



Standardized Cost Reporting in Municipal
Stormwater Permits
Municipal Stormwater Cost Policy
(Draft) Staff Report
August 2023



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List of Abbreviations and Acronyms

ASBS: Areas of Special Biological Significance

BMP: Best Management Practices

CASQA: California Stormwater Quality Association

CEQA: California Environmental Quality Act

CFR: Code of Federal Regulations

CIP: Capital Improvements Programs

CSA: California State Auditor

CWA: Clean Water Act

DAMP: Drainage Area Management Plan

DIT: Division of Information Technology.

IDDE: Illicit Discharge Detection and Elimination

LID: Low-impact Development Technologies

MCM: Minimum Control Measures

MS4: Municipal Separate Storm Sewer Systems

NPDES: National Pollutant Discharge Elimination System

ORPP: Office of Research, Planning, and Performance

RWQCB: Regional Water Quality Control Boards

SMARTS: Stormwater Multiple Application and Report Tracking System

SMC: Stormwater Monitoring Council

STORMS: Strategy to Optimize Resource Management of Stormwater Unit

TMDL: Total Maximum Daily Load

USEPA: United States Environmental Protection Agency

WDID: Waste Discharge Identification Number

Definitions

1. **Best Management Practices (BMP)** — Management activities, physical structures, institutional practices, or prohibitions of practices implemented to control, mitigate, or prevent pollution associated with dry- or wet- weather runoff.
2. **Catch Basin** — Inlet to the storm drain system designed to capture sediment or debris from stormwater runoff before it enters the storm sewer system.
3. **Clean Water Act** — The federal Water Pollution Control Act (33 U.S.C. § 1251 et seq.), and any subsequent amendments thereto.
4. **Discharger** — Entity responsible for carrying out activities that discharge stormwater or non-stormwater related runoff.
5. **Erosion** — The process of debris removal from a site due to anthropogenic or natural action.
6. **Illicit Connection** — Any drain or conveyance system that allows an illegal discharge to enter the storm drain system.
7. **Illicit Discharges** — Any discharges that are not authorized under the MS4 permit or discharge prohibition section of a permit.
8. **Impervious Surface** — Any engineered surface, consisting of materials that inhibit natural infiltration of water into the subsurface.
9. **Integrated Pest Management (IPM)** — A pest control strategy that employs diverse techniques including biological control, habitat manipulation, modification of cultural practices, and the use of resistant varieties for long-term pest management.
10. **Municipal Separate Storm Sewer System (MS4)** — A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains), as defined in 40 CFR 122.26(b)(8).
11. **National Pollutant Discharge Elimination System (NPDES)** — A national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, as defined in 40 CFR § 122.2.
12. **New Development** — Development of a new area which may include construction or installation of buildings, roads, driveways, and other impervious surfaces.
13. **Non-Stormwater** — Flows into or from a MS4 system that are not caused by precipitation events, i.e., rain or snow.
14. **Non-Structural BMP** — Institutional control, policies, and practices (with no physical structures) employed to control quality and quantity of stormwater runoff.
15. **Non-Traditional Phase II MS4 Permittees** — Phase II MS4 Permittees operated by Federal, State, or local entities. These can include schools, universities, parks, ports, transportation facilities, prisons, hospitals, and military bases.
16. **Permittee** — An entity that discharges stormwater and non-stormwater from its jurisdictional area under an approved Phase I or traditional Phase II MS4 permit.
17. **Phase I MS4 Permits** — Stormwater permits issued by regional water boards to control stormwater and non-stormwater discharges from medium to large Permittees, consistent with the definitions provided in (40 CFR §122.26(b)(4)) and (40 CFR §122.26(b)(7)).

18. **Phase II MS4 Permit** — Statewide permit to control stormwater discharges from small Permittees as defined in 40 CFR §122.26(b)(16). Such small Permittees include non-traditional and traditional Phase II MS4 Permittees.
19. **Redevelopment** — Development activities on a site that already has impervious surfaces due to prior development. Such activities may include expansion or retrofitting of existing structures or construction/installation of a new structure on the site. Activities do not include routine maintenance of the existing development.
20. **Runoff** — Stormwater- or non-stormwater-related over-the surface flow
21. **Source Control BMP** — BMPs, structural or non-structural, aimed at preventing or reducing pollution potential at the source.
22. **Stormwater** — Runoff resulting from rain events or snow fall.
23. **Stormwater Pollution Prevention Plan (SWPPP)** — SWPPP is a written document that describes sediment and erosion control plans to reduce pollutants in stormwater runoff.
24. **Structural BMP** — Physical structures used to manage flow and reduce pollutants in stormwater.
 - a. **Bioretention:** Small-scale engineered system consisting of vegetation and soil media to capture and treat stormwater runoff. Bioretention soil mix is designed carefully to provide a balance of hydraulic conductivity and retention time for adequate physical, chemical, and biological treatment processes. Also known as biofilter, rain garden, and porous landscape detention area.
 - b. **Constructed Wetland:** Engineered system that utilizes natural treatment processes to treat and manage stormwater runoff. Constructed wetlands can be perceived as shallow (<4 ft) Wet Pond with greater vegetation coverage.
 - c. **Vegetated Strip:** Flat, narrow vegetated area designed to intercept, infiltrate, and treat stormwater runoff. Also known as biofiltration strip, grassed strip, filter strip, grassed filter, and grass buffer.
 - d. **Dry Pond:** Stormwater basin designed to hold water for a short period of time. Also known as detention basin, detention pond, or extended detention basin.
 - e. **Dry Well:** Underground structure lined with perforated casing and backfilled with gravel or stone that receives water from surrounding impervious surfaces and infiltrates into the underlying soil. An overflow pipe is included to address large storm events when the excess water can be discharged into a larger infiltration area or a stream.
 - f. **Infiltration Basin:** Shallow, earthen impoundment that captures and infiltrates stormwater into the soil.
 - g. **Infiltration Trench:** Long, narrow, gravel-filled depression designed to store and infiltrate stormwater runoff. Infiltration trench is designed without outlet, but may or may not include an overflow, an underdrain or vegetation.

- h. **Media Filters:** Sand filters, with or without amended media, with a pre-treatment chamber for filtering or infiltrating stormwater.
 - i. **Pervious Pavement:** Pavement surface, made of load bearing concrete or asphalt, designed to allow stormwater runoff to infiltrate through the pavement and the soil underneath. Also known as porous pavement, porous concrete, and permeable pavement.
 - j. **Vegetated Swale:** Open, shallow, mild sloped, vegetated channel for conveying runoff downstream. Also known as grass swale.
 - k. **Wet Pond:** Stormwater basin designed to retain water for a long period of time, i.e., throughout the season or during the wet season. Also known as retention basin, retention pond, wet extended detention pond, or wet basin.
25. **Total Maximum Daily Loads (TMDL)** — The maximum amounts of a specific pollutant that a receiving waterbody can accept without violating water quality standards. TMDLs are typically pollutant specific and are developed to account for all the sources of a pollutant, including discharges from wastewater treatment facilities; runoff from homes, agriculture, and streets or highways; "toxic hot spots;" and deposits from the air.
26. **Traditional Phase II MS4 Permittees** — Phase II MS4 permittees that are operated by counties, cities, or towns.
27. **Trash** — All improperly discarded solid material from any production, manufacturing, or processing operation including (but not limited to) products and their packaging or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.
28. **Water Quality Objective** — Numerical or narrative limits or levels of water quality constituents or characteristics which are established for the reasonable protection of designated beneficial uses of the water or the prevention of nuisance within a specific area [Water Code section 13050 (h)].
29. **Water Quality Standards** — Provisions set by the Water Boards (and approved by USEPA) that describe the desired condition of a water body for the intended beneficial uses (e.g., swimming, fishing, municipal drinking water supply)
30. **Watershed** — The area of land that drains water or runoff to a waterbody. The size of a watershed can vary depending on the number of catchments within the watershed.

Executive Summary

The Strategy to Optimize Resource Management of Stormwater Unit (STORMS) at the California State Water Resources Control Board is advancing the perspective that stormwater is a valuable resource. In addition to supporting statewide stormwater capture and use efforts across the state, an important STORMS goal is “Implementing Efficient and Effective Regulatory Programs;” ensuring the best use of municipal resources when implementing stormwater management programs is central to such regulatory objectives.

Although federal regulations mandate reporting of expenditures related to Phase I Municipal Separate Storm Sewer System (MS4) permit compliance, permittees are rarely consistent in their approaches in estimating the costs associated with their stormwater programs. Variability in cost reporting can be attributed to a lack of standardized methodology for tracking and reporting MS4 permit-related costs.

Consistent permit implementation cost data will assist the Regional Water Quality Control Boards (regional water boards) with economic analyses as they reissue permits and consider costs of new or revised permit requirements. A standardized list of cost categories along with a breakdown of costs for different program elements is expected to facilitate the evaluation of cost-effectiveness of different permit elements to improve receiving water quality. A statewide Water Quality Control Policy for Standardized Cost Reporting in Municipal Stormwater Permits (Policy) benefits regional water boards and MS4 permittees by making it easier for permittees to compare the cost of implementing different stormwater BMPs around the state, therefore informing stormwater BMP design and prioritization in the long-term. Furthermore, accurate implementation of cost accounting and reporting would help permittees explore funding sources, in addition to general funds, to finance their stormwater programs.

Staff conducted the following steps to develop a proposed standardized cost reporting methodology and Policy:

1. Reviewed current MS4 permits to identify and compare reporting requirements set by various regional water boards across the state.
2. Reviewed a set of selected annual reports from each region to identify and compare existing cost categories (Table 1).
3. Prepared a draft list of standardized categories for reporting costs of MS4 permit implementation to share with stakeholders, and revised the draft list based on the input received.
4. Selected several permittees to perform case studies to validate the proposed cost categories and to understand reporting methods currently used by Permittees (Table 2).

5. Developed a crosswalk table to transform existing reporting methods to the proposed methodology.

6. Developed a survey-based tool for permittees to report standardized MS4 permit implementation costs.

Based on these steps, the proposed cost reporting categories for Phase I MS4 permittees to report the costs associated with permit compliance are provided below.

1. Overall Program Management and Administration
2. Public Education, Outreach, Involvement and Participation
3. Illicit Discharge Detection and Elimination (IDDE) and Spill Response
4. Planning and Land Development
5. Industrial and Commercial Facilities
6. Construction Site Management
7. Municipal Operations and Maintenance
8. Trash Management
9. Water Quality Monitoring
10. Special Programs
11. Miscellaneous Costs

The statewide Phase II MS4 permit does not currently include a cost reporting requirement and many Phase II MS4 permittees have resource limitations associated with relatively smaller permit implementation programs compared to Phase I MS4 permittees. Therefore, the Draft Policy proposes a simplified cost reporting program for traditional Phase II MS4 permittees. Non-traditional Phase II MS4 permittees are not required to track or report expenditures for implementing their permits. Below are the proposed categories for traditional Phase II MS4 permittees.

1. Overall Program Management and Administration
2. Capital Costs
3. Minimum Control Measures
4. Water Quality Monitoring
5. Miscellaneous Costs

The standardized cost reporting requirements will serve as a stand-alone state policy for water quality control. Once the Policy is adopted by the State Water Resources Control Board (State Water Board) and approved by the Office of Administrative Law, the Policy would require regional water boards to incorporate the new cost reporting requirements when they amend or renew Phase I MS4 permits. Similarly, the reissued statewide Phase II MS4 permit would address standardized cost reporting requirements for traditional Phase II MS4 permittees. Regulatory tools such as a Water Code Section 13383 order may be implemented for the interim period between the effective date of the Policy establishing new cost reporting requirements and the regional water boards' subsequent amendment or reissuance of permits incorporating the cost reporting requirements.

1 Background

1.1 Stormwater as a Resource

Stormwater runoff generated when precipitation from rain and snowmelt events flows over land and/or impervious surfaces without percolating into the ground can be a significant source of pollutants. Pollutants found in stormwater runoff include, but are not limited to, chemicals, pathogens, bacteria, motor oil, and construction debris. As stormwater flows into receiving waterbodies (e.g., streams, rivers, lakes, and the ocean) the receiving water quality can be adversely affected. The negative impacts of polluted stormwater have shaped the long-held view that stormwater is a nuisance that should be routed quickly off city streets.

Over the past few decades, a paradigm shift has occurred in stormwater management in California. In contrast to the traditional goals of mitigating flood risk and protecting receiving water quality from pollutants entrained in stormwater flows, current stormwater management theories increasingly focus on stormwater as a resource to augment insufficient water supplies. [“California’s Water Supply Strategy: Adapting to a Hotter, Drier Future”](#) sets a statewide goal to increase annual supply capacity by at least 250,000 acre-feet by 2030 and 500,000 acre-feet by 2040 through local stormwater capture projects in cities and towns.

In January 2014, Governor Brown released the [California Water Action Plan](#) which outlined a five-year roadmap to put California on the path to sustainable water management. The Water Action Plan was developed to meet three broad objectives: 1) develop more reliable water supplies; 2) the restoration of important species and habitat; and 3) create more resilient, sustainably managed water resources system (water supply, water quality, flood protection, and environment) that can better withstand inevitable and unforeseen pressures in the coming decades. As part of the State Water Board’s efforts to address the Water Action Plan objectives, on January 6, 2016, the Board adopted [Resolution No. 2016-0003](#), approving the Strategy to Optimize Resource Management of Stormwater (STORMS). STORMS identifies goals, objectives, and actions needed for the Water Boards to improve the regulation, management, and utilization of California’s stormwater resources. One of the objectives of STORMS is to “Establish Financially Sustainable Storm Water Programs”:

The cost of compliance is a major issue for many storm water permittees and a significant source of contention among the regulated community, environmental advocacy groups and Water Boards. The projects captured in this objective aim to identify the costs of compliance with the municipal, industrial, and construction permitting programs. Additionally, projects within this objective will focus on making funding accessible to storm water projects.

1.2 Stormwater Regulations

1.2.1 National Pollutant Discharge Elimination System Permits

In 1972, Congress enacted the Clean Water Act (CWA) to restore and maintain the chemical, physical and biological integrity of the nation's waters. The CWA authorizes the United States Environmental Protection Agency (USEPA) to adopt regulations and set and enforce limits in National Pollutant Discharge Elimination System (NPDES) permits issued to entities discharging pollutants through a point source to the waters of the United States. NPDES permits contain details on what constituents an entity can discharge, to what extent dischargers need to monitor and report, and any additional provisions required to safeguard receiving water quality and public health.

The Porter-Cologne Water Quality Control Act (Porter-Cologne) (Wat. Code § 13000 et seq.), enacted in 1969, is the primary water quality law in California. Porter-Cologne addresses two primary functions – water quality control planning and waste discharge regulation. Porter-Cologne is administered regionally, within a framework of statewide coordination and policy. The state is divided into nine regions, each governed by a regional water board. The State Legislature, in adopting Porter-Cologne, directed that the State's waters “shall be regulated to attain the highest water quality which is reasonable[.]” (Wat. Code § 13000.)

The State Water Board is also charged with adopting state policies for water quality control, such as the Draft Policy, which may consist of principles or guidelines deemed essential by the State Water Board for water quality control. (Wat. Code § 13142.)

Under Porter-Cologne, the Water Boards regulate waste discharges that could affect water quality through waste discharge requirements. (Wat. Code §§ 13263, 13377.) In addition, the state is authorized to issue NPDES permits to point source dischargers of pollutants to navigable waters. In 1972, the California Legislature amended Porter-Cologne to provide the state the necessary authority to implement an NPDES permit program in lieu of a USEPA-administered program under the CWA. (Wat. Code, Div. 7, ch. 5.5.) The State Water Board is designated as the state water pollution control agency under the CWA and is authorized to exercise any powers accordingly delegated to the State. (Wat. Code 13160; §§ 13372, 13377) USEPA's permit regulations are contained in 40 CFR, parts 122, 123, and 124.)

To ensure consistency with CWA requirements, Porter-Cologne requires that the Water Boards issue and administer NPDES permits such that all applicable CWA requirements are met. (Wat. Code § 13377, see also Cal. Code Regs, tit. 23, § 2235.2.)

Although the initial scope of NPDES permits did not include stormwater discharges, the Congress expanded the definition of the term “point source” in the CWA in 1987 to “any discernible, confined and discrete conveyance, such as a pipe, ditch, channel, tunnel, conduit, discrete fissure, or container. It also includes vessels or other floating craft from which pollutants are or may be discharged.” This expanded definition requires industrial stormwater discharges, discharges from construction activities, and discharges from

MS4s to be regulated under NPDES permits. The expanded definition is intended to prevent stormwater runoff from transporting pollutants into receiving waters.

1.2.2 Municipal Separate Storm Sewer System Phase I and Phase II Permits

The inclusion of MS4s into NPDES permits was carried out in two phases. The Phase I MS4 regulations were issued in 1990 and required medium and large cities and certain counties with populations of 100,000 or more to obtain NPDES permits for their municipal stormwater discharges. Title 40 of the Code of Federal regulations (CFR), section 122.26(b)(4) and section 122.26(b)(7) establish criteria to determine whether an MS4 is to be regulated under the Phase I regulations.

In 1999, the USEPA issued the Phase II MS4 regulations to regulate many small MS4s as defined in 40 CFR §122.26(b)(16). Phase II, or Small MS4s, include municipal and non-municipal entities labeled as traditional and non-traditional Phase II MS4 permittees, respectively.

1.2.3 Stormwater Regulations in California

In California, stormwater discharge is regulated by the State Water Board and by the nine regional water boards. While a statewide Phase II small MS4 permit is issued to control discharges from small municipalities and other Phase II MS4 permittees, the regional water boards (each with a defined geographical boundary) issue Phase I MS4 permits to control stormwater discharges from the medium and large municipalities within their jurisdiction. Permittees within the same region often collaborate among themselves to create local jurisdictional groups and develop watershed management plans. Such local jurisdictional groups, as well as the regional water boards, often face unique challenges and have unique philosophies about best practices for controlling stormwater pollution which results in varying permit requirements, including cost monitoring and reporting procedures.

1.3 Standardizing Cost Reporting in MS4 Permits

Effective implementation of MS4 permits requires careful planning and dedicated resources from permittees. While federal requirements mandate estimation and reporting of municipal expenditures related to permit compliance, permittees are rarely consistent in their approaches in estimating the cost of their stormwater programs. Variability in cost reporting results from the lack of a standardized methodology for tracking and reporting MS4 permit related costs.

1.4 Legal Authority

The NPDES program regulations applicable to operators of MS4s require large and medium municipal permittees to include in an application for permit coverage:

“A description of the financial resources currently available to the municipality to complete part 2 of the permit application. A description of the municipality's budget for existing storm water programs, including an overview of the municipality's financial resources and budget, including overall indebtedness and assets, and sources of funds for storm water programs.” (40 CFR § 122.26(d)(1)(vi)(A).)

The applicable regulations further require that large or medium MS4 permit applications include a fiscal analysis as follows:

“(vi) Fiscal analysis. For each fiscal year to be covered by the permit, a fiscal analysis of the necessary capital and operation and maintenance expenditures necessary to accomplish the activities of the programs under paragraphs (d)(2) (iii) and (iv) of this section. Such analysis shall include a description of the source of funds that are proposed to meet the necessary expenditures, including legal restrictions on the use of such funds.” (40 CFR § 122.26(d)(2)(vi).)

While the federal regulations do not specify fiscal analysis or cost reporting requirements for small MS4 permittees, California Water Code section 13383 authorizes the Water Boards to establish additional reporting requirements:

“The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge.”

1.5 California State Auditor Report

In 2018, the California State Auditor (CSA) published a report titled “[State and Regional Water Boards: They Must Do More to Ensure That Local Jurisdictions’ Costs to Reduce Storm Water Pollution Are Necessary and Appropriate](#)” (CSA Report.) The CSA Report reviews the existing cost reporting requirements in various Phase I MS4 permits and highlights the need for standardized cost reporting guidance. The CSA Report was published under a directive by the Joint Legislative Audit Committee to investigate the methodology regional water boards utilize to develop and implement Phase I MS4 stormwater permits, including cost reporting requirements and the fiscal impacts of permit implementation.

The CSA Report concluded that the regional water boards used insufficient economic considerations to establish some TMDL implementation plans. Developing appropriate cost estimation will give both the regional water boards and local jurisdictions a better understanding of the financial impact of additional permit requirements. The CSA also discovered inconsistencies in the definitions for and reporting of stormwater program management costs by local jurisdictions stemming from a lack of statewide guidance on tracking and reporting stormwater program management costs. Cost reporting from permittees will remain inconsistent until the State Water Board adopts a policy for statewide standardized cost reporting.

The CSA Report recommended that the State Water Board develop statewide guidance on methods for tracking the cost of stormwater program management for permittees to

ensure that the regional water boards obtain adequate and consistent information on the stormwater program management costs. The CSA Report further recommended that the State Water Board adopt the regulations necessary to ensure that regional water boards and permittees follow its guidance regarding adequate and consistent information about permittees' stormwater program management costs.

1.6 Office of Research, Planning, and Performance Guidance

Based on the CSA Report recommendations, the State Water Board Office of Research, Planning, and Performance (ORPP) published in 2020 [Guidance for Obtaining Phase I Municipal Separate Storm Sewer System \(MS4\) Permit Compliance Costs](#). The objective of this guidance was for regional water boards staff and the public to obtain adequate, consistent, and comparable information on the stormwater management costs permittees incur. It should be noted that the stakeholders raised several concerns about the 2020 guidance document, including an apparent lack of a public process to receive and address comments on the proposed categories.

The guidance document included a list of non-binding cost categories, intended to provide best practices that would allow regional water boards staff to accurately estimate MS4 permit compliance costs. ORPP designed the guidance document to function as a living document. The guidance also notes that the cost data gathered from permittees would not be perfectly comparable due to variability in their permit requirements.

The ORPP guidance suggests that cost reporting should include total costs and overhead, including capital expenditure, land, personnel, construction, consultant fees, permitting costs, and maintenance and operational costs. Below are the primary ORPP recommended cost categories:

1. Total Maximum Daily Load (TMDL) implementation/monitoring plan development
2. Trash Best Management Practices (BMPs)
3. Minimum Control Measures (MCM)
4. Additional institutional BMPs, including enhanced MCM
5. Projects
6. Monitoring
7. Watershed Management Planning
8. Alternative Compliance Plan Development
9. Reporting
10. Other

2 Water Quality Control Policy for Standardized Cost Reporting

2.1 Project Objective and Rationale

In 2020, the STORMS unit began preparing a proposed standardized cost reporting policy for estimating, tracking, and reporting MS4 permit implementation costs. The Draft Policy requires regional water boards to incorporate standardized cost reporting into their MS4 permits, thereby requiring MS4 permittees to annually report stormwater program costs in a consistent manner statewide.

Implementation of a uniform method for cost reporting benefits MS4 permittees in multiple ways. Firstly, a standardized list of cost categories based on stakeholder input on the relevance of category-specific activities to permit requirements, will ensure that reported expenditures are directly related to permit compliance. Secondly, a statewide policy will provide guidance to permittees that do not currently conduct stormwater management program fiscal analyses. Thirdly, a consistent cost reporting format will facilitate cost comparisons for different stormwater BMPs utilized by various permittees statewide. This information is important to reliably estimate cost for low-impact development (LID) technologies. These cost data can inform stormwater BMP selection and can help to quantify the financial resources spent for runoff capture or pollutant load removal for BMP type and catchment area. Finally, accurate cost accounting and reporting will help permittees explore additional funding sources to finance their stormwater programs. Detailed cost data, in a statewide standardized format, will increase the reliability of stormwater management program cost estimates. Improved cost estimates will inform municipal and local jurisdictional needs for additional funding pathways, including stormwater fees.

A statewide policy for uniform cost reporting will assist regional water boards as they consider costs of new permit requirements. A standardized list of cost categories along with a breakdown of costs for different program elements allows regional water boards to evaluate costs associated with different permit elements for improving receiving water quality. The Draft Policy will also serve as a benchmark when evaluating permit implementation costs reported by various permittees.

2.2 Project Approach

STORMS staff conducted the following steps to develop a standardized cost reporting method:

1. Reviewed current MS4 permits to identify and compare reporting requirements set by various regional water boards across the state.
2. Reviewed a set of selected (Table 1) annual reports, submitted by permittees from each region, to identify and compare existing cost categories.

3. Prepared a draft list of standardized categories for reporting costs of MS4 permit implementation to share with stakeholders, and revised the draft list based on the input received.
4. Selected several permittees (Table 2) to perform case studies to validate the proposed cost categories and to understand reporting methods currently used by permittees.
5. Developed a crosswalk table to transform existing reporting methods to the proposed methodology.
6. Developed a survey-based tool for permittees to report standardized MS4 permit implementation costs.

2.3 Issues Considered

Staff considered multiple issues when developing the proposed Draft Policy. This section summarizes the issues and options considered.

2.3.1 Is ongoing expenditure data collection from all permittees necessary?

During initial outreach to interested parties, MS4 permittees expressed concerns about the Project's scope and objectives, specifically regarding development of a statewide cost-reporting format without considering variability in municipality size, accounting systems, geography, and stormwater program objectives. Many permittees suggested that cost estimates from every permittee in California is not needed. Considering these concerns, staff evaluated three alternative project approaches, which are discussed below.

- **Option 1: Develop standardized cost reporting for all MS4 permittees (original scope).** Staff would review existing MS4 permits and annual reports to identify a list of categories that permittees would use to report their costs associated with permit implementation.
 - **Pros:**
 - Standard cost categories and reporting format provides clear distinction between spending directly related to permit implementation and other municipal spending.
 - A standard format enables Regional Boards to analyze submitted data to inform future permits, including cost-benefit considerations for various components of the permit.
 - Standardized data makes it easier to develop a statewide cost of permit implementation database which may inform legislative and policy discussions. For example, historical data for true cost of permit implementation may be used in evaluating the financial capability of MS4 permittees.
 - **Cons:**
 - Due to the variability in permit requirements across the state, developing a standardized cost reporting methodology requires broad categorization of municipal spending. As a result, cost data reported by permittees may have some uncertainties.

- Permittees may need to initially expend additional resources to change their accounting systems or to develop tools to organize costs to fit into required categories.
- **Option 2: Estimate cost of permit implementation through case studies.** Staff would work with permittees willing to share their MS4 permit implementation cost data. Staff would evaluate the datasets to estimate actual cost of MS4 permit implementation for these permittees. The scope of such case studies would include identifying and ranking common cost categories, distinguishing between municipal expenditure directly related to MS4 permit implementation and other municipal spending, and developing a cost evaluation guidance document. Case study participants would be chosen to represent small, medium, and large municipalities from various regions of the state.
 - **Pros:**
 - Would allow for more granular data collection to closely inspect municipal spending related to stormwater programs.
 - Project would be completed in a short period of time.
 - Case studies enable an estimation of a range of implementation costs without putting the burden on the permittees to change their cost tracking and accounting methods.
 - **Cons:**
 - Case studies provide data for a small snapshot of time and do not allow for a long-term evaluation of costs which may vary significantly from year to year.
 - Does not allow for evaluation of the cost of new permit requirements or general cost increases compared to rates of inflation.
 - Scope does not include standardized cost categories or reporting format and there would be no future cost tracking method or standards for the permittees.
 - Due to different permit requirements, extrapolating case study findings from one region to another may not be practical and would be time consuming.
- **Option 3: Hybrid approach.** The project would be broken down into two distinct phases: case studies and standardized cost reporting policy. The final deliverable for the case study phase would be a report detailing existing cost categories used by different case study participants. The report would also document potential barriers to the implementation of a statewide cost reporting method, which would then inform the second phase of the project: development of the standardized cost reporting policy.
 - **Pros:**
 - Case studies provide an opportunity for the State Board to understand cost accounting and reporting methods used by various permittees. Such information could assist with evaluating the

feasibility of implementing a standardized cost reporting format statewide.

- **Cons:**
 - Similar to the case study approach, the case studies will provide data for a small snapshot of time but do not allow for a long-term evaluation of costs which may vary significantly from year to year.
 - Requires extended time and efforts to accomplish project objectives and includes an unnecessary step. Staff can review existing data from permittees without developing a separate case study report.

Staff recommends Option 1. Although this option requires an initial investment from permittees, this option meets the project objectives discussed in Section 2.1 and will allow for ongoing evaluation of permit costs from all MS4 permittees.

2.3.2 Which permittees should be required to report expenditures?

During project development, Phase II MS4 permittees expressed concerns about the scope and objectives specific to the smaller nature of the Phase II permittees' stormwater programs. As smaller municipalities with limited resources, some Phase II permittees do not currently have robust data collection and reporting systems in place to accommodate the proposed cost reporting standardization effort. Existing annual reporting requirements for Phase II permittees do not include any fiscal analysis or documentation of expenditures related to permit implementation. Often Phase II permittees integrate their stormwater management tasks into other municipal operational and departmental activities. Some Phase II permittees do not have a full-time stormwater manager but share staff between departments. Phase II permittees suggested that a requirement for itemizing permit implementation costs would create a significant burden in terms of necessary personnel and financial resources. Establishing a detailed, itemized cost reporting requirement for Phase II permittees would be a paradigm shift for smaller municipalities regarding how they account for their staff time and budget, and financial projection.

Considering these concerns, staff evaluated three project approaches, discussed below.

- **Option 1: Require all MS4 permittees to report in a standardized format appropriate for the MS4 size.** This option would allow for the development of different reporting categories for Phase I and Phase II permittees.
 - **Pros:**
 - Standard cost categories and reporting format would help the State and Regional Water Boards obtain reliable data on spending by both Phase I and Phase II permittees for complying with existing permits.
 - A standard format enables the Water Boards to analyze submitted data to inform future permits, including cost evaluations for various components of the permit.

- Standardized spending data would help Phase II permittees seek and secure funding sources to fund their stormwater programs.
 - The nature of the Phase II permit (one statewide general permit) allows for a simple breakdown of costs based on permit sections.
 - **Cons:**
 - It will be a significant shift for some Phase II permittees regarding how they manage, spend, and account for financial resources for permit implementation.
 - New reporting requirements may initially be resource-intensive for permittees as they develop systems to track and categorize costs.
- **Option 2: Exclude only non-traditional Phase II MS4s from reporting requirements.** Non-traditional Phase II MS4s include facilities such as parks, ports, transportation facilities, prisons, and hospitals.
 - **Pros:**
 - Data is still obtained from most permittees.
 - Stormwater management systems at many non-traditional facilities do not require separate stormwater departments and cost data is difficult to parse out from the general operations and maintenance of the facility itself.
 - Non-traditional Phase II permittees' expenditures vary widely depending on the type of facility. It is not clear that there is utility in collecting this data.
 - **Cons:**
 - A cost analysis of permit elements related to non-traditional permittees would not be available.
- **Option 3: Develop cost categories for Phase II permittees but make tracking and annual reporting optional.** The Phase II standardized cost categories would be a set of recommended best practices that permittees can utilize voluntarily to track their cost internally.
 - **Pros:**
 - Offers a cost reporting guidance that Phase II permittees can voluntarily use for transparent cost tracking as they seek funding for their stormwater programs.
 - **Cons:**
 - Statewide municipal spending data for Phase II permittees would be very limited.
- **Option 4: Exclude all Phase II permittees from reporting requirements.** Standardization for Phase II permittees could be implemented at a later date through future reissuances of the statewide Phase II MS4 permit.
 - **Pros:**

- Relieves Phase II permittees from spending additional resources on cost evaluation.
- Allows opportunities to learn from implementing standardization efforts for Phase I MS4 permittees which could inform similar processes for Phase II permittees at a later date.
- **Cons:**
 - Statewide municipal spending data for Phase II permittees would not be available.

Staff recommends Option 2. This option meets the project objectives discussed in Section 2.1 and will allow for evaluation of permit costs for most municipal stormwater permittees.

2.3.3 How should traditional Phase II permittees categorize costs related to permit implementation?

During project development, staff evaluated options related to the differences in cost categories for Phase I and traditional Phase II MS4 permittees.

- **Option 1: Require Phase II permittees to report using the same cost categories as Phase I permittees.**
 - **Pros:**
 - Allows for direct comparisons between Phase I and Phase II permit elements.
 - Some Phase I MS4 permittees are similar in size to traditional Phase II permittees but have elected to join in a regional Phase I permit. This option would allow for data comparisons between these “small” Phase I permittees and traditional Phase II permittees.
 - **Cons:**
 - The statewide Phase II MS4 Permit does not currently include cost reporting requirements and Phase II permittees often have limited program implementation resources compared to Phase I permittees. Individual program staff in small municipalities regularly perform multiple stormwater-related tasks that are often divided up among departments in larger municipalities. These challenges make it difficult for small permittees to report a detailed breakdown of their expenditures.
- **Option 2: Require traditional Phase II permittees to report using the same cost categories as Phase I permittees and develop criteria which would allow certain permittees to request approval from their regional water boards to use a simplified cost reporting structure.** Criteria would include but not be limited to population and/or average annual stormwater budget.

- **Pros:**
 - Flexible to address the predicted difficulties of small permittees.
 - Currently there are some traditional Phase II permittees that have grown beyond the population cutoff of 100,000 but are still covered by the Phase II permit. Additionally, some small municipalities under a population of 100,000 are included in regional Phase I permits. This option would require the larger traditional Phase II permittees to submit expenditure data in the same manner as Phase I permittees, while also potentially allowing smaller Phase I permittees to use a simplified reporting structure.
- **Cons:**
 - Smaller Phase I permittees are already reporting expenditure data as required in their current permits and do not need a simplified reporting structure.
 - This would likely result in a large amount of traditional Phase II permittees submitting requests to their respective regional water boards, which would require the regional water boards to devote resources to reviewing these requests.
- **Option 3: Develop a simplified cost reporting structure for all traditional Phase II permittees.** Traditional Phase II permittees would have the option to report expenditures using the Phase I cost reporting structure if they would like to develop a more detailed understanding of their expenditures and/or to more clearly present cost data to justify stormwater funding measures.
 - **Pros:**
 - Allows small permittees to report permit expenditures in a simplified manner.
 - Some small permittees may choose to report expenditures using Phase I cost reporting structure.
 - Avoids the necessity (and potential delays) of regional water boards having to review individual requests.
 - **Cons:**
 - Detailed data from larger Phase II permittees (who may have large stormwater departments) would be limited.

Staff recommends Option 3 and have developed a simplified cost reporting structure for Phase II permittees.

2.4 Racial Equity Considerations

On November 16, 2021, the State Water Board adopted Resolution No. 2021-0050, Condemning Racism, Xenophobia, Bigotry, and Racial Injustice and Strengthening Commitment to Racial Equity, Diversity, Inclusion, Access, and Anti-Racism (Racial

Equity Resolution) accepting responsibility to confront structural and institutional racism and advance racial equity. The Racial Equity Resolution reaffirms the Water Boards' commitment to the protection of public health and beneficial uses of waterbodies in all communities, and particularly Black, Indigenous, and people of color communities (BIPOC) disproportionately burdened by environmental pollution including through: cleanup of contaminated soil, soil vapor and groundwater; control of wastes discharged to land and surface water; restoration of impaired surface waters and degraded aquifers; and promotion of multi-benefit water quality projects to increase access to parks, open spaces, greenways, and other green infrastructure. It directs staff to improve relationships with people in BIPOC communities with the goal of centering our work and decision-making on BIPOC who are disproportionately represented in the most vulnerable communities and ensuring staff apply a racial equity lens to their work to ensure equitable outcomes for BIPOC communities.

Staff considered potential impacts of the proposed Policy to those in BIPOC communities and determined that data transparency is an essential part of racial equity as it can be used to elucidate potential inequities and environmental justice issues. This proposed Policy is aligned with the Water Boards' commitment to open data and data transparency consistent with Resolution No. 2018-0032 Adopting Principles of Open Data as a Core Value and Directing Programs and Activities to Implement Strategic Actions to Improve Data Accessibility and Associated Innovation, and could be used to further the Water Board's work in the Racial Equity Action Plan. The data collected from the implementation of this proposed Policy will be publicly available, which will improve community access to data and increase data transparency. It can also be used to track progress towards equity.

There is a need to improve data collection and the granularity of the data to be able to conduct analyses and track progress towards equitable outcomes. Disadvantaged and BIPOC community footprints do not match those of MS4 boundaries, and do not have their own stormwater management programs. Using census data, staff developed a list of small MS4 permittees that are primarily non-white, which could be used to identify BIPOC communities within municipalities. Staff intend to create a map to identifying MS4 permittees that include BIPOC and disadvantaged communities. Geospatial demographic data can be used by municipalities and the Water Boards in conjunction with the data collected in this proposed Policy to identify opportunities for efficiencies and cost savings in municipal stormwater management for communities as well as identify and address environmental justice issues.

2.5 Tribal Engagement Considerations

California Native American Tribes (Tribes) tribal lands generally fall under the jurisdiction of federal National Pollutant Discharge Elimination System (NPDES) permits with oversight from US EPA and as such the proposed Draft Policy does not apply to those communities' permit implementation efforts. Formal Tribal consultation (often referred to as AB52 and as described in Appendix G of the California Environmental

Quality Act [CEQA]) was not conducted, since the activity of adopting the Draft Policy to establish standardized cost reporting categories in NPDES MS4 Permits and require Permittees to report standardized costs is not a project within the meaning of CEQA (see Section 6.0 for additional details). However, there may be concerns about MS4 permit implementation as it relates to waterbodies of significance to Tribes and Indigenous communities. Staff will continue to coordinate with the regional water boards staff to conduct outreach and provide opportunities for Tribal input following the release of the Draft Policy. Outreach and engagement opportunities are also expected to continue throughout the Beta Testing period.

Table 1: List of Annual Reports Reviewed from various regions spanning three state fiscal years.

Permittee	Region	Fiscal Year 2019-20	Fiscal Year 2018-19	Fiscal Year 2017-18
County of Sonoma	1	x	x	X
City of Sebastopol	1	x	x	-
City of Santa Rosa	1	x	x	X
City of Rohnert Park	1	x	-	-
City of Cloverdale	1	x	x	-
Town of Windsor	1	x	x	-
Alameda County Flood Control District	2	x	x	-
City of Berkeley	2	x	x	-
City of Pleasanton	2	x	x	-
City of Salinas	3	x	x	-
Alamitos Bay/Los Cerritos Watershed Group	4	x	x	-
LA County Flood Control District	4	x	x	X
City of Stockton and County of San Joaquin	5	x	x	X
City of Bakersfield and County of Kern	5	x	x	-
Fresno Flood Control District	5	x	-	-
City of South Lake Tahoe	6	x	x	-
County of El Dorado	6	x	x	-
County of Placer	6	x	x	-
Whitewater River Watershed Permittee Group	7	x	-	-
San Bernardino County Flood Control District and Co- permittees	8	x	-	-
City of Lake Forest	8	x	-	-
City of Laguna Hills	8	x	-	-
South Orange County	8	x	x	X
County of San Diego	9	x	x	X
City of Santee	9	x	-	-
City of San Diego	9	x	x	-

Table 2: Permittees selected for case studies to prepare a crosswalk table.

Permittee	Region
City of Santa Rosa	1
Santa Clara Valley Urban Runoff Pollution Prevention Program	2
City/County Association of Govts of San Mateo County	2
City of Salinas	3
Los Angeles County Flood Control District	4
Orange County Public Works	8
City of San Diego	9

3 Existing Cost Reporting Requirements in MS4 Permits

This section summarizes the cost reporting, cost breakdown, and fiscal analysis requirements in existing Phase I MS4 permits issued by the regional water boards.

3.1 North Coast Region (Region 1):

The North Coast Regional Phase I MS4 permit ([Order R1-2015-0030](#)) regulates stormwater discharges from the City of Santa Rosa, portions of unincorporated County of Sonoma, Sonoma County Water Agency, the City of Cotati, the City of Cloverdale, the City of Healdsburg, the City of Rohnert Park, the City of Sebastopol, the City of Ukiah, and the Town of Windsor. The existing regional permit requires each co-permittee to submit a fiscal analysis in their annual report that documents capital costs, operational costs, and maintenance costs necessary for permit compliance. The permit requires that permittees report expenditures under the following minimum four categories: 1) Street Sweeping, 2) Monitoring, 3) Annual Reporting, and 4) Trash Management.

3.2 San Francisco Bay Region (Region 2):

The San Francisco Bay Regional Board Phase I MS4 permit ([Order R2-2022-0018](#)) regulates the stormwater discharges from the counties of Alameda, Contra Costa, San Mateo, and Santa Clara and from the cities located in the aforementioned counties. The permit also regulates stormwater discharges from the City of Fairfield, Suisun City, the City of Vallejo, and the Vallejo Sanitary District. The permit requires permittees to submit a fiscal analysis of the capital costs, operational costs, and maintenance costs necessary for permit compliance. Required cost reporting categories and types of cost are listed in the 3:

Table 3: Cost reporting categories and cost breakdown for the San Francisco Bay Region

Cost Reporting Category/Program Areas	Cost Breakdown
<ol style="list-style-type: none"> 1. Program management 2. Municipal operations 3. New development and redevelopment 4. Industrial and commercial site controls 5. Illicit discharge detection and elimination 6. Construction site controls 7. Public information and outreach 8. Water quality monitoring 9. Pesticides toxicity control 10. Trash load reduction 11. Mercury controls 12. PCBs controls 13. Copper controls 14. Bacteria controls 15. Discharges associated with unsheltered homeless populations 16. Asset management plan development and implementation 	<ol style="list-style-type: none"> 1. Total Cost 2. Capital expenditures 3. Land Costs 4. Personnel costs 5. Consultant costs 6. Overhead costs 7. Construction Costs 8. Operation and maintenance Costs 9. Other costs

3.3 Central Coast Region (Region 3):

NPDES permit ([Order R3-2019-0073](#)) regulates the discharge of stormwater from the City of Salinas which is the only Phase I MS4 in the Central Coast Region.

The permit contains a fiscal analysis section which describes what cost categories the City of Salinas shall use when reporting the costs of permit implementation. The primary cost categories and requested information for each category are listed in 4. The permit specifies unique subcategories for certain primary cost reporting categories such as the pollutant load reduction and planning and land development cost reporting categories. Permit specified subcategories are listed under the primary categories in Table 4.

Table 4: Cost reporting categories and cost breakdown for the Central Coast Region

Cost Reporting Category/Program Areas		Cost Breakdown	
1)	Stormwater program management (Overhead)	1.	Description of costs
2)	Pollutant load reduction plan	2.	Total cost
a)	Plan development, including cost of reasonable assurance analysis.	3.	Funding source and limitation
b)	Implementation (green street projects, regional projects, and restoration projects)	4.	Capital expenditures (other than for land)
3)	Trash reduction implementation plan	5.	Land costs
4)	Asset management program development and implementation	6.	Personnel costs
5)	Minimum control measures	7.	Number and classifications of personnel
a)	Public education/involvement	8.	Cost of consultants
b)	Industrial and commercial facilities program	9.	Overhead costs
c)	Planning and land development program	10.	Construction costs
i)	post construction stormwater management in new development and redevelopment	11.	Operations and maintenance costs
ii)	environmental review		
iii)	development project approval and verification		
iv)	permitting, licensing, and enforcement		
d)	Construction and construction site runoff oversight		
e)	Municipal maintenance		
f)	Illicit connections and discharge		
g)	Additional institutional best management practices (BMPs)		
6)	Monitoring		
a)	Information management and reporting costs		

3.4 Los Angeles Region (Region 4):

The Los Angeles Regional Board developed a regional permit ([Order R4-2021-0105](#)) to replace three previous individual permits: The Los Angeles County permit (Order No. R4-2012-0175-A01), the Ventura County permit (Order R4-2010-0108), and the City of Long Beach permit (Order No. R4-2014-0024-A01). The regional permit regulates MS4 discharges from 99 permittees. The regional permit requires permittees to submit annual fiscal analyses for permit implementation costs. The annual reporting form

(Attachment H in the regional permit) prescribes the following cost reporting categories (5):

Table 5: Cost reporting categories and cost breakdown for the Los Angeles Region

Cost Reporting Category	Cost Breakdown
<ul style="list-style-type: none"> 1) Program management 2) NPDES MS4 permit fees. 3) Minimum control measures (MCM) <ul style="list-style-type: none"> a) Planning and land development programs b) Construction programs c) Public agency activities programs d) Illicit discharges detection and elimination program e) Public information and participation program f) Industrial/commercial facilities program g) Additional institutional BMPs/Enhanced MCMs 4) TMDL implementation plan/Watershed management program development 5) Projects <ul style="list-style-type: none"> a) Distributed projects and green street b) Regional projects c) Other structural BMPs 6) Trash Compliance <ul style="list-style-type: none"> a) Trash TMDLs b) Discharge prohibitions- trash 7) Monitoring <ul style="list-style-type: none"> a) Monitoring plan development b) Outfall and receiving water quality monitoring c) BMP effectiveness monitoring d) Regional studies e) Special studies 8) Other 	<ul style="list-style-type: none"> 1. Capital expenditures 2. Land costs 3. Personnel costs 4. Consultant cost 5. Overhead cost 6. Construction cost 7. Permits, operations and maintenance costs 8. Total expenditure for the reporting year 9. Program budget for the upcoming year

3.5 Central Valley Region (Region 5):

The Central Valley Regional Water Board adopted a region-wide MS4 Permit ([Order R5-2016-0040](#)) that regulates MS4 discharges from 21 permittees in East Contra Costa County, Sacramento County, San Joaquin County, Fresno County, Kern County, and the City of Modesto. The permit requires permittees to perform and submit a fiscal analysis of stormwater program implementation costs within their annual reports.

Additionally, the permit mandates permittees document funding sources that were used or are proposed to cover necessary MS4 program expenditures, including any legal restrictions on the use of such funds. Permittees from this region can select either of the following two approaches to comply with the permit: 1) Pollutant Prioritization Requirements; and 2) Prescriptive Requirements. Regardless of their permit implementation approach, the permittees are required to report expenditures for the following cost reporting categories:

1. Illegal connection and illicit discharge elimination program
2. Construction stormwater runoff control program
3. Industrial/commercial storm water runoff control program
4. Municipal operations stormwater runoff control program (pollution prevention/good housekeeping)
5. Public involvement and participation program
6. Planning and land development/post construction stormwater management program

3.6 Lahontan Region (Region 6):

The Lahontan Regional Board has one MS4 permit ([Order R6T-2017-0010](#)) for three MS4 permittees: The City of Lake Tahoe, El Dorado County, and Placer County. The permit requires each permittee to perform a fiscal analysis of their stormwater management program, including program development and implementation and development and implementation of a Pollutant Load Reduction Plan. Permittees are required to report operations and maintenance costs for their stormwater programs and to describe the source(s) of funding that are proposed to cover necessary MS4 program expenditures, including any legal restrictions associated with those funds.

3.7 Colorado River Basin Region (Region 7):

The Colorado River Basin Regional Board has one Phase I MS4 permit ([Order R7-2013-0011](#)) for the Whitewater River Watershed that regulates stormwater discharges from the following permittees: Riverside County Flood Control and Water Conservation District, Riverside County, Coachella Valley Water District, Cities of Desert Hot Springs, Palm Desert, Banning, Indian Wells, Palm Springs, Cathedral City, Indio, Rancho Mirage, and La Quinta. This permit does not contain any fiscal analysis reporting requirements.

3.8 Santa Ana Region (Region 8):

The Santa Ana Regional Board regulates stormwater discharges through three different Phase I MS4 permits. The Orange County permit ([Order R8-2009-0030](#)) covers: Orange County, Orange County Flood Control District, and the Incorporated Cities of Orange County within the Santa Ana region. The Riverside County permit ([Order R8-2010-0033](#)) regulates stormwater discharges in Riverside County, and the San Bernardino County permit ([Order R8-2010-0036](#)) covers stormwater discharges in San Bernardino County.

All three permits require permittees to perform and submit a stormwater program fiscal analysis that includes the following minimum components: 1) Each permittee's expenditures for the previous fiscal year, 2) Each permittee's budget for the current fiscal year, 3) A description of the source of funds, and 4) Each permittee's estimated budget for the next fiscal year. The Riverside County permit also requires permittees to report fiscal developments that may impact the necessary funding for MS4 Permittee program compliance to meet required implementation schedules.

The San Bernardino County Permit contains two broad implementation cost categories:

1. "Shared costs which may include expenditures primarily by the Principal Permittee for overall stormwater program coordination; Regional Board/State Board meetings and other public forums; preparation and submittal of compliance reports and other reports required under the NPDES permits, responding to Water Code Section 13267 requests, budget and other program documentation; coordination of consultant studies, co-permittee meetings, and training seminars; and
2. Individual costs incurred by co-permittees for implementing pre-existing programs that complement the programs required under MS4 permits. Such programs include (but are not limited to) street sweeping, hazardous waste collection and recycling, and storm drain and other municipal facilities maintenance. In addition to these costs, Riverside County Permit distinguishes costs related to drainage area management plan (DAMP) implementation. These are individual costs incurred by each permittee for implementing the BMPs (drainage facility inspections for Illicit Connections, drain inlet/catch basin stenciling, public education, etc.) included in the DAMP."

3.9 San Diego Region (Region 9):

The San Diego Regional Board's Phase I MS4 permit ([Order R9-2013-0001, as amended by Order No. R9-2015-0001 and Order R9-2015-0100](#)) covers 39 co-permittees located in San Diego County, southern Orange County, and southwestern Riverside County. The regional permit requires each co-permittee to perform and submit an annual fiscal analysis of its jurisdictional runoff management program which include the following cost reporting categories:

1. "Identification of the various categories of expenditures necessary to implement the requirements of this Order, including a description of the specific capital, operation and maintenance, and other expenditure items to be accounted for in each category of expenditures;
2. The staff resources needed and allocated to meet the requirements of this Order, including any development, implementation, and enforcement activities required;
3. The estimated expenditures for items (1) and (2) (see above) for the current fiscal year; and
4. The source(s) of funds that are proposed to meet the necessary expenditures described in items (1) and (2), including legal restrictions on the use of such funds, for the current fiscal year and next fiscal year."

4 Cost Categories Currently Reported or Tracked by Permittees

Permittees from six of the regional water boards—North Coast, Central Coast, Los Angeles, Central Valley, Santa Ana, San Diego—report annual stormwater program implementation expenditures with detailed cost categories and cost breakdowns. Although certain permittees in the Lahontan Region conduct fiscal analyses, the reports lack details about the costs incurred for different program elements. Categories used by permittees for reporting annual expenditures vary between regional water boards and within regions. These differences can be attributed to the variability in permit requirements and the level of specificity of existing permit cost reporting requirements.

Permittees from the Central Coast and Los Angeles Regions uniformly follow guidelines provided in their permits when conducting annual fiscal analysis and reporting of permit implementation-related expenditures. However, permittees from the North Coast, Central Valley, Santa Ana, and San Diego regions use a wide range of categories that vary based on the specific stormwater program or watershed management group. The following sections detail the various categories used by permittees in these regions for MS4 permit implementation cost reporting.

4.1 North Coast Region (Region 1):

The Region 1 Phase I MS4 permit specifies four minimum cost reporting categories, but most of the co-permittees submit a more detailed breakdown of their permit implementation costs. Table 6 shows the reported cost categories from the annual reports submitted over the last 3 years.

Table 6: Cost reporting categories in annual reports by permittees in the North Coast Region

Cost Category	Sonoma County	Rohnert Park	City of Santa Rosa	City of Cloverdale
Program management effectiveness evaluation	x	-	-	-
Private construction	x	-	-	-
Industrial commercial sources	x	-	-	-
Municipal operations	x	-	-	-
Illicit discharge detection and elimination	x			x
Public education and outreach	x		x	-
Standard urban storm water mitigation plan	x	-	-	-

Cost Category	Sonoma County	Rohnert Park	City of Santa Rosa	City of Cloverdale
Monitoring	X	X		X
Permit fee	X	-	-	-
Street sweeping	-	X	-	-
Annual reporting	-	X	-	-
Trash management		X		
Stormwater quality testing	-		X	-
Stormwater maps, hydraulics and surveys	-	-	X	-
Stormwater system operations and maintenance	-	-	X	-
Stormwater discharge permit	-	-	X	-
Stormwater program administration	-	-	X	-
Creek stewardship	-	-	X	-
Stormwater management flood protection projects	-	-	X	-
Storm drain system flood protection maintenance	-	-	X	-
Development planning program	-	-	-	X
Development construction program	-	-	-	X
Construction inspection activities	-	-	-	X
Industrial/commercial Inspection Activities	-	-	-	X
Public agency activities	-	-	-	X
Public Information and Participation Program	-	-	-	X
Miscellaneous expenditure	-	-	-	X

4.2 Central Coast Region (Region 3):

The City of Salinas is the only permittee in the Central Coast Region that has developed a cost accounting tool to more accurately estimate, track, and report permit implementation costs. The categories used in the 2020 annual report are shown in 7:

Table 7: Cost reporting categories in annual reports by the permittee in the Central Coast Region

Categories Suggested in Permit (Section J)	
1.	Stormwater program management (Overhead)
2.	Pollutant Load Reduction Plan
3.	Trash Reduction Implementation Plan
4.	Asset management program development and implementation
5.	Minimum control measures
1.	Public education/involvement
2.	Industrial and commercial facilities program
3.	Planning and land development program
4.	Construction and construction site runoff oversight
5.	Municipal maintenance
6.	Illicit connections and discharge
7.	Additional institutional BMPs
6.	Monitoring
7.	Information Management and Reporting costs

4.3 Central Valley Region (Region 5):

There are two distinct sets of cost categories in annual reports submitted by region 5 permittees (8). The cost categories for the City of Bakersfield are completely different from the categories reported by Fresno County and Stockton. However, Fresno County and the City of Stockton report similar cost categories that exclude two MCMs (public involvement/participation and public education/outreach). Fresno County only reports costs associated with public involvement/participation, but the City of Stockton reports costs associated with public education/outreach. Both categories are listed in 40 CFR § 122.34 as separate MCMs.

Table 8: Cost reporting categories in annual reports by permittees in the Central Valley Region

Cost Category	City of Bakersfield	Fresno County	City of Stockton
Maintenance of structural controls	X	-	-
New development/redevelopment	X	-	-
Road operation and maintenance	X	-	-
Flood management projects	X	-	-
Controls for landfills	X	-	-
Controls for pesticides	X	-	-
Illicit discharge controls	X	-	-
Spill prevention	X	-	-
Illegal dumping controls	X	-	-
Leaking sanitary controls	X	-	-
Inspection and control measures	X	-	-
Industrial monitoring	X	-	-
Site planning procedures	X	-	-
Structural and non-structural BMPs	X	-	-
Education/Training for construction site operators	X	-	-
Estimates of loads and event mean concentrations	X	-	-
Monitoring and NPDES program administration	X	-	-
Program management	-	X	X
Construction		X	X
Industrial/commercial	-	X	X
Municipal operations	-	X	X
Illicit connections/discharges	-	X	X
Public involvement/education	-	X	
Planning/land development	-	X	X
Public outreach	-		X
Water quality monitoring	-	X	X
Water quality-based programs	-	X	X
Program implementation, assessment, and reporting	-		X

4.4 Santa Ana Region (Region 8):

Fiscal analyses submitted by Orange County permittees in the Santa Ana Region include consistent cost reporting categories (9) that primarily focus on distinguishing between capital costs and operation and maintenance costs for structural BMPs.

Riverside County permittees use a different set of categories than Orange County permittees (10). Permittees from San Bernardino County report their annual costs for program implementation but their annual reports do not provide any cost breakdown.

Table 9: Cost reporting categories in annual reports by Orange County permittees

Cost Category	Cost Type	Subcategories
Public projects-BMPs	Capital costs	N/A
Construction BMPs for public construction projects		N/A
Other capital projects/Major equipment purchase		N/A
Program administration	Operation and maintenance costs	N/A
Municipal activities		*Trash and debris control *Drainage facilities maintenance *Street sweeping *Environmental performance *Pesticide and fertilizer management
Public Information		N/A
New development BMPs		N/A
Construction BMPs		N/A
Existing development		Industrial/Commercial/Homeowners association Inspections
Illicit connections/Discharge identification and elimination		N/A
Agency contribution to regional programs		N/A
Household hazardous waste		N/A
Others		N/A

Table 10: Cost reporting categories in annual reports by Riverside County permittees

Cost Category	Sub-categories
Staffing	Benefit allocation; NPDES permit administration; Public education and outreach; Training program; Water quality monitoring; Illegal connections /Illicit discharge program; TMDL; LID facility
Overhead/Emergency efforts	Admin support and data processing & reporting
Consultant services	NPDES permit administration; Public education & outreach; Training program; Water quality monitoring; TMDL; LID Facility; District permit compliance; Miscellaneous watershed protection project work; NPDES public education
Other MS4 program expenses	County counsel/legal services; Vehicle usage; Public education sponsorships & outreach materials; Water quality monitoring; and District permit compliance
Regional programs & memberships	California Stormwater Quality Association (CASQA), The Lake Elsinore and San Jacinto Watersheds Authority (LESJWA), regional water quality monitoring, Southern California Stormwater Monitoring Council (SMC)

4.5 San Diego Region (Region 9):

Permittees in the San Diego Region report permit implementation costs in three broad categories: 1) Jurisdictional runoff management cost component; 2) Watershed management program/TMDL collaboration related cost; and 3) Regional cost sharing. However, the City of San Diego and some cities in the San Diego Watershed Management Area deviate slightly from those three cost reporting categories (Table 11).

Table 11: Cost reporting categories in annual reports by permittees in the San Diego Region

Cost Categories	City of San Diego	San Diego County	City of Santee
Jurisdictional Components			
Administration	x	x	-
Development Planning	x	x	-
Construction	x	x	-
Municipal		x	-
Industrial and commercial	x	x	-
Residential	-	x	-
Illicit discharge detection and elimination	-	x	-
Education/Public participation	-	x	-
Special investigations	-	x	-
Municipal (including non-emergency firefighting expenditures)	x	x	-
Non-emergency fire fighting			-
Stormwater division capital improvements program (CIP)	x	x	-
Residential, education, and public participation	x	x	-
Watershed Component	-		-
Watershed-1	-	x	-
Watershed-2	-	x	-
Regional Component	-		-

Cost Categories	City of San Diego	San Diego County	City of Santee
Annual permit fee to regional board	-	X	-
Co-permittee cost share of regional budget	-	X	-
Additional regional costs for education efforts, monitoring, document reviews, regional meeting attendance, and special projects	-	X	-
Permit fee	-	-	X
Development services	-	-	X
Public services	-	-	X
Dog station maintenance	-	-	X
Street sweeping	-	-	X
Storm drain and channel maintenance	-	-	X
Specialized equipment	-	-	X
Waste disposal (volunteer river cleanups)	-	-	X
Legal expenses	-	-	X
Miscellaneous expenses (supplies, printing, postage, apparel, rainy season sandbags, etc.)	-	-	X
Monitoring			X
Inspection services contract	-	-	X
Professional development	-	-	X
Regional programs total (Santee Share)	-	-	X

5 Proposed Standardized Cost Reporting Categories for MS4 Permits

5.1 Methodology and Criteria

STORMS staff reviewed the ORPP [2020 guidance document's](#) suggested cost reporting categories when developing the proposed cost reporting categories presented in Sections 5.2-5.3. Staff also reviewed the program elements in all Phase I MS4 permits and existing cost reporting categories in annual reports submitted by permittees. Staff then met with permittees to discuss their current tracking and reporting processes for MS4 permit implementation costs. Reviewing permits, reviewing annual reports, and meeting with permittees helped to identify permit-required activities and to develop cost reporting categories to capture those activities. The proposed cost reporting categories will capture activities common to all permits (e.g., program administration, minimum control measures, and water quality monitoring), and activities that are region-specific. Staff developed the proposed cost reporting categories, informed by feedback from regional water board staff and stakeholders, to satisfy the following criteria:

- Expenditures in each cost category shall be directly related to permit requirements.
- Categories shall be inclusive of diverse permit implementation activities in all nine regions.
- Activity lists shall be included for each category for reliable accounting.
- Transitioning from existing categories must be a simple process.

5.2 Proposed Cost Reporting Categories for Implementing Phase I MS4 Permits

Table 12 includes the proposed categories for permittees to report the costs of implementing Phase I MS4 permits, descriptions for each category, and example activities.

Table 12: Proposed standardized cost reporting categories for Phase I MS4 Permittees

Category Name	Description	Example Activities or Expenditure
1. Overall Program Management and Administration	Permit compliance administration and management activities, reporting, general coordination.	<ul style="list-style-type: none"> - stormwater management plan development - stormwater program budget planning and management - asset management - report preparation and submission, including annual reports - GIS mapping and database updates - staff training - overall program effectiveness assessments - coordination with program stakeholders, including regional water boards and State Water Board
2. Public Education, Outreach, Involvement and Participation	Outreach and educational activities that inform members of the public about stormwater and potential impacts to water bodies.	<ul style="list-style-type: none"> - public service announcements, signage, promotional and informational materials, advertisements, and event management to encourage behavioral change for purposes of source reduction - establishing and maintaining partnerships with other agencies that facilitate educational and outreach

Category Name	Description	Example Activities or Expenditure
		<p>activities, including non-governmental organizations</p> <ul style="list-style-type: none"> - applicable state, tribal, and local stormwater-related public notice requirements - activities to engage community members from all economic, ethnic, and cultural backgrounds through citizen panels, citizen watch groups, or other community programs - <i>Note: Costs associated with preparing documents and arranging public meetings related to California Environmental Quality Act (CEQA) compliance <u>should not be included</u> under this category. Such costs should be included into permit issuance costs under respective categories</i>
3. Illicit Discharge Detection and Elimination (IDDE) and Spill Response	Efforts necessary to identify, investigate, and eliminate illicit discharges.	<ul style="list-style-type: none"> - IDDE plan development - spill response to address potential unintended discharges to the MS4 - mobile business source control efforts - education and outreach activities related to IDDE - IDDE enforcement actions

Category Name	Description	Example Activities or Expenditure
4. Planning and Land Development	<ul style="list-style-type: none"> - Planning, reviewing, and implementation of post-construction best management practices (BMPs) for (private and public) new development and redevelopment projects - Stormwater management projects, including structural BMPs 	<ul style="list-style-type: none"> - Inspection and enforcement of post-construction BMPs - Structural BMP design, planning, and construction (except for trash control BMPs) - developing related standards and specifications for mitigation of water quality impacts from land development projects - developing and maintaining tracking systems to monitor and enforce implementation of mandated activities <p><i>Note: For projects with multi-benefits or co-benefits, the primary function or purpose of the project should be considered when selecting appropriate project categories.</i></p>
5. Industrial and Commercial Facilities	Permit-required inspection, outreach, and municipal oversight of existing industrial and commercial facilities.	<ul style="list-style-type: none"> - developing an inventory of industrial and commercial facilities and prioritizing the facilities in terms of threat to water quality - permit issuance - compliance assistance programs to businesses - routine inspections of prioritized facilities and progressive enforcement

Category Name	Description	Example Activities or Expenditure
6. Construction Site Management	Implementation of permit- required activities to minimize the impact of construction site runoff to receiving waters.	<ul style="list-style-type: none"> - stormwater pollution prevention plan (SWPPP) or erosion and sediment control plan review and plan check construction permit issuance, inspection, and enforcement
7. Municipal Operations and Maintenance	Planning and implementation of pollution prevention programs to address runoff resulting from operation and maintenance of permittee-owned or operated facilities and activities.	<ul style="list-style-type: none"> - integrated pest management programs (IPM) - parks and recreational area stormwater management - stormwater systems operation and maintenance - parking facilities maintenance - Corporation yards maintenance - emergency procedures related to fire, drought or other threats to stormwater systems <p><i>Note: Expenditures related to a new development or redevelopment, even if the project is administered by the permittee, should be reported under Planning and Land Development or Industrial and Commercial Program category (as applicable). Any expenditure related to trash control should be reported under the Trash Management category. Expenditures related to spill response should be reported under the IDDE and Spill Response category.</i></p>

Category Name	Description	Example Activities or Expenditure
8. Trash Management	Activities designed and performed to comply with trash provisions, including trash control activities that are required by the permit and routinely performed as a part of municipal maintenance.	<ul style="list-style-type: none"> - trash assessment and mapping - planning, development, and implementation of a trash total maximum daily load (TMDL) - full capture device installation and maintenance - partial capture and other institutional controls such as street sweeping and on-land trash cleanups - inspection and monitoring - Enforcement - reporting, development, and maintenance of electronic databases related to trash management
9. Water Quality Monitoring	All permit-required water quality monitoring activities. Can be broken down into subcategories such as receiving water monitoring, outfall monitoring, BMP effectiveness monitoring, and facility-specific monitoring.	<ul style="list-style-type: none"> - mobilization for sampling - sample collection and transport - laboratory analyses - data analyses and compilation - quality assurance and quality control (QA/QC) - Reporting <p><i>Note: If some monitoring activities are performed as a part of the regional monitoring program, costs shared by the specific permittee should be reported</i></p>
10. Special Programs	Keeping a diverse approach to stormwater management in California in mind, this category is intended to obtain cost information about various	permit required TMDL implementation, including monitoring

Category Name	Description	Example Activities or Expenditure
	region-specific MS4 program elements.	<ul style="list-style-type: none"> - Los Angeles Regional Water Board's watershed management programs - San Francisco Regional Water Board's permit-required control programs for pesticides, mercury, PCBs, copper, bacteria, and discharges associated with people experiencing homelessness.
11. Miscellaneous Costs	Anything not identified or directly related to the categories.	<ul style="list-style-type: none"> - permit fees - membership fees for stormwater related organizations and regional partnerships

Within each category, costs are broken down into the following line items:

- a. Staffing/personnel cost (staff wages, salaries, benefits)
- b. Capital expenditures (excluding land costs)
- c. Land costs (capital expenditures for land or right-of-way easement acquisition)
- d. Consultants (private consultants hired by the permittees to perform activities under any specific cost category)
- e. Construction cost (infrastructure cost/investment not reported under capital expenditure or land costs)
- f. Operation and maintenance (permit-required day to day operation and maintenance activities under a specific cost category)
- g. Overhead (indirect costs directly related to permit implementation; refer to section 5.5 for details related to best accounting practices)

When a line item is not applicable to a cost category, the line-item cost should be reported as zero. All expenditures reported under any of the categories or subcategories must be directly related to permit implementation costs. In addition to cost reporting, permittees must describe funding sources for MS4 permit implementation activities.

Costs should be further itemized under the subcategories shown in Table 13:

Table 13: Proposed cost reporting subcategories for Phase I MS4 Permittees.

Category Name	Sub-categories
1. Overall Program Management and Administration	a. Asset management b. Reporting c. Program effectiveness assessment d. Other
2. Public Education, Outreach, Involvement and Participation	-
3. Illicit Discharge Detection and Elimination (IDDE) and Spill Response	a. IDDE b. Spill Response
4. Planning and Land Development	a. Post-construction BMPs for new or redevelopment projects b. New structural BMP projects (with total stormwater related budget higher than \$200,000) c. Others
5. Industrial and Commercial Facilities	-
6. Construction Site Management	-
7. Municipal Operations and Maintenance	a. Integrated pest management (IPM) program b. Emergency program c. Others
8. Trash Management	a. Full capture device installation and maintenance b. Street sweeping c. Others
9. Water Quality Monitoring	a. Receiving water monitoring b. Outfall monitoring c. BMP monitoring d. Others
10. Special Programs	a. TMDL implementation and monitoring b. Discharge associated with people experiencing homelessness c. Others
11. Miscellaneous Costs	-

To supplement cost information for stormwater BMPs (reported under 4b in the Table 13), Phase I MS4 Permittees should report construction costs for following structural stormwater BMPs upon completion of a project: Bioretention; Constructed Wetland; Dry Pond; Dry Well; Infiltration Basin; Infiltration Trench; Media Filters; Pervious Pavement; Vegetated Swale; and Wet Pond. Construction cost should be submitted with relevant

project details, including location (both address and Global Positioning System coordinates), BMP type, BMP surface area, volumetric loading rate, and drainage area.

5.3 Proposed Cost Categories for Implementing the Phase II MS4 Permit

The State Water Board reissued the Phase II MS4 General Permit in 2013 to regulate stormwater discharges from small municipalities with populations at or below 100,000. Since adopting the Phase II MS4 permit, the State Water Board has added five amendments. Permittees submit annual reports detailing various aspects of the programs, but the current permit does not require permittees to submit fiscal analysis or document expenditures towards permit implementation.

Categories, category descriptions, and example activities for the traditional Phase II MS4 Permittees are shown in Table 14. No standardized cost reporting method is proposed for non-traditional Phase II MS4 permittees at this time.

Table 14: Proposed standardized cost reporting categories for traditional Phase II MS4 Permittees.

Category Name	Description	Example Activities or Expenditure
1. Overall Program Management and Administration	Permit compliance administration and management activities, reporting, general coordination.	<ul style="list-style-type: none"> - stormwater management plan development - stormwater program budget planning and management - asset management - annual report preparation and submission - GIS mapping and database updates - staff training - overall program effectiveness assessments - coordination with program stakeholders, including regional water boards and State Water Board
2. Capital Cost	Development of new structural stormwater control measures or other tangible assets required to comply with the permit.	<ul style="list-style-type: none"> - equipment procured for permit-mandated activities - costs related to storm sewer systems - costs for structural BMP implementation projects - land cost - piping cost - excavation, clearing and grubbing cost

Category Name	Description	Example Activities or Expenditure
3. Minimum Control Measures	Permit-required routine operational and maintenance activities, including minimum control measures implementation.	<ul style="list-style-type: none"> - non-structural best management practices - public engagement and outreach - illicit discharge detection and elimination - spill prevention and response - structural BMP maintenance - industrial and commercial facilities management - construction site management - post construction stormwater management - trash management - other special programs triggered by the MS4 permit
4. Water Quality Monitoring	All permit-required water quality monitoring activities.	<ul style="list-style-type: none"> - receiving water monitoring - TMDL monitoring - ASBS monitoring - stormwater BMP monitoring - outfall monitoring
5. Miscellaneous cost	Anything not identified or directly related to the categories.	<ul style="list-style-type: none"> - permit fees - membership fees for stormwater related organizations and regional partnerships - TMDL implementation activities (excluding TMDL monitoring costs)

Within each category, costs are broken down into the following line items:

- a. Personnel costs (staff wages, salaries, benefits)
- b. Equipment costs (equipment procurement expenditure to carry out permit-required activities)
- c. Land costs (capital expenditures for land or right-of-way easement acquisition)
- d. Consultants (private consultants hired by the permittees to perform activities under any specific cost category)
- e. Material costs
- f. Overhead (indirect costs directly related to permit implementation)

When a line item is not applicable to a cost category, the line-item cost should be reported as zero.

5.4 Reporting Tool

Staff are working with the Division of Information Technology (DIT) at the State Water Board to develop a “Cost of Municipal Stormwater Permit Implementation Portal” with a “Survey Wizard” (survey tool) that permittees must complete each year. The cost categories in the survey will mirror the proposed policy categories. Only numerical responses will be required from stormwater permittees. At the end of the survey, a file (.pdf) would be generated which permittees would then download and attach with their annual report. Raw data in a machine-readable format will be available for regional water boards and the State Water Board to review.

Details of the reporting tool will be available upon adoption of the standardized cost reporting requirements and staff plan to provide training sessions to brief permittees on the best practices for submitting cost of stormwater permit implementation information.

5.5 Best Practices for Cost Accounting and Reporting

Many activities in municipal operations serve multiple purposes in addition to the protection of stormwater quality. For example, when municipal staff review general plans and specifications for a new or re-development project, only a fraction of that time may be spent specifically on stormwater runoff management aspects. Similarly, building inspection, critical source inspection, or environmental crime policing overlap multiple objectives including stormwater management. It is often impractical to precisely track staff time, mileage, and equipment costs related to MS4 programs for overlapping activities. Such accounting challenges can be attributed to implementing multiple charge codes to track one single activity, as well as communication at an unreasonable

frequency to get the exact hours from other departments implementing MS4 activities. Under such circumstances, permittees may report an estimated percentage (informed by feedback from staff performing such activities with multiple purposes) to attribute a fraction of these costs for such activities to MS4 expenditures. Similarly, best professional judgement should be used when estimating personnel costs for staff who are assigned job responsibilities beyond stormwater permit implementation.

There are some routine activities that are part of municipal operations that permittees may perform regularly, e.g., street sweeping and storm drain cleaning; and these activities are also required in many MS4 permits. For such activities, permittees may include the entire cost of the activity to the MS4 program regardless of the routine nature. However, if any of these activities are performed at an increased frequency than required by a permit, permittees must report costs for only the permit-required frequency. In addition, if permittees report street sweeping costs, additional information regarding the street sweeping program will be required. Such information may include but not be limited to area swept, type of sweepers, and volume of debris collected.

Large capital costs and cost recovery may require additional tracking and reporting. For example, if a permittee recovers some permit implementation costs (e.g., plan check or permit issuance fees) through fees charged to private developers, they will need to specify what costs were recovered in the survey tool. Additionally, if a permittee invests in equipment or other large capital improvement projects that will only be fractionally used for MS4 permit related activities, then only a percentage of the total cost reflecting the portion of the investment that will be used toward MS4 permit implementation should be reported. However, if the entire capital investment will be used for permit implementation activities, the entire cost should be attributed to the stormwater program costs under the appropriate category in the survey tool. For large equipment purchases, permittees will be asked to provide additional information such as the useful life of the equipment so that the lump sum equipment purchase can be annualized.

To ensure accurate cost accounting, permittees must not report costs for the same activity under multiple categories. If a permit-required activity overlaps multiple categories, the permittee should use their best professional judgement to choose a single representative cost category. For example, storm drain mapping may be included in Overall Program Management and Administration, or Municipal Operation and Maintenance category, but not both. If it is unclear which category to report a permit implementation activity cost under, permittees should reach out to their respective regional water board for clarification.

5.6 Implementation Plan

The standardized cost reporting requirements are intended to be adopted by the State Water Board as a stand-alone State Policy for Water Quality Control. Because the Water Quality Control Policies are not self-implementing, the water boards will need to amend or reissue Phase I MS4 permits and the Phase II MS4 permit to incorporate the new cost information reporting requirements. If the regional water boards choose to amend their permits during a regular permit renewal period, the State Board will consider a Water Code section 13383 Order to require reporting until renewal.

6 Analysis of Potential Adverse Environmental Effects

The State Water Board must comply with all applicable state and federal public participation requirements and state laws governing environmental and peer review when adopting a state policy for water quality control. To the extent that any approval of a policy constitutes a project within the meaning of the California Environmental Quality Act (CEQA) (Public Resources Code § 21000 et seq.), the State Water Board is lead agency and responsible for preparation of any necessary environmental documentation under CEQA. The California Secretary of Resources has certified the State Water Board's water quality planning process as exempt from certain CEQA requirements when adopting plans, policies, and guidelines, including preparation of an initial study, negative declaration, and environmental impact report. CEQA applies only to discretionary actions by a public agency that are defined as a "project" under CEQA. A project is defined as "the whole of an action which has the potential for resulting in either a direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment." (Pub. Res. Code § 21065; Cal. Code Regs., tit 14 § 15378(a).)

The activity of adopting the Draft Policy to establish standardized cost reporting categories in NPDES MS4 Permits and require Permittees to report standardized costs is not a project within the meaning of CEQA as the requirements established in the Draft Policy for Permittees do not have the potential either to result in a direct physical change to the environment or to result in a reasonably foreseeable indirect change to the environment. State Water Board regulations governing CEQA do not apply when the State Water Board determines that the activity is not subject to CEQA. (Cal. Code Regs., tit. 23, § 3720, subd. (d).

7 Beta Testing for the Proposed Standardized Cost Reporting Method

7.1 Beta Testing Process

STORMS staff is conducting beta testing of the “survey wizard” tool and the cost reporting categories prior to consideration of adoption of the proposed standardized cost reporting requirements as a state water quality control policy. The purpose of beta testing is to assess the applicability of the survey tool and the cost reporting categories to the participant municipalities. Beta testing also allows agencies participating to identify whether categories and subcategories require further development. The beta testing period will be six months and success of the beta testing program is highly dependent on the extent of participation from MS4 permittees.

Table 15: Phase I & II MS4 permittees participating in the beta test listed by region.

Permittee	Region	Permittee Type
City of Santa Rosa	1	Phase I
City of Sonoma	1	Phase II
City of Trinidad	1	Phase II
Town of Windsor	1	Phase I
Los Angeles County Flood Control District	4	Phase I
City of Monrovia	4	Phase I
City of Stockton	5	Phase I
City of Indio	7	Phase I
Fresno Metropolitan Flood Control District	5	Phase I
Orange County Public Works	8	Phase I
City of San Diego	9	Phase I

A total of 11 (nine Phase I and two Phase II) MS4 Permittees are participating in the beta test (**Table 15**). Beta test participants will itemize their permit implementation expenditures under the proposed cost reporting categories and subcategories using the survey tool. STORMS staff is working with permittees to ensure each permit-required activity will be captured by the proposed cost reporting categories. Participants assigned a point of contact who is coordinating between different municipal departments to get regular updates on the cost of permit implementation. At the end of the beta testing period, the participants will respond to a follow-up survey related to the ease, challenges, and limitations of using the proposed categories and survey tool for tracking and reporting the costs of implementing MS4 permits.

7.2 Beta Testing Results

The primary (expected) outcome of the beta testing period is to learn about the challenges permittees face while using the proposed cost reporting categories and survey tool to track and report municipal expenditure for implementing MS4 permits. Based on the permittees feedback, STORMS staff will further refine the categories,

provide additional explanation, and develop a “Frequently Asked Questions (FAQ)” section that will accompany the Draft Policy for water quality control.

A summary of the beta testing results will be available in December 2023. This document (Staff Report) will be updated to share the lessons learned from the beta test and how participants’ feedback informed the Draft Policy.

8 Use of Standardized Cost Data

Standardized MS4 cost data, collected statewide and contained in a single repository, informs the water boards' regulatory development process and allows permittees to make program management decisions. Some additional benefits of the statewide cost reporting data are:

- facilitating more accurate estimates of the true cost of MS4 permit compliance and a standardized accounting of the specific costs associated with permit elements.
- Informing reliable estimates for construction, and operation and maintenance costs for stormwater BMP implementation.
- Providing a tool for permittees to present cost data to justify stormwater funding measures.
- Assisting regional water boards with economic analyses of new permit requirements.
- Identifying and addressing environmental justice issues in stormwater management.

It should be noted that the permit implementation cost data will not be used as a surrogate for the level of compliance of activities a permittee performs. Cost data shall not be used to compare permittees' performance and assess the efficacy of their MS4 programs. Any comparisons between permittees would need to take local socio-economic conditions and challenges the different permittees face into account. Moreover, the level of financial resources necessary to comply with the permit or the funding limitations must not be used to justify lack of compliance by a permittee or as a rationale to request less stringent permit requirements.

Appendix A Crosswalk Table Example to Transition from Existing Cost Reporting Categories to Standardized Categories

Category Name	Comparable Existing Categories	Permittee
<p>1. Overall Program Management and Administration</p>	<p>Administration; Stormwater Division Capital Improvement Program</p> <p>Interagency & Interdepartmental Coordination; NPDES MS4 Permit Implementation; Regulation/Policy review; Standard Urban Stormwater Mitigation Plan; NPDES MS4 Annual Report Preparation</p> <p>Information Management and Program Assessment; Asset Management Fiscal Analysis and Cost Reporting Annual Reporting Management Activities</p> <p>Program Management; Annual Report; External Organization Meeting; Regulatory Program Tracking; Review & Reporting; Information/Data Management, Website & Reporting</p> <p>New Program Development; Program Effectiveness Studies</p> <p>Program Administration</p>	<p>City of San Diego</p> <p>City of Santa Rosa</p> <p>City of Salinas</p> <p>Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP)</p> <p>Orange County Public Works (OCPW)</p> <p>City/County Association of Govts of San Mateo County (San Mateo CAG)</p>
<p>2. Public Education, Outreach, Involvement and Participation</p>	<p>Residential, Education, and Public Participation</p>	<p>City of San Diego</p>

Category Name	Comparable Existing Categories	Permittee
	<p>Outreach – Development; Events, Education, Presentations; Volunteer Coordination & Activities</p> <p>Public Information and Participation</p>	<p>City of Santa Rosa</p> <p>Los Angeles County Flood Control District (LAFCD); SCVURPPP; San Mateo CAG</p>
<p>3. Illicit Discharge Detection and Elimination (IDDE) and Spill Response</p>	<p>Illicit Discharge Detection and Elimination</p> <p>Illicit Connections and Illicit Discharges Program</p> <p>Spills</p>	<p>City of San Diego; City of Salinas; SCVURPPP</p> <p>LAFCD; OCPW</p> <p>City of Santa Rosa</p>
<p>4. Planning and Land Development</p>	<p>Development Planning</p> <p>Existing Development; New Development/Significant Redevelopment</p> <p>Planning and Land Development Program</p> <p>Pollutant Load Reduction Plan</p> <p>New Development</p>	<p>City of San Diego</p> <p>OCPW</p> <p>LAFCD</p> <p>City of Salinas</p> <p>San Mateo CAG</p>
<p>5. Industrial and Commercial Facilities</p>	<p>Industrial and Commercial</p> <p>Industrial and Commercial Facilities Program</p>	<p>City of Salinas; City of San Diego; SCVURPPP</p> <p>LAFCD</p>
<p>6. Construction Site Management</p>	<p>BMPs, Retrofits, Facilities Constructed as a Component of Some Other Facility;</p>	<p>OCPW</p>

Category Name	Comparable Existing Categories	Permittee
	Cost for Water Quality BMPs Used During Construction Construction Site Management Construction Program	City of Salinas SCVURPPP; City of San Diego
7. Municipal Operations and Maintenance	Catch Basin Cleaning and Labeling; Storm Drain Maintenance; Channel Invert Cleaning; Sanitary Sewer Preventive Maintenance; Maintenance of Structural and Treatment Control BMPs; Parking Facilities Management Training Household Hazardous Waste Collection; Drainage Facility Maintenance; Facility Drain Maintenance Inspections (Fixed Facility and Field Programs) Other BMP Maintenance Pesticide & Fertilizer Management Municipal Operations Municipal Maintenance	LAFCD OCPW SCVURPP City of Salinas
8. Projects	Distributed Projects and Green Streets; Regional Projects; Restoration Projects	LAFCD
9. Trash Management	Facility Litter/Trash Control Parking Lot Sweeping; Trash and Debris Control; Street Sweeping Trash Management; Street Sweeping Trash Management	OCPW LAFCD City of Salinas

Category Name	Comparable Existing Categories	Permittee
	Trash Control	SCVURPPP
10. Water Quality Monitoring	Monitoring and Sampling Monitoring Regional Monitoring	City of Santa Rosa LAFCD, City of Salinas, SCVURPPP San Mateo CAG
11. Special Programs	Offset Program/Hydromodification Mercury Controls; PCBs Controls; Pesticides Controls	City of Santa Rosa SCVURPPP
12. Miscellaneous Costs	Total Co-permittee Cost Share for Regional Program; Regional Costs for education efforts, monitoring, document reviews, regional meeting attendance and Special Project Permit Renewal MS4 Permit Fees Legal/Collaborative Dues/Fiscal Agent Costs	City of San Diego San Mateo CAG LAFCD SCVURPPP

Appendix B List of Stakeholders Consulted to Inform Standardized Cost Categories Proposed in April 2022

Stakeholder	Types of Organization
City of Salinas	Phase I MS4
Orange County Public Works/CASQA	Phase I MS4
LA County Flood Control District	Phase I MS4
San Mateo Countywide Water Pollution Prevention Program	Phase I MS4
Orange County Public Works	Phase I MS4
City of San Diego	Phase I MS4
City of Santa Rosa	Phase I MS4
Santa Clara Valley Urban Runoff Pollution Prevention Program	Phase I MS4
City of Sacramento	Phase I MS4
Sacramento State University, Office of Water Programs	Academia
CASQA	Associations of Stormwater Professionals and Dischargers
CA Coastkeeper Alliance	Non-governmental Organization
LA Waterkeeper	Non-governmental Organization
CASQA Phase II Subcommittee	Traditional Phase II permittees
City of Yuba City	Phase II MS4
City of Monterey	Phase II MS4

Appendix C Snapshots of the MS4 Implementation Cost Survey Tool for Phase I and Phase II MS4 Permittees

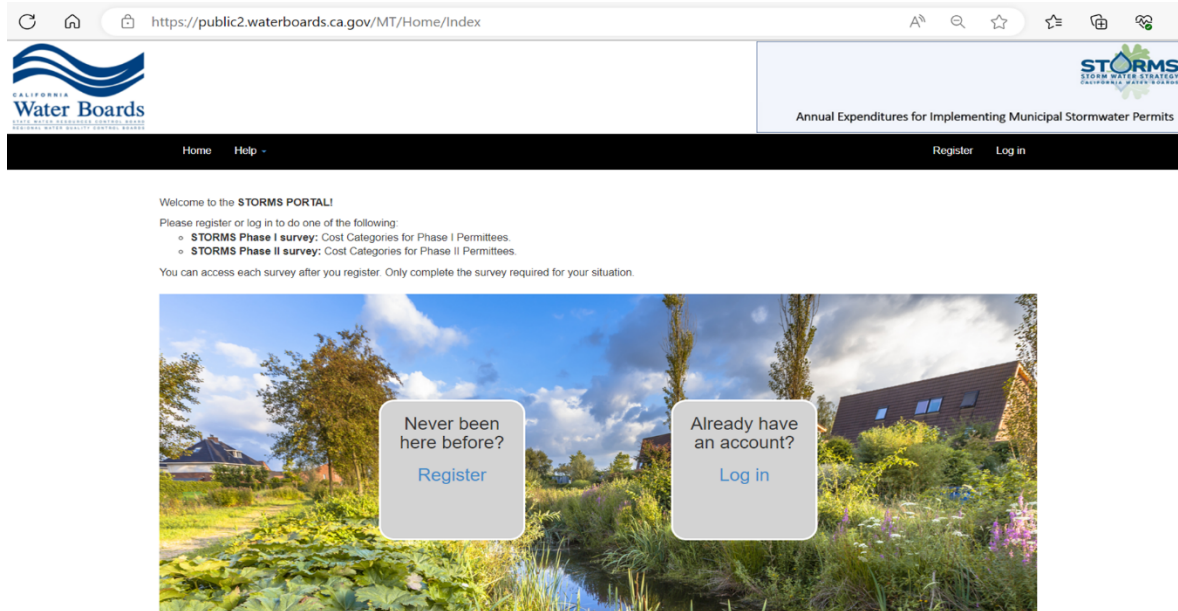


Figure A.1 Start Page for Phase I and Phase II MS4 cost submittal tool

1. Overall Program Management and Administration

Intro	1. Overall	2. Public	3. IDDE	4. Planning	5. Industrial	6. Construction	
	7. Municipal	8. Trash	9. WQM	10. Special	11. Misc.	12. Street Sweeping	13. BMP

1A Line Items

Line Item	Expenditure for last Fiscal Year	Have you recouped or plan to recoup any of the reported costs through a fee?	Amount Recouped
Personnel cost ?		<input type="checkbox"/>	
Capital Expenditures ?		<input type="checkbox"/>	
Have you reported costs associated with any large equipment (cost > \$5,000) purchase?		<input type="checkbox"/>	
Enter the amount for Equipment purchase cost			
Enter the Expected Useful Life for the Equipment			
Enter the Equipment Description			
Land Costs ?		<input type="checkbox"/>	
Consultant Cost ?		<input type="checkbox"/>	
Construction Cost ?		<input type="checkbox"/>	
Operation and Maintenance Cost ?		<input type="checkbox"/>	
Overhead Costs ?		<input type="checkbox"/>	
Total Expenditure			

1B Sub-Categories

Sub-Category	Expenditure for last Fiscal Year
Asset Management ?	
Reporting ?	
Program Effectiveness Assessment ?	
Other ?	
Total Expenditure	

Figure A.2 Line items under each standardized category for Phase I MS4. Category 1 (overall program management and administration) is shown as an example.

Intro

Intro	1. Overall stormwater program management and administration cost	2. Capital cost	3. Operation and maintenance cost	4. Water quality monitoring cost	5. Miscellaneous cost
	WDID	<input type="text"/>			
	Owner/Operator Name:	<input type="text"/>			
	Owner/Operator Street:	<input type="text"/>			
	Region:	<input type="text"/>			
	County:	<input type="text"/>			
	Population:	<input type="text"/>			
Pull SMARTS Information					
<input type="button" value="Close"/>					

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Figure A.3. Introduction page for Phase II MS4 cost submittal tool. Permittee specific information can be imported from SMARTS using WDIDs.

1. Overall Stormwater Program Management and Administration Cost

Intro	1. Overall stormwater program management and administration cost	2. Capital cost	3. Operation and maintenance cost	4. Water quality monitoring cost	5. Miscellaneous cost
Line Item	Expenditure for last Fiscal Year				
Personnel cost ?	<input type="text"/>				
Equipment cost ?	<input type="text"/>				
Land costs ?	<input type="text"/>				
Consultant Cost ?	<input type="text"/>				
Materials cost ?	<input type="text"/>				
Overhead Costs ?	<input type="text"/>				
Total Expenditure	<input type="text"/>				

Figure A.4 Line items under a standardized category for Phase II MS4. Category 1 (overall program management and administration) is shown as an example.