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Environmental Quality and
Waste Management Committee
Honorable Mark Ridley-Thomas, Chairperson
Honorable Joel Wachs, Vice-Chairperson
Honorable Ruth Galanter, Member

20

Dear Councilmembers:

**RESPONSE TO COUNCIL FILE No. 00-0092 REGARDING LOW-FLOW DIVERSION OF
DRY-WEATHER URBAN RUNOFF**

This is a re-transmittal of the Low-Flow Diversion of Dry-Weather Urban Runoff report dated December 27, 2001. Please discard the previous report.

Please find attached a report prepared in response to the specific issues raised via Council Motion (C.F. No. 00-0092) on June 6, 2000. As requested, the report provides a status of the City's low-flow diversion program including cost-sharing agreements, prioritization of diversion projects, public education, source control investigations, and spill response.

If you have any questions about the attached report or the City's Stormwater Program, please contact Gary Lee Moore, Stormwater Program Manager at (213) 847-6346.

Sincerely,

James F. Langley for
Judith A. Wilson, Director
Bureau of Sanitation

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Attachment: "Report from Bureau of Sanitation to City of Los Angeles' Environmental Quality and Waste Management Committee on Council File Number 00-0092: Low-Flow Diversion of Dry Weather Urban Runoff, January 11, 2001."

cc: Maribel Marin, Commissioner, Board of Public Works
James F. Langley, Assistant Director, Bureau of Sanitation

REPORT FROM BUREAU OF SANITATION TO CITY OF LOS ANGELES'
ENVIRONMENTAL QUALITY AND WASTE MANAGEMENT COMMITTEE ON
COUNCIL FILE NUMBER 00-0092

LOW-FLOW DIVERSION OF DRY-WEATHER URBAN RUNOFF

January 11, 2001

Council Resolution No. 00-0092 (Appendix 1) requires the Bureau of Sanitation (Sanitation) to report back to the Environmental Quality and Waste Management Committee on specific aspects of the City's low-flow diversion program.

RECOMMENDATION TO ENVIRONMENTAL QUALITY AND WASTE MANAGEMENT
COMMITTEE:

1. Approve the continued construction of dry-weather diversions of priority storm drains as outlined in Council Resolution No. 00-0092 with the following modification: Imperial Highway Storm Drain Low-Flow Diversion will replace the North Westchester Storm Drain Low-Flow Diversion.
2. Transfer \$600,000 within the Stormwater Pollution Abatement Fund No. 511, Dept. 50, from Account No. P476 to a new Account titled, Imperial Highway Storm Drain Low-Flow Diversion.

REPORT SUMMARY

1. The Bureau of Sanitation has nearly completed negotiations with Los Angeles County on an **agreement to share the operation and maintenance costs** of four of the dry-weather diversions. Under the draft agreement, the City would pay 43 percent of the operation and maintenance costs of the diversions, though it contributes 65 percent of the diverted runoff. The County would pay the remaining costs, including the costs for other jurisdictions that contribute runoff. The draft agreement should be ready for Council review in the spring of 2001.
2. The **Beach Water Quality Advisory Group (BWQAG)**, after reviewing data from storm drain and beach water quality samples collected from April to October 2000 along with the relative health risk ranking, supports the City's plan to divert the drains listed in Council Resolution No. 00-0092 with one modification. The BWQAG recommends that the diversion of the Imperial Highway storm drain takes priority over the diversion of the North Westchester storm drain. The Bureau of Sanitation agrees with this recommendation and requests the transferring of \$600,000 within the Stormwater Pollution Abatement Fund No. 511, Dept. 50, from Account No. P476 to a new Account titled, Imperial Highway Storm Drain Low-Flow Diversion.

3. **Low-Flow Diversion Program Summary.** The following table (Table 1) summarizes the status of the 19 major storm drains that flow from the City of Los Angeles to Santa Monica Bay. All 19 drains receive some portion of their flow from urban runoff originating from the City of Los Angeles. The drains are listed from North to South along the coast. Of the 19 drains, 12 of them are slated to be diverted by 2002. All drains diverted to Hyperion Treatment Plant (HTP) will be tested to determine the contribution of dry-weather urban-runoff to HTP and any subsequent effect on the HTP NPDES Permit.

Table 1. Low-Flow Diversion Program Summary Table

Storm Drain (listed North to South)	Status of Low-flow Diversions			
	Divert	Year	Monitor in 2001	Notes
Castlerock	No		Yes	Rocky downcoast area eliminates recreational access, which reduces public exposure to urban runoff along the shoreline.
Santa Ynez Canyon	No		Yes	Rocky downcoast area eliminates recreational access, which reduces public exposure to urban runoff along the shoreline.
Marquez Avenue	No		Yes	Small flow infiltrates into sand and rarely reaches shoreline, which reduces public exposure to urban runoff along the shoreline.
Bay Club Drive	Yes	2001		Divert to Hyperion Treatment Plant
Pulga Canyon	No		Yes	Lower bacterial counts due to \$5.4 million sewer repair.
Temescal Canyon	Yes	2002		Divert to Hyperion Treatment Plant
Palisades Park	Yes	2001		Divert to Hyperion Treatment Plant
Santa Monica Canyon	Yes	2002		Divert to Hyperion Treatment Plant
Pico-Kenter	Yes	2001		Diverted to SMURRF ¹
Ashland Avenue ²	Yes	2001		Divert to Hyperion Treatment Plant
Rose Avenue ²	Yes	1977		Diverted to Ashland
Thornton Avenue	Yes	2000		Diverted to Hyperion Treatment Plant
Brooks Avenue ²	Yes	2001		Divert to Hyperion Treatment Plant
Venice Pavilion	Yes	2002		Divert to Hyperion Treatment Plant
Marina Del Rey	No		No	Offshore discharge and tidal mixing dilutes bacterial contamination and lowers public exposure.
Ballona Creek	No		No	Offshore discharge and tidal mixing dilutes bacterial contamination and lowers public exposure.
Playa Del Rey ²	Yes	2001		Divert to Hyperion Treatment Plant
North Westchester	No		Yes	Offshore discharge and tidal mixing dilutes bacterial contamination and lowers public exposure.
Imperial Highway	Yes	2002		Divert to Hyperion Treatment Plant

- Note: 1. SMURRF stands for Santa Monica Urban Runoff Recycling Facility.
 2. Los Angeles County Department of Public Works is responsible for the construction and operation of these low-flow diversion structures. The City of Los Angeles is responsible for construction and operation of all other low-flow diversion structures proposed above.

INTRODUCTION

The Bureau of Sanitation's Stormwater Management Division issued a report¹ on August 3, 1999, whereby recommendations were given to construct a series of low-flow diversion (LFD) structures along the Santa Monica Bay shoreline. These structures would divert polluted runoff now flowing from beach drains into recreational waters to the City's sewage collection system for treatment at the Hyperion Wastewater Treatment Plant during the dry-weather period (April 1 to October 31). This runoff is potentially contaminated with microorganisms that could make swimmers ill as demonstrated by a health-effects study conducted along several beaches in the Bay². Further, levels of indicator bacteria measured during routine shoreline monitoring around drains in the Bay often exceed bathing water standards established through State legislation AB-411 for public salt water beaches³.

Sanitation's report prompted discussion by several key City departments and offices on the following topics: the overall approach to selecting drains for diversion, cost-sharing with other municipal agencies, and the use of source-control measures in lieu of low-flow diversion structures. These City departments and offices drafted a low-flow diversion policy that was adopted by the City Council on June 6, 2000. This adopted measure (00-0092)⁴ included policy statements, funding information, directions to Sanitation for additional actions associated with the program, and instructions to report back on certain items to the Council's Environmental Quality and Waste Management Committee (EQ&WM). Two of these items: Santa Monica Urban Runoff Recycling Facility and the Best Management Practices clearinghouse have already been heard by Council and adopted on November 3, 2000.

Reported herein are progress reports on the remaining items:

- Establishing cost-sharing and tracking agreements with other agencies for construction as well as operation and maintenance of LFDs,
- Establishing a Beach Water Quality Advisory Group,
- Prioritizing candidate drains for diversion,
- Conducting public education in watersheds draining to the Bay,
- Conducting source control investigations,
- Monitoring associated with the LFD program, and
- Responding to spills in drains diverted to Hyperion Treatment Plant.

¹ Mullin *et al.* 1999. Ranking of storm drain low-flow diversions. Santa Monica Bay. Bureau of Sanitation, Stormwater Management Division. 35 pp.

² Haile *et al.* 1999. The health effects of swimming in ocean water contaminated by storm drain runoff. *Epidemiology* 10(4): 355-363.

³ See <http://www.dhs.cahwnet.gov/ps/ddwem/beaches/saltwater.htm> for the Calif. Dept. Health Services information on AB411 and implementation guidance.

⁴ See <http://www.lacity.org/textdata/clkjourn/060600.JOU> for text of adopted policy.

COST SHARING AND TRACKING AGREEMENTS

Staff from the City of Los Angeles, Department of Public Works, Bureau of Sanitation, Financial Management Division have met with staff from the County of Los Angeles, Department of Public Works to develop a draft agreement regarding the sharing of operation and maintenance (O&M) costs for the County's and City's low-flow diversions that contribute to the City's sewer system. This initial agreement will cover the Santa Monica Canyon diversion to be constructed by the City and the Ashland Avenue, Brooks Avenue and Playa Del Rey storm drain diversions already constructed by the County. The draft agreement is contained in Appendix 2 of this report.

The following factors were considered during negotiations:

- The City and County's diversions handle runoff from land in the City and Santa Monica. Both cities should therefore contribute towards the costs of the diversions. City and County staff had agreed to pay for the O&M costs of the four diversions based on the runoff contributed by urbanized areas within each jurisdiction. However, the County agreed to pay for the runoff generated within jurisdictions other than Los Angeles, including Santa Monica, so that only the City and County will be signatories to the new agreement.
- The City's residents and businesses pay the County's stormwater assessment in addition to the City's Stormwater Pollution Abatement Charge. It is therefore only fair that the County contribute towards the cost of runoff diversions. Based on its share of the runoff from urbanized areas tributary to the four drains, the City would be responsible for 65 percent of the total O&M cost. However, the County agreed to increase its share of cost so that the City would pay only 43 percent.
- The County is interested in simplifying administration, particularly in minimizing the preparing and paying of charges. If costs were apportioned according to the contribution of runoff, multiple charges would be needed because both the City and County would pay shares of various costs at all four diversions. The County therefore proposed revised responsibilities for the costs of the four diversions, as described below in the summary of the draft agreement. These revised responsibilities result in the City's share of the total cost remaining at 43 percent.

Summary of Draft Agreement

- The City will be responsible for constructing, operating and maintaining its diversion facility at Santa Monica Canyon and will bear all of the costs of the facility.
- The County will be responsible for operating and maintaining the diversion facilities it has already constructed at the Ashland Avenue, Brooks Avenue, and Playa Del Rey storm drains and will bear all of the costs of the facilities.

- The City will bear the cost of treating the runoff from all four diversions.
- The City will monitor the flow and strength of the runoff that is diverted at all four diversions in conformance with wastewater service agreements with the City's contract agencies. The service agreements specify the methods of monitoring the flow and strength, including full-time automated flow monitoring. Strength samples will be taken for one day each quarter while the diversions are taking place. Each day's sample will be a combination of 24 hourly samples.
- The County will pay an annual charge to the City. The charge will initially be \$19,500, but will be inflated over the term of the agreement based on the consumer price index. The amount may also be revised upon mutual consent of the two parties. Payment of the charge will equalize the City and County's burdens under the agreement and will simplify administration by substituting one payment for multiple charges and payments. Table 2 shows the City and County's shares of costs according to the draft agreement and if the costs were shared evenly.

Table 2. Sharing of the O&M Costs for the Runoff Diversions in the Draft Agreement.

Diversion	Total O&M Cost	Costs Shared According to the Agreement ¹		Costs Shared Evenly	
		City Share	County Share	City Share	County Share
Santa Monica Canyon	\$53,649	\$53,649	\$0	\$26,825	\$26,825
Ashland Avenue	28,207	11,707 ²	16,500	14,103	14,103
Brooks Avenue	19,159	2,657 ²	16,502	9,579	9,579
Playa Del Rey	20,060	3,554 ²	16,507	10,030	10,030
Annual Payment	0	(19,500)	19,500	0	0
Total	\$121,076	\$52,068	\$69,008	\$60,538	\$60,538
Percent	100%	43%	57%	50%	50%

¹Costs assume that bacterial pollution in dry-weather surface runoff is generated within urbanized areas.

² Costs of treating and monitoring the flow and strength of the diverted runoff.

- The diversions will be prohibited in the winter rainy months. Wastewater connection charges will not be required for the diversions, because the diversions will not affect system flows during heavy rainfall events when the wastewater system capacity is stressed.

- The agreement has a thirty-year term. A party can request changes in the agreement due to changed regulations, physical changes in the diversions and material changes in the costs only after five years from the date of execution. Both parties must then agree to any changes. The agreement does not prohibit amendments at any times for other reasons.

Schedule for Completion of the Agreement

At a staff level, there is only one outstanding issue. The City would like the County to be responsible for maintaining the diversion structure within the channel. County Council has already completed its review, although we have not yet received its comments. The agreement should be ready for review by the Regional Water Quality Control Board in February 2001. It should be ready for City Council approval in the spring of 2001.

Tracking of Agreements

The City Council has directed the Bureau of Sanitation to establish a method of tracking and monitoring diversion projects by the City and contract agencies and to develop standard agreement/permit conditions to ensure that the interests of the City are protected. The Bureau has simplified this task by consolidating all responsibility for the low-flow diversions with one entity, the Financial Management Division (FMD).

The wastewater contract agencies can divert runoff into the City's system pursuant to their existing service agreements. No other agreements are needed for their diversions. The service agreements require that the agencies annually report the flow and strength of their runoff diverted into the City's wastewater system. FMD will therefore have the information needed to track the quantities of flow and strength of all of the runoff diverted into the system by the wastewater contract agencies and by the City. The service agreements also specify the payment of service charges to the City for treating and conveying the agencies' diverted runoff.

New agreements are needed only if runoff is diverted by agencies that are not wastewater contract agencies, such as the County Public Works Department. Since FMD will be responsible for negotiating all such agreements, it will also have the information it needs to track the quantities of runoff diverted by these agencies and can specify cost-sharing provisions of the new agreements.

BEACH WATER QUALITY ADVISORY GROUP

The City Council directed Sanitation to establish an interagency advisory group to advise the Bureau on issues associated with the Low-Flow Diversion program. As stated in Council Measure 00-0092, this group would "...make recommendations regarding future diversion projects, beach water quality standards, monitoring methods, sampling locations, and to conduct preliminary source control assessments as appropriate."

From these instructions, the Beach Water Quality Advisory Group (BWQAG) was established and has met five times. Stakeholder agencies represented on the committee are:

- City of Los Angeles, Bureau of Sanitation (Stormwater Management Division)
- City of Los Angeles, Bureau of Sanitation (Environmental Monitoring Division)
- City of Los Angeles, Bureau of Sanitation (Executive)
- City of Los Angeles, City Legislative Analyst
- City of Los Angeles, Environmental Affairs Department
- City of Los Angeles, Office of Administrative Research Services (formerly the City Administrative Officer (CAO))
- County of Los Angeles, Department of Health Services
- County of Los Angeles, Department of Public Works, Watershed Management Division
- County of Los Angeles, Fire Department, Lifeguard Division
- Southern California Coastal Water Research Project
- Heal The Bay
- BayKeeper
- Interested individuals from the coastal communities

The committee members have reviewed details of Sanitation's Low-Flow Ranking report, monitoring designs, data collected from April to October of 1999 and 2000, and study plans for the Temescal Canyon source investigation. They also received presentations regarding work being done on the following topics: Cabrillo Beach water quality by Environmental Affairs Department, runoff plume dispersion studies conducted by Southern California Coastal Water Research Project (SCCWRP), and beach water quality standards by a member of the State's Beach Water Quality Task Force. To date, the Committee has agreed with Sanitation's recommendation to move forward with designs for LFD structures at Temescal Canyon and Imperial Highway, and to conduct a source investigation in the Temescal Canyon watershed. Meeting minutes are presented in Appendix 3.

LOW-FLOW DIVERSION PRIORITIZATION

The major storm drains that flow into Santa Monica Bay were evaluated to determine if the storm drain runoff and adjacent beach water quality continue to justify the need for dry-weather low-flow diversions. There are 19 major storm drains flowing from the City of Los Angeles to Santa Monica Bay (Table 1). Eight of these drains are either currently diverted or scheduled for LFD construction over the next two years. Two other drains, Marina Del Rey and Ballona Creek, are located next to each other and have offshore outlets with large-scale tidal mixing that dilutes the coliform counts and, therefore, reduces the risk of illness to swimmers. Discharges from Marina Del Rey enter the Pacific Ocean 1000-feet from shore. Discharges from Ballona Creek enter the Pacific Ocean 500-feet from shore. Shoreline station S-10 located 50-yards downcoast of Ballona Creek consistently show low bacterial counts from daily monitoring.

The remaining 9 drains (Table 3) were evaluated as potential candidates for low-flow diversion. These drains were tested for coliform bacteria from April to October 2000 in the undiluted drain effluent, in the mixing zone, at 50-yards North, and at 50-yards South of the storm drain outlet. Two types of analyses were conducted on the water quality data from storm drain and beach samples. First, beach water quality data was evaluated for exceedences of the existing health standards for water contact, the AB-411 bathing standards (Figures 1, 2, 3, and 4, Appendix 4). AB-411 was adopted by the California Legislature in September of 1997. Los Angeles County Department of Health Services (LACDHS) incorporated AB-411 bathing water standards into their Ocean Water Regulatory and Monitoring Protocol in July 1999. LACDHS is responsible for enforcing laws and regulations regarding beach sanitation and State water quality standards. This includes posting of warning signs on beaches when State standards are not met.

AB-411 bathing standards require that a single sample shall not exceed:

- 10,000 total coliform bacteria/100-mL or
- 400 fecal coliform bacteria/100-mL or
- 104 enterococcus bacteria/100-mL or
- 1,000 total coliform bacteria/100-mL, if the ratio of fecal/total bacteria exceeds 0.1.

LACDHS has monitoring locations at most of the major storm drains entering Santa Monica Bay. Routine samples are collected 50 yards away from the storm drains either upcoast or downcoast. Discussions are currently underway between environmental and regulatory groups to determine if the samples collected 50-yards away from the drain are representative and if the sampling locations should be moved closer to the drain to be more protective of swimmers. Another issue is the location of the station with respect to the lateral transport of urban runoff along the shore. If the waves and currents transport is moving away from the sampling location, then the resulting data will underestimate the contribution of urban runoff to the beach water quality. In Santa Monica Bay, only one of the storm drains monitored by LACDHS is monitored both to

the north and the south. The rest of the storm drain stations are either 50 yards to the north or south of the drain but not both. There are regional differences to how the sampling distance issue is being handled. For example, in San Diego, the local health agency applies AB-411 standards to samples that are collected at 0-yards from the drain. The Bureau of Sanitation from April to October of 2000 collected samples from the drain, the mixing zone in front of the drain, 50-yards North, and 50-yards South to better understand the relationship between urban runoff at the beach and the resulting beach water quality.

Second, the storm drains were ranked according to relative health risk which considers drain flow, bacterial concentration, bacterial ratios, and beach usage. The results from this analysis are shown in Table 4 and Appendix 5.

Table 3. Storm Drains Evaluated for Coliform Contamination During 2000. Drains are Listed from North to South.

Castlerock
Santa Ynez Canyon
Marquez Avenue
Pulga Canyon
Temescal Canyon
Santa Monica Canyon
Venice Pavilion
North Westchester
Imperial Highway

Percent of Samples that Exceeded AB-411 Bathing Standards

Over 90% of the samples collected from the storm drain exceeded the AB-411 bathing water standards (Figure 1). A notable exception to these high numbers is Pulga Canyon, which exceeded AB-411 standards about half as often as the other drains due to a \$5.4 million dollar sewer repair done in early 2000. Mixing zone samples were composited from 5 individual grab samples taken at ankle depth where the incoming waves meet the storm drain effluent. Mixing zone measurements from the following storm drains: Castlerock, Santa Monica Canyon, Temescal Canyon, and Santa Ynez Canyon exceeded the AB-411 standards between 65% and 100% of the time (Figure 2). Mixing zone samples from Imperial Highway and Pulga Canyon form a second group with exceedences at 31% and 28%, respectively. At 50-yards North of the storm drain, Santa Monica Canyon samples showed the 35% exceedence of AB-411 standards, about 3 times higher than any of the other drain measurements at 50-yards North (Figure 3). At 50-yards South, samples from Castlerock, Santa Ynez Canyon, and Santa Monica Canyon exceeded the AB-411 standards between 40% to 60% of the time (Figure 4).

Figure 1. Percent of Samples that Exceed AB-411 Bathing Water Standards at Various Storm Drains from 2000.

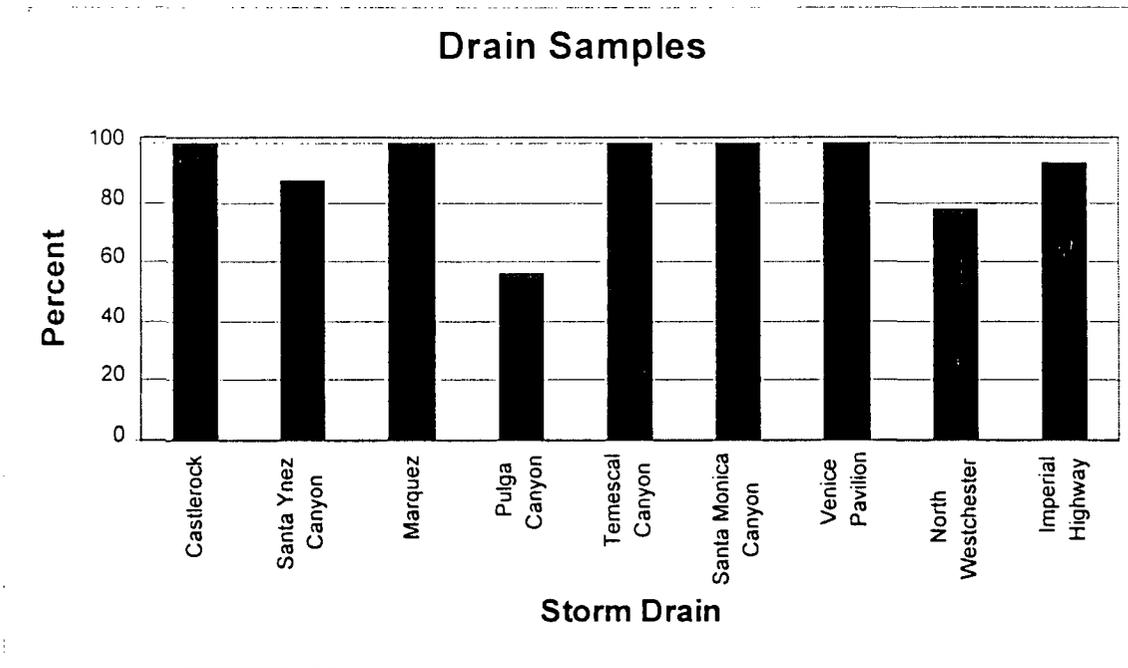
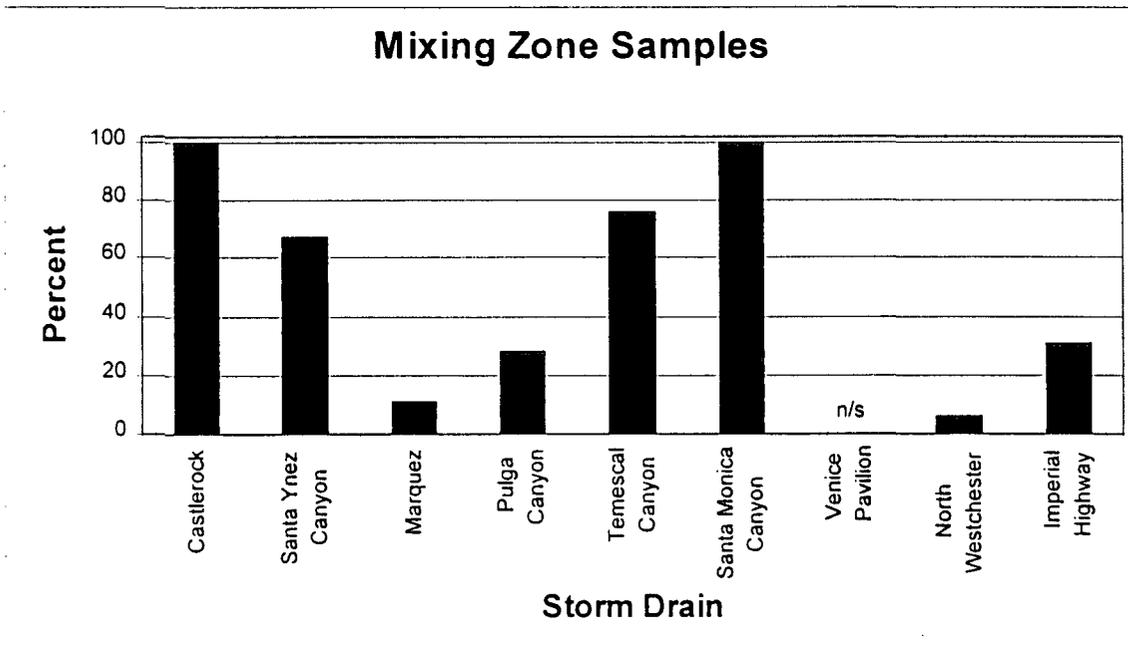
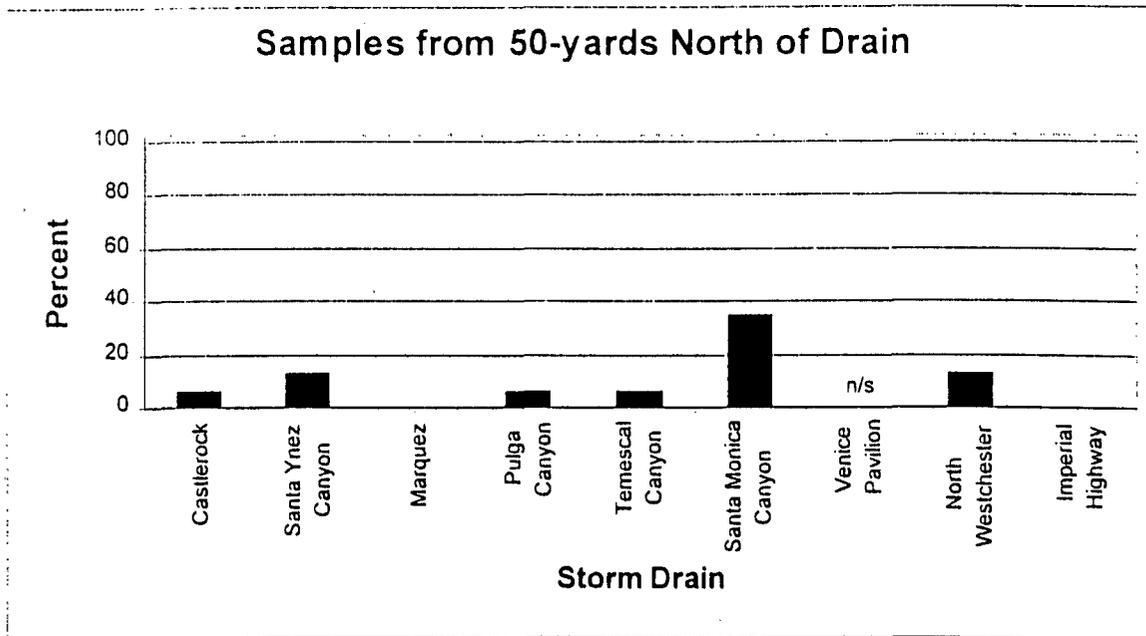


Figure 2. Percent of Samples that Exceed AB-411 Bathing Water Standards in the Mixing Zone from 2000.



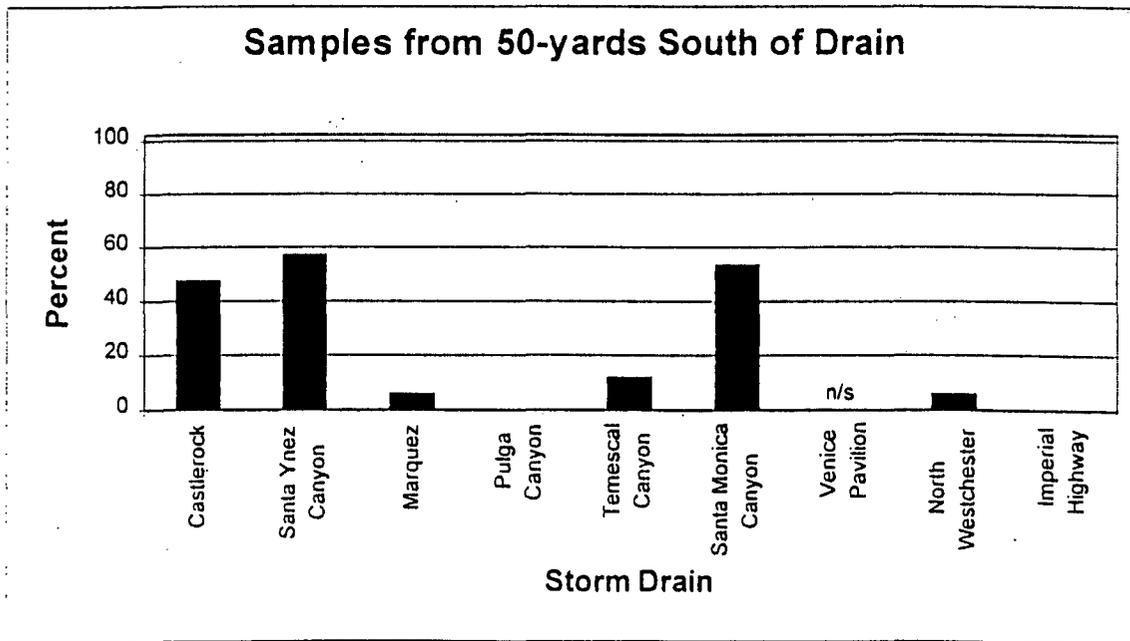
n/s = no samples

Figure 3. Percent of Samples that Exceed AB-411 Bathing Water Standards at 50-yards North in 2000.



n/s = no samples

Figure 4. Percent of Samples that Exceed of AB-411 Bathing Water Standards at 50-yards South in 2000.



n/s = no samples

Relative Health Risk Ranking

Additional analysis was done to determine which drains produced the highest health risk to swimmers. Relative health risk (contamination index) was calculated as the product of the following factors: drain flow, bacterial concentration of *E. coli*, fecal to total coliform ratio, and beach usage. Each of these factors affect the number of swimmers that could become ill. The resulting numbers were ranked in order to determine the drains with the worst contamination. This ranking was developed to ensure that low-flow diversion resources were spent at the storm drains that had a combination of high flow, high bacterial contamination, and high number of beach visitors. In other words, the strategy was to divert the worst drains first.

Table 4. Relative Health Risk Ranking of Storm Drains for 2000.

Ranking	Storm Drain	Contamination index
1	Santa Monica Canyon	8936
2	Santa Ynez Canyon	459
3	Temescal Canyon	104
4	Imperial Highway	94
5	Pulga Canyon	40
6	Castlerock	34
7	Marquez Avenue	0.2
A	Venice Pavilion	A
B	North Westchester	B

- Note: A. The Venice Pavilion storm drain cannot easily be compared to the other storm drains because it is connected to the Windward Avenue Pumping Plant which intermittently pumps out large volumes of dry-weather urban runoff. The other drains flow unencumbered to the shore.
- B. Unable to easily measure drain flow due shallow sheet flow and confined space issues.

Prioritization Discussion

The more samples from the storm drain, mixing zone, 50-yards North, or 50-yards South that exceeded the AB-411 bathing standards, the worse the water quality. No objective standard exists at this time to determine what percent exceedence of AB-411 bathing standards is acceptable. Based on the percent of samples that exceed the AB-411 bathing standards (Figure 1), no one should be in contact with the storm drain effluent. This can occur at Santa Monica Canyon where urban runoff forms a pond across the beach before flowing to the shoreline as a meandering stream. Percent exceedence of samples from the mixing zone samples are a high for Castlerock, Santa Monica Canyon, Santa Ynez Canyon, Temescal Canyon, and to a lesser extent, Imperial Highway and Pulga Canyon. Samples from 50-yards away are a concern to

the North for Santa Monica Canyon and to the South for Castlerock, Santa Ynez Canyon, and Santa Monica Canyon. Of the 9 drains evaluated, Santa Monica Canyon has the most exceedences of the AB-411 bathing standards and should be considered the highest priority for diversion.

Castlerock and Santa Ynez Canyon, on the other hand, both have rocky shorelines to the South that are inaccessible to beachgoers. From a public health standpoint, high percent exceedences of the AB-411 standards for Castlerock and Santa Ynez Canyon are not important unless beachgoers are exposed to the polluted runoff. Beachgoers have not been seen in front of these two drains because of the presence of rocks in the tidal mixing zones as well as offshore in the subtidal areas. Runoff from the Castlerock and Santa Ynez Canyon drains will be studied during the dry weather of 2001 to determine the southernmost extent of their respective bacterial beach contamination.

From the relative health risk ranking (Table 4), Santa Monica Canyon has by far the worst runoff in terms of flow, bacteria, and bacterial ratios, along with high beach usage. Santa Ynez is second, but as mentioned above is not considered accessible to beachgoers. Temescal Canyon is ranked third, and Imperial Highway is ranked fourth.

Venice Pavilion storm drain is connected to the Windward Avenue Pumping Plant, which was designed to handle the local flooding problem. Surface runoff collects in the Plant's wet well, which is then pumped into the Venice Pavilion storm drain when a high water sensor is activated. During dry weather, the pumps go on for about 10 minutes every 15 hours. Venice Pavilion storm drain did not receive a relative health risk ranking because it operates differently than the other drains. Large volumes of urban runoff are intermittently pumped to Venice Beach. The Pumping Plant infrastructure along with the proximity of the Coastal Interceptor Sewer (CIS) creates an opportunity to easily capture local runoff before it reaches the most popular beach area in Santa Monica Bay.

While mixing zone samples from Pulga Canyon and Imperial Highway storm drains have a similar percent exceedence of AB-411 bathing standards, Imperial Highway storm drain was selected for diversion because Imperial Highway storm drain ranks higher than Pulga Canyon storm drain with respect to relative health risk and contamination index (Table 4). Additionally, lifeguards at Pulga Canyon are more likely to keep people away from the mixing zone than at the Imperial Highway storm drain because the Pulga Canyon storm drain has a lifeguard tower located directly over the drain outlet. Pulga Canyon storm drain will be monitored during the dry-season of 2001.

Flow measurements could not be taken for the North Westchester storm drain because of issues related to confined space access and shallow sheet flows in the upstream box structure. North Westchester could not be ranked because of the lack of flow measurements, a key factor in the calculations for relative health risk. Flow measurements for the other drains were taken at the drain outlet. This was not possible at North Westchester because the outlet structure is 200-feet from shore.

Sanitation recommends replacing the North Westchester storm drain Low-Flow Diversion with the Imperial Highway storm drain Low-Flow Diversion based on mixing zone data and discharge location. Mixing zone samples from the Imperial Highway storm drain exceeded the AB-411 bathing standards 4 times more often than mixing zone samples from the North Westchester storm drain. The discharge point of the North Westchester storm drain is 200-feet from shore and is subject to tidal mixing. Swimmers do not have access to the mixing zone in front of the North Westchester storm drain outlet because of the waves hitting the end of the outlet structure. The Imperial Highway storm drain flows directly to the shoreline. Because of the differences in discharge locations and the water quality data (Appendix 4), the chances of beachgoers coming in contact with contaminated flows are greater at Imperial Highway storm drain.

Based on the results of these two types of analyses for the 9 undiverted storm drains, the Bureau of Sanitation recommends that the priority for diversion be Santa Monica Canyon, Temescal Canyon, and Imperial Highway storm drains.

PUBLIC EDUCATION

Santa Monica Canyon Public Outreach Campaign (April - July 2000)

The Santa Monica Creek watershed drains to the Santa Monica Bay via a perennial creek at the bottom of Santa Monica Canyon. Water samples taken at the storm drain outfall show high levels of bacterial and fecal coliform contamination flowing unfiltered to the ocean. Potential sources of contamination in Santa Monica Canyon are leaking septic tanks, landscape waste, and improperly disposed of horse manure.

To address this problem, the City of Los Angeles conducted a public outreach campaign aimed at educating landscapers and gardeners, horse owners, and septic tank owners about the best management practices (BMPs) that would reduce the amount of contamination flowing into Santa Monica Bay.

The City's outreach campaign within the Santa Monica Canyon included the following:

- The mailing of an informational letter and a Septic Tank BMP pamphlet to 800 Santa Monica Canyon residents who maintain septic tanks.
- Three bilingual BMP pamphlets targeting landscapers and gardeners, horse/equine owners and septic tank owners.
- Three fact-sheets providing additional information for each of the three audiences.
- The direct mail of a letter and the appropriate pamphlet to horse owners.
- The preparation and distribution of a newsletter article encouraging homeowners to implement stormwater "good housekeeping" practices.
- The preparation and distribution of a news release that included stormwater "good housekeeping tips" to all local media outlets.
- The distribution of educational materials to area homeowner associations, community centers, libraries, and local press.

- Participating in the Brentwood Memorial Day Parade by staffing a table to distribute educational materials to the attendees.
- The mailing of an informational letter and horse BMP pamphlet to 43 horse owners in the Santa Monica Canyon area.
- Councilmember Cindy Miscikowski published information in Council District 11's monthly newsletter in May. This publication reaches 500 residents.
- The distribution of an article to all local media which resulted in articles published in the following publications: Palisadian Post on April 13, 2000; Los Angeles County Tribune on April 20, 2000; Santa Monica Bay Week on April 20, 2000; Palisadian Post on June 1, 2000; Brentwood News, June 2000; and Palisades 90272 in their July issue.
- An educational presentation to the Pacific Palisades Chamber of Commerce regarding horse owner BMPs and Landscape/Gardening BMPs (June 2, 2000).
- An educational presentation to the Pacific Palisades Community Council regarding horse owner BMPs and Landscape/Gardening BMPs (June 8, 2000).

As the City approaches the construction of the low-flow diversion project planned for the Santa Monica Canyon area, the following public outreach effort will take place prior to construction:

- Mailing to affected residents to increase public awareness and support.
- Partnering with Councilwoman Cindy Miscikowski to publish information in CD 11's monthly newsletter.
- Writing and submitting articles to area newspapers highlighting the facts, timeline and benefits of this low-flow diversion project.
- Advertising in local area newspapers describing this project, its benefits, and its short-term negative effects on the community during the brief construction period.
- Providing educational presentations about low-flow diversions to homeowners associations/community groups within the affected area.

Future Stormwater General Public Outreach Efforts within the City of Los Angeles include, but are not limited to:

- Partnering with the County of Los Angeles for the annual bilingual (English/Spanish) mass media advertising campaign (print and radio).
- Targeting public outreach campaigns at specific pollutants (e.g. trash, pet waste, horse owners, septic tank owners).
- Working with the Mayor's Healthy Neighborhoods program.
- Partnering with City departments (Library, Housing, all Council Districts, Recreation and Parks, Channel 35, Police Department, Animal Services) on the dissemination of information.
- Working with the media in the release of information via press releases and news stories.
- Targeting businesses that have the potential to discharge pollutants of concern (e.g. automotive fluids, trash, pathogens, and coliform) from entering the environment.

- Expanding the City's Stormwater Program web site, LAstormwater.org to provide more information about stormwater pollution prevention.
- Partnering with Business Improvement Districts on the dissemination of information.
- Partnering with Cabrillo Marine Aquarium in the education of elementary students.
- Partnering with Los Angeles County in the education of middle and high-school students through the Generation Earth program.
- Expanding the public agency employee training program to include specialized training for employees whose job duties have the potential to negatively impact water quality.

TEMESCAL CANYON SOURCE CONTROL INVESTIGATION

Sanitation conducted an investigation of the Temescal Canyon watershed to determine if obvious and controllable sources of bacterial contamination were present. If sources could be identified, then measures would be taken to control these bacterial inputs, thus eliminating violations of water quality standards along the shoreline and the need for a diversion structure.

From September to November 2000, personnel from the Bureau of Sanitation have conducted 7 monitoring events at ten stations along the main storm drain line running down the length of the Canyon. Each sample was tested for concentrations of ammonia and three indicator bacteria: total coliform, *E. coli*, and enterococci. All these parameters are indicators of the presence of sewage contamination. Such contamination could be derived from leaking sewers, failing septic tank systems, or waste from pets or horses washing into the storm drain system.

Data collected to date (Appendix 6) indicate that while bacterial concentrations were sporadically elevated within the drain system at different stations; no discernable pattern of bacterial contamination emerges from this monitoring. Based on this finding, Sanitation plans to continue of a low-flow diversion structure at the base of Temescal Canyon with construction to be completed by summer 2002. Dry-weather diversion will keep contaminants from reaching recreational waters from April through October. Public education will continue in our effort to reduce stormwater pollution year round.

LOW-FLOW DIVERSION SPILL RESPONSE

Sanitation is responsible for the operation and maintenance of the City's sewer system, as well as the City's low-flow diversion pump stations. Before the beginning of the next dry-weather diversion period (April 1, 2001), Sanitation will have implemented modifications to the existing Stormwater Hotline Response procedures (Appendix 7) to include notification of any spills to the storm drain system that might impact low-flow diversion structure, the sewer system, or Hyperion Treatment Plant. Currently, protocols exist, that in the event of a spill, notification goes out to the following groups:

Los Angeles County Department of Health Services
Los Angeles County Flood Control District
City of Los Angeles Wastewater Collection Systems Division
Los Angeles County Fire Department-Hazardous Materials
California Dept. of Fish and Game
California Regional Water Quality Control Board, Region 4

Before a low-flow diversion becomes operational these same groups will receive specific drainage maps and modified hotline procedures so that appropriate action can be taken to protect the sewer system in the event of a spill into a storm drain that flows to a low-flow diversion.

To protect the Hyperion Treatment Plant, the City's low-flow diversions have hydrocarbon sensors that automatically shut off the pumps in the presence of volatile hydrocarbons such as gasoline. Additionally, the operation of the City's low-flow diversions are also monitored 24-hours/day from the Venice Pumping Plant where staff can initiate the immediate dispatch of crews to shut down the low-flow diversion pumps in the event of a spill of a non-volatile chemical. Additionally, a call from the Stormwater Hotline can initiate the same response.

Los Angeles County Flood Control District is responsible for the Los Angeles County's low-flow diversion structures at Ashland, Brooks, and Playa Del Rey storm drains. The District is currently part of the multi-agency notification procedures for spill response.

In addition to the above groups, new procedures will include notification of the City's Treatment Plant Emergency Response Coordinator at Sanitation who will take additional steps to protect the sewer and the Hyperion Treatment Plant.

LIST OF APPENDICES

1. Council Resolution Number 00-0092
2. Draft Low-Flow Diversion Cost-Sharing Agreement between the City and County of Los Angeles.
3. Beach Water Quality Advisory Group (BWQAG) Meeting Minutes
4. Drain and Beach Water Quality Measurements from 2000: Percent of Samples Exceeding the AB-411 Bathing Water Standards
5. Contamination Index and Relative Health Risk Ranking of Storm Drains Flowing into Santa Monica Bay for 2000
6. Temescal Canyon Source Identification Study: Map and Data for 2000.
7. City of Los Angeles' Stormwater Hotline Response Procedures

Appendix 1. Council Resolution Number 00-0092

PRINT-VIEW RECORD(S) ▾

Record 1 of 1

DOCID

00-0092

STATUS

c

CHNGDATE

11/8/00

TITLE

1999-00 PROPOSED STORM DRAIN LOW DIVERSION PROG - CIP

AUTHOR

CAO 0610-01876-0222

SUBJECT

Req Ccl approve the 1999-00 proposed Storm Drain Low Flow Diversion Projects in the Stormwater Capital Improvement Program (CIP).

DATEREC

1/19/00

ACTIONS

1-19-00 - For ref

1-19-00 - Ref to EQ&WM & B&F Comts

1-20-00 - File to EQ&WM Comt Clk

2-10-00 - For ref - CLA - Req Ccl approval of Dry-weather Division Program

2-10-00 - Ref to EQ&WM Comt - to EQ&WM Comt Clk

2-29-00 - For ref - Transmittal from CLA / CAO / Bur of Sanitation relative to Dry-Weather Diversion Program

2-29-00 - Ref to EQ&WM Comt - to Comt Clk

6-6-00 - EQ&WM Comt rept ADOPTED, subject to the approval of the Mayor to:

1. ADOPT a dry-weather diversion policy for urban runoff that:

a. Advocates voluntary diversion of drains that pose a significant potential to impact public health, with funding priorities based on ranking of those drains that have the highest potential to impact public health.

b. Pursues capital and operating cost-sharing agreements with other entities and jurisdictions.

c. Does not impact the efficient and safe operation of the City's wastewater system; and is consistent with the Contract Cities Wastewater Services Agreement(s).

d. Considers source control measures as appropriate.

2. REVISE the 1999-00 Stormwater Capital Program to reflect the following dry-weather diversion priorities: Santa Monica Canyon, Palisades Park, Santa Ynez Canyon, Temescal Canyon, Venice Pavilion/Windward and North Westchester. Toward this goal;

a. TRANSFER \$2,590,000 from the following accounts within the General Fund No. 100, Dept 54:

Account Title Amount

P480 Imperial Hwy Storm Drain Low - \$690,000

Flow Diversion

P481 North Westchester Storm Drain - \$800,000

Low Flow Diversion

P482 Pulga Canyon Storm Drain Low - \$1,100,000

Flow Diversion

b. Transfer \$2,590,000 to new accounts within the Stormwater Pollution Abatement Fund, Fund No. 511, Dept 50, as follows:

Account Title Amount

New Santa Monica Canyon Storm - \$870,000

Drain Low Flow Diversion

New Venice Pavilion Storm Drain - \$150,000

Low Flow Diversion

New Temescal Canyon Storm Drain - \$370,000

Low Flow Diversion

New Santa Ynez Canyon Storm Drain - \$600,000

Low Flow Diversion

New North Westchester Storm Drain - \$600,000

Low Flow Diversion

c. TRANSFER \$350,000 within the Stormwater Pollution Abatement Fund No. 511, Dept 50, from the Santa Monica Canyon Low Flow Right of Way, Account P450, as follows:

Account Title Amount

New Temescal Canyon Storm Drain - \$230,000

Low Flow Diversion

P446 CDS Project Westlake Area \$120,000

3. DIRECT the Bureau of Sanitation to:

- a. Seek cost-share funding agreements for capital as well as operation and maintenance costs from other jurisdictions for each of the projects listed above.
 - b. Meet with Los Angeles County, State of California, and City of Santa Monica representatives to discuss the costs of the dry-weather diversion projects, and to present for City Council consideration cost-share agreement(s) that fully recognize the City's substantial financial contribution to these projects.
 - c. Report back on the status of negotiations to the Environmental Quality and Waste Management Committee within 90 days.
 - d. Establish and chair an interagency beach water quality advisory group to include the Bureau of Sanitation, the Environmental Affairs Department, the Chief Legislative Analyst (CLA), the City Administrative Officer (CAO), the Los Angeles County Department of Health Services, the County of Los Angeles Department of Public Works, and other stakeholders as appropriate to: evaluate water quality data; make recommendations regarding future diversion projects, beach water quality standards, monitoring methods, and sampling locations; and, conduct preliminary source control assessments as appropriate.
 - e. Report back to the Environmental Quality and Waste Management Committee as necessary with recommendations on whether the above list of priority low-flow diversion capital projects should be amended due to new data that demonstrates that diverting other drains would have a more beneficial impact upon public health.
 - f. In conjunction with other City departments, as appropriate, continue public education and pollution source control efforts to improve the water quality of storm drain runoff and minimize the need to divert additional drains in the future.
 - g. Establish a method of tracking and monitoring City and contract city dry-weather diversion projects diverted to the City's wastewater treatment facilities, consistent with existing City practices, and develop standard agreement/permit conditions to ensure that the interests of the City are appropriately protected.
 - h. Develop storm drain spill response procedures and emergency dry-weather diversion cut-off procedures as they pertain to a dry-weather diversion program as a whole.
 - i. Report back to the Environmental Quality and Waste Management Committee regarding the status of the Pico-Kenter storm drain, the Santa Monica Urban Runoff Recycling Facility (SMURRF), and project funding.
 - j. Instruct the Stormwater Management Division to develop and report back to the Environmental Quality and Waste Management Committee with a program for expanding the development and implementation of stormwater pollution Best Management Practices (BMPs); program to include, but not be limited to, creating a BMP data bank or clearinghouse, compiling and sharing available data on the types and effectiveness of various BMPs. The data compiled and shared should include all BMPs at City facilities and on City projects, as well as any data received from private developers regarding BMPs installed as a result of the new Standard Urban Stormwater Mitigation Plan (SUSMP) standards.
4. ESTABLISH a low-flow diversion period extending from April 1 through October 31.
5. AUTHORIZE the Director of the Bureau of Sanitation, to accept, on behalf of the City, the Los Angeles County Regional Parks and Open Space District, Santa Monica Bay Competitive Grant award of up to \$1,037,000 million for the construction of the Santa Monica Canyon storm drain dry-weather diversion project and to execute all necessary grant contracts, agreements, and amendments with the funding agency, subject to approval as to form and legality by the City Attorney
- 6-7-00 - File to Mayor
- 6-15-00 - Mayor's message concurred in action of 6-6-00 (CNT0006)
- 6-22-00 - File to EQ&WM Comt Clk OK
- 6-23-00 - File in files
- 7-13-00 - File to Lu Del Rosario - PW - 76122
- 7-20-00 - File in files
- 9-12-00 - For ref - Transmittal from PW / Sanitation regarding the program for expanding the development and implementation of Stormwater Pollution Best Management Practices (BMPs)
- 9-13-00 - Ref to EQ&WM Comt
- 9-14-00 - File to EQ&WM Comt Cl
- 10-27-00 - This days Ccl session - Commun rec from EQ&WM Comt to NOTE and FILE accompanying communication from Bureau of Sanitation (Sanitation), dated August 17, 2000, relative to the development and implementation of stormwater pollution Best Management Practices, inasmuch as the report is for informational purposes only and no

Council action is required.

10-30-00 - File to Cal Clk for placement on next available Ccl agenda

11-3-00 - Communication ADOPTED

11-7-00 - File to EQ&WM Comt Clk OK

11-8-00 - File in Files

▾

Retrieval software: DB/Text *WebPublisher*, provided by



Appendix 2. Draft Low-Flow Diversion Cost-Sharing Agreement between the City and County of Los Angeles.

DRAFT AGREEMENT

This AGREEMENT ("Agreement") is made and entered into this _____ day of _____, 2000, by and between the CITY OF LOS ANGELES ("Los Angeles) and COUNTY OF LOS ANGELES ("County") (collectively referred to herein as the "Parties" or individually as "Party").

RECITALS

WHEREAS, County operates and maintains a storm drain system within the jurisdictional limits of Los Angeles, hereinafter referred to as the "Santa Monica Canyon Storm Drain". The Santa Monica Canyon Storm Drain collects and conveys runoff water from within the Santa Monica Canyon and its tributaries, as shown in Exhibit A to this Agreement; and

WHEREAS, polluted dry weather runoff discharging into Santa Monica Bay can be reduced by diverting the dry weather runoff to Los Angeles' sanitary sewer system for treatment at Los Angeles' Hyperion Treatment Plant; and

WHEREAS, Los Angeles has obtained from the United States Environmental Protection Agency a deviation from the provisions of 40 CFR 35.927-4 and 40 CFR 35.2130 to allow the diversion of dry weather runoff into the sanitary sewer system; and

WHEREAS, Los Angeles desires to construct a structure to divert the dry weather runoff from the Santa Monica Canyon Storm Drain to the sanitary sewer system; and

WHEREAS, County has constructed similar diversions from its storm drains at Ashland Avenue, Brooks Avenue, and Playa Del Rey, as shown in Exhibit B to this Agreement; and

WHEREAS, the drainage areas tributary to the Brooks Avenue and Playa Del Rey drains lie entirely within the jurisdictional limits of Los Angeles; and

WHEREAS, 5 percent of the developed drainage area tributary to the Ashland Avenue drain lies within the jurisdictional limits of Los Angeles, where the developed area is that portion of the total drainage area that is deemed to contribute polluted dry weather runoff; and

WHEREAS, the Parties mutually desire to share in the responsibilities and costs associated with the dry weather runoff diversions as described herein.

NOW, THEREFORE, in consideration of the mutual benefits to be derived by the Parties, of the mutual promises specified herein and of other good and valuable consideration, the Parties agree as follows:

A. Definitions

1. **"Amalgamated System Sewerage System Charges"** means the service charges paid by entities located outside of Los Angeles' jurisdictional boundaries for wastewater discharged to Los Angeles' sanitary sewer system, pursuant to the Service Agreement.
2. **"Amalgamated System Sewerage Facilities Charges"** means the charges, as determined in Section II.C of the Service Agreement, levied on new or expanding dischargers to recover the full cost of constructing wastewater system capacity to accommodate increases in wastewater discharge.
3. **"CPI"** means the Consumer Price Index, as published by the U.S. Department of Commerce or its successor agency, for the Los Angeles/Anaheim/Riverside metropolitan area.
4. **"Fiscal Year"** means the 12-month period beginning on July 1 of one calendar year and ending on June 30 of the following calendar year or any other 12-month period mutually agreed to by the Parties.
5. **"General Fund Reimbursement Charge"** means the charge levied pursuant to Section II.D of the Service Agreement for reimbursement of the costs of emergency response services that are provided to Los Angeles' sanitary sewer system but are paid for by Los Angeles' General Fund.
6. **"Prime Rate"** means the base rate on corporate loans posted by at least 75 percent of the nation's 30 largest banks, as published in the Wall Street Journal or its successor publication.
7. **"Santa Monica Canyon Diversion Facility"** means the structure and equipment to be constructed by Los Angeles at the Santa Monica Canyon Storm Drain to divert the dry weather runoff to the sanitary sewer system.
8. **"Service Agreement"** means "Agreement Between Los Angeles and the City of Santa Monica for the Conveyance, Treatment and Disposal of Wastewater," executed in April 1999, as shown in Exhibit C of the Agreement. Service Agreement is substantially similar to other agreements between Los Angeles and entities located outside of Los Angeles' jurisdictional boundaries that allow the parties to divert dry weather runoff to Los Angeles' sanitary sewer system for treatment at Los Angeles' Hyperion Treatment Plant.

B. General

1. Los Angeles agrees to prepare the necessary plans and specifications, secure all necessary permits and administer the contract to construct the Santa Monica Canyon Diversion Facility.
2. Los Angeles shall be responsible for operating and maintaining the Santa Monica Canyon Diversion Facility including debris removal from the concrete berm constructed across the channel as part of the Diversion and for the replacement of equipment needed to keep the Santa Monica Diversion Facility in good working order. County shall be responsible for operating and maintaining the diversion facilities at its storm drains at Ashland Avenue, Brooks Avenue and Playa Del Rey and for the replacement of equipment needed to keep the diversion facilities in good working order. Los Angeles and County shall operate and maintain these facilities in a responsible manner and keep them in good condition and repair and shall operate the facilities in conformance with all federal, state and local regulations.
3. Los Angeles shall monitor the flow, biochemical oxygen demand, suspended solids and/or any other constituents in the diverted runoff that are included in the basis for the Amalgamated System Sewerage System Charges and General Fund Reimbursement Charges for the diversions at the Santa Monica Canyon Storm Drain and at the Ashland Avenue, Brooks Avenue and Playa Del Rey storm drains, pursuant to the Service Agreement. Los Angeles shall conduct the monitoring in the manner prescribed by the Service Agreement.
4. The diversion of runoff from the Santa Monica Canyon Storm Drain and from the storm drains at Ashland Avenue, Brooks Avenue and Playa Del Rey to the sanitary sewer system shall be prohibited during the period of November 1 through March 31 and shall otherwise be limited pursuant to the provisions of Section II.F of the Service Agreement.

C. Responsibility for Costs

1. The Parties shall not be responsible for paying Amalgamated System Sewerage Facilities Charges for the runoff diversions. Los Angeles and County shall not initiate or continue the diversion of runoff if any of the conditions occur that would cause Parties to pay Amalgamated System Sewerage Facilities Charges pursuant to Section II.F.4 of the Service Agreement.
2. Los Angeles County shall be responsible for annually paying the City of Los Angeles an amount (the "Annual Charge") to cover an estimated inequity in costs associated with the operation, maintenance, replacement, and testing duties assigned under Section B above. For the first Fiscal Year following execution of this Agreement, the Annual Charge shall be equal to \$19,500. For each subsequent Fiscal Year, the Annual Charge shall be increased by the CPI. The Annual Charge will also encompass the County's share of Amalgamated System Sewerage System Charges and General Fund Reimbursement Charges (See Exhibit ___ of

the Agreement). Following annual payment of the Annual Charge, it is projected that the County and City of Los Angeles will have equally shared the fiscal burden of the Santa Monica Canyon, Brooks, and Playa Del Rey diversions and the City of LA will be covering 5% of all costs associated with Ashland Avenue diversion. The Annual Charge may be revised upon mutual consent of both parties.

D. Invoice and Payment

1. Beginning in the year 2001, on or before the first day of November after the close of each Fiscal Year, Los Angeles shall submit an invoice to County for the Annual Charge as set forth in Section C.2. above.
2. County shall pay the invoice within 90 days.
3. Any payments that are late shall be subject to interest on the original amount due at the Prime Rate in effect when the payments first became due plus one (1) percent for payments that are 1 to 30 days late, the Prime Rate in effect when the payment first became due plus five (5) percent for payments 31 to 60 days late, and the Prime Rate in effect when the payment first became due plus ten (10) percent for payments more than 60 days late, not to exceed the maximum rate allowed by law.

E. Liability

1. The Parties shall be individually and separately liable for actions associated with their responsibilities under this Agreement. The City and County shall hold one another harmless for all liability associated with their individual responsibilities under this Agreement.
2. Any authorized representative of County shall have the right to inspect the Santa Monica Canyon Diversion Facility upon at least one day's prior written notice to Los Angeles. Any authorized representative of Los Angeles shall have the right to inspect the Brooks Avenue, Playa Del Rey and Ashland Avenue diversion facilities upon at least one day's prior written notice to County.

F. Term of Agreement

The term of this Agreement is thirty (30) years unless it is modified in writing by mutual consent of the Parties. During the unexpired term of this Agreement, but only after five years following the date of execution of the Agreement, either Party may request that the other Party negotiate, in good faith, modifications of the Agreement which the requesting Party believes are necessary because of any of the following changed circumstances:

1. There is a material change in the regulatory framework for stormwater or wastewater that renders one or more of the terms or conditions of the Agreement to no longer be fair and equitable;

2. There is a proposed change in the physical configuration of any of the diversions at the Santa Monica Canyon Storm Drain and at the Ashland Avenue, Brooks Avenue and Playa Del Rey storm drains that the existing terms or conditions of the Agreement do not adequately address; and
3. There is a material change in the cost of diverting stormwater from one or more of the Santa Monica Canyon Storm Drain and the Ashland Avenue, Brooks Avenue and Playa Del Rey storm drains or in the financial framework of Los Angeles' wastewater conveyance and/or treatment system which either renders any of the terms or conditions of the Agreement to no longer be fair and equitable or creates a condition that the existing terms or conditions cannot accommodate.

G. Conflicts

1. Default

a. Each of the following constitutes a "Default" by Los Angeles under this Agreement:

- (1) Los Angeles fails to construct, operate and maintain the Santa Monica Canyon Diversion Facility as set forth in this Agreement.
- (2) Los Angeles fails to perform or observe any term, covenant, or undertaking in this Agreement that it is to perform or observe and such failure continues for ninety (90) days after a notice of default is sent in the manner prescribed in Section I of this Agreement.

b. Each of the following constitutes a "Default" by County under this Agreement:

- (1) County fails to operate and maintain the Brooks Avenue, Playa del Rey and Ashland Avenue diversion facilities as set forth in this Agreement.
- (2) County fails to pay any annual invoice, including any applicable interest, within 120 days of the due date.
- (3) County fails to perform or observe any term, covenant, or undertaking in this Agreement that it is to perform or observe and such failure continues for ninety (90) days after a notice of default is sent in the manner prescribed in Section I of this Agreement.

2. Remedies

In the event of a Default, the Parties shall have the following rights and remedies:

a. Specific Performance.

The Parties agree and recognize that the rights and obligations set forth in this Agreement are unique and of such a nature as to be inherently difficult or impossible to value monetarily. If a Party does not perform in accordance with the specific wording of any of the provisions in this Agreement, an action at law for damages or other remedies at law would be wholly inadequate to protect the unique rights and interests of the other Parties to the Agreement. Accordingly, in any court controversy concerning this Agreement, the Agreement's provisions will be enforceable in a court of equity by specific performance. This specific performance remedy is not exclusive and is in addition to any other remedy available to the Parties.

b. Cumulative Rights and Remedies.

The Parties do not intend that any right or remedy given to a Party on the breach of any provision under this Agreement be exclusive; each such right and remedy is cumulative and in addition to any other remedy provided in this Agreement or otherwise available at law or in equity. If a non-breaching Party fails to exercise or delays in exercising any right or remedy, the non-breaching Party does not thereby waive that right or remedy. Furthermore, no single or partial exercise of any right, power, or privilege precludes any further exercise of a right, power, or privilege granted by this Agreement or otherwise.

c. Attorney's Fees.

In any adversarial proceedings among the Parties other than the dispute resolution procedure set forth below, the prevailing Party shall be entitled to recover their costs, including reasonable attorneys' fees. If there is no clear prevailing Party, the Court or arbitrator shall determine the prevailing Party and provide for the award of costs and reasonable attorneys' fees. In considering the reasonableness of any Party's request for attorneys' fees as the prevailing Party, the Court or arbitrator shall consider the quality, efficiency, and value of the legal services and similar/prevaling rate for comparable legal services in the local community.

H. Dispute Resolution

1. Each Party to this Agreement may submit any dispute related to or arising under this Agreement to non-binding mediation by delivering notice of the dispute to the other Party.
2. The notice of the dispute shall clearly describe the basis of the dispute and the sections of the Agreement under which the dispute arises.
3. Non-binding mediation shall be conducted by Judicial Arbitration Mediation Services (JAMS) or an equivalent mediation service agreed to by the disputing Parties.

4. Unless otherwise agreed, a mediator shall be appointed within forty-five (45) days of the date the notice of the dispute is delivered to hear the dispute and provide a written determination. The mediator shall be chosen jointly by the Parties. If the Parties cannot agree, the Los Angeles County Superior Court shall appoint the mediator. Employees or agents of the Parties are ineligible to serve as the mediator.
5. The mediation shall be held within ninety (90) days of the date the notice of the dispute is delivered.
6. Any statute of limitations applicable to any claims, rights, causes of action, suits, or liabilities of whatever kind or nature, in law, equity or otherwise, whether known or unknown, shall be tolled during the mediation process. For purposes of this section, the mediation process shall commence upon the service of the notice(s) of the dispute to the other Party. For purposes of this Section, the mediation process shall be deemed complete ten (10) days after service of the mediator's written notice of the conclusion of the mediation.

I. Notice

Any notices or payments required by this Agreement shall be sent or delivered to the following representatives of the Parties:

City of Los Angeles:

City of Los Angeles
Bureau of Sanitation
433 S. Spring Street, 4th Floor
Los Angeles, CA 90014
Attention: Financial Management

County of Los Angeles:

County of Los Angeles
Department of Public Works
900 S. Fremont Av.
Alhambra, CA 91802
Attention: Watershed Management

The Parties may, upon written notice, add or substitute representatives or addresses.

ATTEST:

CITY OF LOS ANGELES

J. Michael Carey
Los Angeles City Clerk

By: _____
Richard Riordan, Mayor

Approved as to Form:

Date: _____

James K. Hahn
Los Angeles City Attorney

Christopher M. Westhoff
Assistant City Attorney

ATTEST:

COUNTY OF LOS ANGELES

Violet Varona-Lukens
Executive Officer, Clerk of the Board of
Supervisors

By: _____
Chairman, Board of Supervisors

Deputy

Date: _____

Approved as to Form:

Lloyd W. Pellman
County Counsel

Deputy

Appendix 3. Beach Water Quality Advisory Group (BWQAG) Meeting Minutes



BEACH WATER QUALITY ADVISORY GROUP
Meeting Minutes: April 27, 2000

ATTENDEES

Melinda Bartlett, EAD
Steve Fleischli, BayKeeper
Vince Varsh, BOS
Mike Mullin, SMD
John Dorsey, SMD

Olivia Aceves-Vallelunga, CAO
Ing-Yih Cheng, EMD
Mitzy Taggart, Heal the Bay
Gary Lee Moore, SMD
Bill DePoto, LA County DPW

BACKGROUND

Gary stated that this group will provide a significant forum information exchange and stakeholder input on low-flow diversions and related water quality issues.

Mike Mullin presented highlights of the Low Flow Ranking Report, data collected during the summer of 1999, and ranking of the potential storm drain diversions to date. The group agreed with the approach of using water quality measurements to rank the drains. All agreed that additional data will increase our confidence that the worst drains will be diverted first. Additional comments include:

- We need to ensure that the number of water samples analyzed during monitoring will be sufficient to state that a beach adjacent a drain has a water quality problem (Olivia).
- We need to better understand the variability of shoreline water quality as related to changing oceanographic conditions (Mike).
- All drains discussed in the Joint Report on LFD Policy should be diverted, then look at others in the Bay that might pose water quality problems (Steve).
- It is important to know not only the quality of effluent discharged from the drain, but also the quality of water in the mixing zone where people swim despite warning signs (group).

Mike then presented the LFD monitoring program that began during April 2000. All members of the committee implied that the monitoring plan now being conducted is appropriate. Mitzy questioned why the program included sample sites positioned 50 yards up- and down-coast from the drain. These locations

were based on current LA Co. DHS stations. The ensuing discussion focused on how close should the shoreline sampling points be to a drain. Distances measured by various agencies range from 0 to 50 yds. Heal the Bay feels that sampling 50 yds away from the drain produces data with high variability and poor for public health decisions. They have recommended to sample at a distance of 25 yds to place a person within visual range of a beach closure or warning sign. Mitzy Taggart reported that this issue is being discussed among members of the State's Water Quality Task Force (Monitoring & Reporting subcommittee), and that they are trying to reach a consensus on the best distance to site a shoreline sampling point relative to a storm drain outlet. Results from the ongoing dispersion study will help answer this question.

Several other recommendations were made:

- For the undiverted drains, monitor priority pollutants in a composite sample at least once per month to characterize chemical pollutants in runoff (Ing-Yih).
- Send data on potential pollutant loading at Hyperion to Sanitation's Industrial Waste Management Division (Vince).
- Maintain 50 yard stations until more information is available (group).

PROPOSED AGENDA FOR NEXT MEETING

1. Results of ongoing Summer 2000 data collected to date (Mullin)
2. LFD construction schedule and progress (Moore)
3. SCCWRP presentation on Santa Monica Bay studies (SCCWRP)
4. Statistically assessing water quality data (Weisberg)
5. Report from the State Water Quality Committee (Taggart)
6. Proposed changes to monitoring (committee)

NEXT MEETING DATE

June 8th, 1:00 pm, SMD conference room (650 S. Spring, 7th Floor).
Parking will be validated for lot at SW corner of Main and 6th St.

cc: Attendees
Barb Garrett, CLA
Mark Gold, Heal the Bay
Steve Weisberg, SCCWRP
Jack Petralia, LA Co DHS
Judy Wilson, BOS
James Langley, BOS



BEACH WATER QUALITY ADVISORY GROUP
Meeting Minutes: June 8, 2000

Attendees

Melinda Bartlett, EAD
Vince Varsh, BOS
Mike Mullin, SMD
John Dorsey, SMD
Jim Lissner, Hermosa Beach
Jack Petralia, LA Co DHS

Ing-Yih Cheng, EMD
Mitzy Taggart, Heal the Bay
Gary Lee Moore, SMD
Drew Ackerman, SCCWRP
Donley Falkenstien, Hermosa Beach

Low Flow Diversion (LFD) Construction Update (Gary)

Thorton Ave LFD is now operating; Bel Air Bay Club should be on-line this month. Santa Monica Canyon is at the 90 % design stage.

Report – State Water Quality Committee (Mitzy)

Committee still reaching consensus on recommended distance to sample near a flowing storm drain – 25 vs. 50 yards. Will try to resolve at next meeting, June 22nd, at SCCWRP.

SCCWRP Plume Dispersion Studies (Drew)

- Report on results to date of hydrodynamic studies around four storm drains in Santa Monica Bay (Malibu Creek, Santa Monica Canyon, Pulga Canyon, Pico-Kenter).
- Will merge results with those from an ongoing bacterial degradation study to predict concentrations with distance from a drain.
- Dye used to track plumes.
- Short-term tests (Plug flows)
 - fluorescein dye loaded into drain effluent.
 - sampled at 25, 50, 100 m from drain mouth; variable sampling frequency.
 - Velocity and dispersion easily determined, variable under different physical conditions.

- Dye hugged shoreline, but did protrude seaward in rip-tide zones.
- Long-term tests (6 hr injections)
 - Performed at Santa Monica and Pulga Canyons (3 times at each site).
 - Injected 1 liter of red rhodamine dye into drain over 6 hr period.
 - Sampled at 46 stations between 50.m up-coast, 400 m down-coast.
 - Steady state developed
 - ~10X dilution between drain and wave wash; ~10X between wave wash and 50 m.
- Data will be used to build predictive model of bacterial distribution along beach given various oceanographic conditions.

Summer 2000 Monitoring (Mike)

The Standard Operating Procedures (SOP) document for collecting samples at the drain locations was distributed and discussed (Attached); methods were accepted by the group.

During discussion of drain locations, the group noted that lifeguard towers are positioned on or adjacent several drain structures. If drains are flowing they should be posted with warning signs (Jack to look into this). Thus, there are conflicting policies at play: don't swim near a flowing drain, but do swim near a lifeguard tower. We will ask the lifeguards to join our committee to discuss this and other issues (John will contact guards).

Jim suggested that when a drain enters the design and construction phase of the project, that a sign be posted announcing to the public about the project, and that runoff will no longer be entering the ocean by a certain date.

Results of the current monitoring (four sampling days to date) were distributed and discussed (attached, ledger-sized Excel spreadsheet). Highlights were:

- Bathing water standards in mixing zones were exceeded mainly at Castlerock, Santa Ynez Canyon, Temescal Canyon, Santa Monica Canyon, and Imperial drains.
- Outside the mixing zones, bathing water standards were exceeded mainly at 50-yds south at Castlerock, Santa Ynez Canyon, Marquez, and Santa Monica Canyon drains.
- Shoreline sampling at Venice Pavillion needs to be coordinated with times when effluent is pumped to the ocean.

Regarding the Venice Pavillion drain, Mike will check with sanitation personnel to coordinate pumping times for sampling. He also will determine if pumping can coincide with those hours where beach use by swimmers is low (e.g. nighttime).

The Environmental Monitoring Division took over the LFD sampling program for undiverted drains beginning Labor Day.

Open Items

1. Jim Lissner and Donley Falkenstein (Hermosa Beach citizens) made a recommendation to focus attention to diverting Ballona Creek to Hyperion for treatment during the dry season. Flow from the creek is a major source of pollution to Santa Monica Bay. Water enthusiasts (e.g. swimmers and boaters) are exposed to water from Ballona Creek. Hyperion can handle the flows:

- Hyperion now treats ~370 MGD.
- Drains now being considered for diversion total ~7 MGD or 2% of the Hyperion flow.
- Ballona Creek would add another 10-15 MGD, or 3-4% of the Hyperion flow.
- Hyperion's 450 MGD daily design capacity could handle the additional flow from Ballona Creek.

Given these figures, the City should consider diverting Ballona Creek. Tourism will be boosted by eliminating the public health threat from this and other drain flows during the dry season.

2. Gary announced that the City Council adopted the Low-Flow Diversion Recommendations jointly produced by the Bureau of Sanitation, CAO, CLA (attached).

Summary of Action Items

1. John Dorsey – Contact LA Co. Lifeguards to attend BWQAG meetings.
2. Mike Mullin – Find out about coordinating Venice Pavillion pumping schedule.
3. Jack Petralia – Find out about posting warning signs around flowing drains.

Next Meeting Date

July 27th, 1:00 pm, SMD conference room (650 S. Spring, 7th Floor).
Parking will be validated for lot at SW corner of Main and 6th St.

cc: Attendees
Barb Garrett, CLA
Mark Gold, Heal the Bay
Steve Weisberg, SCCWRP
Jack Petralia, LA Co DHS
Judy Wilson, BOS
James Langley, BOS



BEACH WATER QUALITY ADVISORY GROUP Meeting Minutes: July 27, 2000

Attendees

Melinda Bartlett, EAD
Shari Kuroki, EAD
Bea Campbell, OARS
James Alamillo, Heal the Bay
Gary Lee Moore, SMD
Angus Alexander, LA Co. Lifeguards

Wayne Mohr, BOE
Angie Bera, Baykeeper
Andrea Mills, OARS
Mike Mullin, SMD
Jack Petralia, LA Co DHS

Low Flow Diversion (LFD) Construction Update

Thorton Ave LFD began operation June 5, 2000. Bay Club LFD needs air conditioning for instrumentation. Palisades Park LFD is being constructed. Santa Monica Canyon LFD will be going out to bid in 8 weeks. Contractors must bid on two different construction scenarios. One is to build Santa Monica Canyon LFD and Venice Pavilion LFD so that economy of scale may be realized. The other scenario is to build the Santa Monica Canyon LFD alone because more time may be needed to evaluate the water quality related to the Venice Pavilion storm drain. Construction of Santa Monica Canyon LFD will create a traffic issue along Entrada St., adding to the existing traffic problems related to the ongoing sewer construction project along PCH. BOE is taking steps to minimize traffic impacts. Wayne Mohr and John Dorsey will work with the Council District 11 regarding public outreach and notification.

Report on Action Items

Captain Angus Alexander is the L.A. County Lifeguards' representative on the BWQAG Committee.

The operation and discharge from the Venice Pavilion SD at Windward Ave. will be evaluated by Mike and Steve McQuay from WCSD before the next meeting.

Jack Petralia from L.A. Co. Dept. of Health Services reported that the storm drains flowing into Santa Monica Bay are posted. Angus mentioned that the

Chief Lifeguard has emphasized to the lifeguards the importance of diligently posting the warning signs.

Due to the old age of the Windward Ave. Pumping Plant that intermittently discharges to the Venice Pavilion storm drain, Sanitation staff are concerned that modifications to the pumping plant's operation might affect its reliability during dry and wet weather.

Summer 2000 Monitoring

Results of the current monitoring were distributed and discussed. Highlights were:

- Drain samples exceed bathing water standards from 75 to 100% of the time.
- In the mixing zone, bathing water standards were exceeded at the following drains: Castlerock (100%), Santa Ynez Canyon (58%), Marquez (17%), Pulga Canyon (50%), Temescal Canyon (92%), Santa Monica Canyon (100%), and Imperial Highway (25%).
- 50-yds. north of the mixing zones, bathing water standards were exceeded at the Santa Ynez Canyon (8%), and Santa Monica Canyon (25%).
- 50-yds. south of the mixing zones, bathing water standards were exceeded at Castlerock (42%), Temescal Canyon (17%), and Santa Monica Canyon (58%).
- Enterococcus were the primary reason for exceedences at the 50-yd north and 50-yd south locations.

Melinda mentioned that beach pollution from the Imperial Hwy storm drain may be coming from food service companies near the airport.

Temescal Canyon Investigation

SMD inspectors with the help of engineers, and scientists are developing a study plan to start identifying sources of bacteria in Temescal Canyon. Sampling with assistance from WCSD will begin as soon as study plan is complete. Laboratory testing will be done by EMD.

Recommendations

The group agreed with the recommendation to:

1. Move forward with the combined Santa Monica Canyon and Venice Pavilion LFDs as outlined above.
2. Move forward with design of the Temescal Canyon LFD while the source identification study continues.

Summary of Action Items

1. John Dorsey – Traffic mitigation for Santa Monica Canyon LFD construction.
2. Mike Mullin – Update on Venice Pavilion.
3. Mike Mullin – Update on Temescal Canyon Investigation.

Next Meeting Date

October 5th, 1:00 pm, SMD conference room (650 S. Spring, 7th Floor).
Parking will be validated for lot at SW corner of Main and 6th St.

cc: Attendees
Barb Garrett, CLA
Mark Gold, Heal the Bay
Steve Weisberg, SCCWRP
Jack Petralia, LA Co DHS
Judy Wilson, BOS
James Langley, BOS



BEACH WATER QUALITY ADVISORY GROUP Meeting Minutes: October 5, 2000

Attendees

Shari Kuroki, EAD
Julie M. Barr, Calif. CoastKeeper
Andrea Mills, OARS
Mitzy Taggart, Heal the Bay
Capt. Angus Alexander, LA Co. Lifeguards

Steve Weisberg, SCCWRP
Mike Mullin, SMD
Gary Lee Moore, SMD
John Dorsey, SMD

Low Flow Diversion (LFD) Construction Update

Santa Monica Canyon LDF sent out for construction bids.

Summer 2000 Monitoring

Results of monitoring to date were distributed and discussed. Key points were:

- Temescal Canyon and Imperial Highway sent to Engineering for design.
- Further sampling and discussion needed for Castlerock, Marquez, North Westchester.
- Venice Pavilion pump station old, therefore connecting to sewer more complicated than previously envisioned; special study required to determine flow patterns at discharge point for this drain.
- Committee questioned if sampling techniques in the mixing zone were similar between this monitoring and studies done for the surf zone dispersion project conducted by Heal the Bay and SCCWRP. (**Action item:** Dorsey checked with EMD on sampling methods; according to Ron Cressey, sampling at mixing zones was the same as that conducted at all other shoreline stations sampled by EMD personnel.)

Temescal Canyon Investigation

An investigation of key sources of bacteria from the Temescal Canyon watershed began August. The goal of this investigation is to determine if any conspicuous sources of coliforms or enterococcus exist within the watershed. The study designed called for 10 sites to be monitored biweekly for the remainder of the dry

season. Single grab samples will be tested for total coliforms, *E. coli*, enterococcus, and ammonia. After two months of sampling, data will be assessed for patterns leading to final source identification work.

Special Environmental Projects – Bacteriological TMDL

Steve Weisberg described TMDL projects being done by SCCWRP, the City of Los Angeles and the RWQCB:

- Die-off study –
 - Series of experiments manipulating salinity, UV light, and coliform concentrations.
 - Coliform concentrations measured over time.
 - Concentrations began diminishing in about one day, could remain elevated for three.
- Historical assessment of shoreline bacteriological data –
 - About the same number of exceedances between dry and wet weather.
 - Mother's Beach and Malibu Surfrider Beach with greatest number of exceedances.
- Proposed wet weather work –
 - Build model of coliform densities washing from various landuse areas.
 - Link with die-off models and flow levels.
 - Predict potential shoreline impacts.
 - Focus source control efforts on landuse areas with greatest problems.
 - First storm - sample 12 times/storm/landuse area, 15 sites/landuse.
 - Second storm – repeat 7 of the 15 sites/landuse area.

Open

Cabrillo Beach: Rec & Park doing bacterial sampling along shoreline, but getting many measurements with ">" values. What can be done? Committee recommended that the test lab (EMD) increase the upper limit for the dilution series.

Cabrillo Beach: Heal the Bay meeting with Army Corps of engineers, Port of Los Angeles, on feasibility of installing tidal gates into the Cabrillo Breakwater to enhance water circulation along the inner Cabrillo Beach.

Next Meeting Date

November 2nd, 1:00 pm, SMD conference room (650 S. Spring, 7th Floor).
Parking will be validated for lot at SW corner of Main and 6th St.



BEACH WATER QUALITY ADVISORY GROUP
Meeting Minutes: November 2, 2000

Attendees

Shari Kuroki, EAD	Jack Petralia, LACDHS
Mike Mullin, SMD	Ron Cressey, EMD
Andrea Mills, OARS	Gary Lee Moore, SMD
Mitzy Taggart, Heal the Bay	James Alamillo, Heal the Bay
Angie Bera, BayKeeper	Mark Gold, Heal the Bay
John Dorsey, SMD	John Foxworthy, Port of LA
Capt. Angus Alexander, LA Co. Lifeguards	Melinda Bartlett, EAD
Karin Christie, EAD	

Low Flow Diversion (LFD) Construction Update

Santa Monica Canyon LDF out for construction bids; includes Venice Pavilion. Temescal Canyon and Imperial Highway sent to Bureau of Engineering for design.

Summer 2000 Monitoring

Results of monitoring to date were distributed (tables and figures) and discussed by Mike Mullin. Key points were:

- 137 samples were collected at 9 drains from April 6 through September 20, 2000.
- The relative health risk rankings indicated that Santa Monica Canyon had the worst runoff ranking followed by Santa Ynez Canyon, Temescal Canyon, Imperial Highway, Pulga Canyon, Castlerock, and Marquez.
- AB411 standards were exceeded most frequently in the mixing zones of all drains (ave = 52%, range = 6-100%)
- At 50 yds either up- or downcoast, standards were exceeded most frequently at Santa Monica Canyon (88%) followed by Santa Ynez Canyon (70%), Castlerock (53%), North Westchester (19%), Temescal Canyon (18%), and Marquez and Pulga Canyon (both at 6%); Imperial Highway only had exceedances in its mixing zone.

- Castlerock and Santa Ynez Canyon discharge into rocky shoreline; considering doing a dispersion study at Santa Ynez next dry season to see if runoff-contaminated water reaches swimming/surfing areas.
- Doing a source control study in Temescal Canyon watershed; Mark Gold recommended not wasting time on these sorts of studies since bacterial concentrations tend to be highly variable, ephemeral.
- Bacterial counts have dropped at Pulga Canyon since construction of new sewers was completed.

Based on ranking and meeting standards, the following recommendations were made to, and accepted by, the committee:

1. Continue with the construction schedule for the Santa Monica Canyon Low Flow Diversion (LFD) structure and Venice Pavilion LFD
2. Proceed with design and construction of the Temescal Canyon LFD structure.
 - Runoff drains to swimming beach, exceedances in and outside of mixing zone.
3. Proceed with design and construction of the Imperial Highway LFD structure in lieu of North Westchester.
 - Runoff drains to swimming beach.
 - Mixing zone is intertidal so people directly exposed to undiluted runoff, had exceedances.
 - North Westchester mixing zone offshore.

A summary of the monitoring and recommendations will be included in a report to the City Counsel's Environmental Quality and Waste Management Committee in January. Members of the BWQAG committee will receive drafts of the report for their review and comment.

Cabrillo Beach Investigation and Actions

Melinda Bartlett presented results (tables, figures) of the City's investigations and follow-up actions regarding water quality problems at the Cabrillo Inner Beach.

- Beach with history of elevated densities of indicator bacteria; often closed when counts exceed County's standards.
- Bird droppings suspected as prime source of bacterial contamination; other sources include rotting organic matter, occasional discarded soiled diapers.
- Beach with poor water circulation.
- Grid work of braided line supported by tall poles positioned 60 ft apart was constructed September 16th, will remain in place over this winter.
- Bacterial counts dropped after grid was established.
- Monitoring will continue.

During the discussion of this project, Mark Gold pointed out that bacterial counts typically drop during winter months, so don't reach conclusions until more

Appendix 4. Drain and Beach Water Quality Measurements from 2000: Percent of Samples Exceeding the AB-411 Bathing Water Standards

City of Los Angeles Low-Flow Diversion Monitoring of Undiverted Drains 2000

DRAIN	Castlerock			Santa Ynez Canyon			Marquez			Pulga Canyon			Temescal Canyon			Santa Monica Canyon			Venice Pavilion			North Westchester			Imperial Highway		
	TOT	ECO	ENT	TOT	ECO	ENT	TOT	ECO	ENT	TOT	ECO	ENT	TOT	ECO	ENT	TOT	ECO	ENT	TOT	ECO	ENT	TOT	ECO	ENT	TOT	ECO	ENT
APR-WK 1	77,000	1,600	4,600	2,900	100	380	240,000	2,400	16,000	4,400	100	100	82,000	100	630	13,000	2,980	300	200,000	2,000	8,200	900	100	30	100,000	2,000	6,500
APR-WK 4	240,000	73,000	24,000	2,600	100	120	140,000	6,800	33,000	7,300	100	970	31,000	630	430	14,000	2,800	400	87,000	4,400	410				2,300	100	230
MAY-WK 2	280,000	6,300	9,600	240,000	3,900	31,000	61,000	1,000	2,400	3,500	300	200	26,000	1,000	2,400	7,400	1,000	860	210,000	15,000	8,600				1,000	1,000	100
MAY-WK 4	270,000	1,000	16,000	23,000	1,000	3,200	410,000	37,000	14,000	4,100	1,000	200	410,000	9,400	28,000	28,000	4,100	630	150,000	1,000	9,000				26,000	1,000	410
MAY-WK 5	180,000	16,300	61,000	14,000	2,000	8,600	12,000	1,000	1,200	16,000	1,000	3,000	35,000	1,000	2,800	12,000	2,100	100							1,000	1,000	100
JUN-WK 1	730,000	5,200	3,100	1,000	1,000	100	1,100,000	1,000	2,800	5,200	1,000	100	250,000	2,000	7,200	7,400	1,000	100				1,000	1,000	100	3,000	1,000	100
JUN-WK 2	210,000	4,000	5,600	99,000	3,100	6,200	190,000	1,000	410	6,300	1,000	100	88,000	2,000	7,200	20,000	5,200	200				3,100	1,000	830	14,000	1,000	200
JUN-WK 3	340,000	7,400	52,000	1,000	1,000	100	690,000	1,000	7,000	1,000	1,000	100	690,000	3,100	44,000	62,000	8,300	100				1,000	1,000	100	460,000	28,000	4,000
JUN-WK 4	870,000	7,400	48,000	1,000	1,000	1,000	650,000	20,000	11,000	7,400	1,000	100	260,000	18,000	14,000	44,000	2,000	2,200				1,000	1,000	310	110,000	13,000	1,100
JUL-WK 1	180,000	5,200	3,700	1,000	1,000	100	99,000	3,100	6,100	5,200	1,000	100	120,000	1,000	13,000	54,000	1,000	410				1,000	1,000	100	1,000	1,000	100
JUL-WK 2	580,000	11,000	11,000	6,300	1,000	100	61,000	1,000	3,000	3,000	1,000	200	60,000	12,000	16,000	100,000	5,200	2,600				1,000	1,000	100	250,000	2,000	850
JUL-WK 3	820,000	1,000	11,000	11,000	1,000	1,200	220,000	5,200	9,600	4,100	1,000	100	42,000	6,300	1,600	22,000	1,000	2,800				2,000	1,000	100	63,000	5,100	8,100
JUL-WK 4	140,000	1,000	10	14,000	100	200	78,000	3,000	3,800	12,000	300	100	170,000	4,100	4,900	130,000	12,000	8,100				100	100	100	1,900	100	200
AUG-WK1	180,000	4,100	5,800	24,000	740	140	38,000	1,000	520	5,700	100	20	37,000	3,100	1,600	88,000	12,000	3,900							3,600	410	52
AUG-WK2	730,000	8,600	32,000	73,000	5,000	1,600	170,000	1,000	21,000	4,100	200	100	84,000	2,000	1,700	23,000	4,100	8,500							4,300	100	100
AUG-WK4	690,000	5,200	15,000				440,000	7,400	9,900	9,300	300	520	16,000	520	5,200	22,000	200	18,000									
SEP-WK1	410,000	1,000	8,400							6,100	100	100															
SEP-WK3										4,000	100	10	30,000	2,000	1,600	35,000	1,000	2,300									
AB-411 std	10,000	400	104	10,000	400	104	10,000	400	104	10,000	400	104	10,000	400	104	10,000	400	104	10,000	400	104	10,000	400	104	10,000	400	104
% >AB-411	100%	100%	94%	53%	80%	73%	100%	100%	100%	11%	50%	33%	100%	94%	100%	88%	100%	82%	100%	100%	100%	0%	78%	22%	47%	60%	60%
AVG	398,083	10,783	20,633	34,253	1,469	3,603	287,438	5,806	6,989	6,039	589	340	143,000	4,015	8,833	40,106	3,764	3,029	161,750	5,600	6,553	1,233	800	174	69,407	3,787	1,476
MAX	870,000	73,000	61,000	240,000	5,000	31,000	1,100,000	37,000	21,000	16,000	1,000	3,000	690,000	18,000	44,000	130,000	12,000	18,000	210,000	15,000	9,000	3,100	1,000	630	460,000	28,000	8,100
MIN	77,000	1,000	3,100	1,000	100	100	12,000	1,000	410	1,000	100	10	16,000	100	330	7,400	980	100	87,000	1,000	410	100	100	30	1,000	100	52
RANGE	793,000	72,000	57,900	239,000	4,900	30,900	1,088,000	36,000	20,590	15,000	900	2,990	674,000	17,900	43,670	122,600	11,020	17,900	123,000	14,000	8,590	3,000	900	600	459,000	27,900	8,048
GEOMEAN	315,594	5,089	12,794	8,566	851	642	164,170	2,599	4,279	5,183	395	136	81,151	2,084	4,221	28,158	2,555	997	153,008	3,390	4,016	937	599	122	11,255	1,077	374
STDEV	275,728	19,813	20,614	63,700	1,440	7,992	301,539	9,626	6,096	3,512	428	701	177,173	4,859	11,418	35,812	3,566	4,660	56,323	6,427	4,108	847	397	187	127,849	7,455	2,584
MIXING ZONE	Castlerock			Santa Ynez Canyon			Marquez			Pulga Canyon			Temescal Canyon			Santa Monica Canyon			Venice Pavilion			North Westchester			Imperial Highway		
APR-WK 1	20,000	460	3,400	24,000	560	1,600	180	10	10	1,800	110	52	13,000	160	520	20,000	620	280				70	10	10	16,000	480	1,000
APR-WK 4	24,000	17,000	7,300	10,000	820	1,000	200	10	10	3,100	41	41	4,600	30	74	9,800	2,400	880				220	52	10	20	10	10
MAY-WK 2	130,000	2,100	4,700	610,000	1,000	14,000	100	100	100	1,900	110	180	9,300	100	410	10,000	1,900	310				100	100	100	100	100	100
MAY-WK 4	200,000	1,300	9,300	36,000	610	1,900	200	100	100	3,200	520	520	70,000	1,300	8,400	7,700	1,100	410				100	100	100	39,000	410	310
MAY-WK 5	18,000	1,100	5,100	14,000	1,400	2,000	100	100	100	6,400	310	970	5,700	100	740	7,300	1,700	620				100	100	100	100	100	100
JUN-WK 1	69,000	410	2,800	740	100	100				200	100	100	25,000	310	1,200	3,000	850	200				100	100	100	100	100	100
JUN-WK 2	7,500	200	630	12,000	100	100				410	100	100	3,200	100	740	3,500	860	520				100	100	100	1,700	100	100
JUN-WK 3	39,000	850	4,000	4,800	100	410				100	100	100	130,000	630	7,200	17,000	1,100	200				520	100	100	7,400	620	100
JUN-WK 4	65,000	310	6,400	740	100	100				200	100	100	20,000	980	1,300	7,900	310	1,500				100	100	100	1,200	100	100
JUL-WK 1	7,500	200	980	1,300	100	100				520	100	100	4,800	310	740	11,000	410	200				630	100	100	100	100	100
JUL-WK 2	58,000	1,700	3,000	2,300	100	100				960	200	100	5,000	310	1,700	39,000	3,400	2,000				100	100	100	3,800	100	100
JUL-WK 3	170,000	200	3,300	7,200	200	1,100				410	100	100	110,000	410	200	5,000	410	630				100	100	100	5,300	300	630
JUL-WK 4	1,000	1,000	10	1,800	130	98				1,200	100	410	4,700	100	310	13,000	1,900	2,400				290	10	63	160	20	10
AUG-WK1	12,000	100	310	2,100	52	180	100	100	100	740	10	86	1,700	100	100	26,000	4,100	3,100				740	10	10	10	10	31
AUG-WK2	200,000	1,100	6,100	24,000	3,000	1,000	100	100	100	320	52	74	520	100	100	4,300	410	1,600				160	10	10	4,100	10	140
AUG-WK4	39,000	300	3,900				100	100	100	850	96	180	15,000	410	510	140,000	5,200	4,700				24,000	24,000	20,000	10	10	10
SEP-WK1	10,000	100	980							1,100	20	10															
SEP-WK3										620	41	41	740	100	100	10,000	610	630									
AB-411 std	10,000	400	104	10,000	400	104	10,000	400	104	10,000	400	104	10,000	400	104	10,000	400	104				10,000	400	104	10,000	400	104
% >AB-411	76%	59%	94%	40%	40%	60%	0%	11%	0%	0%	6%	28%	41%	29%	76%	41%	94%	100%				6%	6%	6%	13%	19%	25%
AVG	62,941	1,672	4,248	50,065	558	1,586	135	114	78	1,335	123	181	24,898	326	1,432	19,676	1,605	1,187				1,714	1,568	1,319	4,944	161	184
MAX	200,000	17,000	14,000	610,000	3,000	14,000	200	410	100	6,400	520	970	130,000	1,300	8,400	140,000	5,200	4,700				24,000	24,000	20,000	39,000	620	1,000
MIN	1,000	100	10	740	52	98	100	10	10	100	10	10	520														

City of Los Angeles Low-Flow Diversion Monitoring of Undiverted Drains 2000

50 YARDS NORTH	Castlerock			Santa Ynez Canyon			Marquez			Pulga Canyon			Temescal Canyon			Santa Monica Canyon			Venice Pavilion			North Westchester			Imperial Highway		
	TOT	ECO	ENT	TOT	ECO	ENT	TOT	ECO	ENT	TOT	ECO	ENT	TOT	ECO	ENT	TOT	ECO	ENT	TOT	ECO	ENT	TOT	ECO	ENT	TOT	ECO	ENT
APR-WK 1	31	10	10	24,000	560	1,600	180	10	10	110	10	10	10	10	10	10	10	10	40	10	10	30	10	10	10	10	10
APR-WK 4	62	10	10	340	10	10	140	10	10	200	10	10	41	10	10	250	86	10	36	10	10	10	10	10	10	10	
MAY-WK 2	74	20	10	20	10	10	10	10	20	120	20	41	10	10	10	74	10	31	10	10	10	10	10	10	10	10	
MAY-WK 4	10	10	10	31	20	10	110	20	41	52	10	10	600	10	51	450	74	20	10	10	10	220	10	20	10	10	
MAY-WK 5	10	10	10	31	10	10	85	10	10	62	10	10	63	10	51	74	10	30	20	10	10	10	10	10	10	10	
JUN-WK 1	20	10	10	52	10	10	31	10	10	86	10	10	220	10	20	120	30	20	85	20	10	30	10	10	10	10	
JUN-WK 2	110	10	10	52	10	10	200	10	10	120	10	10	10	10	10	31	10	10	260	10	10	10	10	10	10	10	
JUN-WK 3	110	97	52	450	10	10	31	20	10	63	30	10	31	10	10	2,600	230	230	160	31	10	150	10	31	10	31	
JUN-WK 4	97	10	10	20	10	10	10	10	10	41	20	10	20	10	10	630	190	230	640	200	320	150	31	10	10	10	
JUL-WK 1	31	31	10	74	41	10	85	31	61	30	10	10	63	31	10	20	10	10	63	51	10	10	41	10	10	10	
JUL-WK 2	130	52	20	98	63	10	97	10	30	10	10	10	10	10	10	3,300	580	890	10	10	10	10	10	10	10	10	
JUL-WK 3	10	10	10	52	20	10	74	10	10	130	10	20	31	10	10	83	10	10	52	10	10	31	10	10	10	10	
JUL-WK 4	4,100	41	300	2,100	10	52	52	10	10	140	10	10	86	10	10	530	97	180	52	10	10	10	10	10	10	10	
AUG-WK 1	10	10	10	110	10	20	52	10	10	180	10	10	63	10	20	20	10	10	10	10	10	10	10	10	10	10	
AUG-WK 2	52	10	10	5,500	390	180	62	10	10	52	10	10	230	10	10	73	41	10	20	10	10	10	10	10	10	10	
AUG-WK 4	260	190	10				110	20	10	74	20	20	52	10	20	3,300	210	300	24,000	24,000	24,000	10	10	10	10	10	
SEP-WK 1	52	10	10							120	10	10															
SEP-WK 3										110	140	10	930	74	320	930	74	320									
AB-411 std	10,000	400	104	10,000	400	104	10,000	400	104	10,000	400	104	10,000	400	104	10,000	400	104	10,000	400	104	10,000	400	104	10,000	400	104
% >AB-411	0%	0%	6%	7%	7%	13%	0%	0%	0%	0%	0%	0%	0%	0%	6%	0%	6%	35%	6%	6%	13%	0%	0%	0%	0%	0%	
AVG	304	32	89	2,195	82	131	83	13	17	94	20	13	145	15	35	735	99	137	1,592	1,526	1,529	50	13	12			
MAX	4,100	190	1,300	24,000	560	1,600	200	31	61	200	140	41	930	74	320	3,300	580	890	24,000	24,000	24,000	220	41	31			
MIN	10	10	10	20	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
RANGE	4,090	180	1,290	23,980	550	1,590	190	21	51	190	130	31	920	64	310	3,290	570	880	23,990	23,990	23,990	210	31	21			
GEOMEAN	55	18	15	165	26	20	62	12	14	78	14	12	54	12	17	189	41	41	62	24	20	24	12	11			
STDEV	980	47	312	6,203	164	409	56	6	15	51	30	8	249	16	75	1,151	145	225	5,978	5,993	5,993	67	9	6			

50 YARDS SOUTH	Castlerock			Santa Ynez Canyon			Marquez			Pulga Canyon			Temescal Canyon			Santa Monica Canyon			Venice Pavilion			North Westchester			Imperial Highway		
	TOT	ECO	ENT	TOT	ECO	ENT	TOT	ECO	ENT	TOT	ECO	ENT	TOT	ECO	ENT	TOT	ECO	ENT	TOT	ECO	ENT	TOT	ECO	ENT	TOT	ECO	ENT
APR-WK 1	450	20	110	660	31	41	130	20	10	160	10	10	420	10	52	1,200	74	120	160	10	10	100	10	10	10	10	
APR-WK 4	390	20	31	2,900	190	460	160	20	10	410	10	10	210	10	10	3,300	570	210	97	31	10	10	10	10	10	10	
MAY-WK 2	700	31	180	250	10	110	20	10	10	160	10	10	420	10	52	190	20	63	10	10	10	10	10	10	10	10	
MAY-WK 4	1,400	41	97	750	10	1,400	10	10	560	31	10	20	31	10	10	280	62	51	10	10	10	10	10	10	10	10	
MAY-WK 5	1,200	86	780				86	31	10	140	10	52	41	10	20	150	30	110	63	10	10	20	10	10	10	10	
JUN-WK 1	1,400	10	85	580	31	140	41	10	10	140	10	10	260	10	20	190	20	10	30	10	10	30	30	10	10	10	
JUN-WK 2	450	31	73	2,000	110	310	230	10	10	120	10	10	200	10	10	530	74	170	140	10	10	20	10	10	10		
JUN-WK 3	3,400	380	1,700	460	41	51	63	10	86	41	41	10	3,300	10	330	1,500	340	570	10	10	10	31	10	10	10	10	
JUN-WK 4	490	10	97	340	10	73	10	10	10	41	10	10	300	20	52	170	31	120	140	31	86	10	10	10	10		
JUL-WK 1	340	41	74	370	150	180	190	31	10	20	10	10	310	20	120	3,400	88	73	180	31	10	41	10	10	10		
JUL-WK 2	2,600	97	280	160	10	41	170	52	10	10	10	10	20	10	41	52	20	10	52	10	10	160	10	10	10		
JUL-WK 3	660	10	97	750	20	170	62	20	10	41	10	41	4,900	320	10	1,600	320	980	74	20	10	230	10	20	10		
JUL-WK 4	510	10	10	52	10	10	120	10	10	130	10	20	74	10	10	490	110	98	20	10	10	31	10	10	10		
AUG-WK 1	2,700	20	20	1,900	10	20	84	10	10	63	10	10	20	41	20	5,500	420	1,400	10	10	10	10	10	10	10		
AUG-WK 2	1,700	41	130	10,000	710	460	62	10	10	52	10	10	420	10	10	860	52	73	10	10	10	10	10	10	10		
AUG-WK 4	9,200	310	810				340	10	10	98	31	10	290	10	10	24,000	1,500	2,800	24,000	24,000	24,000	10	10	10	10		
SEP-WK 1	1,800	20	150							63	10	10															
SEP-WK 3										98	52	10	230	160	20	10	10	10									
AB-411 std	10,000	400	104	10,000	400	104	10,000	400	104	10,000	400	104	10,000	400	104	10,000	400	104	10,000	400	104	10,000	400	104	10,000	400	104
% >AB-411	0%	0%	47%	0%	7%	57%	0%	0%	6%	0%	0%	0%	0%	0%	12%	6%	18%	53%	6%	6%	6%	0%	0%	0%	0%	0%	
AVG	2,168	88	295	1,781	119	144	133	17	18	65	18	13	915	56	58	3,465	270	573	2,464	2,414	2,417	55	10	11			
MAX	9,200	380	1,700	10,000	710	1,400	340	52	560	410	52	52	4,900	320	330	24,000	1,500	2,800	24,000	24,000	24,000	230	30	20			
MIN	340	10	10	52	10	10	10	10	10	10	10	10	20	10	10	10	10	10	10	10	10	10	10	10	10	10	
RANGE	8,860	370	1,690	9,948	700	1,390	330	42	550	400	42	42	4,880	310	320	23,990	1,490	2,790	23,990	23,990	23,990	220	20	10			
GEOMEAN	1,098	34	120	658	33	112	75	15	15																		

Appendix 5. Contamination Index and Relative Health Risk Ranking of Storm
Drains Flowing into Santa Monica Bay for 2000

RELATIVE HEALTH RISK RANKING OF STORM DRAINS ENTERING SANTA MONICA BAY: 2000 DATA

drain	date	flow (CFS)	total coliforms (CFU/100 mL)	E.coli (CFU/100 mL)	Enterococcus (CFU/100 mL)	T:E Total coliforms:E coli	beach usage (persons/f/day)	RHR	avg RHR	order
Castlerock	APR-WK 1	0.0936	77000	1600	4600	48	0.337	1.049		
	APR-WK 4	0.0542	240000	73000	24000	3	0.337	405.319		
	MAY-WK 2	0.0667	280000	6300	9600	44	0.383	3.619		
	MAY-WK 4	0.0917	270000	1000	16000	270	0.383	0.130		
	MAY-WK 5		180000	6300	61000	29	0.383			
	JUN-WK 1	0.3336	730000	5200	3100	140	0.452	5.585		
	JUN-WK 2	0.2324	210000	4000	5600	53	0.452	8.004		
	JUN-WK 3	0.3062	340000	7400	52000	46	0.452	22.293		
	JUN-WK 4	0.4156	870000	7400	46000	118	0.452	11.824		
	JUL-WK 1	0.5660	180000	5200	3700	35	0.557	47.357		
	JUL-WK 2	0.1805	580000	11000	11000	53	0.557	20.969		
	JUL-WK 3	1.8374	820000	1000	11000	820	0.557	1.248		
	JUL-WK4	0.0574	140000	1000	10	140	0.557	0.228		
	AUG-WK1	0.2625	180000	4100	5800	44	0.573	14.046		
	AUG-WK2	0.1401	730000	8600	32000	85	0.573	8.135		
AUG-WK4	0.0889	690000	5200	15000	133	0.573	1.995			
SEP-WK1	0.0629	410000	1000	8400	410	0.380	0.058			
SEP-WK3						0.380			34	6
Santa Ynez Canyon	APR-WK 1	1.0500	2,900	100	380	29	0.288	1.043		
	APR-WK 4	3.1337	2,600	100	120	26	0.288	3.471		
	MAY-WK 2	1.3625	240,000	3,900	31,000	62	0.387	33.417		
	MAY-WK 4	4.1080	23,000	1,000	3,200	23	0.387	69.122		
	MAY-WK 5		14,000	2,000	8,600	7	0.387			
	JUN-WK 1	0.6912	1,000	1,000	100	1	0.634	438.236		
	JUN-WK 2	0.3646	99,000	3,100	6,200	32	0.634	22.436		
	JUN-WK 3	0.7263	1,000	1,000	100	1	0.634	460.496		
	JUN-WK 4	0.0868	1,000	1,000	1,000	1	0.634	55.020		
	JUL-WK 1	1.4291	1,000	1,000	100	1	0.964	1377.612		
	JUL-WK 2	0.5582	6,300	1,000	100	6	0.964	85.417		
	JUL-WK 3	0.1312	11,000	1,000	1,200	11	0.964	11.501		
	JUL-WK4	0.6161	14,000	100	200	140	0.964	0.424		
	AUG-WK1	0.1184	24,000	740	140	32	0.879	2.375		
	AUG-WK2	12.8615	73,000	5,000	1,600	15	0.879	3871.670		
AUG-WK4						0.879				
SEP-WK1						0.575				
SEP-WK3						0.575			459	2
Marquez Avenue	APR-WK 1	0.000585	240,000	2,400	16,000	100	0.288	0.004		
	APR-WK 4	0.000284	140,000	6,800	3,300	21	0.288	0.027		
	MAY-WK 2	0.000428	61,000	1,000	2,400	61	0.387	0.003		
	MAY-WK 4	0.002498	410,000	37,000	14,000	11	0.387	3.227		
	MAY-WK 5		12,000	1,000	1,200	12	0.387			
	JUN-WK 1	0.008203	1,100,000	1,000	2,600	1100	0.634	0.005		
	JUN-WK 2	0.004557	190,000	1,000	410	190	0.634	0.015		
	JUN-WK 3	0.000114	690,000	1,000	7,000	690	0.634	0.000		
	JUN-WK 4	0.000114	650,000	20,000	11,000	33	0.634	0.044		
	JUL-WK 1	0.000114	99,000	3,100	6,100	32	0.964	0.011		
	JUL-WK 2	0.000114	61,000	1,000	3,000	61	0.964	0.002		
	JUL-WK 3	0.000114	220,000	5,200	9,600	42	0.964	0.013		

RELATIVE HEALTH RISK RANKING OF STORM DRAINS ENTERING SANTA MONICA BAY: 2000 DATA

drain	date	flow (CFS)	total coliforms (CFU/100 mL)	E.coli (CFU/100 mL)	Enterococcus (CFU/100 mL)	T:E Total coliforms:E.coli	beach usage (persons/ft/day)	RHR	avg RHR	order
Marquez Avenue (continued) 0.017 0.00125 8.5e-4	JUL-WK4		78,000	3,000	3,800	26	0.964			
	AUG-WK1	0.000114	38,000	1,000	520	38	0.879	0.003		
	AUG-WK2	0.000114	170,000	1,000	21,000	170	0.879	0.001		
	AUG-WK4	0.000171	440,000	7,400	9,900	59	0.879	0.019		
	SEP-WK1						0.575			
	SEP-WK3						0.575		0.2	7
Pulga Canyon 8.1853 51158 33	APR-WK 1	0.8881	4,400	100	100	44	0.497	1.003		
	APR-WK 4	0.3500	7,300	100	970	73	0.497	0.238		
	MAY-WK 2	0.2188	3,500	300	200	12	0.449	2.526		
	MAY-WK 4	0.7125	4,100	1,000	200	4	0.449	78.027		
	MAY-WK 5		16,000	1,000	3,000	16	0.449	0.000		
	JUN-WK 1		5,200	1,000	100	5	0.725	0.000		
	JUN-WK 2	0.4156	6,300	1,000	100	6	0.725	47.826		
	JUN-WK 3	0.2092	1,000	1,000	100	1	0.725	151.644		
	JUN-WK 4	0.7751	7,400	1,000	100	7	0.725	75.942		
	JUL-WK 1	0.7656	5,200	1,000	100	5	1.141	167.983		
	JUL-WK 2	0.2324	3,000	1,000	200	3	1.141	88.391		
	JUL-WK 3	0.3463	4,100	1,000	100	4	1.141	96.380		
	JUL-WK4	0.2615	12,000	300	100	40	1.141	2.237		
	AUG-WK1	0.4716	5,700	100	20	57	1.019	0.843		
	AUG-WK2	0.9570	4,100	200	100	21	1.019	9.514		
	AUG-WK4	0.3349	9,300	300	520	31	1.019	3.303		
	SEP-WK1	0.4593	6,100	100	100	61	0.410	0.309		
	SEP-WK3	0.7874	4,000	100	10	40	0.410	0.807	40	5
Temescal Canyon 56988 37992 245	APR-WK 1	0.3167	82,000	100	630	820	0.497	0.019		
	APR-WK 4	0.4696	31,000	630	330	49	0.497	2.988		
	MAY-WK 2	1.1000	26,000	1,000	2,400	26	0.449	18.996		
	MAY-WK 4	0.2083	410,000	9,400	26,000	44	0.449	20.159		
	MAY-WK 5		35,000	1,000	2,800	35	0.449			
	JUN-WK 1		250,000	2,000	7,200	125	0.725			
	JUN-WK 2	0.4302	88,000	2,000	7,200	44	0.725	14.176		
	JUN-WK 3	0.1094	690,000	3,100	44,000	223	0.725	1.104		
	JUN-WK 4	0.0574	260,000	18,000	14,000	14	0.725	51.875		
	JUL-WK 1	0.4849	120,000	1,000	13,000	120	1.141	4.610		
	JUL-WK 2	0.2133	60,000	12,000	16,000	5	1.141	584.005		
	JUL-WK 3	0.6357	42,000	6,300	1,600	7	1.141	685.434		
	JUL-WK4	0.2137	170,000	4,100	4,900	41	1.141	24.113		
	AUG-WK1	0.3937	37,000	3,100	1,600	12	1.019	104.204		
	AUG-WK2	0.9351	84,000	2,000	1,700	42	1.019	45.374		
	AUG-WK4	0.0260	16,000	520	5,200	31	1.019	0.447		
	SEP-WK1						0.410			
	SEP-WK3	0.1048	30,000	2,000	1,600	15	0.410	5.730	104	3
Santa Monica Canyon	APR-WK 1	6.0000	13,000	980	300	13	1.465	649.378		
	APR-WK 4	5.9111	14,000	2,800	400	5	1.465	4849.476		
	MAY-WK 2	4.0000	7,400	1,000	860	7	1.597	863.243		
	MAY-WK 4	5.0750	28,000	4,100	630	7	1.597	4865.760		
	MAY-WK 5		12,000	3,100	100	4	1.597			
	JUN-WK 1		7,400	1,000	100	7	2.698			

RELATIVE HEALTH RISK RANKING OF STORM DRAINS ENTERING SANTA MONICA BAY: 2000 DATA

drain	date	flow (CFS)	total coliforms (CFU/100 mL)	E.coli (CFU/100 mL)	Enterococcus (CFU/100 mL)	T:E Total coliforms:E.coli	beach usage (persons/ft/day)	RHR	avg RHR	order
Santa Monica Canyon (continued) <i>94.6568</i> <i>7.28</i> <i>4.7</i>	JUN-WK 2	11.2866	20,000	5,200	200	4	2.698	41170.232		
	JUN-WK 3		62,000	6,300	100	10	2.698			
	JUN-WK 4	4.6590	44,000	2,000	2,200	22	2.698	1142.731		
	JUL-WK 1	9.8498	54,000	1,000	410	54	4.515	823.556		
	JUL-WK 2	3.1443	100,000	5,200	2,600	19	4.515	3838.727		
	JUL-WK 3	8.7493	22,000	1,000	2,800	22	4.515	1795.602		
	JUL-WK4		130,000	12,000	8,100	11	4.515			
	AUG-WK1	5.9058	88,000	12,000	3,900	7	3.515	33969.088		
	AUG-WK2	7.6557	23,000	4,100	8,500	6	3.515	19667.458		
	AUG-WK4	8.8587	22,000	1,200	18,000	18	3.515	2038.145		
	SEP-WK1						1.275			
SEP-WK3	13.5615	35,000	1,000	2,300	35	1.275	494.025	8936	1	
Imperial Highway <i>2.57733</i> <i>2147775</i> <i>.139</i>	APR-WK 1	0.015625	100000	2000	6500	50.000	0.475	0.297		
	APR-WK 4	0.046875	2300	100	230	23.000	0.475	0.097		
	MAY-WK 2	0.073611	1000	1000	100	1.000	0.843	62.054		
	MAY-WK 4	0.638889	26000	1000	410	26.000	0.843	20.715		
	MAY-WK 5		1000	1000	100	1.000	0.843	0.000		
	JUN-WK 1		3000	1000	100	3.000	1.000	0.000		
	JUN-WK 2	0.000016	14000	1000	200	14.000	1.000	0.001		
	JUN-WK 3	0.128125	460000	28000	4000	16.429	1.000	218.370		
	JUN-WK 4	0.195000	110000	13000	1100	8.462	1.000	299.591		
	JUL-WK 1	0.270683	1000	1000	100	1.000	1.730	468.281		
	JUL-WK 2	0.174987	250000	2000	850	125.000	1.730	4.844		
	JUL-WK 3	0.459340	63000	5100	8100	12.353	1.730	328.080		
	JUL-WK4		1900	100	200	19.000	1.730	0.000		
	AUG-WK1	0.000004	3600	410	52	8.780	1.162	0.000		
	AUG-WK2	0.574175	4300	100	100	43.000	1.162	1.552		
	AUG-WK4									
	SEP-WK1									
SEP-WK3								94	4	

Appendix 6. Temescal Canyon Source Identification Study: Map and Data for 2000.

Temescal Canyon Source Identification Study

Stormwater Management Division

Total Coliform (MPN/100mL)

Date	TC-1	TC-2	TC-3	TC-3-4A	TC-3-4B	TC-3-4C	TC-4	TC-4-6	TC-5	TC-6	TC-6-8	TC-7	TC-8	TC-9	TC-10
9/15/00	NS (4)	NS (4)	140,000				250,000		230,000	96,000		34,000	650,000	NS (1)	NS (1)
9/25/00	NS (4)	NS (4)	99,000				150,000		770,000	54,000		110,000	16,000	340,000	110,000
9/27/00	2,400,000	NS (4)	1,400,000				520,000		610,000	520,000		200,000	410,000	NS (2)	70,000
9/29/00	170,000	NS (4)	1,400,000				770,000		1,400,000	920,000		690,000	690,000	NS (1)	NS (1)
10/10/00	98,000*	NS (4)	55,000				>2,400,000		1,000,000	820,000		690,000	360,000	NS (3)	NS (3)
10/13/00	7,400	NS (4)	54,000				76,000		340,000	120,000		100,000	26,000	NS (3)	NS (3)
11/2/00	950	NS (4)	6,000	50	<50	2,500	36,000	2,200	<50	12,000	<50	<50	10,000	>120,000	8,000**

E. Coli (MPN/100mL)

Date	TC-1	TC-2	TC-3	TC-3-4A	TC-3-4B	TC-3-4C	TC-4	TC-4-6	TC-5	TC-6	TC-6-8	TC-7	TC-8	TC-9	TC-10
9/15/00	NS (4)	NS (4)	6,200				2,000		3,100	<1,000		<1,000	6,300	NS (1)	NS (1)
9/25/00	NS (4)	NS (4)	2,000				4,100		<1,000	2,000		<1,000	2,000	1,000	<1,000
9/27/00	860	NS (4)	12,000				5,200		6,500	5,800		2,900	4,200	NS (2)	3,500
9/29/00	310	NS (4)	11,000				2,600		11,000	8,600		4,200	64,000	NS (1)	NS (1)
10/10/00	310	NS (4)	410				1,100		740	410		630	740	NS (3)	NS (3)
10/13/00	<200	NS (4)	200				600		2,200	<200		400	200	NS (3)	NS (3)
11/2/00	<50	NS (4)	<50	50	<50	2,500	<50	2,200	<50	<50	<50	<50	100	420	200

Temescal Canyon Source Identification Study

Stormwater Management Division

Enterococcus (MPN/100mL)

Date	TC-1	TC-2	TC-3	TC-3-4A	TC-3-4B	TC-3-4C	TC-4	TC-4-6	TC-5	TC-6	TC-6-8	TC-7	TC-8	TC-9	TC-10
9/15/00	NS (4)	NS (4)	17,000				5,800		5,400	2,800		410	19,000	NS (1)	NS (1)
9/25/00	NS (4)	NS (4)	4,100				2,900		4,000	24,000		1,700	2,900	2,500	0.78
9/27/00	29,000	NS (4)	19,000				18,000		15,000	13,000		4,600	7,400	NS (2)	0.86
9/29/00	5,600	NS (4)	77,000				19,000		34,000	30,000		9,300	29,000	NS (1)	NS (1)
10/10/00	1,900	NS (4)	37,000				12,000		5,500	8,400		4,400	4,200	NS (3)	NS (3)
10/13/00	400	NS (4)	130				1,400		6,400	2,000		3,200	1,200	NS (3)	NS (3)
11/2/00	100	NS (4)	310	100	<100	<100	1,100	100	<100	300	<100	<100	740	14,000	0.7

Ammonia (mg/L)

Date	TC-1	TC-2	TC-3	TC-3-4A	TC-3-4B	TC-3-4C	TC-4	TC-4-6	TC-5	TC-6	TC-6-8	TC-7	TC-8	TC-9	TC-10
9/15/00	NS (4)	NS (4)	0.3				0.5		0.7	0.7		0.5	0.4	NS (1)	NS (1)
9/25/00	NS (4)	NS (4)	0.2				<0.2		<0.2	<0.2		<0.2	<0.2	0.97	0.78
9/27/00	0.65	NS (4)	0.48				0.25		<0.2	<0.2		<0.2	<0.2	NS (2)	0.86
9/29/00	<0.2	NS (4)	<0.2				<0.2		<0.2	<0.2		<0.2	<0.2	NS (1)	NS (1)
10/10/00	<0.2	NS (4)	<0.2				<0.2		<0.2	<0.2		<0.2	<0.2	NS (3)	NS (3)
10/13/00		NS (4)												NS (3)	NS (3)
11/2/00	<0.2	NS (4)	<0.2		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	1.2	0.7

*groundwater sampled between TC-1 and TC-3 on 10/10/00: Total Coliform: <100; E.coli: <100; Entero: <100; NH3: 0.44

**Due to difficulty in obtaining a sample uncontaminated by tide, the TC-10 sampling station was relocated to a M/H upstream from its original location.

(1) Note: No Sample due to High Tide

(2) Note: No Sample due to Outlet Being Plugged by Sand

(3) Note: No Sample due to Water Being Stagnant

(4) Note: No Sample due to No Flow

11/09/00 DG

1

Appendix 7. City of Los Angeles' Stormwater Hotline Response Procedures

City of Los Angeles Dept. of Public Works Bureau of Eng'g. Stormwater Management Division	ENFORCEMENT UNIT PROCEDURES MANUAL	Section No. 301	
	Subject: HOTLINE RESPONSE	Date 12/10/97	Revision No. 0
		Page 1 of 9	

I. OBJECTIVES:

- A. To receive calls from the public, and City, County, State and federal agencies and provide the necessary technical information and/or service relating to stormwater management and education and the protection of the storm drains of the City of Los Angeles and Waters of the State.
- B. To facilitate mitigation of emergency spills threatening the City's storm drain system and Waters of the State and/or disposal of wastes abandoned on the public right-of-way.
- C. To assist local, State and federal regulatory agencies in investigating suspect or known perpetrators of environmental crimes and/or receive information regarding violators of Sec. 64.30 and other pertinent sections of the Los Angeles Municipal Code.
- D. To make the proper notifications of releases of hazardous materials, including oil, to impacted agencies.

II. PROCEDURE FOR RESPONDING TO REQUESTS FOR DISPOSAL OF ABANDONED WASTES ON THE PUBLIC RIGHT-OF-WAY OR NOTIFICATION OF EMERGENCY SPILLS (FOR DUTY OFFICER ONLY)

A. **During regular business hours (7:00A.M. to 4:30 P.M.):**

1. Calls are received by the Duty Officer at the hotline number (800) 974-9794, (when option 1 of the voice mail is selected) or directly from (213) 847-4852 or 485-1776. Callers may be private citizens, or representatives of City Departments, Los Angeles County Public Works, Los Angeles County Fire Department, State and federal agencies.
2. Information regarding spills is faxed by State Office of Emergency Services (OES) to the City Hall Communications Operator who, in turn, faxes the information to the Duty Officer.
3. Written referrals from State, federal, and local enforcement agencies are received via fax or mail by the Duty Officer.
4. The Duty Officer writes down caller's name and phone number, time and date of call, nature of the call and other pertinent information on the Initial Call Worksheet (See Sample Worksheet in Appendix).
5. The Duty Officer inputs information from the worksheet, referrals, or faxes into Initial Call Worksheet of the Call Log-in Database. (See copy of Worksheet and Protocol for Call Log-in Entry System in Appendix). The call is automatically assigned a call ID number by the computer.
6. The Duty Officer determines if the incident called in is within City of Los Angeles territory.
 - a. If the call is outside the City's jurisdiction, the following protocol is followed:
 - i. The Duty Officer calls L.A. County Public Works hotline (800) 303-0003 or the appropriate city to report the incident of abandoned waste or spills affecting the public right-of-way or threatening the storm drain system.
 - ii. The Duty Officer then contacts the complainant/caller and informs the complainant that the details of the incident have been relayed to another agency for action.
 - iii. The Duty Officer updates the Call Log-in database to reflect referral made and receiving agency's response.
 - b. If the call is within the City of Los Angeles's jurisdiction, the following protocol is followed:
 - i. The Duty Officer determines from the caller if the nature of the abandoned waste or

City of Los Angeles Dept. of Public Works Bureau of Eng'g. Stormwater Management Division	ENFORCEMENT UNIT PROCEDURES MANUAL	Section No. 301	
	Subject: HOTLINE RESPONSE	Date 12/10/97	Revision No. 0
		Page 2 of 9	

spilled material is unknown or suspected hazardous.

For Materials of Unknown Nature or Suspected Hazardous

- a. If the nature of the material is unknown or is suspected to be hazardous, the Duty Officer notifies the Los Angeles County Fire Department, Health Haz Mat Division (Health Haz Mat) at telephone number (213) 890-4317 to request a hazcat, a quick method of characterizing the hazards of a material outside of a laboratory environment.
- b. The Duty Officer ascertains from caller if there are any identifying marks or labels on abandoned containers or if there are any witnesses to the abandonment. If so, the Duty Officer notifies the Los Angeles Police Department, Environmental Crimes Unit (LAPD) at (213) 485-4011, in order that an investigation, if deemed necessary by LAPD, may be conducted.
- c. The Duty Officer awaits callback from Health Haz Mat to obtain results of hazcat.
- d. When Duty Officer receives callback from Health Haz Mat and material or waste is confirmed non-hazardous, the Duty Officer calls the appropriate agency for cleanup and/or disposal of the material. The Duty Officer follows the response protocol for non-hazardous material on page 4.
- e. If the callback from Health Haz Mat confirms that material is hazardous and/or identifies the material, the Duty Officer obtains answers to the following questions from the Health Haz Mat Specialist who performed the hazcat:
 - Is there a responsible party who can be required by Health Haz Mat to be liable for cleanup and disposal?
 - Is public health and safety threatened by the incident, necessitating an immediate cleanup?
 - Is there an imminent threat to the City's storm drain system or the receiving waters or has either one been already impacted?
 - What is the extent and type of cleanup necessary?
 - Are there precautions to be exercised by responding inspectors?
- f. The Duty Officer notifies all impacted agencies as listed below:
 - For discharges affecting Los Angeles County (L.A. County) storm drain system, notify L.A. County Public Works Hotline at (800) 300-0003 or L.A. County Flood Control Emergency number (818) 458-4357.
 - For discharges affecting the Waters of the State, notify:
 - State Department of Fish and Game at (310) 590-5132
 - Regional Water Quality Control Board at (213) 266-7615
 - United States Coast Guard, Marine State Office (Long Beach) for releases affecting any navigable waterway, including tributaries.
 - For abandoned wastes and spills occurring within railroad property, notify:
 - Santa Fe Railroad Emergency at (800) 285-2164
 - Southern Pacific Railroad Emergency at (800) 873-3749

City of Los Angeles Dept. of Public Works Bureau of Eng'g.	ENFORCEMENT UNIT PROCEDURES MANUAL		Section No. 301	
	Stormwater Management Division	Subject: HOTLINE RESPONSE	Date 12/10/97	Revision No. 0
			Page 3 of 9	

or Southern Pacific Railroad Haz Mat at (310)490-7045
Metrorail at (213) 244-7085

- g. Once it is determined by the Duty Officer that an immediate response or mitigation is necessary due to:
- 1) the imminent hazard to public health and safety, or
 - 2) entry of pollutants into the storm drain system that may compromise the integrity of the system or impair the beneficial uses of the receiving waters,
- the Duty Officer then contacts the City's emergency response contractor, Rollins Environmental at (800) 326-9176, ext. 226 to request for an emergency cleanup. The Duty Officer relates all the pertinent details of the incident that will be helpful in effecting the cleanup such as the following:
- the identity or type of material
 - the incident location
 - approximate area (in square feet, yards, etc.) of contamination if material has been spilled onto the street, sidewalk, alley, or gutter, the catch basin
 - storm drain line or Waters of the State affected
 - the number of containers and individual volumes of each container
 - the mode of cleanup that may be necessary
 - the names of contact persons (i.e., responding inspectors, Health Haz Mat specialist, Duty Officer)
 - any precautionary measures specified by Health Haz Mat
- h. The Duty Officer obtains an estimated time of arrival (ETA) and confirmation of response from Rollins Environmental Services and notifies Health Haz Mat of the ETA.
- i. The Duty Officer dispatches two Industrial Waste Inspectors (designated first and second responders for the day), to the incident location in order that they may investigate the incident, perform source or responsible party identification, supervise the cleanup, and facilitate communication between the City and all other affected agencies. The Duty Officer then gives them a printout of the Call Log-in Report and briefs them on information obtained from Health Haz Mat and Rollins Environmental Services.
- j. If the release is of reportable quantity, the Duty verifies from Health Haz Mat if a notification to the State Office of Emergency Services (OES) has been made. If not, the Duty Officer has to report the incident to OES at (800) 852-7550.
- k. The Duty Officer contacts the Bureau of Street Maintenance service request desk at (213) 485-5661 if barricading and immediate containment (with use of absorbent material or sand bags) are needed.
- l. If the incident is in impeding traffic in an alley or a street, the Duty Officer calls the 24-hour Department of Transportation Public Service and Information number at (818)756-9418 or 756-9420 for traffic control.
- m. The Duty Officer continues to communicate with field personnel or responders (i.e., Health Haz Mat, Inspectors, Rollins Environmental) and acts as facilitator for additional assistance needed at the incident site until cleanup or disposal is completed.
- n. If subsequent enforcement action, cost recovery, or any other follow-up actions are

City of Los Angeles Dept. of Public Works Bureau of Eng'g.	ENFORCEMENT UNIT PROCEDURES MANUAL		Section No. 301	
	Stormwater Management Division	Subject: HOTLINE RESPONSE	Date 12/10/97	Revision No. 0
Page 4 of 9				

required relating to the incident, see section "For Industrial Waste Inspectors Dispatched to Incident Site (First and Second Responders)" on page 7.

For Non-hazardous Material

- a. When the Duty Officer confirms from a caller or Health Haz Mat that the abandoned material or waste is nonhazardous, the Duty Officer contacts the appropriate City agency for action or disposal as listed below:
 - For construction debris or waste, food processing or food service waste, latex paint, used tires, or empty pharmaceutical containers or any obstructions to the public streets, alleys or rights-of-way, notify the Bureau of Street Maintenance service request number at (213) 485-5661.
 - For large items abandoned on the public right-of-way such as used furniture, appliances, dead animals and other refuse, notify Bureau of Sanitation, Solid Resources Collection Division at (800) 773-CITY.
 - For abandoned containers of human sanitary waste or for trash in catch basins, notify the Wastewater Collection Systems Division district office call is closest to:
 - West Valley (818) 345-2107
 - East Valley (818) 763-5846
 - Hollywood (213) 463-4674
 - Downtown (213) 485-5391
 - West L.A. (310) 575-8491
 - Venice/Westchester (310) 821-5654
 - South (213) 295-1000
 - Harbor (310) 548-7511
 - For sewage spills, overflows, or leaks, notify Bureau of Sanitation, Wastewater Collection Systems Division at (213) 485-5884 or at the emergency number (213) 485-5391.
- b. Sewage spills greater than 500 gallons that enter the receiving waters, including Ballona Creek and Los Angeles River, are reportable to the OES. The Duty Officer ensures that a notification to OES has been made by the Wastewater Collection Systems Division of the Bureau of Sanitation within twenty-four hours discovery of the incident. The Duty Officer notifies the Los Angeles County, Department of Health Services at (213) 881-4159.
- c. The Duty Officer contacts and updates the complainant/caller on referral made or action taken.
- d. The Duty Officer updates Log-in database. If an inspector was dispatched to the site to investigate and acquired more information on the incident, the investigating inspector, usually the first responder, updates the Log-in database and writes a narrative report, as needed.

B. After business hours (4:30 P.M. to 7:00 A.M.) and on weekends and holidays:

City of Los Angeles Dept. of Public Works Bureau of Eng'g.	ENFORCEMENT UNIT PROCEDURES MANUAL		Section No. 301	
	Stormwater Management Division	Subject: HOTLINE RESPONSE	Date 12/10/97	Revision No. 0
			Page 5 of 9	

1. Calls are received by the City Hall Communications Operator at (213) 485-5500. Information regarding spills is faxed by the OES to the Communications Operator at (213) 485-9813. After hour calls are usually from Los Angeles County Fire Department, Health Haz Mat Division (Health Hazmat), City of Los Angeles Fire Department, or Los Angeles Police Department, Environmental Crimes Unit.
2. The Communications Operator determines if the call is within the City's jurisdiction. If so, the Communications Operator contacts the on-call Senior Industrial Waste Inspector (Senior) and relays the details of the incident.
3.
 - a. If the incident is reported by Health Haz Mat, a hazcat may have already been completed. The Senior calls and consults with Health Haz Mat Specialist who performed the Hazcat or initially responded to the call to determine the nature of the material, and if the incident necessitates an emergency response and/or cleanup because of any one of the following circumstances:
 - There a discharge to the public right-of -way that poses an imminent hazard to the public.
 - The discharge may cause the introduction of pollutants into the storm drain system that may compromise the integrity of the system or impair the beneficial uses of the receiving waters.
 - There is an abandoned drum which contains flammable or explosive material.
 - There is an abandoned drum which has spilled some material onto the public right-of-way which is currently static or not flowing but whose static condition may be reversed by runoff from an impending storm.
 - b. If the incident is reported by an agency other than Health Haz Mat, the Senior contacts Los Angeles County Fire Department at (213) 881-2455 and asks for a Health Haz Mat Unit. The Senior awaits a callback from Health Haz Mat to provide them with more information regarding the incident and request a hazcat of the material. If the hazcat confirms that the material is hazardous and/or if Health Haz Mat identifies the material, the Senior then consults with the Health Haz Mat Specialist who performed the Hazcat or initially responded to the call to determine the nature of the material, and if the incident necessitates an emergency response and/or cleanup because of any one of the following circumstances:
 - There a discharge to the public right-of -way that poses an imminent hazard to the public.
 - The discharge may cause the introduction of pollutants into the storm drain system that may compromise the integrity of the system or impair the beneficial uses of the receiving waters.
 - There is an abandoned drum which contains flammable or explosive material.
 - There is an abandoned drum which has spilled some material onto the public right-of-way which is currently static or not flowing but whose static condition may be reversed by runoff from an impending storm.
4. The Senior then contacts the City's emergency response contractor, Rollins Environmental Services by paging Chris Walker at (888) 358-3424 to request for an emergency cleanup. The

City of Los Angeles Dept. of Public Works Bureau of Eng'g. Stormwater Management Division	ENFORCEMENT UNIT PROCEDURES MANUAL	Section No. 301	
	Subject: HOTLINE RESPONSE	Date 12/10/97	Revision No. 0
		Page 6 of 9	

Senior relates all the pertinent details of the incident that will be helpful in effecting the cleanup such as the following:

- the identity or type of material
 - the incident location
 - approximate area (in square feet, yards, etc.) of contamination if material has been spilled onto the street, sidewalk, alley, or gutter, the catch basin
 - storm drain line or Waters of the State affected
 - the number of containers and individual volumes of each container
 - the mode of cleanup that may be necessary
 - the names of contact persons (i.e., responding inspectors, Health Haz Mat specialist, etc.)
 - any precautionary measures specified by Health Haz Mat
5. The Senior obtains an estimated time of arrival (ETA) and confirmation of response from Rollins Environmental Services and notifies Health Haz Mat of the ETA.
- The Senior (with the assistance of the Communications Operator) notifies all impacted agencies as listed below:
- For discharges affecting Los Angeles County (L.A. County) storm drain system, notify L.A. County Public Works Hotline at (800) 300-0003 or L.A. County Flood Control Emergency number (818) 458-4357.
 - For discharges affecting the Waters of the State, notify:
 - State Department of Fish and Game at (310) 590-5132
 - Regional Water Quality Control Board at (213) 266-7615
 - United States Coast Guard, Marine State Office (Long Beach) for releases affecting any navigable waterway, including tributaries.
 - For abandoned wastes and spills occurring within railroad property, notify:
 - Santa Fe Railroad Emergency at (800) 285-2164
 - Southern Pacific Railroad Emergency at (800) 873-3749
 - or Southern Pacific Railroad Haz Mat at (310)490-7045
 - Metrorail at (213) 244-7085
6. The Senior dispatches two Industrial Waste Inspectors (designated first and second responders for the day), to the incident location in order that they may investigate the incident, perform source or responsible party identification, supervise the cleanup, and facilitate communication between the City and all other affected agencies. The Senior then briefs the responders on information obtained from Health Haz Mat and Rollins Environmental Services.
7. If the release is of reportable quantity, the Senior verifies from Health Haz Mat if a notification to the State Office of Emergency Services (OES) has been made. If not, the Senior has to report the incident to OES at (800) 852-7550.
8. The Senior contacts the Bureau of Street Maintenance through the Communications Operator if barricading and immediate containment (with use of absorbent material or sand bags) are needed.
9. If the incident is in impeding traffic in an alley or a street, the Senior calls the 24-hour Department of Transportation Public Service and Information number at (818)756-9418 or 756-9420 for

City of Los Angeles Dept. of Public Works Bureau of Eng'g. Stormwater Management Division	ENFORCEMENT UNIT PROCEDURES MANUAL	Section No. 301	
	Subject: HOTLINE RESPONSE	Date 12/10/97	Revision No. 0

team deduces wrong doing or criminal intent in violating other environmental standards, the inspection team documents the violation by collecting evidence such as taking photographs, witnesses accounts, and samples of the discharge.

- G. The first responder contacts on-call Senior Industrial Waste Inspector and briefs him/her regarding the incident and violation in question. The Senior Inspector decides the best enforcement option to pursue.
 - 1. Once approved by Senior Inspector, the first responder issues a Notice of Violation to the responsible party at the appropriate time (i.e., when violation has been confirmed by evidence) by personal service or registered mail.
 - 2. If the incident appears to have violated discharge prohibitions or standards of the Health and Safety Code, Clean Water Act, or any other environmental statute, the Senior Inspector may refer this case to the appropriate enforcement agency.
 - 3. If the incident appears to have violated discharge standards or prohibitions of multiple statutes, the Senior Inspector then compiles the reports and evidence and turns the case over to the District Attorney's Strike Force or Environmental Protection Agency Strike Force for review.
- H. The first responder updates the Call Log-in Database and writes a narrative report. If the call is received after business hours, the first responder enters the details of the call (as a Duty Officer would when he/she first receives the call) and actions taken, during the next business day. The first responder contacts and updates the caller regarding the cleanup.
- I. If additional investigations are needed or if the cleanup is effected for a long period of time, the first responder returns to the site for follow-up until the cleanup or investigation is complete.
- J. If any of the City's costs can be recovered through an administrative or legal process, the first responder prepares the letter and invoice requiring payment, updates the Cost Recovery database, and notifies the City Attorney's office of any delinquencies.

III. PROCEDURE FOR RESPONDING TO COMPLAINTS REGARDING ILLEGAL DUMPING AND UNAUTHORIZED CONNECTIONS AND REFERRALS FOR ENFORCEMENT ACTIONS (FOR DUTY OFFICER ONLY)

- A. Calls are received by the Duty Officer at the hotline number (800) 974-9794, (when option 1 of the voice mail is selected) or directly from (213) 847-4852 opr 485-1776. Callers may be private citizens, or representatives of City Departments, Los Angeles County Public Works, Los Angeles County Fire Department, State and federal agencies.
- B. Written referrals from local, State and federal enforcement agencies are received via mail or fax by the Chief or Senior Industrial Waste Inspector.
- C. Referrals (written or verbal) for further investigation are also given to the Chief or Senior Industrial Waste Inspector by various enforcement agencies during the District Attorney's and/or EPA Strike Force meetings.
- D. The Duty Officer inputs information from the worksheet, referrals, or faxes into Initial Call Worksheet of the Call Log-in Database. (See copy of Worksheet and Protocol for Call Log-in Entry System in Appendix). The call is automatically assigned a call ID number by the computer. Additionally, the Duty Officer creates a file for all supporting documentation of referral such as photographs, inspection

City of Los Angeles Dept. of Public Works Bureau of Eng'g.	ENFORCEMENT UNIT PROCEDURES MANUAL	Section No. 301	
Stormwater Management Division	Subject: HOTLINE RESPONSE	Date 12/10/97	Revision No. 0
		Page 7 of 9	

traffic control.

10. The Senior continues to communicate with field personnel or responders (i.e., Health Haz Mat Inspectors, Rollins Environmental) and acts as facilitator for additional assistance needed at the incident site until cleanup or disposal is completed. The Senior may seek the assistance of the Communications Operator for contacting different City and outside agencies because the Operator has a comprehensive listing of after-hour or emergency telephone numbers and contact persons.
11. If subsequent enforcement action, cost recovery, or any other follow-up actions are required relating to the incident, see section "For Industrial Waste Inspectors Dispatched to Incident Site (First and Second Responders)" on page 7.
12. When the cleanup is completed, the First Responder (lead Inspector) enters the information in the Complaint Log-in database, writes a narrative report, and updates the caller on the cleanup during the next business day.

II. PROCEDURE FOR RESPONDING TO REQUESTS FOR DISPOSAL OF ABANDONED WASTES IN THE PUBLIC RIGHT-OF-WAY OR NOTIFICATION OF EMERGENCY SPILLS
[FOR INDUSTRIAL WASTE INSPECTORS DISPATCHED TO INCIDENT SITE (FIRST AND SECOND RESPONDERS)]

Once the incident has been assigned to an inspector team (first and second responders), the first responder assumes the lead in the team and the second responder merely assists in the lead inspector investigation.

- A. When the inspection team is dispatched to the incident location, the first responder leads any source investigation or responsible party identification required in the field.
- B. The inspection team locates the storm drain map that applies to the location to determine the direction of flow of the discharge and the storm drain lines affected, from the point of entry.
- C. Based on the drainage map, the inspection team (with the assistance of Bureau of Sanitation Wastewater Collection Systems Division and/or Los Angeles County Public Works, Flood Control personnel and concurrence of Health Haz Mat) determines the extent of contamination of the storm drain lines and therefore, makes a general assessment of the extent of cleanup required.
- D. The inspection team oversees the cleanup by the City emergency response contractor and that performed by the responsible party's emergency response contractor. The team ensures that with both remedial efforts, the threat of the discharge has been completely removed and the cleanup effectively performed.
- E. The first responder checks the hazardous waste manifest and work order for accuracy and validity. These documents with his/her signature.
- F. Enforcement action is required if a violation of Section 64.30 of the L.A.M.C. has been detected in the following:
 1. Failure to notify the Director of Bureau of Sanitation of the uncontrolled discharge, B.5.
 2. Improper containment of uncontrolled discharge, B.6.
 3. Violating discharge prohibitions, B.1.
 4. Discharging without an Industrial Waste Permit, C.1.a.
 5. Discharging at an unpermitted location, C.1.a.

If the first responder determines that a violation of Section 64.30 has taken place or if the inspector

City of Los Angeles Dept. of Public Works Bureau of Eng'g.	ENFORCEMENT UNIT PROCEDURES MANUAL	Section No. 301	
Stormwater Management Division	Subject: HOTLINE RESPONSE	Date 12/10/97	Revision No. 0
		Page 10 of 9	

City of Los Angeles Dept. of Public Works Bureau of Eng'g. Stormwater Management Division	ENFORCEMENT UNIT PROCEDURES MANUAL	Section No. 301	
	Subject: HOTLINE RESPONSE	Date 12/10/97	Revision No. 0
		Page 9 of 9	

reports, and witnesses' accounts.

- E. The Duty Officer determines if the incident called in is within City of Los Angeles territory.
1. If the call is outside the City's jurisdiction, the following protocol is followed:
 - a. The Duty Officer calls L.A. County Public Works hotline (800) 300-0003 or the appropriate municipality to report the incident of illegal dumping, unauthorized connections or requests for enforcement or follow-up action.
 - b. The Duty Officer then contacts the complainant/caller and informs the complainant that the details of the incident have been relayed to another agency for action.
 - c. The Duty Officer updates the Call Log-in database to reflect referral made and receiving agency's response.
 2. If the call is within the City of Los Angeles's jurisdiction, the following protocol is followed:
 - a. The Duty Officer searches the database for previous complaints on similar incidents or discharge location by using the duplicate check function in the Call Log-in database.
 - b. If there are previous complaints on similar incidents or discharge locations, the Duty Officer quickly reviews database for past investigations, samplings