



Update: Cost Impact Analysis of MS4 Tentative Order for San Bernardino County

July 2026

Table of Contents

Executive Summary	3
Introduction	5
Federal MS4 Regulatory Framework	6
Numeric Limitations	7
Permit Revisions	7
Methodology	7
Results	9
Inspection Requirements	11
Permit Revisions	11
Methodology	12
Results	12
Trash Compliance	14
Permit Revisions	14
Methodology	15
Results	15
Development and Significant Re-Development	17
Permit Revisions	17
Methodology	17
Results	18
Implicit Costs: Fiscal Context	19
Illustrative Example: Estimated Fiscal Burden for the City of San Bernardino	19
Illustrative Example: Estimated Fiscal Burden for All Jurisdictions	21
Conclusion	24
About Beacon Economics	25

Executive Summary

In 2024, Beacon Economics estimated the costs that the proposed Santa Ana Regional Water Quality Control Board MS4 Tentative Order would impose on San Bernardino County Permittees. Following revisions to the proposed permit, San Bernardino County retained Beacon Economics to evaluate whether the redlined changes materially alter those cost estimates.

Overall, while the revised Tentative Order includes several modifications that improve implementation flexibility—particularly with respect to Green Streets provisions, Track 1 trash monitoring requirements, the definition of impervious surface, and certain transportation-related improvements—the principal cost drivers identified in the 2024 report remain largely unchanged. In particular, the proposed numeric limitations continue to represent the largest potential source of compliance costs. Other revisions generally affect implementation procedures, inspection requirements, and administrative obligations, but do not materially alter the overall conclusions of the original analysis.

Table ES-1. Summary of Updated Cost Estimates (2026 Dollars)

Permit Provision	Estimated Additional Compliance Cost
Numeric Limitations	\$10.69–\$10.88 billion
Industrial Inspections	\$2.05 million
Commercial Inspections	\$2.87 million
Food and Drinking Establishment Inspections	\$11.16 million
Trash Compliance	\$1.85 million
New Residential Development	Illustrative case study: approximately \$26,300 per home
Construction Site Inspections	Cost impact could not be reliably quantified based on available information

Note: Unless otherwise indicated, estimates represent cumulative 20-year compliance costs associated with the proposed Tentative Order.

To provide additional fiscal context, this update also compares the estimated implementation costs with existing municipal General Fund budgets. Using the City of San Bernardino as an illustrative example, estimated capital costs

are equivalent to approximately 296%–301% of the City's FY 2026 General Fund budget. Assuming capital expenditures are distributed evenly over a five-year implementation period, consistent with the methodology developed in the 2024 report, the combined annual burden of capital costs and one year of operations and maintenance (O&M) costs would be equivalent to approximately 66%–67% of the City's annual General Fund.

Across participating jurisdictions, the median agency in San Bernardino County would face an annualized implementation burden equivalent to approximately 84%–86% of its annual General Fund, illustrating the potential magnitude of the fiscal commitment associated with compliance.

Table E-S. Estimated Fiscal Burden Relative to FY 2026 General Fund Expenditures

Jurisdiction	Capital Cost (% of General Fund)	1-Year O&M (% of General Fund)	Annualized Capital (5 Years) + 1-Year O&M (% of General Fund)
City of Grand Terrace	963–981%	22.9–23.3%	215.6–219.4%
City of Highland	932–949%	22.2–22.6%	208.6–212.4%
City of Yucaipa	709–722%	16.9–17.2%	158.7–161.6%
City of Chino Hills	6978–710%	16.6–16.9%	156.2–159.0%
City of Loma Linda	489–498%	11.6–11.9%	109.5–111.4%
City of Rancho Cucamonga	482–490%	11.5–11.7%	107.8–109.8%
City of Fontana	436–444%	10.4–10.6%	97.6–99.4%
City of Upland	411–418%	9.8–10.0%	92.0–93.6%
City of Big Bear Lake	377–384%	9.0–9.1%	84.4–85.9%
City of Montclair	326–332%	7.8–7.9%	73.0–74.3%
City of Redlands	325–331%	7.7–7.9%	72.8–74.1%
City of Colton	312–318%	7.4–7.6%	69.8–71.1%
City of San Bernardino	296–301%	7.0–7.2%	66.2–67.4%
City of Chino	258–263%	6.1–6.3%	57.8–58.8%
City of Rialto	217–221%	5.15–5.25%	48.5–49.3%
City of Ontario	146–149%	3.47–3.54%	32.7–33.2%
County of San Bernardino	34.9–35.6%	0.83–0.85%	7.8–8.0%
Average	436–444%	10.4–10.6%	97.6–99.3%
Median	377–384%	9.0–9.1%	84.4–85.6%

Source: City of San Bernardino FY 2026 Budget; San Bernardino County Stormwater Program. Analysis by Beacon Economics.

Note: Ranges reflect the lower- and higher-end WMP implementation cost scenarios. The annualized column assumes capital expenditures are distributed evenly over a five-year implementation period, consistent with the methodology developed in the 2024 report.

Introduction

In 2024, Beacon Economics prepared a report estimating the costs associated with the proposed Regional Municipal Separate Storm Sewer System (MS4) Permit issued by the Santa Ana Regional Water Quality Control Board. That report evaluated the anticipated fiscal impacts of the draft permit requirements on San Bernardino County Permittees and identified several areas expected to result in substantial new costs, most notably compliance with the proposed numeric limitations.

Following the release of the 2024 report, the Santa Ana Water Board revised portions of the proposed permit and issued a redlined version reflecting changes to several of the requirements. San Bernardino County subsequently retained Beacon Economics to update its previous analysis and estimate how these revisions affect the projected costs to Permittees.

This memorandum serves as an update to the 2024 report and should be read in conjunction with that analysis. Rather than replicating the original report, this update focuses on those portions of the proposed permit that were revised and the extent to which those revisions alter the estimated costs. Particular attention is given to changes related to the numeric limitations, as well as revisions affecting inspection requirements, trash compliance, and Green Streets provisions.

Federal MS4 Regulatory Framework

Unlike traditional wastewater permits, which often rely on numeric effluent limitations, MS4s are governed by a different federal standard. The 1987 amendments to the Clean Water Act established a framework for regulating municipal and industrial stormwater discharges under the National Pollutant Discharge Elimination System (NPDES). The amendments require MS4 permittees to reduce the discharge of pollutants to the Maximum Extent Practicable (MEP) rather than achieve specified numeric pollutant concentrations. Congress intentionally did not define MEP, and EPA has historically implemented the standard through stormwater management programs consisting of best management practices (BMPs), inspections, maintenance activities, public education, and other pollutant control measures.¹

The proposed Tentative Order (TO), however, includes numeric limitations that may require permittees to implement measures comparable in scope and cost to Watershed Management Programs (WMPs) or Enhanced Watershed Management Programs (EWMPs). To the extent the proposed permit imposes stringent numeric limitations that effectively require implementation of WMP- or EWMP-level controls, it raises the question of whether the permit remains consistent with the statutory MEP framework established by Congress.

This question has taken on added significance following the U.S. Supreme Court's recent decision in *City and County of San Francisco v. EPA* (2025),² which emphasized that NPDES permit requirements must be consistent with the statutory framework established by Congress. Although the case involved a wastewater permit rather than an MS4 permit and did not address the MEP standard directly, it underscores the importance of evaluating permit requirements within the context of the governing statutory scheme. This report does not evaluate that legal question but instead estimates the potential costs associated with complying with the proposed permit requirements.

¹ https://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/phsii2012_5th/fs_final_sidenote.pdf

² https://www.supremecourt.gov/opinions/24pdf/23-753_f2bh.pdf

Numeric Limitations

Permit Revisions

The revisions to the proposed permit do not materially alter the numeric limitations from those analyzed in the 2024 report. Although the permit does not explicitly require Permittees to develop a WMP or EWMP, the numeric limitations remain sufficiently stringent that achieving compliance would likely require implementation of measures comparable in scope and cost to a WMP or EWMP. Accordingly, because the revised permit language does not materially change the numeric limitations, the methodology developed in the 2024 report remains appropriate for estimating compliance costs.

Methodology

Consistent with the methodology used in the 2024 report, this analysis relies on implementation costs from existing WMPs and EWMPs developed in Los Angeles County. These programs provide the closest available benchmark for estimating the costs that San Bernardino County Permittees would likely incur to achieve comparable levels of compliance. Estimated costs are scaled according to the relative size of the San Bernardino County study area.

Implementation costs are presented over a 20-year planning horizon, consistent with both the underlying WMP and EWMP reports and the methodology developed in our 2024 analysis. The Los Angeles Regional Water Quality Control Board recognizes 19 regional WMP/EWMP groups; however, comprehensive implementation cost information was publicly available for only 17 regional plans, which form the basis of this analysis.

The reported implementation costs include both capital expenditures and annual operations and maintenance (O&M) costs. Because the source plans were prepared over multiple years using different price assumptions, all costs were converted to constant 2026 dollars using the Personal Consumption Expenditures (PCE) price index. This adjustment ensures that implementation costs are comparable across all regional WMPs and EWMPs regardless of when the original plans were prepared.³

³ For reports that included inflation adjustments, costs were first converted to their original base-year values before being adjusted to constant 2026 dollars.

Several Los Angeles County regional WMPs and EWMPs reported implementation costs as lower- and higher-end estimates rather than single values. Rather than averaging these estimates, this analysis retains the reported ranges to preserve the uncertainty reflected in the underlying implementation plans.

Building on the methodology developed in the 2024 report, total implementation costs were first aggregated across the 17 regional WMPs and EWMPs for which comprehensive cost information was publicly available to produce lower- and higher-end cost estimates for Los Angeles County.⁴ The Los Angeles County implementation costs were expressed on a per-managed-acre basis and scaled to the managed acreage of the San Bernardino County study area. Managed acreage was selected as the scaling metric, as in the 2024 report, because implementation costs are largely driven by the geographic extent of the area requiring stormwater management improvements.

The Los Angeles County regional plans encompass approximately 989,656 managed acres, while the San Bernardino County study area includes approximately 343,990 managed acres, representing 34.8 percent of the Los Angeles County managed area. The Los Angeles County cost estimates were multiplied by this acreage ratio to estimate total 20-year implementation costs for the San Bernardino County study area.

The estimated study area costs were then allocated among participating San Bernardino County jurisdictions using the cost allocation methodology provided by the San Bernardino County Stormwater Program. Consistent with the Program's direction, Beacon Economics used the allocation framework associated with the FY 2026–27 Monitoring cost category as the basis for estimating each agency's share of potential WMP implementation costs under the Santa Ana Regional Water Quality Control Board's tentative MS4 permit order. Under this methodology, 95% of costs are allocated among the 17 participating permittees using a weighted formula consisting of (1) a 10% equal allocation distributed evenly across all participating permittees, (2) a 30% allocation based on each permittee's share of the total participating population, and (3) a 60% allocation based on each permittee's share of the total participating land area. The remaining 5% is allocated directly to the San Bernardino County Flood Control District. The resulting allocation percentages were applied to the estimated study area implementation costs to estimate each agency's share of capital and operations and maintenance (O&M) costs.

Capital costs and annual O&M costs were allocated proportionally according to each agency's estimated cost share. Twenty-year O&M costs were calculated by multiplying annual O&M expenditures by 20 years, and total 20-year implementation costs represent the sum of capital expenditures and cumulative O&M costs.

⁴ This analysis follows the methodology developed in the 2024 report but expands the dataset to include all 17 Los Angeles County regional WMPs and EWMPs for which comprehensive implementation cost information was publicly available.

Table 1. Estimated 20-Year Costs of Los Angeles County Regional WMPs and EWMPs (\$M)

Los Angeles County Regional WMP/EWMP Group	Capital (Low)	Capital (High)	Annual O&M (Low)	Annual O&M (High)	Total 20-Yr Cost (Low)	Total 20-Yr Cost (High)
Ballona Creek	\$3,638.33	\$3,638.33	\$103.85	\$103.85	\$5,715.28	\$5,715.28
Beach Cities	\$57.97	\$119.99	\$2.70	\$2.70	\$111.90	\$173.92
Dominguez Channel	\$1,686.62	\$1,686.62	\$19.36	\$19.36	\$2,073.80	\$2,073.80
East San Gabriel Valley	\$475.87	\$872.54	NR	NR	\$475.87	\$872.54
Upper Los Angeles River Reach 2	\$282.08	\$282.08	NR	NR	\$282.08	\$282.08
Los Cerritos Channel	\$447.60	\$447.60	NR	NR	\$447.60	\$447.60
Lower Los Angeles River	\$2.29	\$2.29	\$0.27	\$0.27	\$7.68	\$7.68
Lower San Gabriel River	\$45.84	\$87.63	NR	NR	\$45.84	\$87.63
Malibu Creek	\$259.93	\$259.93	\$4.97	\$4.97	\$359.37	\$359.37
Marina Del Rey	\$468.33	\$468.33	\$2.23	\$2.23	\$513.03	\$513.03
North Santa Monica Bay	\$43.41	\$43.41	\$1.45	\$1.45	\$72.40	\$72.40
Palos Verdes Peninsula Cities	\$120.22	\$172.99	\$1.79	\$2.03	\$156.02	\$213.60
Rio Hondo/San Gabriel River	\$1,914.44	\$1,914.44	\$26.29	\$26.29	\$2,440.24	\$2,440.24
Santa Monica Bay J2 & J3	\$866.55	\$866.55	\$3.83	\$3.83	\$943.07	\$943.07
Upper LA River	\$8,145.72	\$8,145.72	\$281.65	\$281.65	\$13,906.22	\$13,906.22
Upper San Gabriel River	\$1,528.55	\$1,528.55	\$52.90	\$52.90	\$2,589.44	\$2,589.44
Upper Santa Clara River	\$841.80	\$841.80	NR	NR	\$841.80	\$841.80
Total					\$30,981.66	\$31,539.72

Source: Los Angeles Regional Water Board; Analysis by Beacon Economics. (2026 dollars)

Table 2. Cost Scaling Assumptions for the San Bernardino County Study Area

Metric	Value
Los Angeles County MS4 Managed Area (Acres)	989,656
San Bernardino County Study Area (Acres)	343,990
San Bernardino-to-Los Angeles Land Ratio	34.80%
Estimated 20-Year Cost (Low \$)	10,690,724,754
Estimated 20-Year Cost (High \$)	10,882,951,500

Source: Los Angeles Regional Water Board; San Bernardino County Stormwater Program; Analysis by Beacon Economics. (2026 dollars)

Results

Applying the methodology described above yields estimated 20-year implementation costs of approximately \$10.69 billion under the lower-end scenario and \$10.88 billion under the higher-end scenario for the San Bernardino County study area.

Under the lower-end scenario, estimated implementation costs range from approximately \$141.0 million for the City of Big Bear Lake to \$1.88 billion for the unincorporated parts of the County of San Bernardino, while the higher-end scenario ranges from approximately \$143.5 million to \$1.92 billion. The City of San Bernardino, County of San

Bernardino, Fontana, Ontario, and Rancho Cucamonga account for the largest estimated implementation costs under both scenarios.

Table 3. San Bernardino County Lower-End Scenario: Estimated 20-Year Costs by Agency (\$M)

Agency	Cost Share	Capital	O&M (Annual)	O&M (20-Yr)	Total (20-Yr)
City of Big Bear Lake	1.32%	\$95.5	\$2.3	\$45.5	\$141.0
City of Chino	4.67%	\$338.4	\$8.1	\$161.1	\$499.5
City of Chino Hills	5.44%	\$393.7	\$9.4	\$187.4	\$581.0
City of Colton	3.07%	\$222.4	\$5.3	\$105.9	\$328.2
City of Fontana	8.98%	\$650.3	\$15.5	\$309.6	\$959.8
City of Grand Terrace	1.16%	\$83.9	\$2.0	\$39.9	\$123.8
City of Highland	3.32%	\$240.3	\$5.7	\$114.4	\$354.7
City of Loma Linda	1.93%	\$140.0	\$3.3	\$66.7	\$206.7
City of Montclair	1.81%	\$130.8	\$3.1	\$62.2	\$193.0
City of Ontario	9.01%	\$652.6	\$15.5	\$310.7	\$963.3
City of Rancho Cucamonga	8.12%	\$588.0	\$14.0	\$279.9	\$867.9
City of Redlands	5.37%	\$389.0	\$9.3	\$185.2	\$574.1
City of Rialto	4.93%	\$357.3	\$8.5	\$170.1	\$527.5
City of San Bernardino	10.34%	\$749.3	\$17.8	\$356.7	\$1,105.9
City of Upland	3.58%	\$259.2	\$6.2	\$123.4	\$382.5
City of Yucaipa	4.33%	\$313.4	\$7.5	\$149.2	\$462.5
County of San Bernardino	17.63%	\$1,276.7	\$30.4	\$607.8	\$1,884.5
SB County Flood	5.00%	\$362.1	\$8.6	\$172.4	\$534.5
Total	100.00%	\$7,243	\$172	\$3,448	\$10,691

Source: Los Angeles Regional Water Board; San Bernardino County Stormwater Program; Analysis by Beacon Economics. (2026 dollars)

Table 4. San Bernardino County Higher-End Scenario: Estimated 20-Year Costs by Agency (\$M)

Agency	Cost Share	Capital	O&M (Annual)	O&M (20-Yr)	Total (20-Yr)
City of Big Bear Lake	1.32%	\$97.2	\$2.3	\$46.3	\$143.5
City of Chino	4.67%	\$344.5	\$8.2	\$164.0	\$508.5
City of Chino Hills	5.44%	\$400.7	\$9.5	\$190.8	\$591.5
City of Colton	3.07%	\$226.4	\$5.4	\$107.8	\$334.1
City of Fontana	8.98%	\$662.0	\$15.8	\$315.1	\$977.1
City of Grand Terrace	1.16%	\$85.4	\$2.0	\$40.7	\$126.1
City of Highland	3.32%	\$244.6	\$5.8	\$116.5	\$361.1
City of Loma Linda	1.93%	\$142.5	\$3.4	\$67.9	\$210.4
City of Montclair	1.81%	\$133.1	\$3.2	\$63.4	\$196.5
City of Ontario	9.01%	\$664.4	\$15.8	\$316.3	\$980.6
City of Rancho Cucamonga	8.12%	\$598.6	\$14.2	\$285.0	\$883.6
City of Redlands	5.37%	\$396.0	\$9.4	\$188.5	\$584.5
City of Rialto	4.93%	\$363.8	\$8.7	\$173.2	\$536.9
City of San Bernardino	10.34%	\$762.7	\$18.2	\$363.1	\$1,125.8
City of Upland	3.58%	\$263.8	\$6.3	\$125.6	\$389.4
City of Yucaipa	4.33%	\$319.0	\$7.6	\$151.9	\$470.8
County of San Bernardino	17.63%	\$1,299.7	\$30.9	\$618.7	\$1,918.4
SB County Flood	5.00%	\$368.7	\$8.8	\$175.5	\$544.1
Total	100.00%	\$7,373	\$175	\$3,510	\$10,883

Inspection Requirements

Permit Revisions

The revisions to the proposed permit make several changes to the inspection requirements for industrial, commercial, and construction sites. Overall, however, the changes are relatively modest. Most of the revisions clarify the scope of existing inspection requirements rather than introducing new inspection obligations.

For industrial and commercial facilities, the revised permit now specifies that inspections apply only to facilities that discharge, or have the potential to discharge, pollutants to the MS4. The revised language also exempts Flood Control District Permittees from the industrial and commercial inspection requirements. In addition, commercial inspection requirements have been revised to apply only to fixed facilities, thereby excluding mobile businesses such as food trucks from the inspection program.

For construction sites, the revised permit modifies the acreage thresholds used to classify projects by priority. Specifically, the threshold for High Priority sites is reduced from 50 acres to 20 acres, while the threshold for Medium Priority sites is reduced from projects disturbing between 20 and 50 acres to projects disturbing between 5 and 20 acres. As a result, a larger number of construction projects may be subject to more frequent inspections.

The most notable revision relates to inspections of eating and drinking establishments. In the version of the proposed permit evaluated in the 2024 report, Permittees were required to inspect eating and drinking establishments annually. The revised permit instead provides that Permittees may cause annual inspections to occur on their behalf by another party, such as a health care agency or consultant. While the revised language appears to provide additional implementation flexibility, it is less prescriptive than the language evaluated in the 2024 report. Accordingly, the extent to which this revision affects implementation costs will depend on how Permittees ultimately satisfy this requirement.

Methodology

Because the revisions to the proposed permit do not materially alter the overall inspection framework, the methodology developed in the 2024 report remains appropriate for estimating inspection costs. The cost estimates presented in this update have been adjusted from 2024 to constant 2026 dollars and continue to rely on the facility inventories and inspection assumptions developed in the original analysis. Accordingly, the estimates should be interpreted as approximations of the revised permit requirements, as the number and composition of regulated facilities within the study area have likely changed since completion of the 2024 report.

Results

CONSTRUCTION SITE INSPECTIONS The revised permit modifies the criteria used to classify construction sites by priority. The acreage threshold for High Priority sites is reduced from 50 acres to 20 acres, increasing the number of projects subject to the more rigorous inspection schedule. Likewise, the threshold for Medium Priority sites is reduced from projects disturbing between 20 and 50 acres to projects disturbing between 5 and 20 acres.

These revisions may increase construction inspection costs by shifting a larger number of projects into higher-priority inspection categories. However, because historical information on the acreage distribution of construction sites is not available, the magnitude of this increase cannot be reliably quantified. Accordingly, consistent with the 2024 report, no quantitative estimate of the cost impact is presented.

INDUSTRIAL INSPECTIONS As in the 2024 report, the principal cost drivers remain (1) the increased inspection frequency for Low Priority industrial facilities and (2) the requirement that facilities covered under the Industrial General Permit be classified as High Priority and therefore subject to annual inspections.

Based on the methodology developed in the 2024 report and updated to constant 2026 dollars, increasing the inspection frequency for Low Priority industrial facilities is estimated to increase inspection costs by approximately \$46,644 annually, or approximately \$932,881 over a 20-year period, across San Bernardino County Permittees.

In addition, classifying Industrial General Permit facilities as High Priority is estimated to increase inspection costs by approximately \$55,950 annually, or approximately \$1.12 million over a 20-year period. This estimate assumes

that approximately 18.7 percent of Medium Priority industrial facilities are covered under the Industrial General Permit, consistent with the assumptions developed in the 2024 analysis.

Combined, these provisions are estimated to increase industrial inspection costs by approximately \$102,600 annually or **\$2.05 million** over a 20-year period (2026 dollars).

COMMERCIAL INSPECTIONS As in the 2024 report, the primary driver of increased commercial inspection costs remains the increased inspection frequency required for Low Priority commercial facilities.

The revised permit now explicitly limits commercial inspections to fixed facilities and clarifies that inspections apply only to facilities that discharge, or have the potential to discharge, pollutants to the MS4. In addition, Flood Control District Permittees are exempt from the commercial inspection requirements. These revisions are not expected to materially affect the cost estimates presented in this analysis. The 2024 analysis relied on U.S. Census Bureau establishment counts for commercial facilities and eating and drinking establishments, which did not include non-fixed facilities such as food trucks or other mobile businesses.

Consistent with the methodology developed in the 2024 report, this update assumes the same distribution of High-, Medium-, and Low-Priority commercial facilities used in the original analysis. Cost estimates have been updated from 2024 to constant 2026 dollars but do not reflect changes in the number or distribution of commercial facilities since the 2024 report was completed.

Based on these assumptions, increasing the inspection frequency for Low Priority commercial facilities is estimated to increase inspection costs by approximately \$143,634 annually, or approximately **\$2.87 million** over a 20-year period.

Food and Drinking Establishments

As in the 2024 report, the primary driver of increased inspection costs for food and drinking establishments is the requirement for annual inspections. The revisions to the proposed permit do not materially alter this requirement and therefore do not warrant a change in the methodology used to estimate costs.

Consistent with the 2024 analysis, this update assumes approximately 2,282 food and drinking establishments are located within the San Bernardino County study area. This estimate is based on U.S. Census Bureau establishment data and assumes that the number of establishments has remained unchanged since the original analysis. Cost estimates have been updated from 2024 to constant 2026 dollars.

Under these assumptions, annual inspections of food and drinking establishments are estimated to increase inspection costs by approximately \$558,083 annually, or approximately **\$11.16 million** over a 20-year period (2026 dollars).⁵

Trash Compliance

Permit Revisions

The revisions to the proposed permit do not materially change the overall requirement that Permittees achieve compliance through either Full Capture Systems (Track 1) or equivalent measures (Track 2). Permittees remain responsible for implementing and maintaining these measures within Priority Land Use Areas or approved Equivalent Alternate Land Use Areas.

The revised permit does, however, make several notable changes.

1. First, Permittees may now request approval from the Executive Officer to substitute one or more Priority Land Use Areas with alternate land use areas that generate equivalent or greater amounts of trash. To obtain approval, Permittees must demonstrate through empirical evidence (e.g., street sweeping records, catch basin cleanup records, mapping, or visual trash surveys) that the proposed substitute areas generate trash at rates equal to or greater than the Priority Land Use Areas being replaced. This revision provides additional flexibility in determining where trash control measures are implemented.
2. Second, the revised permit appears to eliminate the requirement for Track 1 Permittees to conduct ongoing trash monitoring that was included in the earlier draft permit. As a result, the direct monitoring costs estimated in the 2024 report are no longer expected to be incurred.
3. Third, the revised permit shortens the interim compliance milestone from four years to one year. Under the revised language, Permittees must install, operate, and maintain Full Capture Systems (Track 1) or equivalent measures (Track 2) for at least 50 percent of Priority Land Use Areas (and approved Equivalent

⁵ Consistent with the 2024 report, this analysis assumes a base inspection cost of \$250 per inspection. All inspection costs have been converted to constant 2026 dollars using the PCE, resulting in an equivalent inspection cost of approximately \$263 per inspection.

Alternate Land Use Areas) within one year of the permit's effective date. If a Permittee does not expect to meet this accelerated interim milestone, it must submit, within 90 days of the permit becoming effective, an alternative interim compliance schedule for approval by the Executive Officer.

The final compliance deadline remains December 2, 2030, by which Permittees must achieve compliance for all applicable Priority Land Use Areas, Designated Land Use Areas, and approved Equivalent Alternate Land Use Areas.

According to the San Bernardino County Flood Control District, shortening the interim milestone from four years to one year may present practical implementation challenges. Rather than implementing trash capture infrastructure in two distinct phases, agencies will likely find it more efficient to complete projects through a single coordinated construction effort. As a result, many Permittees may be unable to achieve exactly 50 percent implementation within the first year and instead may need to prepare and submit alternative interim compliance schedules for approval.

The revised one-year interim milestone also differs from the State's trash implementation framework, which establishes a final compliance deadline of December 2, 2030, but does not include a comparable requirement to achieve 50 percent implementation within one year. Although the removal of the Track 1 monitoring requirement is expected to reduce certain direct compliance costs, the accelerated implementation schedule may increase planning, coordination, and administrative burdens. These potential costs are highly dependent on how individual agencies choose to implement the revised requirements and therefore cannot be reliably quantified.

Methodology

The revisions to the proposed permit materially affect the methodology used to estimate trash compliance costs. The revised Tentative Order removes the requirement for Track 1 Permittees to conduct and report certain quantitative trash monitoring activities, including estimates of trash discharged from representative outfalls and receiving waters. Accordingly, the annual monitoring costs included in the 2024 analysis have been removed from the updated cost estimates.

Annual reporting requirements, however, remain in place. Track 1 Permittees must still prepare annual reports documenting the type and location of Full Capture Systems, inspection and maintenance activities, progress toward interim and final compliance milestones, and updated GIS information. Thus, this analysis continues to include annual reporting costs, while eliminating the separate annual monitoring costs estimated in the 2024 report.

The remaining cost estimates therefore consist of a one-time initial assessment and annual reporting costs. Both have been updated from 2024 to 2026 dollars using the Personal Consumption Expenditures (PCE) price index.

Potential costs associated with meeting the accelerated one-year interim implementation milestone are not estimated because they cannot be reliably quantified from the available information.

Results

The revised permit is expected to reduce the direct, quantifiable costs associated with trash compliance by eliminating the ongoing Track 1 monitoring requirement. Under the revised assumptions, the remaining estimated costs consist of the one-time initial assessment and annual reporting requirements.

Over a 20-year period, these activities are estimated to cost approximately \$115,900 per Permittee, or approximately **\$1.85 million** across all San Bernardino County Permittees (Table 5). These estimates do not include any additional costs that agencies may incur in meeting the accelerated interim implementation milestone, which could increase planning, coordination, or administrative expenditures but cannot be reliably estimated.

Table 5. Estimated Trash Compliance Costs

Task	Cost (\$2024)	Cost (\$2026)
One-time Initial assessment	\$30,000	\$31,603
Annual Monitoring	\$15,000	-
Annual Reporting	\$4,000	\$4,215
20-Year Total per Permittee	\$410,000	\$115,903
20-Year Total – All SB Permittees	\$6,560,000	\$1,854,448

Source: San Bernardino County Stormwater Program; Analysis by Beacon Economics. (2026 dollars)

Development and Significant Re-Development

Permit Revisions

The proposed Tentative Order also includes several revisions that appear to provide additional flexibility for transportation projects. Based on discussions with permittees and a review of the redline edits, revisions to the definition of impervious surface, the addition of guidance related to Green Streets, and new language recognizing certain Americans with Disabilities Act (ADA) accessibility requirements for curb ramps and similar infrastructure may reduce compliance challenges for roadway improvement projects. These revisions appear responsive to concerns raised by permittees regarding the practical implementation of post-construction requirements for transportation infrastructure.

While these revisions represent meaningful improvements in certain contexts, permittees indicated that challenges remain for many new development projects, particularly residential developments. For example, roadway widening associated with new developments may still trigger treatment control requirements unless projects can qualify for the additional flexibility provided through the Green Streets provisions. As a result, although the proposed revisions may alleviate some implementation concerns for public roadway projects, they may not substantially reduce compliance costs for many forms of private development.

Methodology

Consistent with the 2024 report, this update continues to use the residential subdivision case study to illustrate the potential impact of the proposed permit on development costs. The case study assumes a development consisting of 29 single-family homes constructed along an extended roadway corridor and relies on the same project design assumptions and estimated BMP costs developed in the original analysis.⁶ Because the revised Tentative Order modifies several provisions affecting roadway projects, including the addition of Green Streets guidance, this case study is retained as an illustrative example rather than a prediction of costs for all residential developments.

⁶ A development of 29 single homes spanning a land area of 40 feet by 3,620 feet (where each parcel is 125 feet) would currently require no BMPs in San Bernardino, whereas under the new TO it would require 29 BMPs.

Results

Under the assumptions developed in the 2024 report and expressed in constant 2026 dollars, the illustrative residential subdivision would incur approximately **\$764,000** in additional BMP construction and installation costs, or approximately **\$26,300 per home**, relative to the current permit.

These estimates reflect the incremental capital costs associated with installing the required BMPs and do not include future operations and maintenance costs, which may be borne through homeowners' associations or other long-term maintenance arrangements depending on the ownership and maintenance structure of the development.

However, discussions with San Bernardino County Flood Control District indicate that revisions to the proposed permit—including the addition of Green Streets guidance and other changes affecting roadway projects—may provide greater flexibility than the version of the Tentative Order evaluated in the 2024 report. As a result, the magnitude of these potential cost increases is less certain and will depend on how the revised provisions are ultimately interpreted and implemented for new development projects.

Accordingly, this case study should be viewed as an illustration of the potential order of magnitude of development costs rather than a prediction of the costs that would apply to all residential developments.

Implicit Costs: Fiscal Context

Implementation of the tentative MS4 permit could place substantial additional demands on local government budgets throughout San Bernardino County. To the extent that agencies are required to fund WMP implementation, they may face difficult budgetary tradeoffs, including increasing revenues, reducing expenditures in other program areas, delaying capital improvements, or pursuing a combination of these approaches. Such tradeoffs may be particularly challenging for agencies with limited fiscal flexibility or existing budget constraints.

Illustrative Example: Estimated Fiscal Burden for the City of San Bernardino

To illustrate the magnitude of the estimated implementation costs relative to existing municipal resources, Tables 6 and 7 compare the City of San Bernardino's estimated WMP implementation costs under the lower- and higher-end scenarios with the City's FY 2026 General Fund budget by department. The City's estimated implementation costs are based on its 10.34% cost share of the total study area implementation costs, consistent with the allocation methodology described in the Methodology section.

Under the lower-end scenario, the City's estimated capital costs are equivalent to approximately 296% of its entire FY 2026 General Fund budget, while one year of O&M costs represents approximately 7% of the General Fund. Consistent with the methodology developed in the 2024 report, this analysis assumes that capital improvements would be implemented over a five-year period. The final column presents the combined annual fiscal burden assuming capital expenditures are spread evenly over a five-year implementation period and combined with one year of O&M costs. Under this assumption, the City's annual implementation costs would be equivalent to approximately 66% of its annual General Fund budget.

Table 6. City of San Bernardino Lower-End Scenario: Estimated Annual Costs as Fiscal Year 2026 Share of General Fund Expenditures⁷

Expenditures by Department	GF Expenditures (\$,M)	Budget Share	Capital	1-Yr O&M	Capital/5 + 1-Yr O&M
Police	\$138.33	54.7%	541%	13%	121%
Public Works	\$ 37.65	14.9%	1989%	47%	445%
General Government	\$ 21.73	8.6%	3447%	82%	771%
Community Development & Housing	\$ 16.41	6.5%	4563%	109%	1021%
Finance & Management Services	\$ 7.24	2.9%	10342%	246%	2314%
Parks Recreation & Community	\$ 6.39	2.5%	11720%	279%	2623%
City Manager	\$ 5.81	2.3%	12900%	307%	2887%
Legal Services	\$ 5.54	2.2%	13527%	322%	3027%
Library	\$ 4.95	2.0%	15123%	360%	3384%
Human Resource & Risk Management	\$ 3.04	1.2%	24616%	586%	5509%
Economic Development	\$ 2.00	0.8%	37402%	890%	8371%
City Clerk	\$ 1.99	0.8%	37552%	894%	8404%
City Council	\$ 1.30	0.5%	57571%	1370%	12885%
Mayor	\$ 0.43	0.2%	175945%	4188%	39377%
Special Assessment District	\$ 0.15	0.1%	499275%	11884%	111739%
Capital Improvement Projects	\$ -	0.0%	-	-	-
Total	\$ 253.0	100%	296%	7%	66%

Source: City of San Bernardino FY 2026 Budget; San Bernardino County Stormwater Program. Analysis by Beacon Economics.

Under the higher-end scenario, the estimated annual burden is slightly larger, with capital costs equivalent to approximately 301% of the General Fund, one year of O&M costs equal to approximately 7%, and the combined annual burden (assuming a five-year capital implementation period) equal to approximately 67% of the City's annual General Fund budget.

⁷ Note: Estimated implementation costs are based on the City of San Bernardino's 10.34% cost share of total study area implementation costs, derived using the cost allocation methodology described in the Methodology section. The Capital/5 + 1-Yr O&M column assumes that capital expenditures are incurred evenly over a five-year implementation period, consistent with the methodology developed in the 2024 report, and are combined with one year of operations and maintenance (O&M) costs.

Table 7. City of San Bernardino Higher-End Scenario: Estimated Annual Costs as Fiscal Year 2026 Share of General Fund Expenditures⁷

Expenditures by Department	GF Expenditures (\$,M)	Budget Share	Capital	1-Yr O&M	Capital/5 + 1-Yr O&M
Police	\$138.33	54.7%	551%	13%	123%
Public Works	\$ 37.65	14.9%	2025%	48%	453%
General Government	\$ 21.73	8.6%	3509%	84%	785%
Community Development & Housing	\$ 16.41	6.5%	4645%	111%	1040%
Finance & Management Services	\$ 7.24	2.9%	10527%	251%	2356%
Parks Recreation & Community	\$ 6.39	2.5%	11931%	284%	2670%
City Manager	\$ 5.81	2.3%	13132%	313%	2939%
Legal Services	\$ 5.54	2.2%	13770%	328%	3082%
Library	\$ 4.95	2.0%	15395%	366%	3445%
Human Resource & Risk Management	\$ 3.04	1.2%	25059%	596%	5608%
Economic Development	\$ 2.00	0.8%	38075%	906%	8521%
City Clerk	\$ 1.99	0.8%	38227%	910%	8555%
City Council	\$ 1.30	0.5%	58606%	1395%	13116%
Mayor	\$ 0.43	0.2%	179109%	4263%	40085%
Special Assessment District	\$ 0.15	0.1%	508253%	12097%	113748%
Capital Improvement Projects	\$ -	0.0%	-	-	-
Total	\$ 253.0	100%	301%	7%	67%

Source: City of San Bernardino FY 2026 Budget; San Bernardino County Stormwater Program. Analysis by Beacon Economics.

Illustrative Example: Estimated Fiscal Burden for All Jurisdictions

Tables 8 and 9 extend the preceding analysis to all participating jurisdictions, comparing each agency's estimated WMP implementation costs under the lower- and higher-end scenarios with its FY 2026 General Fund budget. As with the City of San Bernardino example, the Capital/5 + 1-Yr O&M column assumes that capital expenditures are distributed evenly over a five-year implementation period, consistent with the methodology developed in the 2024 report.

The results suggest that the estimated fiscal burden extends well beyond a single jurisdiction. Under the lower-end scenario, the median participating agency faces capital costs equivalent to approximately 377% of its annual General Fund budget. Even after spreading capital expenditures over five years, the combined annual burden remains equivalent to approximately 84% of the median agency's General Fund. The higher-end scenario produces similar results, with median capital costs equivalent to approximately 384% of annual General Fund expenditures and an annualized implementation burden of approximately 86% of the median agency's General Fund.

While the magnitude of the estimated burden varies across jurisdictions depending on their cost allocation, General Fund resources, population, and geographic size, the analysis suggests that many participating agencies could face implementation costs representing a substantial share of their existing fiscal resources. Under the lower-end scenario, the average annualized implementation burden across participating jurisdictions is approximately 98% of annual General Fund expenditures, increasing slightly to approximately 99% under the higher-end scenario. As a result, implementation of the Tentative Order could require agencies to identify new revenue sources, reprioritize existing expenditures, defer other capital investments, or pursue a combination of these approaches to finance compliance.

Table 8. Lower-End Scenario: Estimated Annual Costs as Fiscal Year 2026 Share of General Fund Expenditures

	Cost Share %	Capital (\$M)	1-Yr O&M (\$M)	General Fund (\$M)	Capital (% GF)	1-Yr O&M (% GF)	Capital/5 + 1-Yr O&M (% GF)
Total WMP Costs		\$7,243	\$172				
City of Big Bear Lake	1.32%	\$95.50	\$2.27	\$25.3	377.0%	9.0%	84.4%
City of Chino	4.67%	\$338.43	\$8.06	\$131.0	258.3%	6.1%	57.8%
City of Chino Hills	5.44%	\$393.65	\$9.37	\$56.4	697.8%	16.6%	156.2%
City of Colton	3.07%	\$222.37	\$5.29	\$71.3	311.9%	7.4%	69.8%
City of Fontana	8.98%	\$650.28	\$15.48	\$149.1	436.2%	10.4%	97.6%
City of Grand Terrace	1.16%	\$83.89	\$2.00	\$8.7	963.2%	22.9%	215.6%
City of Highland	3.32%	\$240.31	\$5.72	\$25.8	932.3%	22.2%	208.6%
City of Loma Linda	1.93%	\$140.03	\$3.33	\$28.6	489.2%	11.6%	109.5%
City of Montclair	1.81%	\$130.77	\$3.11	\$40.1	326.2%	7.8%	73.0%
City of Ontario	9.01%	\$652.63	\$15.53	\$447.2	145.9%	3.5%	32.7%
City of Rancho Cucamonga	8.12%	\$588.03	\$14.00	\$122.1	481.8%	11.5%	107.8%
City of Redlands	5.37%	\$388.98	\$9.26	\$119.6	325.2%	7.7%	72.8%
City of Rialto	4.93%	\$357.35	\$8.51	\$165.0	216.6%	5.2%	48.5%
City of San Bernardino	10.34%	\$749.26	\$17.83	\$253.2	296.0%	7.0%	66.2%
City of Upland	3.58%	\$259.17	\$6.17	\$63.1	410.9%	9.8%	92.0%
City of Yucaipa	4.33%	\$313.36	\$7.46	\$44.2	709.3%	16.9%	158.7%
County of SB	17.63%	\$1,276.72	\$30.39	\$3,655.0	34.9%	0.8%	7.8%
SB County Flood	5.00%	\$362.14	\$8.62	-	-	-	-
Average	5.56%	\$402.38	\$9.58	\$317.98	436.05%	10.38%	97.59%
Median	4.80%	\$347.89	\$8.28	\$71.30	377.00%	9.00%	84.40%

Source: City of San Bernardino FY 2026 Budget; San Bernardino County Stormwater Program. Analysis by Beacon Economics.

Table 9. Higher-End Scenario: Estimated Annual Costs as Fiscal Year 2026 Share of General Fund Expenditures

	Cost Share %	Capital (\$M)	1-Yr O&M (\$M)	General Fund (\$M)	Capital (% GF)	1-Yr O&M (% GF)	Capital/5 + 1-Yr O&M (% GF)
Total WMP Costs		\$7,373	\$175				
City of Big Bear Lake	1.32%	\$97.22	\$2.31	\$25.3	383.8%	9.1%	85.9%
City of Chino	4.67%	\$344.52	\$8.20	\$131.0	262.9%	6.3%	58.8%
City of Chino Hills	5.44%	\$400.73	\$9.54	\$56.4	710.4%	16.9%	159.0%
City of Colton	3.07%	\$226.37	\$5.39	\$71.3	317.5%	7.6%	71.1%
City of Fontana	8.98%	\$661.98	\$15.76	\$149.1	444.0%	10.6%	99.4%
City of Grand Terrace	1.16%	\$85.40	\$2.03	\$8.7	980.5%	23.3%	219.4%
City of Highland	3.32%	\$244.63	\$5.82	\$25.8	949.0%	22.6%	212.4%
City of Loma Linda	1.93%	\$142.55	\$3.39	\$28.6	498.0%	11.9%	111.4%
City of Montclair	1.81%	\$133.12	\$3.17	\$40.1	332.1%	7.9%	74.3%
City of Ontario	9.01%	\$664.36	\$15.81	\$447.2	148.5%	3.5%	33.2%
City of Rancho Cucamonga	8.12%	\$598.60	\$14.25	\$122.1	490.4%	11.7%	109.8%
City of Redlands	5.37%	\$395.97	\$9.42	\$119.6	331.0%	7.9%	74.1%
City of Rialto	4.93%	\$363.77	\$8.66	\$165.0	220.5%	5.2%	49.3%
City of San Bernardino	10.34%	\$762.73	\$18.15	\$253.2	301.3%	7.2%	67.4%
City of Upland	3.58%	\$263.83	\$6.28	\$63.1	418.3%	10.0%	93.6%
City of Yucaipa	4.33%	\$318.99	\$7.59	\$44.2	722.1%	17.2%	161.6%
County of SB	17.63%	\$1,299.68	\$30.93	\$3,655.0	35.6%	0.8%	8.0%
SB County Flood	5.00%	\$368.65	\$8.77	-	-	-	-
Average	5.56%	\$409.62	\$9.75	\$317.98	443.87%	10.56%	99.34%
Median	4.80%	\$354.15	\$8.43	\$71.29	383.76%	9.13%	85.89%

Source: City of San Bernardino FY 2026 Budget; San Bernardino County Stormwater Program. Analysis by Beacon Economics.

The above examples illustrate the magnitude of the potential fiscal commitment relative to existing municipal expenditures and the tradeoffs local agencies may face in financing WMP implementation while continuing to fund other core public services.

Conclusion

The revisions to the proposed Tentative Order address several concerns identified in the 2024 report and, in some cases, provide additional implementation flexibility for Permittees. Notable examples include revisions related to Green Streets, the definition of impervious surface, and certain transportation-related improvements. However, many of the principal cost drivers identified in the original analysis remain largely unchanged.

Most notably, the proposed numeric limitations continue to represent the largest potential source of compliance costs and would likely require implementation measures comparable in scope and cost to Watershed Management Programs (WMPs) or Enhanced Watershed Management Programs (EWMPs). While revisions to inspection requirements, trash compliance, and development provisions modify certain implementation details, they do not materially alter the overall cost conclusions presented in the 2024 report. This update also places these estimated implementation costs into the fiscal context of participating jurisdictions, illustrating that even when capital expenditures are assumed to be implemented over a five-year period the resulting annual costs may represent a substantial share of many agencies' General Fund resources.

Overall, this update indicates that although the revised Tentative Order reflects several meaningful improvements, substantial compliance costs for San Bernardino County Permittees remain if the permit is adopted in its current form. The findings in this report suggest that many agencies could face significant fiscal tradeoffs as they balance permit compliance with other municipal priorities and public services.

About Beacon Economics

Founded in 2006, Beacon Economics, an LLC and certified Small Business Enterprise with the state of California, is an independent research and consulting firm dedicated to delivering accurate, insightful, and objectively based economic analysis. Employing unique proprietary models, vast databases, and sophisticated data processing, the company's specialized practice areas include sustainable growth and development, real estate market analysis, economic forecasting, industry analysis, economic policy analysis, and economic impact studies. Beacon Economics equips its clients with the data and analysis they need to understand the significance of on-the-ground realities and to make informed business and policy decisions.

Learn more at beaconecon.com

Project Team

Christopher Thornberg PhD. Founding Partner (Project Advisor)

Niree Kodaverdian PhD. Research Manager

Christopher Carr. Research Associate

For further information about this report or to learn more about Beacon Economics please contact:

Sherif Hanna, Managing Partner sherif@beaconecon.com

Victoria Bond, Director of Marketing and Communications. victoria@beaconecon.com

Beacon Economics LLC shall remain the exclusive owner of any Proprietary Information and all patent, copyright, trade secret, trademark, domain name and other intellectual property contained herein.