



City of Arts & Innovation

Mobility & Infrastructure Committee Memorandum

TO: MOBILITY & INFRASTRUCTURE COMMITTEE DATE: MARCH 14, 2024

FROM: PUBLIC WORKS DEPARTMENT WARDS: ALL

SUBJECT: NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PERMIT UPDATE

ISSUE:

Receive an update on the National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Permit changes that will impact the City of Riverside.

RECOMMENDATION:

That the Mobility & Infrastructure Committee receive an update on the National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Permit changes that will impact the City of Riverside.

BACKGROUND:

NPDES Program

The National Pollutant Discharge Elimination System (NPDES) Permit Program has its roots in the Clean Water Act (CWA) of 1972. The CWA aimed to restore and maintain the chemical, physical, and biological integrity of the nation's waters. One of its key provisions was the establishment of the NPDES program, which regulates the discharge of pollutants into waters of the United States.

The NPDES program is administered by the Environmental Protection Agency (EPA) at the federal level, but it operates in partnership with state environmental agencies. The Regional Water Quality Control Board (RWQCB) is responsible for issuance and enforcement of the NPDES MS4 Permit. Under the NPDES permit, limits are placed on the types and amounts of pollutants that can be discharged. The NPDES permit also requires Permittees to monitor and report their discharges.

The NPDES program has increasingly focused on promoting pollution prevention and control through the use of best management practices, technology-based standards, and water quality-based standards. Efforts have also been made to increase transparency and public participation in the permitting process, allowing municipalities to provide input on proposed permits and enforcement actions.

MS4 Permit

The NPDES Program administers several types of permits to regulate water discharges of various industries. Among those is the MS4 Permit which requires municipalities operating a stormwater management system to implement measures to reduce the discharge of pollutants into the storm drain system and ultimately into local water bodies. To accomplish this, municipalities are required to conduct inspections on businesses, implement development standards aimed at reducing the impacts of development, and manage several programs to improve water quality.

The City of Riverside was first issued a MS4 Permit in 1990. The City is within the Santa Ana Region which contains the Santa Ana River as its primary water body. Subsequent MS4 Permits were issued in 1996, 2002, and 2010. Each version of the MS4 Permit undergoes various revisions and updates in response to changing environmental regulations, scientific understanding, and local conditions. All previously issued NPDES permits solely applied to the Riverside County region, which included a total of 16 Permittees. San Bernardino and Orange Counties, both within the Santa Ana Region, were issued their own respective permits.

On December 24, 2021 the RWQCB released a new tri-County permit draft, referred to as the Staff Working Proposal (SWP). The proposed permit now includes both San Bernardino and Orange Counties enveloping a total of 60 municipalities into one single MS4 Permit. The 2010 MS4 Permit is still currently in effect until the SWP is adopted. The SWP was meant to be just that, a working draft of the next generation MS4 Permit. Since its release, efforts have been made to increase transparency and public participation in the permitting process, allowing all three counties and the public to provide input on it.

From January 2022 to September 2022, all three counties collaborated with the RWQCB to discuss each section of the SWP along with the notable impacts that would affect each municipality. On October 19, 2022 a redlined SWP and rationale letter was prepared by the three-county group and was transmitted to the RWQCB. Meetings resumed from January 2023 through April 2023 where the redlines were reviewed and supplemental information was provided to the RWQCB. In the fourth quarter of 2023, the Regional Board announced they would release a new version as a Tentative Order for public review with eventual adoption in early 2024. As of January 31, 2024, the Tentative Order has not been released. Public Works has engaged the City's Intergovernmental Relations Officer and is seeking opportunities to advocate for municipality and development friendly revisions to the Order.

DISCUSSION:

The SWP contains many changes to the current NPDES Permit and augments several stormwater programs. This discussion does not include a full review of all changes but highlights those staff consider most impactful to the City of Riverside. A summary of each and their potential impacts is provided below.

Incremental Changes

Several incremental changes to existing programs will impact City operations. These include:

1. Increased inspections for industrial and commercial businesses, and construction sites
2. Increased training of City staff across multiple departments
3. Improved tracking of various stormwater metrics through database development
4. Increased reporting frequency to RWQCB
5. Increased monitoring of local waterways

6. Standardized cost reporting and tracking
7. Implement Integrated Pest Management (IPM) in maintenance practices
8. Increased storm drain infrastructure maintenance

Impact: Increased staff time to accomplish all incremental changes.

State Trash Amendments

The State Trash Amendments require all agencies with land use authority over industrial, commercial, high density residential, and other related land use types to install devices into storm drains that will capture trash or implement programs that will result in the capture of trash before it reaches local water bodies. The objective of these regulations is to fully capture all trash from these land use areas, or an equivalent amount in other areas, by no later than the year 2030. To accomplish this, on October 23, 2018, the City Council approved an Implementation Plan detailing the City's approach to comply with these regulatory requirements. While the Implementation Plan has been submitted and approved by the RWQCB, the current NPDES Permit does not contain any regulatory requirement to actually fulfill the plan. The SWP changes this and requires compliance with the State Trash Amendments by the year 2030.

Impact: Increased staff time to carry out the Implementation Plan.

New Development Changes (including Roadway projects)

The Staff Working Proposal (SWP) continues the Water Quality Management Plan (WQMP) Program whereby most new developments and redevelopment projects are required to incorporate Low Impact Development (LID) principles into their project design. This frequently includes construction of retention basins, bioretention planters, pervious surfaces, and other infrastructure designed to capture and/or treat stormwater runoff. The SWP increases the sizing criteria used for this infrastructure which could lead to a larger part of new development being taken up by LID infrastructure. In addition, the SWP requires smaller projects subject to ministerial approval to incorporate site design and source control Best Management Practices (BMPs) into their projects. Other changes to the definitions of terms in the SWP would see surfaces like gravel now being considered impervious which could also increase the sizing of LID infrastructure.

Another significant change is to roadway projects. The existing permit encourages green infrastructure on a "do what you can, where you can" basis, but without having to generate a WQMP. The Regional permit now removes this exemption. Roadway projects would be required to generate WQMPs and include a site design that is conducive to LID, incorporate source controls and structural treatment BMPs, and record a commitment to maintain these BMPs in perpetuity.

Impacts: 1) Increased staff time to review WQMPs and other ministerial projects requiring LID, 2) Roadway and or right of way footprint of project sites would be reduced because of LID infrastructure, and 3) Increased cost to roadway projects to construct and maintain LID infrastructure.

Total Maximum Daily Load (TMDL)

Total Maximum Daily Load (TMDL) is a regulatory term used under the Clean Water Act to describe the maximum amount of a pollutant that a water body can receive while still meeting water quality standards. TMDLs are established for specific water bodies that are identified as impaired, meaning they do not meet water quality standards set by regulatory agencies. The City of Riverside is a stakeholder in two TMDLs: 1) Bacterial Indicator TMDL for Middle Santa Ana

River and 2) Nutrient TMDLs for Lake Elsinore and Canyon Lake. As part of these TMDLs the City is involved in Task Force groups with several other stakeholders working together to meet the water quality standards for this area.

The Regional Permit reinforces deadlines identified in the TMDLs and requires updates to compliance plans associated with each TMDL. If the City and other stakeholders cannot meet the TMDL deadlines, the RWQCB may implement Time Schedule Orders requiring compliance within certain time frames and requiring commitments to programs/projects that will achieve compliance.

Impact: 1) Increased staff time related to TMDL Program Management, 2) Potentially increased contributions to TMDL Task Force groups.

Watershed Management Plans (WMPs)

A Watershed Management Plan (WMP) is a comprehensive strategy designed to address the management and protection of an entire watershed or drainage basin. It typically involves collaboration among stakeholders such as government agencies, environmental organizations, local communities, and industry to develop a coordinated approach to managing water resources within a specific geographic area. The Staff Working Proposal establishes WMPs as an option for compliance with water quality standards of local waterways. These plans provide an assessment of the watershed conditions, prioritize watershed issues, and develop strategies and actions to achieve water quality standards. WMPs typically identify capital projects that will be completed to meet watershed goals.

While WMPs are optional in the SWP, many stakeholders consider them effective tools that allow compliance with water quality standards on a designated and manageable timeline. However, developing a WMP would likely commit the City to very expensive infrastructure projects designed to capture and/or treat stormwater runoff. This will be the challenge facing the City as it strives to meet water quality objectives in local waterways. If the City is unable to find and eliminate sources of pollutants, then it may be subject to fines or third party lawsuits and ultimately be required to implement major water quality projects on an urgent time schedule. Development of a WMP may provide a roadmap for compliance but commits the City to design and construction of infrastructure projects and perpetual maintenance and still does not represent compliance with compliance deadlines already established in TMDLs.

In any scenario including infrastructure projects, costs are substantial. Cities in Los Angeles County, for example, have WMPs and are building infrastructure to capture and treat stormwater runoff. Examples include large regional retention basins, diversions to sewer systems, small scale local treatment systems, and bioretention structures. Municipalities in Los Angeles County are spending hundreds of millions of dollars annually to do this. However, they also benefit from Measure W, a 2018 ballot measure approved by voters that created a special parcel tax of 2.5 cent per square foot of impermeable area. This parcel tax raises approximately \$280 million annually to go toward these projects and programs.

Infrastructure projects designed to capture and treat stormwater runoff are very costly. With the help of a consultant, and using cost figures from Los Angeles County WMPs, staff performed a rough analysis of the City of Riverside's potential costs to construct and maintain this type of infrastructure. The costs are estimated at anywhere from \$290 million to \$750 million over a 20-year period, or a maximum of \$37.5M per year. This cost is greater than the current annual allocation to the pavement management program.

Impact: 1) Increased staff time to prepare and participate in WMPs and 2) Significant capital cost for infrastructure projects. (3) Need to seek new revenue sources & funding opportunities.

Conclusion

The SWP, as it currently stands, is a major change from the City's current MS4 Permit. The incremental changes combine to require major commitments of staff resources and new development requirements would impact all projects including new roadways by increasing the amount of space that LID infrastructure will consume leaving less area for other structures/roadways. The biggest concern of all may be the potential impacts of complying with water quality standards, TMDLs, and WMP development. The City may be required to develop major infrastructure projects that would capture and/or treat stormwater runoff. Current stormwater program staffing levels and budget allocations are not adequate for these unfunded and mandated changes.

STRATEGIC PLAN ALIGNMENT:

The programs described in this report align with **Strategic Priority 4 - Environmental Stewardship** and **Strategic Priority 6 – Infrastructure, Mobility & Connectivity** and **Goals 4.2** and **6.2** as detailed below:

4.2 - Sustainably manage local water resources to maximize reliability and advance water reuse to ensure safe, reliable, and affordable water to our community.

6.2 - Maintain, protect, and improve assets and infrastructure within the City's built environment to ensure and enhance reliability, resiliency, sustainability, and facilitate connectivity.

Furthermore, the NPDES Program and MS4 Permit, in general, align with each of the following five Cross-Cutting Threads:

1. **Community Trust** – Complying with the NPDES MS4 permit requirements serves the public interest and supports clean water in the community.
2. **Equity** – The programs implemented in response to the permit changes will support clean water throughout the City ensuring that all residents can enjoy the beneficial uses of local waterways.
3. **Fiscal Responsibility** – Program implementation is a permit requirement regardless of the financial implications. Compliance projects will be chosen based on ability to meet permit requirements while being as fiscally responsible as possible. Permit changes will inevitably have an impact on staff, time, and resources.
4. **Innovation** – This program will require innovative thinking to design and create projects that effectively capture and/or treat polluted stormwater. Permit implementation will require future collaborations and partnerships.
5. **Sustainability & Resiliency** – NPDES MS4 permit implementation contributes to the sustainability of the City's and region's local waterways.

FISCAL IMPACT:

There is no fiscal impact associated with this update. Potential financial impacts of the SWP are broadly reviewed in the Discussion section.

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Attachment: Presentation