

DATE ISSUED: May 20, 2005

REPORT NO. 05-126

ATTENTION: Rules, Finance, and Intergovernmental Relations Committee
Agenda of May 25, 2005

SUBJECT: Storm Water Management Funding Issue

SUMMARY

Issues – Should the Rules Committee adopt the City Manager’s recommendations on funding the Storm Water Management Service Charge Study?

Manager’s Recommendations – Approve the funding of the Stormwater Management Service Charge Study.

Fiscal Impact – \$346,834 in Fiscal Year 2006 to complete the Storm Water Management Service Charge Study.

BACKGROUND:

Infrastructure: Recent rains have once again revealed a significant problem with the City’s storm drain infrastructure. Recently Fashion Valley Road was closed and a family was relocated from a residence in the 1900 block of Hanford Drive due to separate failures of corrugated metal pipe (CMP). This is not a new issue and will be an increasing problem if the aging and deteriorating storm drain infrastructure is not immediately addressed. Funding is needed above and beyond the current level to address the following infrastructure needs:

- CMP Replacement
- Drainage Channel and Ditch Maintenance
- Drainage Repair/Improvement
- Storm Drain Pump Station Repair/Maintenance
- Watershed Maintenance Plans and Drainage Studies
- Undersized Pipe Replacement
- Street Sweeping
- Street Underdrain Replacement
- Low Flow Storm Drain Diversion System Maintenance and Expansion for Areas of Special Biological Significance
- Storm Water Treatment Systems Maintenance

Permit Compliance: In addition to infrastructure needs, additional funding is needed to comply with federally mandated programs to reduce pollutants in urban runoff. The 1972 Clean Water Act established the National Pollutant Discharge Elimination System (NPDES) permit program to regulate the discharge of pollutants to waters of the United States. Governmental agencies in San Diego County collect and discharge storm water and urban runoff containing pollutants through their storm water conveyance systems (i.e., storm drains). These agencies, including the City of San Diego, implement programs to reduce pollutants under the NPDES permit requirements commonly known as the Municipal Storm Water Permit for San Diego Co-permittees. The San Diego Regional Water Quality Control Board, in its capacity to enforce the Federal Mandates at the State level, initially issued the Municipal Storm Water Permit in 1990, but significantly revised the Permit in February 2001. Permit renewal in 2006 will probably significantly increase requirements again.

The City's *Urban Runoff Management Plan*, adopted by City Council in January 2002, created the blueprint for actions the City would take to protect and improve the water quality of the ocean, rivers, creeks, reservoirs, and bays in the region and achieve municipal permit compliance. The Plan outlined a phased implementation that would allow increased activities as additional funding was identified. At this time, the City has not identified funds to fully implement its Urban Runoff Management Plan.

Storm Water Management Funding:

The City of San Diego currently spends \$14.6 million annually on maintaining the City's drainage infrastructure and complying with the San Diego Municipal Storm Water Permit. The existing Storm Drain fee generates approximately \$6.0 million annually in revenue to fund the operations and administrative costs associated with the City's drainage infrastructure and storm water management. The

Table 1: Current Storm Water Management Related Expenses

General Services - Street Division	FY05 Budget
Storm Drain and Pump Station Maintenance	\$ 6,899,025
Street Sweeping	3,874,057
Emergency Drainage Projects	498,000
Infrastructure Subtotal	<u>11,271,082</u>
Metropolitan Wastewater - Storm Water Pollution Prevention Division	
Storm Water Operations	\$ 2,343,193
NPDES Co-permittee Payment	403,186
Permit Compliance Subtotal	<u>2,746,379</u>
Administration	101,175
Reserve for Public Liability	500,000
TOTAL EXPENSE	<u><u>14,618,636</u></u>

expenses outlined in Table 1 only reflect currently funded activities and do not consider the funds needed to address the deferred maintenance of the City's infrastructure and compliance with the Federal Clean Water Act related to storm water pollution prevention. Without an adequate dedicated revenue source, infrastructure needs and permit compliance will continue to be significantly underfunded. The following report discusses the background and a possible approach to address this issue.

Storm Drain Fee: The City of San Diego’s Storm Drain Fee was established in 1990 to help pay for storm drain related expenses. The fee was initially \$0.50 per month per household, but was increased in 1992 and again in 1996 to the current amount of \$0.95 per month for single family

residence water meters and \$0.0647 per hundred cubic feet of water usage for commercial and industrial users. The fee is collected on the City’s water utility bills. Revenues currently generated from this fee equal approximately \$6 million; 83% of which is designated for maintenance and repair of the City’s storm drain infrastructure performed by the Street Division of the General Services Department.

Table 2: Funding Of Storm Drain Related Activities

Storm Drain Fee	\$	6,046,746	41%
Transnet		498,000	3%
General Fund		8,073,890	55%
TOTAL REVENUE		<u>\$ 14,618,636</u>	

Primarily, the General Services-Street Division and Metropolitan Wastewater-Storm Water Pollution Prevention Division incur the majority of the storm water management related expenses, but there are other departments that receive funding from the storm drain fee for administration and risk management. See Attachment 1 for details on the distribution of storm drain fee monies. Although the fee exists to fund storm drain related expenses, it is inadequate to fully fund either the Street Division to maintain/repair the drainage infrastructure or the Storm Water Division to comply with federal water quality mandates. As outlined in Table 2, these expenses must be supplemented by other funding sources (primarily the General Fund).

Any modifications to the existing Storm Drain Fee would need to meet Proposition 218 requirements. Proposition 218, which was approved in November 1996, restricts property-related fees, which are fees imposed "as an incident of property ownership." Proposition 218 requires an assessment be developed by professional engineers that ensures that no property owner's fee is greater than the proportionate cost of providing the property-related service to a particular parcel. Also, the fee would require approval in an election by either (a) a majority of property owners, or (b) two-thirds of all voters.¹

Recently, the City became aware of legislation (a State Constitutional Amendment -- ACA-13) sponsored by the Schwarzenegger Administration that would amend Proposition 218 to exempt flood assessments and storm water management from the voting requirement in the same manner as water, sewer and refuse fees.

DISCUSSION:

Infrastructure Improvements: The following summarizes items needed to correct the extensive deficiencies that exist in the City’s drainage system (Attachment 2 summarizes the estimated fiscal impacts). If the City does not undertake an aggressive program to address the storm drain infrastructure, the City will continue to experience failures such as those previously mentioned.

Given that some of these problems are due to deteriorating storm drains, it is expected that the number and degree of failures will accelerate over time.

¹California Budget Project. *Proposition 218: A Summary of Its Provisions and Impacts*. January, 1997.

1. Corrugated Metal Pipes (CMP) - There are an estimated 33 miles of CMP pipe throughout the City. This pipe was installed beginning in the early 1960's and discontinued in the early 1980's. The average service life of this pipe is thirty (30) years. Some of the pipe will deteriorate faster and some slower depending on the underground environment in which it was placed. Given that the pipe began to reach the end of its service life around 1990, the pipe should be completely replaced by 2010.

In order to accurately measure the extent of the deterioration and establish priorities for replacing the pipe, a condition assessment of the pipe is necessary. A preliminary cost to perform the condition assessment is approximately \$1,500,000 (the initial estimate for the assessment was \$750,000 but was revised after further research of similar efforts around the County). The total estimated cost to replace the CMP is approximately in excess of \$50,000,000.

2. Drainage Infrastructure - There are an estimated 84 miles of drainage channels throughout the City. Maintenance of flood control channels must protect water quality and provide mitigation. The environmental permitting process has significantly affected the cost to maintain the channels free and clear from debris, sedimentation and/or vegetation. The regulatory agencies mandate that maintenance impacts to the flood control channels be mitigated as a condition of a permit.

There is currently no funding available to establish mitigation and only minimal funding for proper maintenance. The lack of maintenance has created a situation where the channels are unable to handle the designed water capacity, thereby increasing the potential for flooding. The total estimated cost for permits and to establish mitigation is approximately \$23,000,000. In addition to the current level of operations, the estimated cost to provide initial project analysis, monitoring, cleaning and post project analysis is approximately \$3,000,000 annually.

3. Drainage Repair/Improvements – In addition to the CMP issue identified above, there are approximately 172 identified projects throughout the City that are necessary to repair existing problems. These projects vary in size and cost. All projects deal with components of the storm drain infrastructure in disrepair and/or that have inadequate capacity to handle the flow and/or flooding. The total estimated cost to complete these projects is approximately \$47,000,000.
4. Storm Drain Pump Stations - There are 14 storm drain pump stations in the City. All of the pump stations require maintenance and an increase in their capacity to bring them up to the level of performance required to handle the amount of anticipated rainfall. Although all of the pump stations are functioning, needed repairs are continually

postponed. Repairs include: replacing old pumps, upgrading electrical wiring, upgrading pump control centers, replacing diesel engines, installing telemetry and installing backup electrical generators. The total estimated cost to repair the pump stations is approximately \$6,000,000.

5. Watershed Maintenance Plans and Drainage Studies - There are six watersheds in the City, none of which are totally inclusive to San Diego, as they also include other jurisdictions. A Watershed Maintenance Plan examines all of the factors of a particular watershed's operations. These factors include land use, habitat preservation, and erosion control. This plan is a comprehensive and proactive way to examine all of the factors and then manage the watershed in a coordinated way.

A Drainage Study is an analysis of a smaller area and examines what type of storm drain system is necessary to convey storm waters. Examples of areas needing these studies are older communities such as Ocean Beach, Mission Beach and Normal Heights. The estimated cost for the watershed maintenance plans and drainage studies is approximately \$250,000 annually.

6. Undersized Pipes - There are an estimated 17.3 miles of undersized reinforced concrete pipe. The undersized pipes have a diameter less than 18 inches and have the potential for causing flooding. The total estimated cost to replace the pipe is approximately \$17,000,000.
7. Street Sweeping – Street Sweeping benefits the storm drain system by preventing debris from clogging pipes and removing pollutants from road surfaces. Street Division's goal was to sweep residential areas once a month and commercial areas once a week. Downtown, some beach areas and a few highly dense residential areas are swept several times per week. However, due to reductions in staff and the continued growth of the City, the goal to sweep residential areas is now at least, once every other month. An estimated \$2,000,000 in additional funding is needed, annually, to sweep all streets at least every month, regardless of rain, holidays, vacations, injuries or equipment repairs. This additional funding will allow scheduling of commercial streets and residential streets to be swept one time per week and one time per month respectively. Competing demands on the General Fund may reduce the FY06 level of street sweeping below the FY05 level.
8. Street Underdrains – There are over 100 street underdrains. Street underdrains are very shallow “box type” conduits that take surface water run-off from one side of the street to the other. These underdrains are located in older areas of the City and are no longer approved for use. Even with a light rain, the underdrains plug up easily and are difficult to clean. The total estimated cost to replace the street underdrains is approximately \$5,000,000.
9. Low Flow Storm Drain Diversion System Maintenance – Currently, the City's Low Flow Storm Drain Diversion System consists of 53 operational facilities and 29 facilities under construction or scheduled for construction. These diversion systems, located around

Mission Bay and along the coastline, protect our local beaches from bacterial contamination during periods of dry weather. These systems divert low dry weather flows or urban runoff from the storm drain to the wastewater collection system for treatment. The estimated cost of annual maintenance for these facilities is approximately \$600,000.

Low Flow Storm Drain Diversion System Expansion for Areas of Special Biological Significance – The Federal Clean Water Act requires coastal states to have an Ocean Plan for the attainment and maintenance of water quality standards. The California Ocean Plan prohibits storm water waste discharges to areas of special biological significance (ASBS). There is one ASBS, the San Diego - La Jolla Ecological Reserve, within the City of San Diego. Due to pending regulatory action by the State regarding this issue, the City is conducting a planning study for additional low flow diversion facilities in the La Jolla Shores area to eliminate dry weather discharges into the ASBS. The estimated cost of these new facilities is approximately \$6 million.

10. Storm Water Treatment Systems Maintenance – The Municipal Storm Water Permit includes a provision known as the Standard Urban Storm Water Mitigation Plans (SUSMP) which mandates that new development and significant redevelopment incorporate into the design of a project structural devices that retain and treat urban storm water runoff before it is discharged from the site. The City is required to construct storm water treatment systems on City Capital Improvement Program (CIP) projects and assure for their maintenance in the future. The estimated annual maintenance based upon existing and designed storm water treatment facilities is approximately \$100,000.

Urban Runoff Management Programmatic Needs: The Storm Water Pollution Prevention Division of the Metropolitan Wastewater Department has been identified as the lead in coordinating the City's activities as they relate to complying with the Municipal Storm Water Permit. In Fiscal Year 2005, the Storm Water Pollution Prevention Division received \$2.7 million (\$2.3 general fund, \$0.4 Storm Drain fund) for complying with the Municipal Permit and keeping San Diego's beaches and bays clean.

Approximately \$7 million in additional funds annually are needed to sustain and continue the progress of the activities established to reduce the level of pollutants from urban runoff entering our rivers, bays, and the ocean. These activities, conducted by the Storm Water Pollution Prevention Division, include public education, employee training, industrial and commercial storm water inspections, storm water code compliance and enforcement, water quality monitoring, municipal activities oversight, storm water standards for development and significant redevelopment, and watershed planning. Special water quality source identification studies and identifying methods for the City to comply with "Total Maximum Daily Load" requirements which specify the total amount of specified pollutants (e.g., metals) that can be allowed in our rivers, bay, and the ocean are also needed. In addition, funding is needed to fully implement the industrial and commercial inspection program and purchase/develop data management tools to assist in decision making. These needs have been identified as a priority in the current permit cycle.

For the most part, the City of San Diego has implemented its pollution prevention activities on a jurisdictional basis. However, the City of San Diego is within six of the nine Permit-defined hydrologic units (or watersheds) in the region and as such, participates in the implementation of the Watershed Urban Runoff Management Programs for San Dieguito, Penasquitos, Mission Bay and La Jolla, San Diego River, San Diego Bay, and Tijuana River watersheds. These watershed-based programs are expected to progress over time as the Co-permittees collectively identify high priority issues and activities to address them. In February 2006, the Municipal Permit is scheduled to be renewed. The renewed permit will be more watershed specific, which would require the City to change its implementation focus. Additional needs will be identified at that time based on the requirements outlined in the permit.

Other Municipality and Legislative Actions: In 2005, a national survey conducted by the management consulting firm Black and Veatch, revealed that the City of San Diego's Storm Drain fee was low compared to the other municipalities that responded. Overall the residential monthly fee of \$0.95 per month was the 84th lowest of 85 users; with the highest being \$14.26 and the lowest being \$0.24 in St. Louis. The median fee was \$3.70. This survey also indicated that 72% of the respondents used storm water user fees as their major (at least 90%) source of revenue. Attachment 3 contains the complete survey report.

Compliance with federal water quality mandates is an issue that is being addressed throughout the state. The following demonstrates the various methods utilized in other cities:

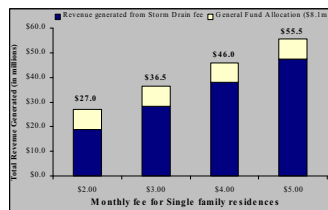
- In November 2004, the residents of Los Angeles approved Proposition O, which will allow the City of Los Angeles to issue \$500 million in general obligation bonds for projects that clean up polluted storm water, and bacteria in the City's rivers, lakes, beaches, and ocean. A 67% voter approval was needed and the measure passed with a 76% to 24% margin.
- The City of Poway has utilized revenues from water and sewer utility charges to cover storm water management expenses.
- The City of San Marcos increased their trash fees to cover a portion of their storm water management compliance program expenses.

CONCLUSION:

The existing Storm Drain fee is inadequate to fund an adequate level of operations, address the need to fix the City's aging storm water infrastructure and adequately comply with Federal Water Quality Mandates. The Storm Drain fee could be restructured and increased, in accordance with Proposition 218, to provide a level of funding to address the unfunded needs. The City has already begun to undergo this process. In 2002, the City of San Diego entered into an agreement with the consulting firm, Brown and Caldwell, for the development of a cost of services study; including a fee structure that is in conformance with requirements of Proposition 218.

Based on the consultant's preliminary information a revised fee structure would be developed based upon amount of runoff (hydrologic runoff coefficient) and the type of runoff (pollutant load) per customer class. The revised fee structure would also create additional customer

classifications; \$28.4 million based on \$3.00 per month; \$37.9 million based on \$4.00 per month; and \$47.4 million based on \$5.00 per month. The chart to the right depicts revenue generated based upon the various scenarios of monthly fees for single family residences. These projections assume that in addition to the revenue generated by the Storm Drain fee, the existing general fund allocation (\$8.1 million) continues. The revenues



portrayed and described in this report will be generated from all customer categories. Disproportionate changes may occur to non-single family residential customer categories based on the proportionate cost of providing storm water management service to them, and will be studied as the cost of services study is finalized. The consultant has provided a scope of work for the services needed to finalize the cost of services study and prepare for balloting. The estimated cost for these services is \$346,834 and is included in the proposed FY06 Stormwater Pollution Prevention Division budget.

At \$3.00 per month average fee for single family residences is the minimal level of funding recommended in this report because any fee less than this would not support a meaningful change in service level. The \$3.00 per month fee level would begin to address the City’s most critical issues. The activities addressed in this report would not be funded at a 100% level and would require a long term approach to accomplish all needs. It is projected that as capital and/or major infrastructure projects are completed, these funds will be redirected to address maintenance needs. Also, it is recommended that bond financing for capital improvement projects be studied. Bond financing would allow the City to spread the capital cost across an expanded timeframe.

If the City decides to proceed with the revised Storm Drain fee, there are two options for placing this ballot before the voters: (a) a mail-out ballot to property owners or (b) a general election. As mentioned previously, the City would need 50%+1 of returned mail-out ballots or two-thirds majority approval of the general electorate for this measure to pass. The cost of the mail-out ballot was estimated by the consultant to be approximately \$200,000. The cost of placing this ballot before the electorate would be approximately \$240,000 in a primary election or \$150,000 in a general election.

ALTERNATIVE:

- 1) Do not fund the Storm Water Management Services Charge Study.

Respectfully Submitted,

Halla Razak
Chief Deputy Director
Engineering & Capital Projects Department

Approved: Richard Mendes
Deputy City Manager

- Attachments:
1. Fiscal Year 2005 Storm Drain Fee Distribution
 2. Storm Drain Infrastructure Needs
 3. [Black & Veatch 2005 Stormwater Utility Survey](#)

**ATTACHMENT 1
FISCAL YEAR 2005 STORM DRAIN FEE DISTRIBUTION**

Department - Division	Description	FY05 Budget
General Services - Street Division	Maintenance and Repair	\$5,042,385
Risk Management	Public Liability Claims Fund	\$500,000
Metropolitan Wastewater Department – Storm Water Pollution Prevention	National Pollution Discharge Elimination System (NPDES) Permit Compliance	\$403,186
Water	Administration	\$59,814
Auditor	Administration	\$41,361
<i>TOTAL STORM DRAIN BUDGET</i>		<i>\$6,046,746</i>

**ATTACHMENT 2
STORM DRAIN INFRASTRUCTURE NEEDS**

Corrective Action	Capital Expense	Annual Operating Expense
Replace Corrugated Metal Pipes (CMP)		
Condition Assessment	\$1,500,000	
Replacement	\$50,000,000	
Maintain Drainage Infrastructure		
Mitigation	\$23,000,000	
Permitting		\$43,000
Maintenance of drainage infrastructure		\$9,900,000
Repair/Improve Drains	\$47,000,000	
Repair/Update Storm Drain Pump Stations	\$6,000,000	
Development Watershed Maintenance Plans and Drainage Studies		\$250,000
Replace Undersized Pipes	\$17,000,000	
Street Sweeping		\$5,900,000
Replace Underdrains	\$5,000,000	
Low Flow Storm Drain Diversion Systems		
Maintenance		\$600,000
Expansion for ASBS	\$6,000,000	
Storm Water Treatment Systems Maintenance		\$100,000