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CALIFORNIA STATE UNIVERSITY FULLERTON

Program Effectiveness Assessment and Improvement Plan

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1. Introduction

The Phase II Small Municipal Separate Storm Sewer System (MS4) General Permit[1] (Phase II Permit) requires the development and implementation of a *Program Effectiveness Assessment and Improvement Plan* (PEAIP). This PEAIP addresses each of the elements outlined in Provision F.5.h.1. for non-traditional small MS4s and includes the strategy that the California State University, Fullerton Campus (Campus) will use to track the short- and long-term effectiveness of the storm water program, the measures that will be used to assess the effectiveness of the best management practices (BMPs), and the storm water program as a whole, and a description of how the Campus will use this information to improve their storm water program.

The Campus storm water program addresses pollutants of concern (POCs) and implements BMPs; and, consistent with Provision F.5.h.1 requirements, this PEAIP presents a plan for assessing the effectiveness of BMPs that focus on high priority POCs. This approach provides a manageable assessment program that can be improved, targeted, and refined.

The Campus has developed this PEAIP as a guidance document for staff to assist in conducting the program effectiveness assessments (EAs). This PEAIP outlines the approach that the Campus will use to manage its storm water program to improve its effectiveness at reducing the identified high priority POCs, thereby achieving the maximum extent practicable (MEP) standard and protecting water quality.

This PEAIP addresses the requirements in Provision F.5.h.1, as summarized in **Table 1** and **Figure 1.** The PEAIP is modeled after the methodology described within the California Storm water Quality Association (CASQA) document, A Strategic Approach to Planning for and Assessing the Effectiveness of Storm water Programs (February 2015).

Table 1. Phase II Permit PEAIP Provisions and Corresponding PEAIP Sections (Non-Traditional Small MS4s)

Phase II Permit Provision(s)	PEAIP Section
F.5.h.1.(i-iii)	1. Introduction
F.5.h.1.(ii)(a)(1-2)	2. Program Effectiveness Assessment Approach and Development
F.5.h.1.(ii)(a)(1)	2.3. Identification of the Storm water Program Activities
F.5.h.1.(ii)(a)(2)	2.2. Identification of the Key Target Audiences
F.5.h.1.(ii)(a)(2)	2.2. Identification of the Key Target Audiences 2.2.1. Target Audience Actions

The schedule for the implementation of the PEAIP is as follows:

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[1] Order No. 2013-0001-DWQ, effective July 1, 2013

- Permit Year 2-5 – Develop and Submit PEAIP Annual Report (by October 15)
- Permit Year 2-5[2] - Update PEAIP as necessary

Figure 1   General Storm Water Management Model (CASQA, 2015)
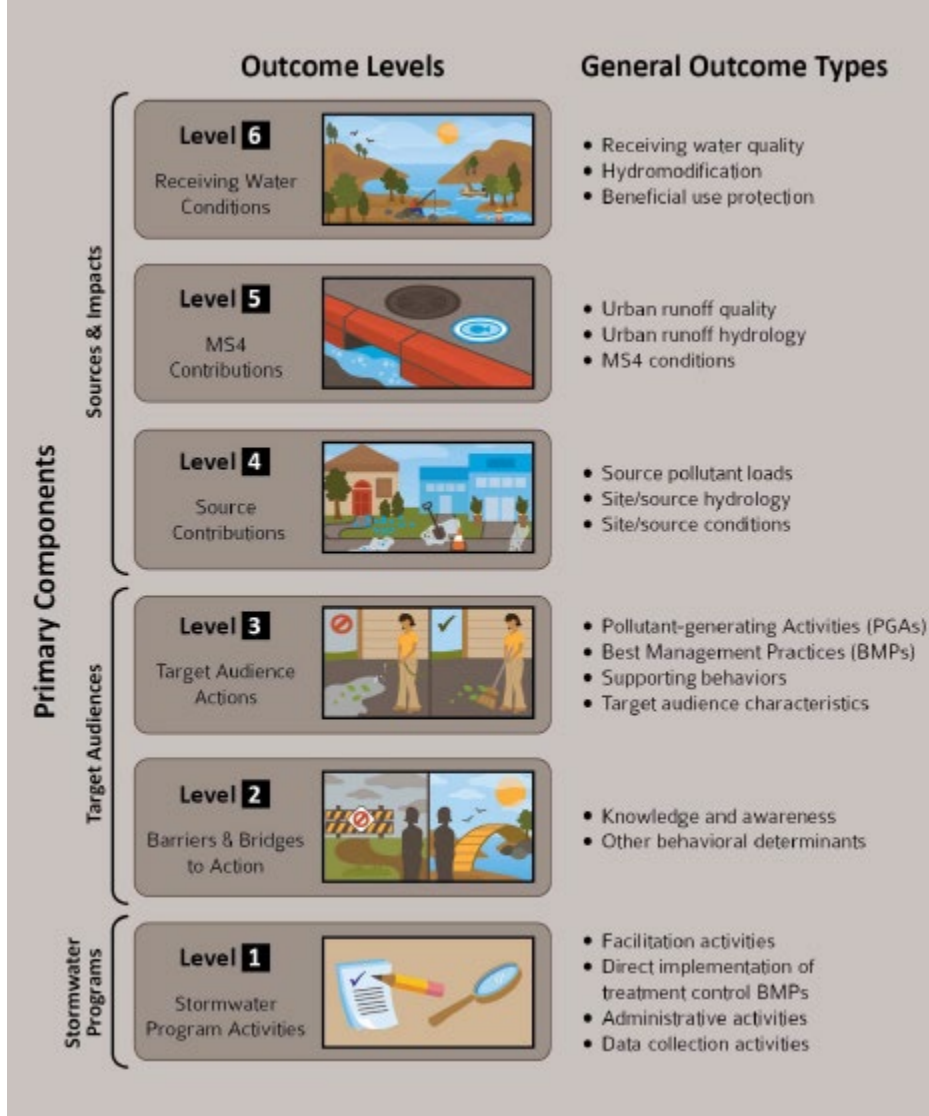
1.1.   STORM WATER PROGRAM GOALS AND OBJECTIVES

Storm water programs are inherently complex due to a number of factors such as: the number of pollutant sources, the limited ability to directly control the behaviors of target audiences, the number of constituents that must be addressed, the co-mingling of flows within the drainage system, and the potential impacts to water quality from other sources (off-site run on, wind-blown materials, groundwater seepage, aerial deposition, etc.).

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[2] The Permit may be administratively extended beyond Year 5

The overall goals of the Campus's storm water management program are to a) reduce the potential impact(s) of pollution from urban areas on waters of the State and waters of the United States (U.S.) and protect their beneficial uses; and b) develop and implement an effective storm water program that is well-understood and broadly supported by stakeholders.

2. Program Effectiveness Assessment Approach and Development

This PEAIP was developed to implement an evaluation of program elements and BMPs, ensuring that they are well-targeted and determining whether intended results are being achieved.

Storm water program management can be described by a cycle divided into three phases of activity:

- Program Planning and Modification – In this phase, the Campus is identifying the critical components and POCs for its storm water program, as well as developing an EA approach and management questions to assist in determining if the program is achieving the intended results.

- Program Implementation – In this phase, the Campus is implementing the program and obtaining the assessment data needed to answer the management questions.

- Effectiveness Assessment – In this phase, the Campus is conducting EAs, reviewing the results, and determining if any program modifications are necessary. This will be conducted as a part of the Annual Report. Once identified, the Campus will make the program modifications and initiate the next round of implementation, leading again to renewed assessment and planning.

This process is applied repeatedly over time in order to focus the storm water program in on the most effective BMPs and the achievement of the desired results.

CSUF will utilize the CASQA EA approach[3] which utilizes a general model that aggregates three primary components from the six outcome levels and associated, general outcome types (**Figure 2**). The three primary components are:

- Sources and Impacts (Outcome Levels 4-6) – This component addresses the generation, transport, and fate of urban runoff pollutants. It includes sources (sites, facilities, areas, etc.), storm water conveyance systems, and the water bodies that ultimately receive the source discharges (receiving waters). This component is typically assessed on a long-term basis.

- Target Audiences (Outcome Levels 2-3) – This component focuses on understanding the behaviors of the people responsible for source contributions. It explores the factors that determine existing behavioral patterns and looks for ways to replace polluting behaviors with non-polluting behaviors. This component is typically assessed on a short- and/or long-term basis.

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[3] See 2015 CASQA Guidance Document, Section 2.0: Storm water Management Approach

- Storm water Programs (Outcome Level 1) – Storm water programs are the road map for the improvements that managers wish to attain in receiving waters. Their immediate purpose is to describe programs that will facilitate changes in the behaviors of key target audiences. This component is typically assessed on a short-term basis.

The six categories of outcome levels establish a logical and consistent organizational scheme for assessing and relating individual outcomes.

This PEAIP will focus primarily on Storm water Program activities (Outcome Level 1) the Target Audiences (Outcome Levels 2 and 3) and the Sources and Impacts (Outcome Level 4) and will provide a plan to collect data that can be used to improve the storm water program and protect water quality. Assessment at Outcome Level 5 may be made within the MS4 and will focus on source reduction and capture improvement of high priority POCs (Trash). Assessment at Outcome Level 6 is beyond the scope of this PEAIP because the Campus MS4 does not outfall to a receiving water. The focus, therefore, will be on reducing the impact of discharge to the receiving MS4 (City of Fullerton).

2.1. IDENTIFICATION OF SOURCES AND IMPACTS

2.1.1. Receiving Water Conditions

One of the primary objectives of the storm water program is the protection of the beneficial uses of the receiving waters. Where POCs are unidentified, the prioritized BMPs and assessment will be based on common urban pollutants.

All of the Campus' storm water discharges to the City of Fullerton's MS4, which in turn discharges to Fullerton Creek. Fullerton Creek is not listed as a 303(d) impaired water body. However, in order to comprehensively identify potential POCs for the PEAIP, the SMARTS tool was utilized which identifies impairments within the Campus' HUC 10 watershed. This tool returned the following based on the Campus location.

Table 2. Potential Pollutants of Concern Based on SMARTS HUC 10 Tool

Impairment - Parameter	Potential Pollutant of Concern
Ammonia (Unionized)	Ammonia (Unionized)
Chlorpyrifos	Chlorpyrifos
Diazinon	Diazinon
Dissolved Oxygen	Low Dissolved Oxygen
E.Coli and Enterococcus	Enterococcus
E.Coli and Enterococcus	Fecal Coliform
E.Coli and Enterococcus	Total Coliform
E.Coli and Enterococcus	Escherichia coli (E. coli)

Impairment - Parameter	Potential Pollutant of Concern
Metals Screen	Copper
Nitrate, Nitrite and total Nitrogen.	Nitrate
Nitrate, Nitrite, total Nitrogen. Dissolved oxygen, temperature, and total phosphorus.	Nutrients
Pesticide screen	Pesticides
Sodium	Sodium
Temperature	Temperature, water
Test for individual Organic compounds identified in Appendix A to CFR Part 423	Priority Organics
Turbidity	Turbidity
pH	pH

Based on the above list and the known nature of campus activities, the following POCs were identified as high priority POCs for CSUF:

- Pesticides (general screen; neither chlorpyrifos or diazanon are believed to be used on Campus)
- Nutrients (nitrate, nitrite, total nitrogen, phosphorus)
- Turbidity/sediments
- Trash
- Automotive-related oils

2.1.2. Urban Runoff (Outcome Level 5)

Level 5 Outcomes may be measured either within the MS4 or within discharges from the MS4. In either case, evaluation typically focuses on pollutant concentrations or loads, or both. Level 5 Outcomes provide a direct linkage between upstream sources and receiving waters and, as such, are a critical expression of storm water program success.

However, due to the temporal and spatial variability of water quality data, it is extremely challenging and takes many years and a significant amount of data to establish linkages between pollutants in MS4 discharges and the conditions within the receiving waters.

Although Outcome Level 5 assessments may occur in future Permit terms, the known urban runoff and MS4 contributions were used to focus the PEAIP and select the key metrics that will be used to assess the effectiveness of the storm water programs.

2.1.3. Source Contributions (Outcome Level 4)

A source is anything with the potential to generate pollutants prior to their introduction to the MS4. Source loadings are the pollutant loadings added by the urban sources to an MS4. Source reductions are the changes in the amounts of pollutants associated with specific sources before and after BMPs are employed.

In order to determine the specific target audiences and the appropriate prioritized BMPs, The Campus has evaluated the Campus to identify the primary potential sources of each high priority POC. The following table illustrates these sources.

Table 3. Primary Potential Sources of High Priority POCs

High Priority POC	Primary Potential Sources
Pesticides	Athletic fields runoff Campus ornamental landscaping runoff (not Arboretum) Structure runoff where pesticides are in use for insect control
Nutrients	Athletic fields runoff Campus ornamental landscaping runoff Arboretum runoff
Turbidity/sediments	Construction Uncovered landscape material storage Open parking lots
Trash	Official/unofficial smoking areas Campus hardscape Open parking lots
Automotive-related oils	Open parking lots Parking structures Facilities maintenance area

2.2. IDENTIFICATION OF KEY TARGET AUDIENCES (OUTCOME LEVELS 2 AND 3)

This component focuses on the actions of target audiences and the factors that influence them. Target audiences are the individuals and populations that a storm water program is directed to and may include, but are not limited to, students, faculty, staff, visitors, guests, contractors, and the general public. Because source reductions can only be achieved by the people responsible for pollutant loadings, a successful program will be one that is able to induce positive behavioral changes in the target audiences.

2.2.1. Target Audience Actions (Outcome Level 3)

This section address the actions of target audiences and whether or not changes are occurring within these target audiences over time. The major categories of target audience actions are:

- Pollutant Generating Activities (PGAs) – behaviors that contribute pollutants to urban runoff (e.g., vehicle and equipment washing without containment, improper waste disposal, spills during materials loading and unloading)

- Best Management Practices (BMPs) – activities or other controls that are implemented to reduce or eliminate discharges of pollutants (e.g., Construction and Post-construction BMPs, Scheduling routine catch basin and storm drain pipe cleaning and maintenance, Spill Prevention and Control Countermeasures (SPCC), implementation of secondary containment)

- Supporting behaviors – include a wide range of potential actions that are distinct from BMP implementation but help support the implementation (e.g., pollution incident reporting, catch basin stenciling, public involvement)

CSUF will focus its evaluation of Outcome Level 3 on the actions of target audiences for the high priority POC. CSUF has identified the critical target audiences as:

- Facilities staff

- Landscape staff

- Students

CSUF will evaluate the effectiveness of its storm water program at Outcome Level 3 by using the management questions to guide its assessment of target audience implementation of BMPs and reduction of PGAs. It is expected that assessment at this outcome level will be included in the short- and long-term EAs.

2.2.2. Barriers and Bridges to Action (Outcome Level 2)

Level 2 Outcomes are critical because they form the basis for achieving desired behavioral changes and provide a means of gauging progress toward their achievement. The term "barriers and bridges" refers to the fact that there are factors that may aid or inhibit a desired behavior and that these need to be understood in order to affect the change that is desired. People won't act differently unless they understand the problem and are motivated—and able—to change.

Level 2 Outcomes provide a means of gauging whether the prioritized activities (e.g., outreach, training, other program activities) are producing changes in the behavior of the target audiences through increases knowledge and awareness, as well as changes in attitudes. Examples of Level 2 outcomes range from awareness of basic concepts (e.g., why storm water pollution is a problem; the difference between storm drains and the sanitary sewer) to specific knowledge (e.g., how to apply fertilizer in accordance with Permit requirements; how to properly clean a storm drain).

CSUF will work to identify barriers and bridges that may be influencing target audience behavior. CSUF will assess Outcome Level 2 on an as-needed basis as part of the adaptive management process. It is expected that assessment at this outcome level will be included in the short- and long-term EAs.

2.3.   IDENTIFICATION OF THE STORM WATER PROGRAM ACTIVITIES (OUTCOME LEVEL 1)

Level 1 Outcomes focus on the various activities that are conducted within a program. Examples of these activities include providing education to target audiences, inspecting hotspots, conducting surveys of target audiences, and conducting monitoring. Outcome Level 1 only measures the implementation of the storm water program, rather than the impact of the program is having.

The EAs will focus on the impact of the storm water program by assessing Outcome Levels 2 through 4 as they relate to the high priority POCs. Based on the identification of the high priority POCs and their potential sources, target audiences, and prioritized BMPs, the Campus has identified the Program Elements for which the implementation of prioritized BMPs will be assessed.

Table 4 Program Elements for Which Prioritized BMPs Will Be Assessed through the Identified Management Questions

Program Element	Phase II Permit Provision (s)	Pollutants of Concern (POCs)				
		Pesticides	Nutrients	Turbidity/ sediments	Trash	Automotive-related oils
Education and Outreach	F.5.b	✓	✓	--	✓	✓
Public Involvement and Participation	F.5.c	✓	✓	✓	✓	✓
Illicit Discharge Detection and Elimination	F.5.d	--	--	✓	--	--
Construction Site Storm Water Runoff Control	F.5.e	--	--	✓	--	--
Pollution Prevention/Good Housekeeping	F.5.f	✓	✓	✓	--	✓
Post Construction Storm Water Management	F.5.g	--	--	✓	--	✓

3. Management Questions

In order to focus the EAs, CSUF has identified management questions for the prioritized BMPs that may be implemented to address the high priority POCs.

The assessment data and information collected by CSUF (**Section 4**) are focused on Outcome Levels 2 through 4 and will be used to answer programmatic-based management questions related to the prioritized BMPs.

Pursuant to the CASQA guidance, the types of questions that were considered for this PEAIP include the following:

- To what extent did prioritized BMPs or group of BMPs reduce pollutant loads from their sources to the storm drain system [OL4]

- To what extent did prioritized BMPs or group of BMPs change the target audience's behavior? [OL3]

- What barriers or bridges are influencing or could influence the target audience's ability or desire to implement the prioritized BMPs or group of BMPs? [OL2]

Based on a review of the types of management questions that may be utilized (above) as well as an understanding of the primary urban sources of the POCs, CSUF has identified management questions for each of the high priority POC. The CASQA Outcome Level(s) addressed by the questions are indicated in brackets.

Pesticide Management Questions

- Are concentrations of pesticides at MS4 outfall locations indicative of significant pesticides being discharged to the MS4? [OL4]

- Are pesticide-related BMPs being implemented and maintained? [OL3]

- Are there barriers to landscape and athletic staff desire to implement pesticide BMPs relative to athletic fields or landscaped areas? [OL2]

- Are there barriers to facilities' staff ability or desire to implement pesticide BMPs relative to pest control at campus structures? [OL2]

Nutrient Management Questions

- Are concentrations of nutrients at MS4 outfall locations indicative of significant nutrients being discharged to the MS4? [OL4]

- Are nutrient-related BMPs being implemented and maintained? [OL3]

- Are there barriers to landscape and athletic staff desire to implement nutrient BMPs relative to athletic fields or landscaped areas? [OL2]

Turbidity/Sediment Management Questions

- Are construction sites covered under the Construction General Permit being managed so that they are in compliance with applicable SWPPP requirements and preventing sediment from leaving the site? [OL3]

- Are Erosion Control, Sediment Control, and Good Housekeeping and Material and Waste Management BMPs being implemented and maintained? [OL3]

- Are there barriers to facilities staff ensuring that the CSUF-required BMPs for reducing turbidity/sediment discharge are followed? [OL2]

Trash Management Questions

- Are Good Housekeeping and Material and Waste Management BMPs being implemented and maintained? [OL3]

- Are waste reduction programs having an impact on litter reduction at sporting and other major campus events? [OL3]

- Are anti-smoking campaigns reducing cigarette butt liter? [OL3]

- Are there barriers to use of proper receptacles for trash and cigarette butts? [OL2]

Automotive-Related Oils Management Questions

- Are Good Housekeeping and Material and Waste Management BMPs being implemented and maintained? [OL3]

4. Data Assessment and Collection

4.1. DATA ASSESSMENT METHODS

During the EA process, the data collected will be analyzed using a variety of methods such as:

- **Qualitative assessment** includes confirmation that an activity (e.g., construction site inspections) was conducted and/or that a specific task (e.g., completion of a pet waste brochure) was completed, as well as narrative assessment.

- **Descriptive statistics** are numbers that are used to summarize and describe data. Several descriptive statistics are often used at one time, to give a full picture of the data. Examples of descriptive statistics are counts (includes quantification and tabulation), averages, variance, etc. Other information includes: direct quantitative measurements of pollutant load removal, estimates of pollutant load removal for BMPs where direct measurement of pollutant removal is overly challenging, and direct quantitative measurement of behaviors that serve as proxies of pollutant removal or reduction.

- **Comparisons to established reference points** involve comparing collected data to established targets (targeted outcomes, discharge prohibitions, WQOs, required activity levels, etc.) or other reference points (other programs, previous results, baseline values, visual comparison using photographs over time, etc.].

- **Temporal change** is change over time. This includes variability, trends, and changes due to program implementation (e.g., simple change [absolute or %] or statistical trends).

4.2. DATA COLLECTION METHODS

The assessment data will be collected through various means such as:

- **Internal Tracking** of program data (e.g., inspection data, website public outreach and education efforts)

- **Site Investigations** conducted by Campus staff to directly observe or assess a practice (e.g., inspections, site visits, complaint investigations)

- **Interviews** conducted by Campus to discern awareness and behavior (e.g., field and office staff)

- **Monitoring and Sampling** data obtained directly by campus (e.g., MS4 sampling if needed, maintenance facility visual inspections)

- **Review of External Data Sources** by Campus (e.g., data or information obtained via the State or Regional Water Board, other regulatory programs, online databases, consultants, third parties)

- **Special Investigations:** can encompass any of the categories above, but involves a more intensive one-time focus.

4.3.   DATA REQUIREMENTS FOR SELECTED METRICS AND OUTCOME LEVELS

In the tables below, the POC-specific management questions representing focused program activities and/or prioritized BMPs are presented, along with the assessment methods that will be used during the EA process and the associated assessment data that should be collected for evaluation. The CASQA outcome levels that may be supported by the EA results are also indicated. Where applicable, the units for the required data are specified.

Although Table 5 identifies the management questions, data assessment methods, and data collection methods that will initially be used for the EAs, future PEAIPs may modify and/or incorporate other management questions or data assessment/collection methods based on the information gained from the implementation of the PEAIP. Any modifications to the PEAIP will be identified as a part of the Annual Reports.

Table 5 High-Priority POC Questions, Data Assessment Methods, and Data Collection Methods

Management Questions	Data Assessment Methods	Data Collection Methods
Pesticide and Nutrient Management at OL4		
Are concentrations of pesticides and nutrients in a MS4 outfall locations indicative of significant pesticides/nutrients being discharged to the MS4?	**Descriptive Statistics** Pesticide/nutrient concentrations in storm water flows versus established water quality parameters **Temporal Change** Concentration trend over time	Collect water samples at northwest MS4 outfall location, or equivalent, during storm events
BMP Implementation at OL3		

Management Questions	Data Assessment Methods	Data Collection Methods
Are high-priority POC-related BMPs being implemented and maintained?	**Qualitative Assessment** Narrative assessment of common issues with BMP implementation that were identified	• Periodic inspections of pollutant hotspot inspections as required under F.5.f.5 and O&M BMPs as required under F.5.f.8 • Annual meetings with responsible groups for BMP implementation to assess degree of implementation • Individual interviews, if barriers appear to exist
Barriers to Action at OL2		
Are there barriers to landscape and athletic staff desire to implement pesticide- and/or nutrient-related BMPs relative to athletic fields or landscaped areas?	**Qualitative Assessment** Narrative assessment of barriers to implementation	• Annual meetings with responsible groups for BMP implementation to assess degree of implementation • Individual interviews, if barriers appear to exist
Are there barriers to facilities' staff ability or desire to implement pesticide BMPs relative to pest control at campus structures?	**Qualitative Assessment** Narrative assessment of barriers to implementation	• Annual meetings with responsible groups for BMP implementation to assess degree of implementation • Individual interviews, if barriers appear to exist
Are there barriers to facilities staff ensuring that the CSUF-required BMPs for reducing turbidity/sediment discharge are followed?	**Qualitative Assessment** Narrative assessment of barriers to implementation	• Annual meetings with responsible groups for BMP implementation to assess degree of implementation • Individual interviews, if barriers appear to exist
Other Trash Management		

Management Questions	Data Assessment Methods	Data Collection Methods
Are waste reduction programs having an impact on litter reduction at sporting and other major campus events? [OL3]	**Quantitative Assessment** Evaluation of visual trash assessment (VTA) results	VTAs (see Trash Implementation Plan for description)
Are anti-smoking campaigns reducing cigarette butt liter? [OL3]	**Qualitative Assessment** • Narrative assessment of cigarette butt litter locations **Quantitative Assessment** • Assess butt count trends	• Identify high cigarette butt litter areas • Perform periodic inspection of litter and receptacle availability • Facility staff interviews • Obtain semi-annual cigarette butt cleanup butt count data from Fresh Air Advocates
Are there barriers to use of proper receptacles for trash and cigarette butts? [OL2]	**Qualitative Assessment** Narrative assessment of barriers to implementation	• Student interviews • Responsible area staff interviews
Other Turbidity/Sediment		
Are construction sites covered under the Construction General Permit being managed so that they are in compliance with applicable SWPPP requirements and preventing sediment from leaving the site?	**Qualitative Assessment** Are the construction contractors documenting non-zero numbers of deficiencies and explaining corrective actions	• Review of Construction General Permit annual reports submitted by construction contractors to determine if deficiencies are being identified and corrected

Note that several of the data collection elements also serve as BMPs for CSUF's Public Education and Outreach Program associated with gauging the level of awareness in target audiences and effectiveness of education tasks.

Glossary of Terms

Adaptive Management: Adaptive Management is a structured process of directing decision-making with an aim toward achieving identified goals or milestones and addressing/reducing uncertainty over time.

Assessment Methods: Assessment Methods are processes used to obtain or evaluate assessment data or information. Depending on the particular outcome and/or management questions, numerous assessment methods may be used.

Best Management Practice (BMP): Defined in 40 CFR 122.2 as schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce pollutants discharged to waters of the United States.

California Storm water Quality Association (CASQA): Storm water quality management organizations and individuals, including cities, counties, special districts, industries, and consulting firms throughout the state. (https://www.casqa.org/)

Effectiveness Assessment (EA): Effectiveness Assessment includes the methods and activities that storm water managers use to evaluate how well their programs are working, and to identify modifications necessary to improve them. EA is the mechanism by which feedback is evaluated to enable ongoing adaptive management.

Program Management Cycle: The Program Management Cycle broadly divides storm water program management into three phases:
1. Program planning and modification;
2. Program implementation; and
3. Effectiveness assessment.

Maximum Extent Practicable (MEP): The technology-based standard established by Congress in CWA section 402(p)(3)(B)(iii) for storm water that operators of MS4s must meet. Technology-based standards establish the level of pollutant reductions that dischargers must achieve, typically by treatment or by a combination of source and/or treatment control BMPs.

Municipal Separate Storm Sewer System (MS4)[4]: An MS4 is a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) that is:
- Owned by a state, city, town, village, or other public entity that discharges to waters of the U.S.;
- Designed or used to collect or convey storm water;
- Not a combined sewer; and
- Not part of a Publicly Owned Treatment Works (POTW) (sewage treatment plant).

Phase II MS4 Permit: The Phase II Permit, issued in 1999, requires regulated small MS4s in urbanized areas, as well as small MS4s outside the urbanized areas that are designated by the permitting authority, to obtain NPDES permit coverage for their storm water discharges. Each

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[4] Based on the definition in Title 40 Code of Federal Regulations §122.26 (b)(8)

regulated MS4 is required to develop and implement a storm water management program/ approach to reduce and/or eliminate the discharge of pollutants from the MS4 to the maximum extent practicable (MEP) and effectively prohibit discharges of non-storm water into its MS4, unless such discharges are authorized.

Pollutant of Concern (POC): A pollutant that is reasonably expected to be present in urban runoff and may reasonably be expected to affect the designated uses of the receiving water. Urban runoff pollutants of concern may include sediments, non-sediment solids, nutrients, pathogens, oxygen-demanding substances, petroleum hydrocarbons, heavy metals, floatables, polycyclic aromatic hydrocarbons (PAHs), trash, and/or pesticides and herbicides.

Program Element: Program Elements are distinct components of a storm water program that focus on reducing pollutants from a particular activity or pollutant source/target audience. The Program Elements for the Phase II MS4 include the following:
- Program Management
- Education and Outreach
- Public Involvement and Participation
- Illicit Discharge Detection and Elimination
- Construction
- Pollution Prevention/Good Housekeeping
- Post Construction
- Water Quality Monitoring

Receiving Water Conditions: Receiving Water Conditions can include any chemical, biological, or physical parameter that can be measured or assessed in receiving waters (i.e., chemical concentrations, dissolved oxygen levels, biological integrity, species diversity, eutrophication, microbiological or toxicological conditions, hydromodification).

Source: "Source" means anything with the potential to generate pollutants prior to their introduction to the MS4. A typical program broadly addresses the following source categories: residential areas, construction and development sites, commercial and industrial sources, and municipal operations. Sources may alternatively be defined by the populations associated with areas, facilities, or activities, e.g., residents, dog-walkers, mobile car washers, or restaurant employees.

Source Contribution: Source Contribution can refer either to a source loading or to a reduction in that loading. Source loadings are the pollutant loadings added by sources to a MS4. Source reductions are changes in the amounts of pollutants associated with specific sources before and after control measures are employed.

Target Audience: A "Target Audience" consists of the people (individuals and populations) that are expected to gain knowledge or engage in the behaviors that a storm water program is intended to elicit. BMPs and other controls are implemented by many types of third parties, so the term "target audience" is broadly defined and virtually any group of people could be a target audience, including students, faculty and staff, visitors and guests, the general public, elected and appointed officials, other government agencies, etc.