

LOS ANGELES COUNTY FLOOD CONTROL DISTRICT OVERVIEW OF MONITORING PROGRAMS

Prepared by:

Monitoring Programs Unit Data Management Section Watershed Management Division Los Angeles County Department of Public Works



MS4 Permit



Los Angeles RWQCB

- Term: 2001 (Revised 2005) Present
- Many monitoring details prescribed in permit

Description	# Sites	# Storm Events ¹	# Dry Events ²
Mass Emission	7	3	2
Tributary (rotated)	6	4	2

¹ October 1 to April 15, including first storm, no prior dry days required

² Timing of events not prescribed in Permit

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Site Selection

Mass Emissions

- Only watersheds prescribed in Permit
- Above estuaries
- Safe for staff
- Secure for equipment
- Accessible
- Tributaries
 - Rotated every two years
 - Currently in Malibu Creek
 - Recommended by Permittees, approved by EO
 - Otherwise, same as for MEs, and
 - Representative land uses

Purpose



- Mass Emissions
 - Calculate mass emissions from each watershed
 - Cumulative impact of MS4 inputs
 - Trends
- Tributaries
 - Identify sub-watersheds causing/contributing to exceedances
 - Prioritize management actions





Storm Sampling



- Flow-paced at 12 sites
- Discrete grabs converted to flow-paced in lab at 1 site (Santa Clara River ME), allowed by Permit
- Sample for duration of storm, or >= 60% runoff
- 3 different autosamplers used for composites
- Min. 4.5-2.5 gallon composite jars per event, when including Toxicity testing
- Else, min. 0.5–2.5 gallon composite jar
- Grabs only for bacteria, O&G, TPH, Cyanide, some VOCs, Total Phenols, DO
- In situ measurements: Temperature, pH (starting)



Event Summary



- Go/no-go decision based on 3-4 local forecasts
- ▶ 4 sampling teams of 2 persons (1-4 sites each)
- I person storm coordinator
- Site visit 1: (<48 hrs before event): check all equipment, program sampler</p>
- Teams activated when rain cells on path to monitoring locations (travel time)
- Site visit 2: rising limb grabs, check autosamplers, adjust pacing if needed, replace bottle(s) if needed, grab sampling composite for Santa Clara River ME



Event Summary Continued



- Deliver bacteria and other grab sample bottles to County Environ. Tox. Lab
- 6 hour holding time for bacteria
- Site visit 3: pick up composite bottles after storm event, take to County Enviro. Tox. Lab
- Additional visits for troubleshooting may occur



Data Management and Reporting



- Oracle based database developed in-house
 2006
- Founded on Standard Data Exchange Formats (SDEF) developed by SCCWRP
- SWAMP compliant
- Can upload Electronic Data Deliverable (EDD) lab results file from County Envir. Toxicology Lab
- Annual Monitoring Report due August 15



Unique Aspect of Our Monitoring Program



Our samplers: "MacGyver" Group Have duct tape, willing and ready to use it

Operate and maintain 3 types of autosamplers





Of Our Monitoring Program

Flow monitoring management

Sampling management

Few teams, wide area

- Isco and Sigma Pressure Transducers
- Rating curves: Direct (Mass Emission) and Theoretical (Tribs)
- 2 flow management softwares
- Pacing NOT prescribed in Permit
- Figured it out ourselves
- Approximately 3,600 sq. mi.
- Santa Clara River to Coyote Creek
- About 9.3 million population
- Traffic
- 6 major watersheds
- 133 to 834 square miles



References



- Stormwater Quality Monitoring Reports
 - http://ladpw.org/wmd/NPDES/report_directory.cfm
- NPDES Permit Documents
 - http://www.swrcb.ca.gov/rwqcb4/html/programs/s tormwater/la_ms4_final.html



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QUESTIONS?



Contacts:

Armond Ghazarian (626) 458–7149 aghazar@dpw.lacounty.gov

Fred Gonzalez (626) 458–5948 fgonzal@dpw.lacounty.gov

THANK YOU!

