public impressions, or number of storm drains cleaned, may not translate into direct measures of water quality improvements. However, the City believes that implementing these activities does have an indirect effect in the improvement of water quality, more specifically, stormwater runoff.¹

¹ *A Framework for Assessing the Effectiveness of Jurisdictional Urban Runoff Management Programs*
http://www.projectcleanwater.org/pdf/copermittees/assessment_framework_final.pdf

Implementation Schedule² -The City continues to develop and implement its PEAIIP. The following key dates and associated milestones provide important steps for the implementation of the City's PEAIIP.

Milestone	Estimated Key Dates
BMP Inventory	Jun-17
Pollutant Loading Analysis (Unmitigated Condition 1)	Jun-17
Catchment Ranking (Unmitigated Condition 1)	Jun-17
BMP Assessment	Jun-18
Pollutant Loading Analysis (Mitigated Condition 2)	Jun-18
Catchment Ranking (Mitigated Condition 2)	Jun-18
Program Modifications	Oct-18

1 - Unmitigated condition refers to the baseline modeling analysis that does not include the use of best management practices.
2 - Mitigated Condition refers to the modeling analysis of load reduction with the use of best management practices.

If you have any questions or comments on this matter, please call me at 805-773-4656 or email at mkacsinta@pismo beach.org.

Sincerely,



Madeline Kacsinta
City of Pismo Beach

² As indicated in the Central Coast Regional Water Quality Control Board Section 13267 Letter requesting information specific to the stormwater programs progress in assessment program effectiveness and modifications: June 13, 2016