

# Memorandum


**TO:** HONORABLE MAYOR  
AND CITY COUNCIL

**FROM:** Kerrie Romanow

**SUBJECT: STORMWATER PERMIT  
ANNUAL REPORT 2016-2017**

**DATE:** September 13, 2017

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Approved		Date	9/14/17
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## REPLACEMENT

### REASON FOR REPLACEMENT

The purpose of this replacement memorandum is to correct erroneous content regarding full-trash capture maintenance requirements and activities.

### RECOMMENDATION

Approve a resolution authorizing certification and submittal of the FY 2016-2017 Stormwater Permit Annual Report to the San Francisco Bay Regional Water Quality Control Board by September 30, 2017, in conformance with the Municipal Regional Stormwater National Pollutant Discharge Elimination System Permit requirements, pursuant to the Federal Clean Water Act.

### OUTCOME

Approval of this recommendation will result in submittal of the FY 2016-2017 Annual Report to the Regional Water Quality Control Board (Water Board) as required by Permit.

### EXECUTIVE SUMMARY

The Municipal Regional Stormwater National Pollutant Discharge Elimination System (NPDES) Permit (Permit) requires the City to submit a Stormwater Management Annual Report (Annual Report) by September 30 of each year certifying implementation of and compliance with the Stormwater Permit requirements. The Annual Report fulfills the requirement for reporting on activities undertaken from July 1, 2016, through June 30, 2017.

The current 5-year Permit, effective January 1, 2016, includes significant requirements related to green infrastructure, trash load reduction, and polychlorinated biphenyls (PCBs) control measures. Staff implemented programs and activities to address these and other requirements in FY 2016-2017. This memorandum highlights the City's accomplishments and activities supporting compliance with the Permit during the reporting period and briefly describes significant activities planned for FY 2017-2018.

## **BACKGROUND**

Stormwater enters the City's storm sewer system through more than 35,000 inlets, is conveyed through approximately 1,130 miles of sewer mains, and discharged largely without treatment, through 1,500 outfalls, to local creeks and streams and ultimately to San Francisco Bay. Discharged water is comprised of rainfall, irrigation water, and other water used outdoors. It can collect and transport pollutants as it flows across rooftops, sidewalks, driveways, streets, and landscaping.

The Federal Clean Water Act requires the City to operate its municipal separate storm sewer system under a NPDES permit for the discharge of stormwater to surface waters. The Permit specifies actions necessary to reduce the discharge of pollutants in stormwater to the maximum extent practicable and effectively prohibit non-stormwater discharges into the municipal storm sewer system to protect local creeks and the Bay. The Permit includes provisions that require reduction of pollutants to storm drains from routine municipal operations; appropriate site design and treatment measures to manage stormwater runoff quality and quantity from new and redevelopment project sites; inspection of construction sites and industrial and commercial facilities that could potentially contribute to stormwater pollution; prohibition of illicit discharges and to ensure that they are detected, controlled and eliminated; implementation of control methods for pollutants of concern such as PCBs, pesticides, mercury, and trash; and monitoring to track water quality status and trends. The Permit includes several significant requirements related to green infrastructure planning, trash reduction, and PCBs controls.

The Permit requires the City to submit an Annual Report by September 30 of each year, documenting performance of Permit required actions and certifying Permit compliance. The Annual Report follows a standardized reporting template developed by the Bay Area Stormwater Management Agencies Association (BASMAA), approved by Water Board staff, and used by all 76 agencies regulated by this regional permit. This standardized reporting template is intended to provide the Water Board with consistent information about permittee compliance throughout the Bay Area. The referenced Annual Report fulfills the requirement for reporting on activities undertaken from July 1, 2016, through June 30, 2017.

Actions to prevent pollution from entering the City's storm sewer system encompass various City operations, as well as the daily activities of San José residents and businesses. Accordingly, multiple City departments are actively engaged. Collaborative efforts are critical to preventing stormwater pollution and protecting water quality and include: Environmental Services (ESD);

Public Works (PW); Planning, Building and Code Enforcement (PBCE); Transportation (DOT); Parks, Recreation and Neighborhood Services (PRNS); Housing, and the City Attorney's Office. ESD provides oversight of the Permit and leads or coordinates implementation across the various City departments. Table 1 lists the Permit elements and identifies departments engaged in their implementation.

Table 1

Permit Provision	City Departments					
	ESD	DOT	Housing	PBCE	PRNS	PW
Municipal Operations	X	X			X	X
New Development and Redevelopment (Green Infrastructure)	X	X		X	X	X
Industrial and Commercial Site Controls	X					
Illicit Discharge and Detection Elimination	X	X				
Construction Site Control	X			X		X
Public Information and Outreach	X				X	
Water Quality Monitoring	X					
Pesticides Toxicity Control	X	X			X	X
Trash Load Reduction	X	X	X		X	X
Mercury, PCBs, and Copper Controls	X	X		X		X
Exempted and Conditionally Exempted Discharges	X			X		

## **ANALYSIS**

### **Permit Implementation Highlights for FY 2016-2017**

City departments implementing the Permit requirements worked diligently to meet the challenge of conducting compliance activities. Accomplishments during FY 2016-2017 demonstrate the collective efforts of City departments to improve the condition of local creeks and waterways and reduce pollutant loads to San Francisco Bay.

The Permit includes significant requirements in the "New Development and Redevelopment", "Trash Load Reduction," and "PCBs Controls" provisions. The City has and will continue implementing activities and programs to meet these Permit requirements. Highlights of key Permit implementation activities for FY 2016-2017 and for the upcoming year are summarized below:

#### **Development and Green Infrastructure**

The Permit mandates that new development and redevelopment (public and private) projects meeting certain criteria include appropriate source control, site design, and treatment measures to manage stormwater runoff pollutants and prevent increases in runoff flows from project sites (i.e., "Regulated Project"). Compliance is achieved primarily through the development review, planning, and the permitting process by ensuring water quality protection is integrated into new and redevelopment projects. The Permit further requires that all installed treatment measures are regularly inspected to ensure proper operation and maintenance in perpetuity. The number of

projects regulated by the Permit is expected to continue to increase in FY 2017-2018. ESD, PW, DOT, and PBCE worked together in FY 2016-2017 to revise and streamline procedures through the development of two interdepartmental standard operating procedures intended to better ensure all new and redevelopment projects comply with permit requirements.

The Permit requires the City to submit a Green Infrastructure Plan (GI Plan) to the Water Board by September 30, 2019. As a preliminary step, Council approved the Permit-required GI Plan framework on May 23, 2017. The framework describes specific tasks and timeframes for development of the GI Plan. In FY 2017-2018, ESD will hire a qualified consultant to conduct a reasonable assurance analysis (RAA). The required modelling analysis is intended to provide “reasonable assurance” to the Water Board, Baykeeper, and other stakeholders that the City’s plan will, through implementation of green infrastructure and other control methods, reduce stormwater pollutants to acceptable levels. The green infrastructure plan will refer to the RAA, and serve as an implementation guide as the City shifts impervious surface drainage to green infrastructure through a subsequent Capital Improvement Program (CIP). The Green Infrastructure Plan and RAA will address requirements in both the Permit and Baykeeper Consent Decree. The CIP will specify what projects will be constructed to meet the City’s requirement under the Baykeeper Consent Decree to appropriate \$100 million to implement the Green Infrastructure Plan.

In FY 2017-2018, during the development of the GI Plan, the City is required by the Permit to continue evaluating public infrastructure projects for the potential to incorporate green infrastructure. Throughout FY 2016-17, ESD coordinated with other City departments to determine if there were opportunities to include green infrastructure into planned capital improvement projects and identified those opportunities in the Annual Report. In addition, the City has two green street projects currently under construction that incorporate green infrastructure technologies into multi-modal roadway improvements. Construction is scheduled for completion in the Fall of FY 2017-2018.

#### Trash Load Reduction

The goal of this Permit provision is to reduce and eliminate trash passing through the storm sewer system in order to protect uses of those waterways to which the system discharges. This provision includes mandatory trash load reduction goals and compliance targets of 70% trash load reduction by 2017 and 80% trash load reduction by 2019, with a goal of 100% by 2022. The City’s trash load reduction as of July 1, 2017 is 79.2%, exceeding the mandatory goal. This represents a substantial increase above the City’s 53.3% trash load reduction as of July 1, 2016.

The City achieved its progress to date primarily through a combination of additional Full Trash Capture systems, ongoing source control actions, implementation of a Direct Discharge Trash Control Plan (homeless encampment cleanups), additional creek and shoreline cleanups conducted by Downtown Streets Team and volunteer creek cleanup groups, and on-land visual assessments. Each of these program efforts are described below:

Full Trash Capture Device Installation

The City installed a total of 11 additional public Hydrodynamic Separator (HDS) systems in FY 2016-2017, increasing its inventory to a total of 21 systems. HDSs are large full trash capture systems installed underground while CPSs are small full trash capture devices installed in storm drain inlets. The City recorded 103 fully functioning Connector Pipe Screens (CPS) units treating stormwater runoff. Collectively, these HDS and CPS systems treat 8,223 acres of trash generating areas in the City, exceeding the permit requirement of 895 acres. The City is claiming 36% trash load reduction for full trash capture systems.

The Permit also includes new inspection and maintenance requirements for all full trash capture devices. These requirements have impacted the workload of DOT. The Permit generally requires CPSs to be inspected and maintained at least once per year, however, if they are located in areas significantly impacted by trash, they must be inspected at least twice per year. In FY 2016-2017, DOT implemented an aggressive monthly HDS systems inspection program to gather data necessary to develop a long-term customized maintenance schedule for each system.

Construction contracts are scheduled to be awarded in FY 2017-2018 to install six or seven more large full trash capture systems. These systems are projected to allow the City to meet the 80% trash reduction mandate by 2019 and are anticipated to be the last set of HDS systems to be installed. ESD, DOT and Public Works will continue to work collaboratively on the location, design, construction, and maintenance of these devices.

Direct Discharge Trash Control Program

ESD, Housing, and PRNS continued to partner on implementing a Direct Discharge Trash Control Program (DDTCP) with the objective to remove trash from significant stretches of San José creeks. The City received approval of the DDTCP from the Water Board Executive Officer on August 3, 2016 and authorization to claim up to a 15% trash load reduction off-set for encampment cleanups conducted in connection with the program. The DDTCP documents the coordinated efforts of the three departments and partner non-profit organizations to conduct outreach to homeless individuals, dismantle encampment structures, remove residual trash from creeks, and patrol subject areas to prevent (re)establishment of encampments. In FY 2016-2017, the DDTCP efforts resulted in 581 tons of trash removed from creeks. The City is claiming the maximum allowable 15% trash load reduction based on the volume of trash removed in FY 2016-2017.

ESD, Housing, and PRNS plan to continue working together along with external partners to implement this key program in FY 2017-18.

Creek and Shoreline Cleanups

The City continued cleanups along Coyote Creek, Los Gatos Creek, and the Guadalupe River with partners including Downtown Streets Team (DST), Keep Coyote Creek Beautiful (KCCB), and South Bay Clean Creeks Coalition (SBCCC). DST's Creek Crew worked five days a week and collected 129 tons of trash. More than 2,400 volunteers participated in 49 creek cleanups led

by KCCB and SBCCC and removed 46 tons of trash. Collectively, these partners removed 175 tons of trash from San José's creeks.

Additional creek cleanups were conducted by City departments and other non-profit groups. The City is claiming the maximum 10% trash load reduction offset for creek and shoreline cleanups and plans to continue this effort in FY 2017-2018.

#### *Jurisdictional Source Controls*

The City continued to implement and assess the EPS Foam Food Container Ordinance that became effective for all food service establishments as of January 1, 2015, and the Single-Use Carryout Bag Ban ordinance that became effective as of January 1, 2012. Creek and river litter surveys have shown a 69% reduction in the number of bags found in stormdrain inlets, and a 78% reduction in the number of bags found in creeks. Since full implementation of the Foam Food Container Ordinance, most restaurants have successfully transitioned away from using foam food ware to alternative products. Staff has responded to about 80 complaints of non-compliance and continues to provide education and enforcement to food service establishments. The City estimates an approximate 73% reduction in the amount of EPS food service ware in stormwater. The City is claiming the maximum 10% trash load reduction off-set for its jurisdiction-wide source control programs.

#### *On-land Visual Trash Assessments*

The Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) conducts on-land visual trash assessments to evaluate changes in the level of trash that could be transported into the storm sewer system. These assessments are conducted in at least 10% of the City's street miles in areas impacted by trash where control measures other than full trash capture are implemented. Visual assessments are conducted at least three times each year at randomly selected street segments. These visual assessments yielded an 8.2% trash load reduction. The visual trash assessments results could possibly reflect the impact of City trash control measures such as street sweeping, the Illegal Dumping Rapid Response Program, public litter cans, and public outreach but cannot necessarily be directly attributable to those programs. The trash assessment trash load reduction percentage is subject to change over time.

#### *PCBs Controls*

The Water Board has assigned a particularly high priority to PCBs in the Permit since urban stormwater is thought to be the primary pathway of new PCBs loads to the San Francisco Bay. Bay-wide, stormwater Permittees are required to reduce PCBs loads within the permit term by implementing a variety of control measures that could include removal in large trash capture devices, additional street sweeping, inlet cleaning, and the referral of suspected PCBs source properties to the Water Board. Toward the latter effort, ESD assessed old industrial sites in FY 2016-2017 as required in the Permit. ESD staff continue to work collaborate with BASMAA, the Water Board, industry, and internally, to develop and begin implementing a regional program to ensure that PCBs do not enter the storm sewer system when buildings constructed between 1950 and 1980 using PCBs-containing materials are demolished. The Permit requires such a

program to be in place by 2019. This control measure will account for the largest proportion of the required PCBs load reduction.

The Permit also includes a requirement to evaluate PCBs presence in caulks and sealants used in storm drain or roadway infrastructure in public rights of way. BASMAA has secured a contractor to conduct a region-wide study to address this requirement. The City will participate along with many other Bay Area municipalities to ensure a comprehensive evaluation.

The Permit requires planning and implementation of green infrastructure to reduce PCBs loads by specific county-wide amounts. The Baykeeper Consent Decree requires similar planning and implementation of green infrastructure but primarily addressing fecal indicator bacteria, which are much more broadly distributed. The Permit-required PCBs load reduction from green infrastructure will therefore be used as a prioritization factor when conducting the RAA and developing the GI Plan.

The complete *FY 2016-2017 Stormwater Permit Annual Report* is available on the City website at <http://www.sanjoseca.gov/Archive.aspx?AMID=160&Type=&ADID=1>.

## **EVALUATION AND FOLLOW-UP**

As the City continues with permit implementation, staff will provide reports on key implementation efforts to the Transportation and Environment Committee and City Council.

## **POLICY ALTERNATIVES**

***Alternative #1: Do not approve the 2016-2017 Stormwater Permit Annual Report to the Regional Water Quality Control Board.***

**Pros:** None known. The report is primarily a report on past activities.

**Cons:** To not submit or delay in the submittal beyond September 30 would put the City at risk of being found in violation of the Permit.

**Reason for not recommending:** This Annual Report submittal will fulfill a permit-mandated obligation and maintain City compliance with its Permit. This Annual Report represents the best and most complete summation of City activities related to stormwater for FY 2016-2017.

## **PUBLIC OUTREACH**

This memorandum will be posted on the City's Council Agenda website for the September 19, 2017 City Council Meeting.

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<sup>1</sup> All documents referenced as web links are also available for review in the City Clerk's Office or the Environmental Services Department. To find a report at the website, select the Council date and item number.

### **COORDINATION**

The Annual Report was developed by the Environmental Services Department in collaboration with the departments of Planning, Building and Code Enforcement; Public Works; Transportation; Housing; Parks, Recreation and Neighborhood Services; and the City Attorney's Office. The Annual Report was reviewed by each of these departments to ensure that the data and information presented in the report accurately and properly reflects their respective operations.

### **COMMISSION RECOMMENDATION/INPUT**

There is no commission recommendation or input associated with this action.

### **COST SUMMARY/IMPLICATIONS**

There are no direct costs associated with submittal of the Annual Report, as the report summarizes activities that were already funded and have already occurred. Ongoing programs related to the Permit are funded primarily through the Storm Sewer Operating Fund (Fund 446). Certain programs discussed in this memorandum that cannot be funded by Fund 446 are funded from the General Fund.

### **CEQA**

Not a Project, File No. PP17-009, Annual Reports that involve no approvals of any City Actions.

/s/  
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Director, Environmental Services

For questions, please contact Napp Fukuda, Deputy Director, Environmental Services, at (408) 793-5353