

CITY OF LOS ANGELES
IRP Steering Group Workshop No. 6
July 24, 2003

MEETING MINUTES

Attendees: See Attached

OPENING REMARKS

Attendees were welcomed and informed that the workshop will cover the important urban runoff issues. The Workshop Agenda was briefly reviewed as follows:

- Welcome
- Runoff Description and Drivers
- Runoff Quality and Quantity
- Runoff Options – Source Control
- Breakout Session
- Runoff Options – Cont.
- Runoff Alternatives
- Current Events
- Wrap-up

RUNOFF DESCRIPTION

Runoff – Description (Dry Weather)

The sources of dry weather runoff were presented:

- Over-irrigation
- Washing Driveways, Sidewalks, and Streets
- Washing Cars
- Permitted Discharges
- Construction Dewatering
- Illicit Discharges
- Natural Seepage

Runoff – Description (Wet Weather)

The wet weather runoff sources are:

- Rain that flows off streets, buildings, and open space
- Permitted Discharges
- Illicit Discharges

CURRENT LEGAL FRAMEWORK

The legal framework for the Stormwater Program was discussed:

- Storm Water Permits
 - Requires administration of 5 model programs
 1. Public Education

- 2. Public Outreach
- 3. Development Planning
- 4. Construction Planning
- 5. Public Agency
- Receiving Waters Limitation Section
 - Water quality standards and objects
 - Use all available tools to reach water quality standards
 - TMDLs. Total Maximum Daily Loads
 - The amount of a particular pollutant that a particular stream, lake, estuary or other waterbody can 'handle' without violating state water quality standards

RUNOFF MANAGEMENT DRIVERS

The current regulations (TMDLs) driving the Stormwater Program are:

- Dry Weather
 - Bacteria
 - Trash (LA River & Ballona Creek)
- Wet Weather
 - Bacteria (Santa Monica Bay & Marina del Rey)
 - Trash (LA River & Ballona Creek)

The potential regulations (TMDLs) drivers for both dry and wet weather are:

- Nitrogen
- Metals
- Bacteria (other locations)
- Other

The drivers from the IRP process are:

- Dry Weather
 - Increase diversions to wastewater or runoff plant
 - Increase beneficial use
- Wet Weather
 - Increase beneficial use

RUNOFF QUALITY

It was explained that the presentation will discuss what we are currently doing, what we plan to do in the future, and we'll ask you to help us define other possibilities. The presentation will cover both quantity and quality of runoff. As far as quality is concerned, the rain that falls onto the streets is not the problem, but as it flows, it becomes polluted with the following pollutants:

- Pesticides, Herbicides
- Fertilizers
- Oils
- Animal Waste (Bacteria)
- Trash
- Yard Trimmings and Leaves

- Pollutants From the Air
- Hazardous Products
- Sediment

RUNOFF QUANTITY

There are 4 major course watersheds that fall within the City boundaries

- Los Angeles River Watershed
- Ballona Creek Watershed
- Santa Monica Bay Watershed
- Dominguez Channel Watershed

These four watersheds also extend beyond the City’s boundary

Runoff – Daily Dry Weather Quantity

The quantity of dry weather runoff from each of the four watersheds is:

Watershed	Within the entire watershed	Only within the City’s boundary
Los Angeles River Watershed	59 million gallons per day	28 million gallons per day
Ballona Creek Watershed	20 million gallons per day	16 million gallons per day
Santa Monica Bay Watershed	16 million gallons per day	4 million gallons per day
Dominguez Channel Watershed	15 million gallons per day	10 million gallons per day
Total	110 million gallons per day	58 million gallons per day

To help the audience visualize how much water 110 million gallons per day is, the following equivalent volume comparisons were given: 110 million gallons

- = 1.3 Times Rose Bowl
- = 435 Olympic Sized Swimming Pools
- = Equivalent to Annual Water Use of Approximately 700 Families

A comparison was also made between the projected wastewater flows that will have to be managed in 2020 and the dry weather runoff quantity: 531 million gallons per day for the wastewater and 110 million gallons per day for the dry weather runoff.

Wet Weather Runoff Quantity

The average rainfall that the Los Angeles area receives per year is about 15 inches (one hundred year average). The average 15 inches of rain produces 350 billion gallons of water, and of that 350 billion gallons of water, 125 billion gallons is runoff. The remaining 225 billion gallons that does not runoff is absorbed in the ground, used by the vegetation, and evaporated into the atmosphere. The Regional Historic Wet Weather Runoff Per Rain Year was shown graphically from the year 1900 to 2000 (see slide 17 of presentation handout). The rain pattern for a typical year was also show graphically (see slide 18 of presentation handout). This graph shows that there are about 15 rain events during the year in the months of January through May and October through December. There is a dry period from mid-May through late October.

Anticipated Quantity of Wet Weather Runoff Required to Meet Regulations

The Santa Monica Bay Bacterial TMDL indicates that compliance can be achieved if the runoff from each ½ inch of rain (or less) storm event is managed. So as a starting point, the IRP will estimate that the quantity of wet weather runoff that we will have to manage to meet regulations

is the runoff produced from the first ½ inch of each rain event. The quantity of wet weather runoff resulting from a ½ inch rain event in each of the four watersheds discussed previously is:

Watershed	Within the entire watershed	Only within the City’s boundary
Los Angeles River Watershed	2,500 million gallons per day	1,050 million gallons per day
Ballona Creek Watershed	500 million gallons per day	390 million gallons per day
Santa Monica Bay Watershed	500 million gallons per day	100 million gallons per day
Dominguez Channel Watershed	300 million gallons per day	160 million gallons per day
Total	3,800 million gallons per day	1,700 million gallons per day

To help the audience visualize how much water 3.8 billion gallons per day is, the following equivalent volume comparisons were given: 3.8 billion gallons
 = 45 Times Rose Bowl
 = 15,000 Olympic Sized Swimming Pools
 = Equivalent to Annual Water Use of Approximately 25,000 Families

A comparison was also made between the projected wastewater flows that will have to be managed in 2020, the quantity of dry weather runoff, and the quantity of wet weather runoff targeted for management: 531 million gallons per day for the wastewater, 110 million gallons per day for the dry weather runoff, and 3,800 million gallons per day of wet weather runoff.

RUNOFF OPTIONS

Runoff Management - Options

The first option we will use to management runoff is source control to reduce quantity and improve quality. The runoff that is not manage with source control will be managed with the following four options:

- Diversion to Wastewater System
- Runoff Treatment and Discharge
- Runoff Treatment and Beneficial Use
- Non-Urban Regional Recharge

Source Control to Reduce Quantity – Dry Weather

The following are the available source control options to reduce the quantity of runoff in dry weather (some are currently being used):

- Increase public education and participation in programs
- Sweep sidewalks and driveways
- Smart Irrigation
- Wash vehicles at car washes

Source Control to Reduce Quantity – Wet Weather

The following are the available source control options to reduce the quantity of runoff in wet weather (some are currently being used):

- Conserve Natural Areas / Vegetation Controls
- Cistern
- Retention Grading

- Infiltration Trenches
- Infiltration Basin
- Wetlands
- Vegetated Swales and Strips
- Extended / Dry Detention Basin
- Porous Pavement
- Wet Pond
- Dry Well

Source Control to Improve Quality

The following are source control methods to improve the quality:

- Eliminate littering
- Pick up pet waste
- Recycle motor oil
- Provide Employee Training
- Protect Slopes and Channels
- Provide Storm Drain System Stenciling & Signage
- Protect Trash Storage Areas
- Cover Outdoor Material Handling and Storage Areas
- Maintain fleet vehicles
- Repair & clean maintenance bays
- Sweep parking areas
- Install clarifiers / oil-water separators
- Maintain loading docks
- Use proper waste handling and disposal methods

RUNOFF BREAKOUT SESSION

The attendees were broken into 4 groups to discuss other possible source control options and the important considerations for the options. The comments from the 4 groups are presented in Attachment A.

Runoff Management – Dry Weather Options

The first option we will use to management runoff in dry weather is source control to reduce quantity and improve quality. The dry weather runoff that is not manage with source control will be managed with the following four options:

- Diversion to Wastewater System (current practice for a small percentage of the dry weather flow)
 - Produces more recycled water to use for non-potable water demand
 - Will require increased treatment capacity
- Runoff Treatment and Discharge
 - No recycled water available to meet water demands
- Runoff Treatment and Beneficial Use
 - Produces recycled water for non-potable water demand or recharge
- Non-Urban Regional Recharge

- Use of dry weather runoff suitable for recharging the groundwater through the spreading grounds

Runoff Management – Wet Weather Options

The first option we will use to management runoff in wet weather is source control to reduce quantity and improve quality. The following four options are available to manage the wet weather runoff that is not manage with source control:

- Diversion to Wastewater System
 - Produces more recycled water to use for non-potable water demand
 - Will require increased treatment capacity
- Runoff Treatment and Discharge
 - No recycled water available to meet water demands
- Runoff Treatment and Beneficial Use
 - Produces recycled water for non-potable water demand or recharge
 - Requires seasonal storage
- Non-Urban Regional Recharge (current practice for a non-urban wet weather flow)
 - Use of wet weather runoff suitable for recharging the groundwater through the spreading grounds

CURRENT EVENTS IN THE NEWS

It was announced that there is a tour of one of the spreading grounds on August 8. There is a tour sign-up sheet at the check-in table. More information will be sent to you in the mail.

ATTACHMENTS

- Attachment A – Additional source control options and implementation considerations presented in Breakout session
- Attachment B - Feedback Report - All major questions and concerns voiced during the workshop are addressed in the Feedback Report.
- Attachment C – Steering Group Attendance list
- Attachment D – Staff Attendance list